

SAR TEST REPORT



The following samples were submitted and identified on behalf of the client as:

Product Name	GPS Cycle Computer		
Brand Name	Pioneer		
Model No.	SGX-CA600		
Prepared for	Pioneer Corporation		
	28-8, Honkomagome 2-chome, Bunkyo-ku, Tokyo		
	113-0021, Japan		
Standards	IEEE/ANSI C95.1-1992, IEEE 1528-2013,		
	KDB248227D01v02r02,KDB865664D01v01r04,		
	KDB865664D02v01r02,KDB447498D01v06		
FCC ID	AJDK110		
Date of Receipt	Oct. 19, 2018		
Date of Test(s)	Nov. 28, 2018		
Date of Issue In the configuration tested, the EUT	Nov. 30, 2018 UT complied with the standards specified above.		

Remarks:

This report details the results of the testing carried out on one sample, the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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Signed on behalf of SGS

Clerk / Ruby Ou	Engineer / Bond Tsai	Asst. Manager / John Yeh
Kuby Ou	Bonditsai	John Teh
		Date: Nov. 30, 2018

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Report No. : E5/2018/A0012 Page: 2 of 80

Revision History

Report Number	Revision	Description	Issue Date
E5/2018/A0012	Rev.00	Initial creation of document	Nov. 30, 2018

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1. General Information

1.1 Testing Laboratory

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Tel	+886-2-2299-3279	
Fax +886-2-2298-0488		
Internet http://www.tw.sgs.com/		

1.2 Details of Applicant

Company Name	Pionee	er Corporation			
Company Address		Honkomagome)21, Japan	2-chome,	Bunkyo-ku,	Tokyo

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1.3 Description of EUT

Equipment Under Test	GPS Cycle Computer			
Brand Name	Pioneer			
Model No.	SGX-CA600			
FCC ID	AJDK110			
Mode of Operation	⊠WLAN802.11 b/g/n(20M) ⊠Bluetooth			
	WLAN802.11 b/g/n(20M)		1	
Duty Cycle	Bluetooth		1	
TX Frequency Range	WLAN802.11 b/g/n(20M)	2412	_	2462
(MHz)	Bluetooth	2402	_	2480
Channel Number	WLAN802.11 b/g/n(20M)	1	—	11
(ARFCN)	Bluetooth	0	_	78

Max. SAR (1g) (Unit: W/Kg)				
Band	Measured	Reported	Channel	Position
WLAN802.11b	0.22	0.22	1	Back side

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Main Antenna						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
	802.11b	1	2412		15.50	15.28
		6	2437	1Mbps	15.50	15.41
		11	2462		15.50	15.42
		1	2412		14.00	13.96
2450 MHz	802.11g	6	2437	6Mbps	14.00	13.70
		11	2462		14.00	13.76
		1	2412		13.00	12.98
	802.11n20-HT0	6	2437	MCS0	13.00	12.56
		11	2462		13.00	12.58

WLAN802.11 b/g/n(20M) conducted power table:

Bluetooth conducted power table:

Mode	Channel	Frequency (MHz)	• • • • •	Max. Rated Avg. Power + Max. Tolerance (dBm)
(M		GFSK	Power + Max. Tolerance (dBill)	
	CH 00	2402	2.79	3
LE	CH 19	2440	3.33	3.5
	CH 39	2480	3.22	3.5

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1.4 Test Environment

Ambient Temperature: 22±2° C Tissue Simulating Liquid: 22±2° C

1.5 Operation Description

Use chipset specific software to control the EUT, and makes it transmit in maximum power. Measurements are performed respectively on the lowest, middle and highest channels of the operating band(s). The EUT is set to maximum power level during all tests, and at the beginning of each test the battery is fully charged.

EUT was tested as below based on KDB inquiry.

Tablet mode

Front / back / top / top tilt / bottom / right / left side_ 5mm

Note:

802.11b DSSS SAR Test Requirements:

- 1. SAR is measured for 2.4 GHz 802.11b DSSS mode using the highest measured maximum output power channel, when the reported SAR of the highest measured maximum output power channel for the exposure configuration is \leq 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration.
- 2. When the reported SAR is > 0.8 W/kg, SAR is required for that exposure configuration using the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel; i.e., all channels require testing.

802.11g/n OFDM SAR Test Exclusion Requirements:

- 3. SAR is not required for 802.11g/n when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.
- 4. BT and WLAN use the same antenna path, but they can't transmit at the same time.
- According to KDB447498 D01, testing of other required channels is not required

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when the reported 1-g SAR for the highest output channel is \leq 0.8 W/kg, when the transmission band is \leq 100 MHz.

- 6. According to KDB865664 D01, SAR measurement variability must be assessed for each frequency band. When the original highest measured SAR is ≥ 0.8 W/kg, repeated that measurement once. Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is \geq 1.45 W/kg (~10% from the 1-g SAR limit)
- 7. According to KDB447498D01, BT SAR is excluded as below.

	ВТ	
Max. tune	-up power(dBm)	3.5
Max. tune	Max. tune-up power(mW)	
	Test separation distance	5mm
All surfaces	Calculation value	0.705
	Require SAR testing?	NO

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1.6 The SAR Measurement System

A block diagram of the SAR measurement System is given in Fig. a. This SAR Measurement System uses a Computer-controlled 3-D stepper motor system (SPEAG DASY 5 professional system). The model EX3DV4 field probe is used to determine the internal electric fields. The SAR can be obtained from the equation SAR= σ (|Ei|²)/ ρ where σ and ρ are the conductivity and mass density of the tissue-simulant.

The DASY 5 system for performing compliance tests consists of the following items:

- 1. A standard high precision 6-axis robot (Staubli RX family) with controller, teach pendant and software. An arm extension is for accommodating the data acquisition electronics (DAE).
- 2. A dosimetric probe, i.e., an isotropic E-field probe optimized and calibrated for usage intissue simulating liquid. The probe is equipped with an optical surface detector system.
- 3. A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.

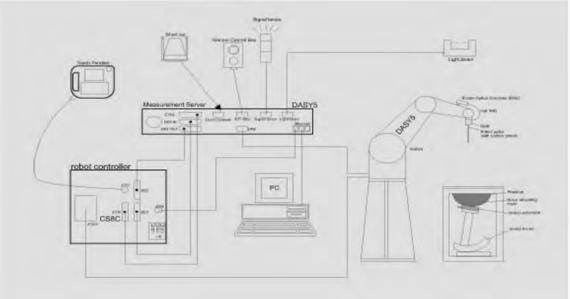


Fig. a The block diagram of SAR system

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- 4. The Electro-optical converter (EOC) performs the conversion between optical and electrical of the signals for the digital communication to the DAE and for the analog signal from the optical surface detection. The EOC is connected to the measurement server.
- 5. The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- 6. A probe alignment unit which improves the (absolute) accuracy of the probe positioning.
- 7. A computer operating Windows 7.
- 8. DASY 5 software.
- Remote control with teach pendant and additional circuitry for robot safety such as warning lamps, etc.
- Tissue simulating liquid mixed according to the given recipes. 10.
- 11. Validation dipole kits allowing to validate the proper functioning of the system.

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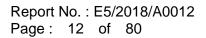
1.7 System Components

EX3DV4 E-Field Probe

Construction	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)		
Calibration	Basic Broad Band Calibration in air Conversion Factors (CF) for HSL 2450 MHz Additional CF for other liquids and frequencies upon request		
Frequency	10 MHz to > 6 GHz		
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)		
Dynamic	$10 \mu\text{W/g}$ to > 100 mW/g		
Range	Linearity: ± 0.2 dB (noise: typically < 1 μ W/g)		
Dimensions	Tip diameter: 2.5 mm		
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%.		

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PHANTOM	
Model	ELI
Construction	The ELI phantom is used for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI is fully compatible with the IEC 62209-2 standard and all known tissue simulating liquids. ELI has been optimized regarding its performance and can be integrated into our standard phantom tables. A cover prevents evaporation of the liquid. Reference markings on the phantom allow installation of the complete setup, including all predefined phantom positions and measurement grids, by teaching three points. The phantom is compatible with all SPEAG dosimetric probes and dipoles.
Shell	2 ± 0.2 mm
Thickness	
Filling Volume	Approx. 30 liters
Dimensions	Major axis: 600 mm
	Minor axis: 400 mm

DEVICE HOLDER

Construction	The device holder (Supporter) for Notebook is made by POM (polyoxymethylene resin) , which is non-metal and non-conductive. The height can be adjusted to fit varies kind of notebooks.	
		Device Holder

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1.8 SAR System Verification

The microwave circuit arrangement for system verification is sketched in Fig. b. The daily system accuracy verification occurs within the flat section of the SAM phantom. A SAR measurement was performed to see if the measured SAR was within +/- 10% from the target SAR values. These tests were done at 2450 MHz. The tests were conducted on the same days as the measurement of the DUT. The obtained results from the system accuracy verification are displayed in the table 1 (SAR values are normalized to 1W forward power delivered to the dipole). During the tests, the liquid depth above the ear reference points was \geq 15 cm \pm 5 mm (frequency \leq 3 GHz) or \geq 10 cm \pm 5 mm (frequency > 3 G Hz) in all the cases. It is seen that the system is operating within its specification, as the results are within acceptable tolerance of the reference values.

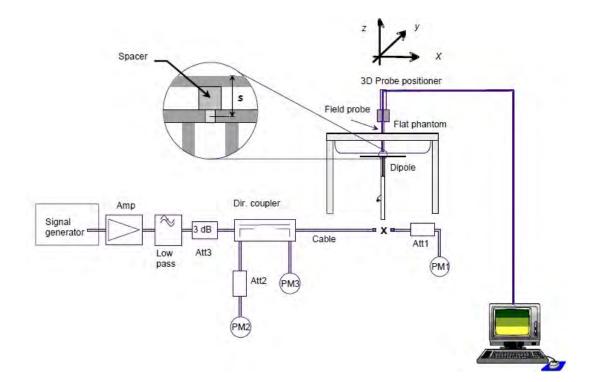


Fig. b The block diagram of system verification

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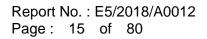
Validation Kit	S/N	Frequ (Mł	,	1W Target SAR-1g (mW/g)	(Pin=250mW) Measured SAR-1g (mW/g)	Measured SAR-1g normalized to 1W (mW/g)	Deviation (%)	Measured Date
D2450V2	727	2450	Body	50.8	12.7	50.8	0.00%	Nov. 28, 2018

Table 1. Results of system validation

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1.9 Tissue Simulant Fluid for the Frequency Band

The dielectric properties for this body-simulant fluid were measured by using the Agilent Model 85070E Dielectric Probe (rates frequency band 200 MHz to 20 GHz) in conjunction with Network Analyzer. All dielectric parameters of tissue simulates were measured within 24 hours of SAR measurements. The measured conductivity and permittivity are all within $\pm 5\%$ of the target values.

The depth of the tissue simulant in the flat section of the phantom was ≥ 15 cm ± 5 mm (Frequency \leq 3G) or \geq 10 cm \pm 5 mm (Frequency >3G) during all tests. (Fig. 2)

Tissue Type	Measurement Date	Measured Frequency (MHz)	Target Dielectric Constant, εr	Target Conductivity, σ (S/m)	Measured Dielectric Constant, εr	Measured Conductivity, σ (S/m)	% dev ɛr	% dev σ
		2402	52.764	1.904	51.106	1.955	3.14%	-2.67%
		2412	52.751	1.914	51.109	1.966	3.11%	-2.73%
		2437	52.717	1.938	51.082	1.990	3.10%	-2.71%
Body	Nov, 28. 2018	2442	52.712	1.941	51.066	1.994	3.12%	-2.71%
		2450	52.700	1.950	51.091	2.005	3.05%	-2.82%
		2462	52.685	1.967	51.061	2.021	3.08%	-2.74%
		2480	52.662	1.993	51.012	2.046	3.13%	-2.68%

Table 2. Dielectric Parameters of Tissue Simulant Fluid

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				Ingr	redient			Tatal
Frequency (MHz)	Mode	DGMBE	Water	Salt	Preventol D-7	Cellulose	Sugar	Total amount
2450M	Body	301.7ml	698.3ml		_	_	_	1.0L(Kg)

The composition of the tissue simulating liquid:

Table 3. Recipes for Tissue Simulating Liquid

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1.10 Evaluation Procedures

The entire evaluation of the spatial peak values is performed within the Post-processing engine (SEMCAD). The system always gives the maximum values for the 1 g and 10 g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

- 1. The extraction of the measured data (grid and values) from the Zoom Scan.
- 2. The calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters)
- 3. The generation of a high-resolution mesh within the measured volume
- 4. The interpolation of all measured values from the measurement grid to the high-resolution grid
- 5. The extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
- 6. The calculation of the averaged SAR within masses of 1g and 10g.

The probe is calibrated at the center of the dipole sensors that is located 1 to 2.7mm away from the probe tip. During measurements, the probe stops shortly above the phantom surface, depending on the probe and the surface detecting system. Both distances are included as parameters in the probe configuration file. The software always knows exactly how far away the measured point is from the surface. As the probe cannot directly measure at the surface, the values between the deepest measured point and the surface must be extrapolated. The angle between the probe axis and the surface normal line is less than 30 degree.

In the Area Scan, the gradient of the interpolation function is evaluated to find all the extreme of the SAR distribution. The uncertainty on the locations of the extreme is less than 1/20 of the grid size. Only local maximum within -2 dB of the global maximum are searched and passed for the Cube Scan measurement. In the Cube Scan, the interpolation function is used to extrapolate the Peak SAR from the lowest measurement points to the inner phantom surface (the extrapolation distance). The uncertainty increases with the extrapolation distance. To keep the uncertainty within 1% for the 1 g and 10 g cubes, the extrapolation distance should not be larger than 5mm.

The maximum search is automatically performed after each area scan measurement. It is based on splines in two or three dimensions. The procedure can find the maximum for most SAR distributions even with relatively large grid spacing. After the area scanning measurement, the probe is automatically moved to a position at the interpolated maximum. The following scan can directly use this position for reference, e.g., for a finer resolution grid or the cube evaluations. The 1g and 10g peak evaluations are only available for the predefined cube 7x7x7 scans. The routines are verified and optimized for the grid dimensions used in these cube measurements.

The measured volume of 30x30x30mm contains about 30g of tissue.

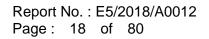
The first procedure is an extrapolation (incl. Boundary correction) to get the points between the lowest measured plane and the surface. The next step uses 3D

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interpolation to get all points within the measured volume. In the last step, a 1g cube is placed numerically into the volume and its averaged SAR is calculated. This cube is the moved around until the highest averaged SAR is found. If the highest SAR is found at the edge of the measured volume, the system will issue a warning: higher SAR values might be found outside of the measured volume. In that case the cube measurement can be repeated, using the new interpolated maximum as the center.

1.11 Probe Calibration Procedures

For the calibration of E-field probes in lossy liquids, an electric field with an accurately known field strength must be produced within the measured liquid. For standardization purposes it would be desirable if all measurements which are necessary to assess the correct field strength would be traceable to standardized measurement procedures. In the following two different calibration techniques are summarized:

1.11.1 Transfer Calibration with Temperature Probes

In lossy liquids the specific absorption rate (SAR) is related both to the electric field (E) and the temperature gradient ($\delta T / \delta t$) in the liquid.

$$SAR = C \frac{\delta T}{\delta t}$$

whereby σ is the conductivity, ρ the density and c the heat capacity of the liquid.

Hence, the electric field in lossy liquid can be measured indirectly by measuring the temperature gradient in the liquid. Non-disturbing temperature probes (optical probes or thermistor probes with resistive lines) with high spatial resolution (<1-2 mm) and fast reaction time (<1 s) are available and can be easily calibrated with high precision [1]. The setup and the exciting source have no influence on the calibration; only the relative positioning uncertainties of the standard temperature probe and the E-field probe to be calibrated must be considered. However, several problems limit the available accuracy of probe calibrations with temperature probes:

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- The temperature gradient is not directly measurable but must be evaluated from temperature measurements at different time steps. Special precaution is necessary to avoid measurement errors caused by temperature gradients due to energy equalizing effects or convection currents in the liquid. Such effects cannot be completely avoided, as the measured field itself destroys the thermal equilibrium in the liquid. With a careful setup these errors can be kept small.
- The measured volume around the temperature probe is not well defined. It is difficult to calculate the energy transfer from a surrounding gradient temperature field into the probe. These effects must be considered, since temperature probes are calibrated in liquid with homogeneous temperatures. There is no traceable standard for temperature rise measurements.
- The calibration depends on the assessment of the specific density, the heat capacity and the conductivity of the medium. While the specific density and heat capacity can be measured accurately with standardized procedures (~ 2% for c; much better for ρ), there is no standard for the measurement of the conductivity. Depending on the method and liquid, the error can well exceed $\pm 5\%$.
- Temperature rise measurements are not very sensitive and therefore are often performed at a higher power level than the E-field measurements. The nonlinearities in the system (e.g., power measurements, different components, etc.) must be considered.

Considering these problems, the possible accuracy of the calibration of E-field probes with temperature gradient measurements in a carefully designed setup is about ±10% (RSS) [2]. Recently, a setup which is a combination of the waveguide techniques and the thermal measurements was presented in [3]. The estimated uncertainty of the setup is $\pm 5\%$ (RSS) when the same liquid is used for the calibration and for actual measurements and ±7-9% (RSS) when not, which is in good agreement with the estimates given in [2].

1.11.2 Calibration with Analytical Fields

In this method a technical setup is used in which the field can be calculated analytically from measurements of other physical magnitudes (e.g., input power). This corresponds to the standard field method for probe calibration in air; however, there is no standard defined for fields in lossy liquids.

When using calculated fields in lossy liquids for probe calibration, several points must be considered in the assessment of the uncertainty:

- The setup must enable accurate determination of the incident power.
- The accuracy of the calculated field strength will depend on the assessment of the dielectric parameters of the liquid.
- Due to the small wavelength in liquids with high permittivity, even small

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setups might be above the resonant cutoff frequencies. The field distribution in the setup must be carefully checked for conformity with the theoretical field distribution.

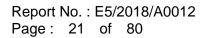
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1.12 Test Standards and Limits

According to FCC 47CFR §2.1093(d) The limits to be used for evaluation are based generally on criteria published by the American National Standards Institute (ANSI) for localized specific absorption rate ("SAR") in Section 4.2 of "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz," ANSI/IEEE C95.1, By the Institute of Electrical and Electronics Engineers, Inc., New York, New York 10017. These criteria for SAR evaluation are similar to those recommended by the National Council on Radiation Protection and Measurements (NCRP) in "Biological Effects and Exposure Criteria for Radio frequency Electromagnetic Fields," NCRP Report No. 86, Section 17.4.5. Copyright NCRP, 1986, Bethesda, Maryland 20814. SAR is a measure of the rate of energy absorption due to exposure to an RF transmitting source. SAR values have been related to threshold levels for potential biological hazards. The criteria to be used are specified in paragraphs (d)(1) and (d)(2) of this section and shall apply for portable devices transmitting in the frequency range from 100 kHz to 6 GHz. Portable devices that transmit at frequencies above 6 GHz are to be evaluated in terms of the MPE limits specified in § 1.1310 of this chapter. Measurements and calculations to demonstrate compliance with MPE field strength or power density limits for devices operating above 6 GHz should be made at a minimum distance of 5 cm from the radiating source.

- Limits for Occupational/Controlled exposure: 0.4 W/kg as averaged over the (1) whole-body and spatial peak SAR not exceeding 8 W/kg as averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 20 W/kg, as averaged over an 10 grams of tissue (defined as a tissue volume in the shape of a cube).
- Occupational/Controlled limits apply when persons are exposed as a (2) consequence of their employment provided these persons are fully aware of and exercise control over their exposure. Awareness of exposure can be accomplished by use of warning labels or by specific training or education through appropriate means, such as an RF safety program in a work environment.
- Limits for General Population/Uncontrolled exposure: 0.08 W/kg as (3) averaged over the whole-body and spatial peak SAR not exceeding 1.6 W/kg as averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 4 W/kg, as averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube). General Population/Uncontrolled limits apply when the general public may be exposed, or when persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or do not

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exercise control over their exposure. Warning labels placed on consumer devices such as cellular telephones will not be sufficient reason to allow these devices to be evaluated subject to limits for occupational/controlled exposure in paragraph (d)(1) of this section. (Table 4.)

Human Exposure	Uncontrolled Environment General Population	Controlled Environment Occupational
Spatial Peak SAR (Brain)	1.60 W/kg	8.00 W/kg
Spatial Average SAR (Whole Body)	0.08 W/kg	0.40 W/kg
Spatial Peak SAR (Hands/Feet/Ankle/Wrist)	4.00 W/kg	20.00 W/kg

Table 4. RF exposure limits

Notes:

- 1. Uncontrolled environments are defined as locations where there is potential exposure of individuals who have no knowledge or control of their potential exposure.
- 2. Controlled environments are defined as locations where there is potential exposure of individuals who have knowledge of their potential exposure and can exercise control over their exposure.

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2. Summary of Results

WLAN Antenna

Mode	Position	Distance (mm)	СН	Freq. (MHz)	Max. Rated Avg. Power + Max.	Measured Avg. Power	Scaling		AR over 1g /kg)	Plot page
		. ,		(Tolerance (dBm)	(dBm)		Measured	Reported	page
	Front side	5	1	2412	15.50	15.36	103.28%	0.175	0.181	-
	Back side	5	1	2412	15.50	15.36	103.28%	0.215	0.222	25
	Top side	5	1	2412	15.50	15.36	103.28%	0.135	0.139	-
WLAN802.11 b	Top Tilt side	5	1	2412	15.50	15.36	103.28%	0.190	0.196	-
	Bottom side	5	1	2412	15.50	15.36	103.28%	0.022	0.022	-
	Right side	5	1	2412	15.50	15.36	103.28%	0.104	0.107	-
	Left side	5	1	2412	15.50	15.36	103.28%	0.027	0.027	-

Note:

Scaling = $\frac{\text{reported SAR}}{\text{measured SAR}} = \frac{P2(mW)}{P1(mW)} = 10^{\left(\frac{P2-P1}{10}\right)(dBm)}$

Reported SAR = measured SAR * (scaling)

Where P2 is maximum specified power, P1 is measured conducted power

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3. Instruments List

Manufacturer	Device	Туре	Serial number	Date of last calibration	Date of next calibration
SPEAG	Dosimetric E-Field Probe	EX3DV4	3938	Oct.24,2018	Oct.27,2019
SPEAG	System Validation Dipole	D2450V2	727	Apr.24,2018	Apr.23,2019
SPEAG	Data acquisition Electronics	DAE4	1336	Aug.06,2018	Aug.05,2019
SPEAG	Software	DASY 52 V52.10.1	N/A		Calibration not required
SPEAG	Phantom	ELI	N/A	Calibration not required	Calibration not required
Agilent	Network Analyzer	E5071C	MY46107530	Feb.26,2018	Feb.25,2019
Agilent	Dielectric Probe Kit	85070E	MY44300677	Calibration not required	Calibration not required
Agilent	Dual-directional	772D	MY52180142	Jul.04,2018	Jul.03,2019
	coupler	778D	MY52180302	Jul.05,2018	Jul.04,2019
Agilent	RF Signal Generator	N5181A	MY50144143	Mar.15,2018	Mar.14,2019
Agilent	Power Meter	E4417A	MY52240003	Dec.21,2017	Dec.20,2018
Agilent	Power Sensor	E9301H	MY52200003	Dec.21,2017	Dec.20,2018
			MY52200004	Dec.21,2017	Dec.20,2018
TECPEL	Digital thermometer	DTM-303A	TP130074	Mar.09,2018	Mar.08,2019

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4. Measurements

Date: 2018/11/28

WLAN 802.11b_Body_Back side_CH 1_5mm

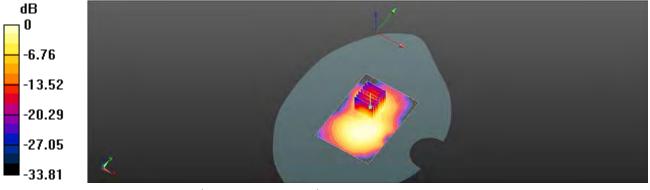
Communication System: WLAN 2.45G; Frequency: 2412 MHz; Duty Cycle: 1:1 Medium parameters used: f = 2412 MHz; σ = 1.884 S/m; ϵ_r = 52.978; ρ = 1000 kg/m³ Phantom section: Flat Section Ambient temperature: 22.1°C; Liquid temperature: 21.8°C

DASY5 Configuration:

- Probe: EX3DV4 SN3938; ConvF(7.3, 7.3, 7.3); Calibrated: 2018/10/24
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1336; Calibrated: 2018/8/6 •
- Phantom: SAM
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

Area Scan (71x101x1): Interpolated grid: dx=12 mm, dy=12 mm Maximum value of SAR (interpolated) = 0.321 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 6.865 V/m; Power Drift = -0.01 dB Peak SAR (extrapolated) = 0.429 W/kg SAR(1 g) = 0.215 W/kg; SAR(10 g) = 0.097 W/kg Maximum value of SAR (measured) = 0.325 W/kg



0 dB = 0.325 W/kg = -4.88 dBW/kg

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5. SAR System Performance Verification

Date: 2018/11/28

Dipole 2450 MHz SN:727

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1 Medium parameters used: f = 2450 MHz; σ = 2.005 S/m; ϵ_r = 51.091; ρ = 1000 kg/m³ Phantom section: Flat Section Ambient temperature: 22.1°C; Liquid temperature: 21.8°C

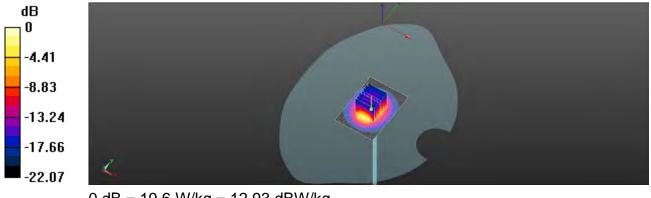
DASY5 Configuration:

- Probe: EX3DV4 SN3938; ConvF(7.3, 7.3, 7.3); Calibrated: 2018/10/24
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1336; Calibrated: 2018/8/6 •
- Phantom: SAM
- DASY52 52.10.1(1476); SEMCAD X 14.6.11(7439)

Area Scan (51x71x1): Interpolated grid: dx=12 mm, dy=12 mm Maximum value of SAR (interpolated) = 21.3 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 99.54 V/m; Power Drift = 0.02 dB Peak SAR (extrapolated) = 26.5 W/kg SAR(1 g) = 12.7 W/kg; SAR(10 g) = 5.92 W/kg

Maximum value of SAR (measured) = 19.6 W/kg



0 dB = 19.6 W/kg = 12.93 dBW/kg

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6. DAE & Probe Calibration Certificate

sugheusstrasse 43, 8004 Zuric	h, Switzerland		Service suisse d'étatonnage Servizio svizzero di taratura Swiss Calibration Service
ccredited by the Swiss Accredite he Swiss Accreditation Service fulfilateral Agreement for the n	e is one of the signatories	to the EA	No.: SCS 0108
CALIBRATION C		0-0	: DAE4-1336_Aug18
	DAE4 - SD 000 D		
Selibration procedure(s)	QA CAL-05.v29 Calibration proces	dure for the data acquisition elec	tronics (DAE)
Calibration date:	August 06, 2018		
The measurements and the unce All culibrations have been condu	etainties with confidence pro cted in the closed laboratory	real standards, which realize the physical un obtability are given on the following pages ar fiscility, environment temperature (22 ± 3) ⁴	id are part of the certificate.
The measurements and the unce All calibrations have been conclu Calibration Equipment used (M&	etainties with confidence pro cted in the closed laboratory	obability are given on the following pages ar	id are part of the certificate. G and humidity < 70%.
The measurements and the unce All calibrations have been condu Calibration Equipment used (M& Primary Standards	stainties with confidence pro cted in the closed laboratory TE critical for calibration)	shability are given on the following pages at facility; environment temperature (22 \pm 3)*	id are part of the certificate.
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Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland



Schweizenscher Kellbrierdienet s Service suisse d'étalonnage C Servizio svizzero di taratura s Swiss Calibration Service

Accordination No.: SCS 0108

Accredited by the Smiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration cortification

Glossary

DAF Connector angle

data acquisition electronics

information used in DASY system to align probe sensor X to the robot coordinate system.

Methods Applied and Interpretation of Parameters.

- DC Voltage Measurement: Calibration Factor assessed for use in DASY system by comparison with a calibrated instrument traceable to national standards. The figure given corresponds to the full scale range of the voltmeter in the respective range.
- · Connector angle. The angle of the connector is assessed measuring the angle mechanically by a tool inserted. Uncertainty is not required.
- The following parameters as documented in the Appendix contain technical information as a result from the performance test and require no uncertainty
 - DC Voltage Measurement Linearity. Verification of the Linearity at +10% and -10% of the nominal calibration voltage. Influence of offset voltage is included in this measurement.
 - Common mode sensitivity: Influence of a positive or negative common mode voltage on . the differential measurement.
 - Channel separation: Influence of a voltage on the neighbor channels not subject to an ٠ input voltage.
 - AD Converter Values with inputs shorted: Values on the internal AD converter . corresponding to zero input voltage
 - Input Offset Measurement: Output voltage and statistical results over a large number of . zero voltage measurements.
 - Input Offset Current: Typical value for information; Maximum channel input offset ٠ current, not considering the input resistance.
 - Input resistance: Typical value for information: DAE input resistance at the connector, during internal auto-zeroing and during measurement.
 - Low Battery Alarm Voltage: Typical value for information. Below this voltage, a battery alarm signal is generated.
 - Power consumption: Typical value for information. Supply currents in various operating modes.

Certificate No: DAE4-1336_Aug18

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DC Voltage Measurement A/D - Converter Resolution nominal

High Flange: 1LSB full range = -100...+300 mV full range = -1.....+3mV 6.1µV. Low Range 1LSB = SINV DASY measurement parameters; Auto Zero Time: 3 sec; Measuring time: 3 sec

Calibration Factors	X	Y	z
High Range	403.344 ± 0.02% (k=2)	403.624 ± 0.02% (k=2)	403.107 ± 0.02% (k=2)
Low Range	3.95102 ± 1.50% (k=2)	3,98703 ± 1,50% (k=2)	3.99683 ± 1.50% (k=2)

Connector Angle

Connector Angle to be used in DASY system	287.0°±1°
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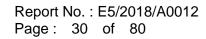
Certilicate No: DAE4-1336_Aug16

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Appendix (Additional assessments outside the scope of SCS0108)

1. DC Voltage Linearity

High Renge	Reading (µV)	Difference (µV)	Error (%)
Channel X + Input	200042.98	8.65	0.00
Channel X + Input	20006.34	1.71	0.01
Channel X - Input	-20005.65	-0.58	0.00
Channel Y + Input	200034.32	0.12	0.00
Channel Y + Input	20003.47	-1:57	0.01
Channel Y - Input	-20008.39	-1.21	0,01
Channel Z + Input	200032.22	-2.05	-0.00
Channel Z + Input	20002.78	-2.14	-0.01
Channel Z - Input	-20007.34	-2.09	0.01
Low Range	Reading (jsV)	Difference (µV)	Error (%)
Channel X + Input	2001.47	0.30	0,01
Channel X + Input	201.92	0.79	0.39
Channel X - Input	-198,26	0.70	
and the second s	-190,20	0.59	-0.30
	2001,55	0.59	-0.30
Channel Y + Input			10000
Channel Y + Input Channel Y + Input	2001.55	0.37	0.02
Channel Y + Input Channel Y + Input Channel Y - Input	2001.55 200.97	0.37 -0.11	0.02 -0.05
Channel Y + Input Channel Y + Input Channel Y - Input	2001.55 200.97 -199.34	0.37 -0.11 -0.43	0.02 -0.05 0.22

2. Common mode sensitivity

DASY measurement parameters: Auto Zero Time: 3 sec. Measuring time: 3 sec

	Common mode Input Voltage (mV)	High Range Average Reading (µV)	Low Range Average Reading (µV)
Channel X	200	B:04	4.72
	- 200	4.13	-4.79
Channel Y	200	-3,65	-3,78
	200	2.68	2.45
Channel Z	200	22,40	22.16
	- 200	-24.83	-25.10

3. Channel separation

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Input Voltage (mV)	Channel X (µV)	Channel Y (µV)	Channel Z (µV)
Channel X	200	+1	6.12	+1,64
Channel Y	200	9.19		6.46
Channel Z	200	8.44	6.31	-

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4. AD-Converter Values with inputs shorted

DASY measurement parameters: Auto Zero Time: 3 sec. Measuring time: 3 sec.

	High Range (LSB)	Low Range (LSB)	
Channel X	15666	16509	
Channel Y	15907	15587	
Channel Z	- 15855	15507	

5. Input Offset Measurement

DASY measurement parameters: Auto Zero Time: 3 sec: Measuring time: 3 sec OM01 funit

	Average (µV)	min. Offset (µV)	max. Offset (µV)	Std. Deviation (µV)
Channel X	0.87	-0.00	2.62	0.36
Channel Y	3.53	2.87	4.59	0.34
Channel Z	-0.18	-1.34	1.53	0.54

6. Input Offset Current

Nominal Input circuitry offset current on all channels <25fA

7. Input Resistance (Typical values for information)

	Zeroing (kOhm)	Measuring (MOhm)	
Channel X	200	200	
Channel Y	200	200	
Channel Z	200	200	

8. Low Battery Alarm Voltage (Typical values for information)

Typical values	Alarm Level (VDC)	
Supply (+ Vcc)	+7.9	
Supply (- Vcc)	-7.6	

9. Power Consumption (Typical values for information)

Typical values	Switched off (mA)	Stand by (mA)	Transmitting (mA)
Supply (+ Vcc)	+0.01	36	+14
Supply (- Vcc)	-0.01	В	-9

Certificate No: DAE4-1336 Aug18

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		"Whitehald"	Swise Calibration Service
coredited by the Sales Accreditation Service Number of Service Accreditation Service International Agreement for the	Itation Service (SAS) vice is one of the signatories e recognition of calibration c	to the EA	creditation No.: SCS 0108
Illent SGS-TW (Au	dan)	Cartificate No.	EX3-3938_Oct18
CALIBRATION	CERTIFICATE		
Object	EX3DV4 - SN:393	34	-
Colitration procedure(in)	CAL-25.V6	A GAL 12 v9; QA CAL-14.v4, QA ture for dosimetric E-lieta probes	
Calibration date	October 24, 2018		
This calibration certificate docu The measurements and the un	ments the traceability to nation containing with confidence pro	nal standards, which realize the physical units Rability are given on the following pages and	of measurements (SI) are part of the certificate
		facility: an wiron manifest persistence (22 \pm 3)°C \pm	and humidity < 70%.
			and humidity < 70%.
Saibrahan Espajonern used (M		facility: constrainment temperature (22 \pm 3)°C \pm	
failbration Expirement used (M Permany Standards	1875 ortical for calibration)		and humidity < 70%.
Calibration Explorment used (M Permany Standards Power meller NRP	187E ortical for calibration)	facility: constrainment temperature (22 \pm 3)°C s $\label{eq:constraint}$ Call Date (Certificate No.)	Scheduled Calibration
Caldrukon Espiorment used (M Pentery Standards Power meter NRP Power sensor NRP-291 Power sensor NRP-291	IBTE ontical for calibration)	facility: anvironment hetepeesture (22 ± 3)°C c Carl Dete (Centicate No.) 08-Apr-18 (No. 217-10267202873)	Scheduled Calibration Apr-19
Caldwalican Explorment used (M Pennery Standards Power meter NRP Power sensor NRP-281 Power sensor NRP-291 Reference 20 dB Attanuator	IBTE onlical for calibration) ID SN: 104778 SN: 103244	facility: ankironment testpresture (22 ± 3)°C o Gal Data (Dentificate No.) 08-April 16 (No. 217-02672)(2673) 08-April 16 (No. 217-02672)	Scheduled Calibration Apr-16 Apr-19
Caldration Equipment used (M Primary Standards Power meter NRP- Power sensor NRP-281 Power sensor NRP-291 Reference 20 dB Attenuator Reference 20 dB Attenuator	ID SN: 104778 SN: 104778 SN: 103244 SN: 103245 SN: 58277 (20x) SN: 3813	facility: anvironment helipeesture (22 ± 3)°C c Cal Dete (Certificate No.) 08-Apr-18 (No. 217-4267242673) 08-Apr-18 (No. 217-426724) 08-Apr-18 (No. 217-42672) 08-Apr-18 (No. 217-42672) 28-Dec-17 (No. 553-3013, Dec17)	Scheduled Calibration Apr-19 Apr-19 Apr-19 Apr-19 Dec-18
Caldwalion Explorment used (M Permany Standards Powers metier NRP- Power sensor NRP-ZB1 Power sensor NRP-ZB1 Reference 20 dB Attentiator Reference 20 dB Attentiator	ID SN: 104778 SN: 103244 SN: 103245 SN: 103245 SN: 103245	facility: ankironment temperature (22 ± 3)°C a Carl Dete (Centricate No.) 04-Apr-16 (No. 217-0057200873) 04-Apr-16 (No. 217-00572) 04-Apr-16 (No. 217-00572) 04-Apr-16 (No. 217-00572) 04-Apr-18 (No. 217-00572)	Scheduled Calibratian Apr-16 Apr-19 Apr-19 Apr-19
Calibration Explorment used (M Pennery Standards Power meter NRP Power sensor NRP-291 Power sensor NRP-291 Reference 20 dB Attenuator Reference 20 dB Attenuator Reference Probe ES30V2 DAE4	ID SN: 104778 SN: 104778 SN: 103244 SN: 103245 SN: 58277 (20x) SN: 3813	facility: anvironment helipeesture (22 ± 3)°C c Cal Dete (Certificate No.) 08-Apr-18 (No. 217-4267242673) 08-Apr-18 (No. 217-426724) 08-Apr-18 (No. 217-42672) 08-Apr-18 (No. 217-42672) 28-Dec-17 (No. 553-3013, Dec17)	Scheduled Calibration Apr-19 Apr-19 Apr-19 Apr-19 Dec-18
Calibration Explorment used (M Permany Standards Powers encore NRP- Powers encore NRP-291 Power sencor NRP-291 Reference 20 dB Attenuator Reference 20 dB Attenuator Reference Probe ESSOV2 DAE4 Secondary Standards	ID SN: 104778 SN: 104778 SN: 103244 SN: 103245 SN: 55277 (20x) SN: 55277 SN: 55277 SN: 560	facility: ankironment testpresture (22 ± 3)°C a Cal Data (Dentificate No.) 04-Apri-16 (No. 217-02672)02673) 04-Apri-16 (No. 217-02672) 04-Apri-16 (No. 217-02672) 04-Apri-16 (No. 217-02673) 04-Apri-16 (No. 217-02673) 04-Apri-17 (No. CAS-3013, Dec17) 21-Dec-17 (No. CAE4-660, Dec17)	Scheduled Calibration Apr-19 Apr-19 Apr-19 Apr-19 Dec-18 Dec-18 Dec-18
Caldwalican Employment used (M Primary Standards Powes meter NRP Power sensor NRP-281 Reference 20 dB Attenuator Reference 20 dB	ID SN: 104778 SN: 104778 SN: 103244 SN: 103245 SN: 103245 SN: 35277 (20x) SN: 35277 (20x) SN: 3560 ID	facility: ankironment temperature (22 ± 3)°C a Carl Data (Centricate No.) 08-Apr-16 (No. 217-02672012873) 04-Apr-16 (No. 217-02672) 04-Apr-18 (No. 217-02672) 05-Apr-17 (No. (CAE4-660, Dec17) Check Date (in house)	Scheduled Calibratian Apr-19 Apr-19 Apr-19 Apr-19 Dec-18 Dec-18 Dec-18 Scheduled Check
Saibration Explorment used (M Permery Standards Prover meter NRP Power sensor NRP-281 Power sensor NRP-291 Reference 20 dB Attenuator Reference Probe ES305/2 DAE4 Secondary Blandards Power sates E44198 Power sates E44198	IBTE onfice#for collibration) ID SN: 104778 SN: 103244 SN: 103245 SN: 55277 (20x) SN: 5513 SN: 560 ID SN: 66841253674	facility: anvironment helipsestore (22 ± 3)°C c Cal Dete (Certificate No.) 08-Apr-16 (No. 217-02672)(2673) 08-Apr-16 (No. 217-02672) 08-Apr-16 (No. 217-02672) 08-Apr-16 (No. 217-02672) 30-Dec-17 (No. ES3-3013, Dec17) 21-Dec-17 (No. ES3-3013, Dec17)	Scheduled Calibration Apr-18 Apr-19 Apr-19 Apr-19 Dec-18 Dec-18 Dec-18 Scheduled Check In house check: Jun 20
Calibration Explorment used (M Pentary Standards Powers motion NRP-291 Power sensor NRP-291 Reference 20 dB Attentiator Reference 20 dB Attentiator Power sensor E44152A Power sensor E44152A Ref generator HP 8648C	ID SN: 104778 SN: 104778 SN: 103244 SN: 103245 SN: 103245 SN: 3812 SN: 560 ID SN: 66041253874 SN: 66041253874 SN: 660410210 SN: 00110210 SN: UB3642J01700	Call Deta (Certificate No.) 08-Apr-16 (No. 217-0267202873) 08-Apr-16 (No. 217-0267202873) 08-Apr-16 (No. 217-02672) 08-Apr-16 (No. 217-02672) 08-Apr-16 (No. 217-02672) 08-Apr-16 (No. 217-02672) 08-Apr-16 (No. 217-02672) 08-Apr-17 (No. E33-3013, Dec17) 21-Dec-17 (No. E33-3013, Dec17) 21-Dec-17 (No. E33-3013, Dec17) 21-Dec-17 (No. E33-3013, Dec17) 21-Dec17) 21-Dec-17 (No. E33-3013, Dec17) 21-Dec17) 21-Dec-17 (No. E33-3013, Dec17) 21-Dec17) 21-Dec17 (No. E33	Scheduled Cationalian Apr-19 Apr-19 Apr-19 Dec-18 Dec-18 Dec-18 Scheduled Check In house check Jun-20 In house check Jun-20
Calibration Explorment used (M Permany Standards Powers motion NRP-291 Powers remove NRP-291 Power sensor NRP-291 Reference 20 dB Attennator Reference 20 dB Attennator Reference 20 dB Attennator DAE4 Secondary Standards Power mater E44198 Power tenstre E44198 Power tenstre E44198 Power tenstre E44198	ID SN: 104778 SN: 104778 SN: 103244 SN: 103245 SN: 55277 (20x) SN: 5501 SN: 560 ID SN: 560 ID SN: 56041253674 SN: 401495087 SN: 000110210	facility: ankironment testpresture (22 ± 3)°C a Cal Data (Centificate No.) 08-Apr-16 (No. 217-03672012673) 08-Apr-16 (No. 217-02673) 08-Apr-16 (No. 217-02673) 08-Apr-16 (No. 217-02673) 08-Apr-17 (No. 217-02663) 09-Dec-17 (No. 213-02663) 09-Dec-17 (No. 233-013) Dec17] 21-Dec-17 (No. 243-0463) Dec17] Check Date (In house) 06-Apr-16 (In house) 06-Apr-16 (In house check Aun-18) 06-Apr-18 (In house check Aun-18)	Scheduled Calibration Apr-19 Apr-19 Apr-19 Apr-19 Dec-18 Dec-18 Scheduled Check In house check: Jun 20 In house check: Jun/20 In house check: Jun/20
Calibration Explorment used (M Permany Standards Powers motion NRP-291 Powers remove NRP-291 Power sensor NRP-291 Reference 20 dB Attennator Reference 20 dB Attennator Reference 20 dB Attennator DAE4 Secondary Standards Power mater E44198 Power tenstre E44198 Power tenstre E44198 Power tenstre E44198	ID SN: 104778 SN: 104778 SN: 103244 SN: 103245 SN: 103245 SN: 3812 SN: 560 ID SN: 66041253874 SN: 66041253874 SN: 660410210 SN: 00110210 SN: UB3642J01700	Call Deta (Certificate No.) 08-Apr-16 (No. 217-0267202873) 08-Apr-16 (No. 217-0267202873) 08-Apr-16 (No. 217-02672) 08-Apr-16 (No. 217-02672) 08-Apr-16 (No. 217-02672) 08-Apr-16 (No. 217-02672) 08-Apr-16 (No. 217-02672) 08-Apr-17 (No. E33-3013, Dec17) 21-Dec-17 (No. E33-3013, Dec17) 21-Dec-17 (No. E33-3013, Dec17) 21-Dec-17 (No. E33-3013, Dec17) 21-Dec17) 21-Dec-17 (No. E33-3013, Dec17) 21-Dec17) 21-Dec-17 (No. E33-3013, Dec17) 21-Dec17) 21-Dec17 (No. E33	Scheduled Calibratian Apr-16 Apr-19 Apr-19 Dec-18 Dec-18 Dec-18 Dec-18 Scheduled Check In house check Jun-20 In house check Jun-20 In house check Jun-20 In house check Jun-20
Calibration Explorment used (M Permany Standards Powers moder NRP Powers amon NRP-281 Power sensor NRP-281 Reference 20 dB Attenuator Reference 20 dB Attenuator Reference 20 dB Attenuator DAE4 Secondary Blandards Prover mater E44198 Prover sensor E44198	ID SN: 104778 SN: 104778 SN: 103244 SN: 103245 SN: 35277 (25x) SN: 3513 SN: 360 ID SN: 360 SN: 36041253674 SN: 30141253674 SN: 300110210 SN: 000110210 SN: UB342L01700 SN: UB342L01700	Facility: ankironment temperature (22 ± 3)°C a Carl Deta (Certificate No.) 08-Apr-16 (No. 217-00572/00572) 08-Apr-16 (No. 217-00572) 08-Apr-18 (No. 217-00572) 08-Apr-18 (No. 217-00572) 08-Apr-18 (No. 217-00572) 08-Apr-18 (No. 217-00573) 08-Apr-18 (No. 217-00573) 08-Apr-18 (No. 217-00573) 08-Apr-19 (No. 2017) 21-Dasc-17 (No. CAE4-660 Dec17) 08-Apr-18 (In house) 08-Apr-18 (In house check Jun-18) 08-Apr-14 (In house check Ct-18)	Scheduled Calibratian Apr-19 Apr-19 Apr-19 Apr-19 Dec-18 Dec-18 Dec-18 Scheduled Check In house check: Jun-20 In house check: Oct-19
Salbrakon Espigment used (M Permary Standards Power meter NRP Power sector NRP-281 Power sector NRP-291 Reference 20 dB Attenuator Reference 20 dB Attenuator DAE4 Secondary Blandards Power mater E4412A Prover sector E4412A Prover sector E4412A Reference 4452A Power kensor E4452A Power kensor E4452A Power kensor E4452A Network Analyzer E8368A	ID SN: 104778 SN: 104778 SN: 103244 SN: 103245 SN: 38277 (20x) SN: 3813 SN: 3813 SN: 3860 ID SN: 3841250674 SN: 3841250677 Name	facility: ankironment temperature (22 ± 3)°C a Carl Date (Centricate No.) 08-Apr-16 (No. 217-0267202873) 04-Apr-16 (No. 217-02672) 04-Apr-18 (No. 217-02672) 05-Apr-17 (No. E53-5013, Dec/17) 21-Dec-17 (No. CAE4-660, Dec/17) Check Date (in house) 05-Apr-16 (in house check Jun-18), 05-Apr-16 (in house check Jun-18), 06-Apr-16 (in house check Jun-18), 06-Apr-17 (in house check Cer-18) Function	Scheduled Calibratian Apr-19 Apr-19 Apr-19 Apr-19 Dec-18 Dec-18 Dec-18 Scheduled Check In house check: Jun-20 In house check: Oct-19
Calibration Explorment used (M Permany Standards Power meter NRP Power sensor NRP-281 Power sensor NRP-291 Reference 20 dB Attenuator Reference Probe ES30V2 DAE4 Secondary Standards Power mater EA4108 Power sensor EA412A Reference C4412A Reference C441	IBTE onlicel for extinuition) ID SN: 104778 SN: 103244 SN: 103244 SN: 35277 (20x) SN: 3550 ID SN: 3560	Facility: ankironment temperature (22 ± 3)*C at Carl Date (Certificate No.) 04-Apr-16 (No. 217-026720) 04-Apr-16 (No. 217-02672) 04-Apr-18 (No. 217-02672) 05-Apr-18 (In house) 05-Apr-16 (In house) 05-Apr-16 (In house Check Jun-18) 06-Apr-16 (In house check Cot-18) Function Laboratery Technican	Scheduled Calibration Apr-19 Apr-19 Apr-19 Apr-19 Dec-18 Dec-18 Dec-18 Scheduled Check In house check: Jun 20 In house check: Jun 20

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Report No. : E5/2018/A0012 Page: 33 of 80

Schmid & F Engineer	Sin & Low L	S Sohwsizurischer Kalimierdiunst Strivice suisee d'étalomage Strivice sylizzers di larement Swine Califoration Sorvice
The Swiss Acc	re Swiss Accreditation Service (SAS) midlitation Service is one of the signatories to the EA reason the the recognition of calibration certificance	Accessibilition No.: SCS 0105
Glossary: TSL NORMX, y. z ConvF DCP CF A, B, C, D Potenzation (Potenzation (Connector Ar	tissue simulating liquid sensitivity in free space sensitivity in TSL (NORMx,y,z dictic compression point creat factor (1/duty, cycle) of the RF algn6/ miciolation dependent linearization parameters p oprotation around probe axis I S relation around at axis that is in the plane no Let, S = 0 is normal to probe exis	ormal to probe axis (8) measurement center).
 a) IEEE Absor- Techn b) IEC 6 held s c) IEC 6 used 	Is Performed According to the Following St Std 1528-2013, "IEEE Recommended Practice for Determ rightion Rate (SAR) in the Human Head from Wireless Com- misues". June 2013 32209-1.", "Measurement procedure for the assessment o and bady-mounted devices used next to the ear (frequenc 32209-2. "Procedure to determine the Specific Absorption In close proximity to the human body (frequency range of 855684, "SAR Measurement Requirements for 100 MHz U.	nining the Peak Spatial-Averaged Specific imunications Devices: Measurement of Specific Absorption Rate (SAR) from hand- y range of 300 MHz to 6 GHz)*, July 2016 Rate (SAR) for wireless Communication devices 30 MHz to 6 GHz)*, March 2010
	Applied and Interpretation of Parameters:	D D GHZ
NOR NOR NOR NOR NOR	Mx, y, z : Assessed for E-field polarization $\emptyset = 0$ (F< 900 MF/Mx, y, z are only intermediate values, i.e., the uncertainties namy inside TSL (see below ConvF). M(x, y, z = NORMx, y, z = NORMx, y, z = NORMx, y = NORMx, y = NORMx, y, z = NORMx, y, z = NORMx, y	of NORMx, y z does not affect the E ² -field incy Response Chart). This linearization is
in the DCPA signs	emented in DASY4 software versions later than 4.2. The un stated uncertainty of ConvF. x,y,z: DCP are numerical insenzation parameters assessed al no uncertainty required). DCP does not depend on frequ- EAR in the Dept to Accessed Both Industry adjustment	ed based on the calls of power sweep with GW achoy flor media,
 Ax.y.; 	PAR is the Peak to Average Ratio that is not calibrated by identified z; Bx,y,z; Cx,y,z; Dx,y,z; VRx,y,z; A, B, C, D are numerical atio of paver sweep for specific modulation signal. The parallel provides of the parallel of the paralle	no based baseasa areferment of the contraction of
Conv	a. VR is the maximum calibration range expressed in RMS in and Boundary Effect Parameters: Assessed in flat phan dard for f < 800 MHz) and inside waveguide using analytic:	Svoltage across the diode. Iom using E-field (or Temperature Transfer

standard for til s 800 MHz) and inside waveguide using analytical field distributions based on power measurements for til s 800 MHz. The same octupe are used for assessment of the parameters explied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 softwarm to improve probe accuracy close to file boundary. The samelinity in TSL corresponder to NORMX, y.2 * Com/* Alteredy the uncertainty corresponde to that given for Com/*. A frequency dependent Gonv/* is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.

- Schwitchl isotropy (3D deviation from isotropy): In a field of low gradients realized using a flat piranism exposed by a patch antaina. Sensor Offset: The sensor offset corresponds to the offset of writial measurement center from the probe to
- (on probe axis). No tolerance required, Connector Angle: The angle is assessed using the information gained by dutermining the NORMs (no
- ۲ uncertainty required).

Caritificate No: EX3-3838 Oct18

Page ≥ cf 39

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EX3DVA - SM:3508

Report No. : E5/2018/A0012 Page: 34 of 80

Christer 24, 2848

Probe EX3DV4

SN:3938

Manufactured: Calibrated:

May 2, 2013 October 24, 2018

Calibrated for DASY/EASY Systems (Note: non-compatible with DASY2 system!)

Certificate No: EK3 3558/ DVHB

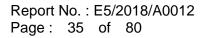
Page 3 of 30

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EXIDV4-SN adda

Optaber 24, 2018

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3938

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm [µV/(V/m)*)*	0.51	0.57	0.33	± 10.7 %
DCP (mV) ^e	103.2	100.5	107.8	2 10-1 10

Modulation Calibration Parameters

UID	Communication System Name		A dB	B dBõV	c	D dB	VR mV	Unc ^c (k=2)
D	CW	X	0.0	0,0	1.0	0.00	164.0	±3:5 %
		Y	0.0	0.0	1.0		1742	-
1		Z	0.0	0.0	1.0		176.3	

Note: For details on UID parameters see Appendix.

Sensor Model Parameters

	G1 fF	C2 IF	a V 1	T1 ms.V-2	T2 ms.V ⁻¹	T1 ms	T4 V1	75 V"	Tê
X	59.09	436.9	35.15	26.09	1.205	5,10	1.012	0.575	1.009
¥	53.22	40B.3	37.24	24.25	1.457	5.10	0.000	0.766	1.013
Z	46.65	332.5	32.92	15.26	1.153	4.98	2.000	0.225	1.005

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

The uncertainties of Norm X,Y,Z do republied the E⁴-fault uncertainty minute TSL (see Plages 5 and 6)

Numerical Insurication parameter: widentamy nonrequired. Uncenterny is determined using Therman, dentation from imper response wideying widentative dents to and is expressed for the source of the

Certificate No: Ex3-3938 Oct18

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EX3DV4--EN:3908

October 24, 2018

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3938

t (MHz) ^G	Relative Permittivity	Conductivity (S(m)	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^a (mm)	Une (k=2)
750	41.9	0.89	9.82	9.82	9,62	0.45	0.80	± 12.0 %
835	41,5	0.90	9.50	9.50	9.50	0.50	0.85	± 12.0 %
900	41,5	0.97	9.25	9.25	9.25	0.33	1.04	+12.0%
1450	40.5	1.20	8.53	8.53	8,53	0.30	0,88	± 12.0 %
1750	40:1	1.37	8.32	8.32	8.32	0.36	D,90	± 12.0 %
1900	40.0	1.40	7.85	7.95	7 95	0.29	0,90	±12.0%
2000	40.0	1.40	7.93	7.93	7:93	0.35	0.80	± 12.0 %
2300	39.5	1.67	7.59	7.59	7.59	0.37	0.80	112.0%
2450	39.2	1.80	7.17	7,17	7.17	0.39	0.83	±12.0%
2603	39.0	1.96	231	7.11	7.11	0.38	0.87	± 12.0 %
5250	35.9	4.71	5.00	5.00	5.00	0.40	1.80	£ 13.1 %
5600	35.5	6.07	4.65	4.65	4.85	0,40	1.80	± 13,1 %
5750	35.4	6.22	4.76	4.76	4.76	0,40	1.80	±13.1 %

Calibration Parameter Determined in Head Tissue Simulating Media

⁶ Enclaimely which a box 300 MHz of ± 100 MHz anly applies for DASY v4.4 and ingles (see Page 2), each is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvE uncertainty at calibration frequency and the uncertainty for the initiational lequency tend. Inequency which is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvE uncertainty at calibration frequency and the uncertainty for the initiational lequency tend. Inequency which is the astrongen to ± 100 MHz.
⁶ A tradington of the ConvE uncertainty at calibration frequency and the uncertainty for the initiational lequency tend. Inequency which is the astrongen to ± 100 MHz.
⁶ A tradington of the convE uncertainty of the convE assessments in 10, 64, 120, 150 and 220 MHz respectively. Above 5 GHz thequency with the tradington of the convE as a static tend to ± 100 MHz.
⁶ A tradington of the ConvE assessments in 10, 64, 120, 150 and 220 MHz respectively. Above 5 GHz thequency with the tradington of the uncertainty of the convE as a static tend to ± 100 MHz.
⁶ A tradington of the ConvE assessments are the tradington of the tradington of the uncertainty is a static tend to ± 100 MHz.
⁶ A tradington of the ConvE assessments are the tradington of the tend of the uncertainty is a static tend to ± 50%. The uncertainty is the RSS of the ConvE model.
⁶ A tradington of the convE assessments.
⁶ A provide the tend of tend of

Certificate No: EX3-3938_Oct18-

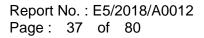
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EX3DV4- SN:3935

October 24, 2018

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3938

Calibration Paramete	r Determined in Bod	y Tissue Simulating Media
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F(MHz) ¹²	Relative Permittivity	Conductivity (\$/m)	ConvF X	ConvF Y	ConvF Z	Alpha ⁰	Depth ^{is} (mm)	Une (k=2)
750	55.5	0,96	9.72	9.72	9.72	0.46	0.87	± 12.0 %
835	55.2	0.97	9.56	9.56	9.55	0.41	0.92	± 12.0 %
5000	55.0	1.05	9.33	8.33	9.33	0.48	0.87	± 12.0 %
1450	54.0	1,30	7,98	7,98	7.98	0.32	0.90	± 12.0 %
1760	53.4	1.49	7.83	7.83	7.83	0.43	0.90	+ 12.0 9
1900	53.3	1.52	7.52	7.52	7.52	0.33	0.96	± 12.0 %
2000	53.3	1.52	7.62	7,62	7:62	0,36	0,89	± 12.0 %
2300	52.9	1.81	7.35	7.33	7.33	0.42	11.87	= 12.0 %
2450	52.7	1.95	7.30	7.30	7.30	0.35	0.87	= 12.0 %
2600	52.5	2.16	7.15	7.15	7.15	0.33	0.95	± 12.0 %
5250	48,9	5,36	4.23	4.23	4,23	0.50	1.90	± 13.1.%
5800	48.5	5.77	3.77	3.77	3.77	0.50	1.90	±13.1%
6800	48.2	6.00	4.00	4.00	4.00	0.50	1.90	± 13.1 %

⁶ Finguency validity dopse 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher lisen Page 2), etc. It is instanted to ± 30 MHz. The anomalisity in the RSS of the ConvE undertainty at Latibular Inspectory and the uncertainty in the installard Inscalard Inscalary band. Finguency warmy below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvE assessments at 30, 64, 128, 150 and 220 MHz respectively. None 6 GHz theorem yind years be extended to ± 100 MHz. The installard Inscalary is the RSS of the ConvE undertainty of the ConvE assessments at 30, 64, 128, 150 and 220 MHz respectively. None 6 GHz theorem yind years be extended to ± 100 MHz. The installard Inscalary is the RSS of the ConvE assessments at 30, 64, 128, 150 and 220 MHz respectively. None 6 GHz theorem yind years be extended to ± 100 MHz. The installard Inscalary is the RSS of the ConvE assessments at 30, 64, 128, 150 and 220 MHz respectively. None 6 GHz theorem years below 3 GHz, the validity of issue parameters (is anti-in) can be retracted to ± 10% information formation (converted to ± 10% Hz, the validity of issue parameters (is anti-in) can be retracted to ± 10% information formation (converted to ± 10% Hz). The undertainty is the RSS of the ConvE assessments at 30, 64, 128 (information (converted to ± 10% Hz). The undertainty is the RSS of the ConvE assessments at 30, 64, 128 (information (converted to ± 10% Hz). The undertainty is the RSS of the ConvE assessment at 30, 64, 128 (information (converted to ± 10% Hz). The undertainty is the RSS of the ConvE assessment (converted to ± 10% Hz) is the RSS of the ConvE assessment (converted to ± 10% Hz) is the RSS of the RSS of the RSS of the RSE of the converted to the RSE of the ConvE assessment (converted to ± 10% Hz). The undertainty is the RSS of the RSE of the RSE of the converted to ± 10% Hz assessment (converted to ± 10% Hz) is the RSE of the converted to ± 10% Hz assessment (converted to ± 10% Hz). The undertainty is the RSE of the RSE of the converted to ± 10% Hz assessment (converted

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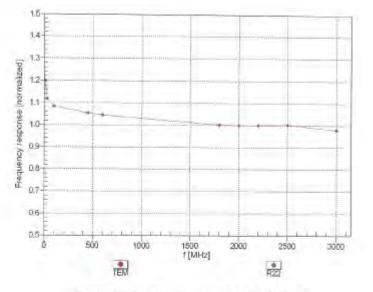


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EX3DV4- SN 3938

October 24, 2019

Frequency Response of E-Field (TEM-Cell;ifi110 EXX, Waveguide: R22)



Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

Certificate No: EX3-3938 Oct18

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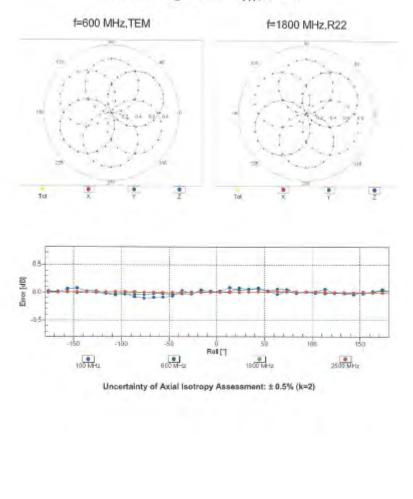
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EX3DV4- SN:3938

October 24, 2018



Receiving Pattern (\$), 9 = 0°

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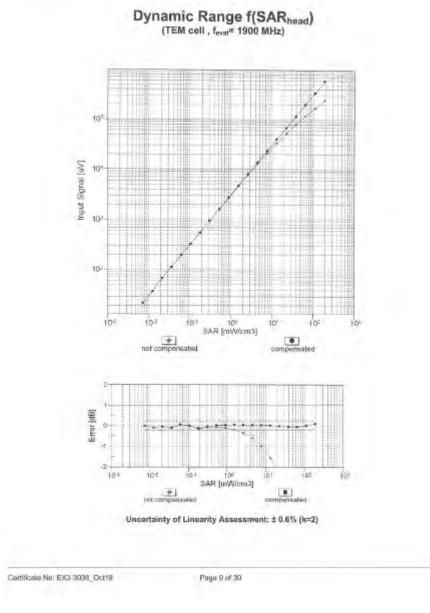
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EX3DV4- 5N.3938

October 24, 2018



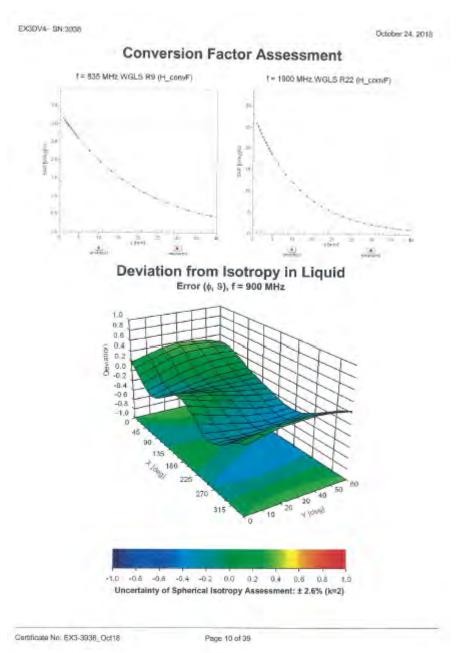
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EX3DV4--SN:3838

Onicher 24, 2018

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3938

Other Probe Parameters

Sensor Amangement	Trlangular
Connector Angle (*)	-26.4
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diamater	2.5 mm
Proba Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point.	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Massurement Distance from Surface	1.4 mm

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EX3DV4-SN:3935

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Ordnber 24, 2018

UID	Communication System Name		A dB	dB õV	c	tB	WR mV	Max Unc* (k=Z)
0	CW	X	0.00	0.00	1.00	0.00	164.0	± 3.5 %
	1	Y	0.00	0.00	1.00		174,2	
		Z	0.00	0.00	1.00		176.3	
10010- CAA	SAR Validation (Square, 100ms, 10ms)	x	11.84	84.28	19.03	10.00	20.0	19.8%
1.1		Y	4.75	72.52	14.55	_	20.0	
-		7	2.70	65.86	10.62		20.0	1.1.1.1
10011- CAB	UNITS-FED (WCDMA)	×	1,25	71.04	17.46	0.00	150,0	当尊臣将
		Y	0.87	65.19	13,50		150.0	
	and an and the second second second second second	Z	1 10	69.84	16,56		150.0	
10012- CÁB	IEEE 802,11b WIFI 2.4 GHz (DISSS, 1 Mbps)	X	1.29	65.77	16,62	0.43	100.0	±.9,6 %
		Y	113	63,57	14.74		150.0	
10013-	IEEE 802.11g WIFI 2.4 GHz (DSSS	ZX	1.17	64.77	15.66	1.46	150.0 150.0	29.6%
CAB	OFDM, 6 Mbps)	Y	4.93	66.63	17.40	1,40	100.0	# 9/0 %
		Z	4.79	66.72	16.84	-	150.0	
10021-	CSM-FOD (TDMA, GMSK)	× ×	100.00	118.51	30.68	9.39	50.0	19.8%
DAC	GBIN-FOD (TDINA, GWGK)	v	100.00	117.47	30.14	9,39	50.0	2.9.0.%
		Z	9.68	81.65	18.25		50.0	
10023- DAC	OPRS FDD (TDMA, GMSK, TN 0)	x	100.00	118,45	30.70	9.57	50.0	± 9.6 %
and the		Y.	100.00	117.42	30.17		0.60	
		Z	8.28	79.56	17.55		50.0	
10024- DAC	GPRS-FDD (TDMA; GMSK, TN 0-1)	×	100.00	116.27	28.62	6,56	60.0	±9,6%
		Y	100.00	113.88	27.38		63.0	
		Z	17.36	88.43	18.89		60.0	
10025- DAC	EDGE-EDD (TDMA, IIPSK, TN 0)	×	14.85	105,19	41,18	12.57	50.0	1964
		Ŷ	6.69	80.08	30.32		50.0	
	and a second and an and a second seco	Z	5,13	73.32	26.13		50.6	
10026- DAC	EDGE-FOD (TDMA, 6PSK, TN 0-1)	×	28.61	116.31	40,38	9.56	60/0	#86%
		Ŷ	17.18	103.12	35.82	-	60.0	
		Z	10.76	82.22	31,22	1.000	ED.D	1000
10027- DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2)	×	100,00	116.23	27.82	4,80	80.0	± 9.6 %
_		Y	100.00	112.20	25.80		80.0 80.0	
10028- DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)	X	100.00	117.56	27.68	3.55	100.0	±9.8%
UNU		Y	100.00	111.19	24.62		100.0	-
		Ż	100.00	105.05	21.28	-	100.0	
10029- DAC	EDGE-FDO (TDMA, JPSK, TN 0-1-2)	×	14.44	99.44	33.73	7.80	80.0	± 9.6 %
		Y	10.38	91.48	30.62		0.08	
-		Z	6.98	83.31	26.90	-	0.08	
10030- CAA	IEEE BOZ.15.1 Bluesonth (GFSK, DH1)	8	100.00	115.12	27.62	5,30	70,0	19.6%
		Y	100.00	111.80	25.93		70.0	
		Z	13 15	85.08	t7,21		76.0	
10031- CAA	IEEE 802.15.1 Bluelooth (GFSK, DH3)	X	100.00	120.41	27.44	1.88	100.0	± 9.6 M
3- 1 M.		Y	100.00	105.85	20.53	-	100.0	-
-		Z	100.00	102.30	18.53		100.0	

Certificate No: EX3-3938_Oct78

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10032	IEEE 802:15 1 Bluetooth (CESK, DH5)	T X	100.00	129.17	29.93	1.17	100.0	1106%
DA4	Constant of the second se	2.11	1.00100		60100	1.10	1000	2.010.2
		N.	100.00	101.34	18.33		100.0	1
		Z,	100.00	104.25	18.82	1	100.0	
1003:1- C.4.Á	IEEE 802.15.1 Blowbath (PI4-DQPSK. DH1)	×	100.00	128.01	35,11	5.30	70,0	19.6 N
_		Y	30.26	106.06	28.70		70.0	-
10034-	IEEE 802 15 1 Bluelooth (FW4-DOPSK	X	7.06	82.85	20.38		70,0	
GAA	DH3		31.82	84.70	29.61	1.88	100.0	= 9.6 %
-		Y Z	3.36	77.14	19.61		100,0	
10035-	IEEE 802151 Bluelogth (PI/4-DOPSK	X	8.76	93.74	24.54	1.17	100.0	190%
CAA	DH5)	Y	2.68	74.38	16.81	3.0%	100.0	2 20 4
		Ż	2.45	74.78	16.51		100.0	
10036- CAA	IEEE 802.15.1 Bluexoth (8-DPSK, DH1)	X,	100.00	128.23	35.27	5.30	70.0	19.0%
1.000		X	49.55	114:02	30.85	-	70.0	
	The contract of the second second	Z	8,61	35.86	21.44	-	70.0	
10037- CAA	IEEE B32 15 1 Billelooth (B-DPSK, DH3)	x	28.47	109.85	29.14	1,88	100.0	± 9.6%
		Y	4.63	60.65	15,28		100.0	-
		Z	3.10	76:20	17.05		100.0	1.1
10038- CAA	IEEE 802 16 1 Blunioch (R-DPSK, DH5)	×	9.40	95,18	25.08	1.07	100,0	19.6%
_		Y	2.66	74.97	16.94		100.0	
10039	CONTRACTOR OF THE PARTY PARTY	Z	2.52	75,38	16.85		100.0	Sec. 177.
CAB	CDMA2009 (1xRTT, RC1)	x	2.91	79.68	19,30	0.00	158.0	+96%
_		Y	1.40	67.94	13.51		150.0	
10042	(S-54.) IS-136 FOD (TDMA/FDM, PI/4-	2	2.58	79.60	18.81		150.0	
CAB	DQPSK, Hairale)	×	100.00	114.29	27.89	7.78	50.0	±96%
		Y	100.00	112.24	26.53	-	50.0	1
10044-	(S-BI/EIA/TIA-553 FOD IFDMA, FMI	X	7.08	77.78	15.66		50.0	
CAA	Seattle and the ready that	Y		111.10	2.98	0.00	150.0	19,6%
-		Z	0.12	121.97	13.25		150.0	
10046-	DECT (TDD. TDMA/FDM, GFSK, Full	X	100.00	124.36	11.44	10.00	150.0	
CAN	Slat 24)	2	28.80	98.60	27.12	13.60	25.0	19,8%
		2	6.10	73.04	18.88	-	25.0 25.0	
10045- 14.4	DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)	X	109.00	118.79	31.19	10.79	40.0	#98%
		Y.	42.73	105.35	27.69	-	40.0	
		7	6.52	75.70	16,44		40.0	1
10058- 544	UMTS-TOD (7D-SCDMA, 1-28 Mops)	x	59.92	118.40	32.89	9,03	50.0	±0.8%
		Y	20.27	96.61	26.81	-	50.0	-
0058-	EDGE EDG/TEALA	2	8,72	#1.4R	20.30	1.1	50.0	-
DAC	EDGE-FDO (TDMA, BPSK, TN 0-1-2-3)	X	3.95	90.34	29,75	6.55	100.0	19.6%
		4	7.41	64.68	27.34	-	100.0	
0059-	IEEE 802 110 WIFI 2.4 GHz (DSSS, 2	ZX	5.37	78.46	24.34		100.0	·
CAB	Mops)	101	0.04	68,16	17.83	0.67	118.0	2384
_		Y	1.24	65.28	15,64		110.0	
0060-	IEEE 802.11b WIFI 24 GHz (DSSS, 5.5	Z	1:24	66,08	15.24		110.0	-
BAC	Mbps)	×	100.00	136.52	35.86	1,30	110.0	#86%
			100.001	127.82	31.55		110.0	
		Z	75.11	127/04	31.74		110.0	

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10051-	IEEE 802 11b WIFI 2 4 GH2 (DSSS. 11	X	37.93	122.29	34,76	2/04	110.0	±9.6 K
CAB	Mbps)	Y	7.04	91.70	25.29	-	110.0	
		Z	3.71	82.53	21.92	_	110.0	-
0062- CAC	IEEE 802 11a/h WIFI 5 GHz (OFDM, 6 Mbps)	X	4.83	66.93	16.78	0.49	100.0	*96%
		Y.	4.68	66.44	16.40	1	100.0	
		Z	4.61	66.82	16.41		100,0	
0063- CAC	IEEE 802,11a/h WIFI 5 GH2 (OFDM, 9 Mbps)	x	4,86	87.07	16,91	0.72	100.0	#9.8.%
		Y	4.71	66.58	16.52	-	100.0	
10064-	serve who are a shirt of calls for bits an	Z	4.62	86.89	16.47	20.000	100.0	
CAC	IEEE 802.11a/h WIFI 5 GHz (OFDM, 12 Mops)	×	5.19	67.38 86.91	17.15	0.86	100.0	±9.6%
		Z	5.02	67.10	16.79	-	100.0	
100E5-	IEEE 802 11ah WIFI 5 GHz (OFDM, 18	X	5.07	67.10	17.30	1.21	100.0	± 9.8 %
CAC	Mops)	Ŷ	4,91	66.89	18.94	1.21	100.0	1 9,0 %
				66.99		_		
10086-	IEEE 802.11a/h WiFi 5 GHz IOFDM 24	Z	4.77	67.44	16.73	1.46	100.0	19.6%
CAC	Mbps)			1.2.2	1. C.	in and	10000	10.0 %
		Y.	4.95	66.98	17.15		100.0	
		Z	4,78	66.99	16.85	12	100.0	1
10067- CAC	(EEE 802.11a/h WiFI 5 GHz (OFDM, 36 Mbps)	×	5,40	67.52	17.91	2.04	100.0	主用原格
		Y.	5.26	67.17	17.62		100.0	
		Z	5,06	67.09	17.23		100.0	
10068- DAC	IEEE 802 11a/h WIFI 5 GHz (OFDM, 48 Mbps)	X	5,51	67.80	18.25	2.55	100.0	± 9.6 %
		Y	5.36	87.40	17.94		100,0	1.1
	the second s	Z	5.11	67.14	17.41		100.0	1.24.8
10069- CAC	IEEE 802 11a/h WIFI 5 GHz (OFDM, 54 Mbps)	×	5.58	67.69	18.40	2.67	100.0	19.6%
		Y	5.44	67.37	18.13		100.0	-
		2	5.19	67.11	17.58		100.0	
10071- CAB	(EEE 802.11g W/FI 2.4 GHz (DSSS/OFDM, 9 Mbps)	×	5.17	67.17	17.75	1.99	100.0	±9.6%
		Y	5.05	66.81	17.46	-	100.0	
12.544	THE AND IN THE REPORT OF A PAIL	Z	4.88	66.78	17.09	2.30	100.0	±9.6 %
10072- CAB	(DSSS/OFDM, 12 Mbps)	×	5.21	67.68 67.27	17.74	2.30	100,0	= 9.0 %
		Z	4.87	B7.11	17.28		100.0	
10073- CAB	(EEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps)	X	5.30	67.92	18.44	2.83	100.0	1985
	Thereased with the taplets	Y	5.18	67.55	18:13		100.0	-
		Z	4.94	57.26	17.56		100.0	1.00
10074- GAB	IEEE 802 11g WIFI 2.4 GHz (DSSS/OFDM, 24 Mbps)	x	5.29	67,90	18.65	3.30	100.0	±96%
		·Υ	5.19	\$7.54	18.34		100.0	
		Z	4.93	. 67.18	17.70	-	100.0	1000
10075- CAB	(DSSS/OFDM, 36 Mbps)	×	5.40	68.28	19.10	3.82	ACA.	7.0 F.#
100		Y	5.28	67.86	18,77	_	90.0	-
	1000 400 44-1110 a 1 601	Z	4.98	67.33	17.99	4.15	90.0	196%
10076- GAB	(DSSS/OFDM, 48 Mbps)	X	5.38	67,97	19,17	4.15	90.0	20.0.2
		Y	5.29	67.64	18.88		90.0	-
10077	ALL SOUTH AND DE CON-	Z	5.00 5.41	87.13 68.03	18,10	4:30	90.0	196%
10077- CAB	(DSSS/OFDM, 54 Mbps)	×		1.000	19.26	-,40	90.0	1 3 0 %
-		Z	5.32	67.72	18.98		90.0	-
		12	5.93	07.61	10.19	A	100.0	1

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10081-	CDMA2900 (1xRTT, RC3)	X	1.20	70.94	15.87	0.00	1 150.0	19.5%
CAE		-	-			1.000		
_		Y	0.68	63.33	10.59		150.0	
10082-	In style you sho includes that	Z	.0.97	69.12	14.01		150.0	
CAB	IS-54 / IS-138 FDD. (TDMA/FDM, P/4- DQPSK, Fulirate)	×	1.35	61,30	6.54	4.77	80.0	19.6%
-		4	1,15	60.10	5.56		80.0	
10890-	GPRS-FEID (TDMA, GMSK, TN 0-4)	Z	0.90	60.00	4.82	-	80.0	
DAC	GPRS-PUD (10MA, GMSH, 19/0-4)	×	100.00	116.34	28.67	6.56	60.0	±9,6%
		Y	100.00	113.98	27.45		60.0	
10097	UMTS-EDD (HSDPA)	Z	16,90	88.08	18.81		0.09	
CAR	Unito FUD (HAUPA)	×	1.98	69.10	16,70	0.00	150.0	19.6%
		Z	1.88	66.14	14.64		\$50.0	
10088-	UMTS-FDD (HSUPA, Subles) 2;		1.92	60.38	16.52		180.0	
CAB	unita-FOD (Haura, auties) 2;	×	1.94	69.09	16.77	0.00	150,0	29.6%
		Y	182	66,08	14,59	-	150.0	
10099-	EDGE EDD CTUMA BEEK THANK	2	1.87	69,33	16.49	1000	150.0	
DAC	EDGE-FOD (TDMA, 8PSK, TN 0-4)	×	28.67	116.31	40,37	9.56	0.00	±9.6%
		Y	17.22	103.14	35.83		60.0	-
10100-	LTE-FOD (SC-FDWA: 100% RB: 20	2	10.80	92.24	31.22		60.0	-
CAE	MHz, QPSK)	X	3.51	72.21	17.62	0.00	159,0	±96%
		Y	2.94	69.12	15,85	1	150.0	
10101-	Law entry and entry and and has	2	8.29	71.84	17.33	1.00	150,0	
CAE	LITE-FOID (SIC-FDMA, 100% RB, 20 MH2_16-QAM)	×	3,42	68.37	16.44	0.00	159/3	±96%
_		Ŷ	3.15	66,88	15.45		150.0	
10102-	the second se	Z	3.26	58 19	16.19		150.0	1
CAE	L7E-FDD (8C-FDMA, 100% RB, 20 MHz, 64-DAM)	8	3.51	68.25	16.50	0,00	150.0	186%
		- Y-1	3.25	55.87	15.57	1	158.0	
10103-		Z	3:35	88.16	18,28		150.0	
GAG	LTE-TOD (SC-FDMA, 100% RB, 20 MHz, QPSK)	×	9.10	80,51	22.32	3,98	85.0	196%
		Y.	7.71	77.60	21.05	-	65.0	
10108-	1.40	2	6.72	75.88	19.85		.65.0	
CAG	LTE-TDD (9C-FDMA, 100% RB, 20 MH2_16-QAM)	×	8,36	77.67	22.08	3.98	85.0	+9.6%
		¥.	7.66	75,78	21.18		65.0	
PRo Pro		Z	6.54	73.78	19,84		65.0	
10105- 0AG	LTE-TOD (SC-FOMA, 100% RB, 20 MHz, 64-QAM)	x	8.22	77.35	.22.27	3.98	65.0	3.0.6 %
_		Y.	7.00	74.28	20,84		65.0	
10108-	1 the Mater over 1995 by	Z	8.41	73.36	19.96		65.0	1.00
ZAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QP5K)	8	3/17	71.32	17.44	0.00	150,0	±9.6 %
		Y	2.58	68.37	15.87		150,0	
10109-	1 TEMPANAMETERS	- 2.	2.85	71.00	17,15		180.0	1.000
CAG	LTE-PDD (SE-FDMA, 100% RB, 10 MHz, 16-QAM)	.X.	3.09	68.24	16,43	9.00	150.0	±88%
		Y	2.80	66.64	15.30		150.0	
0110-	I TE EDD (DA EDALA ARRAY DA ANT	Z	2.62	68.15	16.17	_	150.0	
CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, DPSK)	x	2.51	70.39	17,18	0.00	150.0	± 9/6 %
-		Y.	2.08	67.38	15.21		150.0	
0111-	LIFE FEDD (SO FEDD)	Z	2,30	70.10	16.80		150.0	
DAVG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	x		69,15	16,90	11.00	150.0	+9.6 %
-		· Y	2.43	67.13	15.44		150.0	1
		Z	271	69.56	16.7E		150.0	

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10112-	LIE-FOO (SC-FDMA, URPS RB, 10	×	3.20	88.13	16.43	0.00	150.0	主导反称
CAG	MH2_ 64-QAMI	Y	2.93	80,85	15.39	-	160.0	
		2	3.04	68.13	16.21	-	150.0	
CAIG	LTE-FOD (SC-FOMA: 100% RB, 5 MHz	x	2.58	69.16	16.96	0.00	150.0	1965
Lerisa	[0152590]	X	8.64	87.31	15.65		150.0	
		Ż	2.87	69.66	16.87		150.0	-
10734- CAC	GEE 802-11n (HT Greenheid, 13.5 Mbps. BPSK)	х	5.21	67.32	16.54	0.00	150.0	1985
		Y	5.08	66.85	16 21		150.0	
		Ź	5,00	67.43	16.43	the second	150.0	
10110- CAC	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	×	5.56	67.60	16.68	0.00	150.0	±9.8%
		Y	5.42	67.15	16.37		150.0	
-		Z	5:34	67.52	16.48		150.0	
10116- CAC	IEEE 802,111 (HT GreenBeld, 135 Mbps: 64-GAM)	X	5,33	67.58	16.60	0.00	150.0	+0'8 e
	1	· Y	5.19	67.09	16.26		150.0	
10117-	IEEE 802 110 (HT Mixed, 13 5 Mbds,	X	5.15 5.21	67 61 67 33	16.44 15.56	0.00	150.0	±9,6 %
CAC	BPSKI	10	5.06	0.00	10.10		175.0	
		7	5,06	66,76 67.31	16.19	-	150.0	
10116- CAC	(EEE 802.11n (HT Mored, 81 Mbps. 16- QAM)	X	5.83	67.75	16.76	0.00	150.0	‡9E =
white	GARGE .	Y	5.56	07.54	15.45		150.0	-
		ż	1.41	67.66	15.55	-	150.0	
10115- DAG	IEEE 802.11n (HT Mixed: 135 Mbps, 64- QAM)	X.	6.20	87,52	16.58	0,00	150,0	19.6 %
100 100	Section 2	Y	5.16	67.02	16.24		150.0	
	the second second second second	Z	0.13	87.55	16.43		150.0	
10140- CAE	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 10-QAM)	×	3.55	60.24	16.42	0.00	150.0	298%
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Ý	3.29	60.88	15.49		150.0	
A.c. yes	CANCEL OF A STATE OF A STATE OF A STATE	Z	1.39	68.15	10.19		150.0	
10141- CAE	LTE-FDD (5C-FDMA, 100%-RB, 15 MHz: 64-DAM)	×	3.65	68,26	111.55	00,12	150.0	=0.5%
		Y.	3.42	66.99	15.00		tablo	
	and the second sec	Z	3.52	68.25	16.36		150.0	1
10142- CAE	LTE-FDD (6C-FDMA, 100% RB, 3 MHz, DPSK)	×	2.31	70.61	17.10	0,00	150.0	¥96%
		×.	1 84	67.11	14.76	-	150.0	-
	The set of the local time are when	2	2.12	70.48	16.85	10.000	150.0	1000
10140- CAE	LTE-FDD (SC/FDMA, 100% RB, 3 MHz, 16-DAM)	×	2.11	70.28	16.99	00.01	150.0	4985
		7	2.31	37.48	15.00		150.0	-
10:44-	LTE-FDD (6C-FDM), 100% RB, 3 MHz, 64-DAM	X	2.68	70.99	16.78 15.37	0.00	150.0	± 9.6 %
GAE	Distrigravit	V	234	85.60	13.59	-	150.0	
		2	2.29	67.85	14 87		150.0	-
10145- CAF	LTE-FED (SD-FDMA, 100% RB, 1.4 MHz, GPSK)	x	1.93	10.60	16.10	0.60	150,0	±0.6%
-		Y		03.06	10,90	1000	150.0	h
		2	133 -	67.08	12.73		100.0	
10146- CAF	LTE FDD (SC-FDMA, 100% RE, 1.4 MHz, 18-QAM)	X	4.28	75,06	17.12	0.00	160.0	396%
-		Y.	2.47	6時71	13.45		150.0	-
10 10 10 10		2	2.38	66.35	12.25	0.00	150.0	1005
10147- DAF	LTE-FDD (SC-FDMA, 100% RB) 1.4 MHz, 64-QAM)	×	6,45	B1.86	19,47	0.00	150.0	±9,8 %
_		Y	3,10	7179	14.97		100.0	-
		- Z	3.20	72.21	14.01	1	150.0	

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10149-	LIE FOD (SC-FDMA, 50% RB, 20 MHz,	1.8	3,10	68.31	16.47	0.00	150.0	± 9.6 %
CAE	TB-DAM)	0	party	00.01	10.47	0.00	150.0	± 3,6 %
		Y.	2,81	66.69	15.35		150.0	-
		. Z	2.93	68.23	16,22		150.0	
10150- CAE	LTE-FDD (SC-FDMA: 50% RB, 20 MHz, 84-DAM)	x	3.21	68,18	18,48	0,00	150.0	29.6%
_		·Y	2.94	66.70	15.43		150.0	
		Z	3.05	68,20	16.26		150.0	1
10161- CAG	LTE-TOD (SC-FDMA, 50% RB, 20 MHz, QPSK)	×	10.13	83.77	23.67	3.98	85.0	296%
		Y. Z	8.42	80.52	22.26		85.0	_
10152-	LTE-TED (SC-FDMA 50% R8: 20 MHz	X	0.04	77.61	20.59	-0.04	65.0	
CAG	16-QAM)	Y	7 13	75.91	22.05	3,96	65.0	±9.6 %
		Z	6.04	73.58	19.44		65.0 65.0	
10153	LTE-TED (SC-FDMA, 50% RB, 20 MHz	X	8.44	78.82	22.75	3.98	85.0	19.6%
CAG	64-QAM)	Y	7.56	1.5000	1.2.2	3.00	1000 C	19.0 %
		Z	6.48	76.89	21.74		65.0	
10154- CAG	LTE-FDD (BC-FDMA, 50% RB, 10 MHz, OPSK)	X	2.59	70.97	20.30 17.50	0.00	65.0 150.0	± 9.6 %
Phillip	Sarving	N	2.12	67.77	10.17	-	1000	-
_		Z	2.12	70.74	15:47		160.0	-
10155-	LTE-FDD (SC-FDMA, 50% RB) 10 MHz.	X	2.36	69.15	17.16	0.00	150.0	1000
CAG	16-QAM()	Ŷ				0.00	150.0	7989
		Z	2.49	67.14	15.45	-	150,0	
10158- CAG	LTE-FDD (SC-FDMA, 50% R8, 5 MHz, OPSK)	X	2.21	89.67 71.19	16.78 17.23	0.00	160.0 160,0	±96%
	and a second sec	Y	1.65	67.01	14.46	-	150.0	-
		Z	2.01	71.01	16.65		150.0	-
10,157- CAG	LTE-FDD (SC-FDMA, 50%, RB, 5 MHz 16-QAM)	×	2.40	88.89	15.72	0.00	150,0	±96%
_		Y.	1.95	65.89	13.48	-	150.0	
		2	2.19	68.70	14.94		150.0	-
10158- GAG	LTE-FDD (SC-FDMA, SV% RB, 10 MHz, 54-QAM)	x	2.98	69 22	17.01	0.00	150 0	198%
_		X.	2.65	67.36	15.65		150.0	
10159-	1.99 man and part inter the	2	2.68	69.75	16.93		150.0	
CAG	LTE FOD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	X	2.54	69.44	16.05	0.00	150.0	±36%
		Y	2.05	86.31	13.77		150.0	
10160-	LTE-FOD (SC-FDMA, 50% RB, 18 MHz	Z	2.34	69.42	15.34	-	150.0	
CAE	QPGK)	×	2.96	69.71	18.97	0.00	150.0	196%
		Y	2.78	67.67	15.60	-	150.0	
ID161-	LTE-FDO (SC-FDMA, 50% RB, 15 MHz; 16-GAM)	Z X	3.11	69.58 68.11	16.72 16:44	0.00	150.0	± 8,6 %.
	(a) and (a)	Y	2.85	66.60	15:34		100.0	
		2	2.95	68.19	16:22	-	150.0	
10162- CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-OAM)	x	3.21	68.15	16.50	0.00	150.0 150.0	296%
_		9	2.94	66.74	10.46		150.0	-
0402	View Processing and the local statements of the	2.	3.08	68.32	16.32		150.0	
1018B- DAF	LTE-FDD (SC-FDMA, 50% R6, 1,4 MHz, OPSK)	X	4.07	71.03	19.91	3.01	150.0	+965
		Y	3.79	69.95	19.36		150.0	1
0187-	LTE FROM LOAD TONAL	7	3.83	71.36	19.78		150.0	
10187- 3AF	LTE-FDO (SC-FDMAL 50% RE, 1.4 MHz, 18-OAM)	8	5.42	74.80	20.07	3.01	150.0	±0.6%
_		Y	4.77	72.78	19.75		150.0	
		2	5.29	75.01	20.77		150.0	

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10168-	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz,	X	6.05	77.17	21.98	3.01	150.0	±9.6 %
CAF	64-QAM)		1.121		50088 J		-1122-55	2 0.0 10
		Y	5.30	75.09	21.09	-	150.0	
		Z	6.36	79.86	22.71		150.0	
0169- CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	×	3.85	72.93	20.70	3.01	150.0	± 9.6 %
		Y	3.33	70.15	19.41		150.0	
0170-	LTE-FOD (SC-FDMA, 1 RB, 20 MHz.	Z	3.47 6.37	72.51 81.48	20.23	3.01	150.0	+ 0 0 0
CAE	16-QAM)	1	Sec. 1	623.5	23.72	3.01	150.0	±9.6 %
		Y	4.75	76.10	21.63	_	150.0	
0171-	LTE-FDD (SC-FDMA, 1 RB, 20 MHz,	ZX	7.01 4.87	85.04	20.53	3.01	150.0	±9.6 %
ALE .	64-QAM)	Ŷ	3.87	71.72	18.83	5.01	150.0	20.0 %
		Z	4.54	76.13	20.23		150.0	
10172-	LTE-TDD (SC-FDMA, 1 RB, 20 MHz,	X	80.41	131.60	39.78	6.02	65.0	±9.6 %
CAG	QPSK)				32.14	0.02	65.0	2 9.0 %
		Y.	18.51	103.18	32.14 29.18		65.0	
10173-	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	X	100.00	127.75	36.65	6.02	65.0	±9.6 %
CAG	TD-GAM)	Y	30.31	107.15	31.45		65.0	
		Z	25.08	102.02	28.13		65.0	
10174- CAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	X	60.73	116.92	33.35	8.02	65.0	± 9.6 %
	or anny	Y	21.73	99.84	28.80		65.0	
		Z	17.08	94.57	25.40		65.0	
10175- CAG	LTE-FDD (SC-FDMA, 1 RB, 10 MHz. OPSK)	X	3.78	72.50	20.41	3.01	150.0	± 9.6 %
unic	araig	Y	3.29	69.80	19.15		150.0	
		Z	3.40	71.98	19.88		150.0	
10176- CAG	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	×	6.38	81.51	23.73	3,01	150.0	± 9.6 %
		Y	4.76	76.12	21.65	-	150.0	
		Z	7.03	85.08	24.74		150.0	1.0
10177- CAL	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	X	3.82	72.71	20.53	3.01	150.0	± 9.6 %
		Y.	3.32	69.97	19.25		150.0	
		Z	3.44	72.23	20.02		150.0	
10178- CAG	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16- QAM)	×	6.26	81.12	23.55	3.04	150.0	± 9.6.%
		Y	4.70	75.86	21.51		150.0	1
0.000000	a second construction of the second se	Z	6.85	84.54	24.51	1000	150.0	
10179- CAG	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	×	5.53	78.38	21.95	3.01	150.0	± 9.6 %
		Y	4.28	73.73	20.08		150.0	
		Z	5,53	80.03	22.20		150.0	+ 0.0 -
10180- CAG	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64- QAM)	×	4.85	75.63	20.45	3.01	150.0	± 9.6 %
	NAL CONTRACTOR	Y	3.85	71.63	18.78		150.0	
1075274	the state of a second state of the	Z	4.51	75.97	20.14	3.01	150.0	1.15.27.10
10181- CAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	×	3.82	72.60	20.52	3.01	150.0	± 9.6 %
		Y	3.31	69.95	19.24		150.0	
		Z	3.44	72.20	20.01	3.01	150.0	±9.6 %
10182- CAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	X	6.25	81.00	23.54	3.01	150.0	18/0 %
		Y	4.70	75.84	21.50	-	150.0	-
		Z	6.83	84.50	24.49	2.04	150.0	+075
10183- AAD	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	×	4.84	75.60	20.44	3.01	150.0	± 9.6 %
		Y	3.85	71,61	18.77		150.0	-
		Z	4.50	75.94	20.13		150.0	

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CAE ITTES. CAE	QPSK)							
		Y	3.32	70.00	19.27	-	150.0	
		Z	3.45	72.28	20.04	-	150.0	-
	LTE-FDD (SIC-FDMA, 1 RB, 3 MHz, 16- QAM)	x	6.29	81.18	23,59	3.01	150.0	± 9,6 %
		Y	4.72	75.91	21.53		150.0	
		Z	5.88	84.63	24.55		150.0	
10106- AAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64- QAM)	x	4,86	75.68	20,48	3.01	150.0	29.6%
		L Y	3.87	71.68	18.80		150.0	
_		Z	4.53	76.04	20.17		150.0	-
10187- CAF	LTE-FDD (SC-FDMA, 1 HB, 1.4 MHz. QPSK)	8	3.86	72.79	20.60	3.01	100 D	49.6 %
_		Y	3,33	70.05	19.38		150.0	
1-11-11-1	and the second s	Z	3.46	72.24	20.11		160,0	11.00
ID188-	LTE-FOD (SC-FOMA, 1 RB, 1.4 MHz, 16-CAM)	x	6,59	82.17	24,08	3.01	150.0	#96%
_		Y	4.88	76.63	21.93		150.0	
N.S. August	and a state of the	2	7.44	86.21	25.23		150.0	
10.199 AAF	LTE-FOD (SC-FOMA, 1 RB, 1.4 MHz, 54-QAM)	x	5,01	76.28	20.81	3.01	1.50.0	±96%
_		Y	3,96	72.12	19.08		150.0	
	and the second of the second o	2	4,72	76.84	20.60		150.0	1.1.1.1.1
10193- GAC	IEEE B02 11n (HT Greenfield, 6.5 Mbps, BPSK)	X	4.64	66.78	16.35	0,00	150.0	136%
		Y	4,48	65.22	15.91		160.0	
10194-		Z	4.48	66.93	16,19	1.0.0	150.0	
CAC	(ESE 802 11h (HT Graanfield 39 Mops: 16-QAM)	x	4.84	67.15	16.46	0.00	150.0	496%
-		Y.	4.66	66 55	15.03		160.0	
10195-	IFFF day do a line of the second	Z	4.65	67.23	16.31	and the second	150.0	
DAC:	IEEE 802 11n (HT Grounteld, 65 Mbps, 64-QAM)	×	4.88	67.16	16.47	0,00	150,0	£9.6 %
-		Ŷ	4.70	55,55	16.05		150.0	
10190	THEFT DOD ALL WITCH. THE PARK	Z	4.69	87,26	16.32	and the second	158,0	1
CAC	IEEE 802 11n (HT Mixed, 6.5 Mbps, BRSK)	x	4.66	86,68	15.38	0,00	150.0	±9.6 %
		Y	4.49	66.29	15.93	1	150.0	
101971	THE ADD COLUMN 1 NOT A DOLLAR OF A	Z	4.48	66.99	16.21	1.00	150.0	
CÁC	EEE 802 11n (HT Model 39 Mbps. 16- GAM)	x	4,85	57.17	16.47	0.00	150.0	± 9.6 %
		X	4,67	66,58	16.04		150.0	
10198- CAC	IEEE 802.11n (HT Mixed, 86 Mbps, 64- QAMI	X	4.86 4.89	67.25 67.18	16.32 16.48	0.00	150.0	± 9.6 %
		Y	4.70	68.60	10.00			
-		Z	4.69	67.27	16.06		150.0	
10219i	IEEE 802.11n (HT Maxed, 7.2 Mbps, BPSK)	x	4.81	66.90	18.33 18,35	0,00	150.0 150.0	±9.6 %
		Ŷ	4.43	66.30	15.89	-	150.0	
		ż	1 12	67.01	16.10		150,0	
0220	EEE 802,11n IHT Maed 43.3 Mopt 16-	X	-4.85	67.15	16.47	0.00	150.0	19.6%
CAC	(GAM)	Y.	4.87	66.56	16.04	0.00	150.0	± 9.0 %
		Z	4.65	67.22	16.31		150.0	-
0221 2AC	TEEE 802.11n (HT MIXed) 72.2 Mbps, 64- QAM)	X	4,88	67.10	16.31	0.00	150.0	±包括%
-	and the second s	41	4.71	66.53	16.05		160.0	
A		Z	4.70	67.20	18.31	-	150.0	
10222- SAC	IEEE 802.11n (HT Mixed, 15 Mbps) BPSK)	×	5,19	87.35	16.57	0.00	150.0	EB.6 %
-		Y	5.03	56.77	18.1#	-	150.0	
		z	5.01	67.33	16.39	-	150.0	-

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10223-	IEEE 802 11n (HT Mixed, 90 Mbbs, 16-	X	5.54	67.61	1671	0.00	150.0	19.0%
CAC	QAM)	12.		1.000		(a) die		
		Y.	6.35	66.99	16.32	_	150.0	-
		2	5,29	67.45	16.47		150.0	
10224- IAG	JEEE 802 11n (HT Maiere 150 Mags, 64- DAM)	x	5.24	67,46	16,55	00.00	150.0	1985
		Y	5.08	66.87	16.16		150.0	_
	the second s	2	5.06	67.45	16.38		150.0	
0225- CAL	UMTS-FDO (HSPA+)	x	2,94	66.61	15,90	0.00	150.0	594%
		-¥	2.72	65.45	14.90		150.0	
	and the second sec	Z	2,80	66.78	15.59		150.0	
10228- SAA	LTE-TDD (SC-FDWA, 1 RB, 1.4 MHz, 18-QAM)	x	100.00	127.97	36.79	6.02	65.0	19.6%
		Y	33.01	108.86	32.02		65.0	
	The second second second second second	Z	28.60	104.35	28.88		65.0	
0227- CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	x	71.64	120.02	34.24	6.02	65.0	190.8
		Y	27.56	104.08	30/11	-	65.0	
		Z	21.67	.98.19	26.50		85 D	
10228- DAA	LTE-TOD (SC-FDMA, 1 RB, 1.4 MHz, OPSK)	X	83.78	133,19	40,33	0.02	65.0	±9.6 %
-		Y.	27.23	111,37	34.65	· · · · · · · ·	65.0	
	and the second sec	Z	14,92	99.20	29.65		65.0	
10229- CAC	LTE-TOD (SC-FDMA, 1 FIB, 3 MHz, 16- QAM)	x	100.00	127.75	36.66	6.02	85.0	19.0%
		Y	30.45	107.22	31.48		65.0	
		7	25.36	102.20	28.19		65.0	_
10230- DAC	UTE-TOD (SC-FDMA, 1 RB.3 MHz. 64- GAM)	x	64.64	118.06	33.66	6.02	65.0	± 9,6%
1000		Y.	25.67	102,71	29.64		65,0	-
		Z	19.55	96.45	25.91	11.1.1.1.1	55.0	
10231- CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	×	74.78	130.72	39.63	6.02	65.0	196%
		Y	25.26	109.74	34.10		65.0	
	and a set of the second second second	Z	13.84	97.69	29.10	-	65.0	1.000
10232- CAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16- DAM)	X	100.00	127.76	36.66	8.02	65.0	=96 W
		Y	30,44	107.22	31.48	-	85.0	1
		Z	25,32	102.18	28.18	1 A 10	85.0	Carrow
10233- CAF	LTE-TOD (SC-FDMA, 1 RE) 5 MHz, 54- DAM)	X	64.74	118.10	33.67	8,02	65.0	计目标转
		8	25.00	102.71	29.64		85.0	1
	Sector of sector of the sector	Z	19.51	96.43	25.91		65.0	
10234- EAF	LTE-TOD (SC-FDMA, 1 RB, 5 MHz. QPSK)	x	68.79	128.16	38.87	6.02	65.0	± 9,6 %
		Y	23.59	108.16	33:53		65,0	
		Z	12.92	98.23	28.52		65.0	
10235- GAF	LTE-TDD (SC-FDMA, 1 RE, 10 MHz, 18-QAM)	×	100,00	127,77	36,66	6.02	65.0	196%
		Y.	30.53	107.29	31.50		65.0	-
		2	25.37	102.23	28.19		65.0	A
10238- CAF	LTE-TDD (SC-FDMA: 1 RB, 18 MHz, 84-QAM)	x	65.78	118.34	33.32	6.02	05.0	2862
-		Y	25.93	102.87	29,68		65.D	-
	1	Z	19.72	96.57	25.94		65.0	1.0.0.0
10237- CAF	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	×	78.22	131-13	39.74	6.02	85.0	19.6%
		Y.	25.46	109.93	34.16		65.0	-
		Z	13.89	97.78	29.12		65.0	
10238- CAF	LTE-TDE (SC-FDMA, 1 RB, 15 MHz, 16-DAM)	×	100.00	127.76	36.66	6.02	65.0	± 9,6 %
		Y	30.42	107.23	31,48	-	65.0	
		2	25.26	102.15	28.17		65.0	

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102394	LTE-TDD (SE-FDMA, 1 RB, 15 MHz.	X	64.82	118:13	33.68	6.02	65.0	+9.6%
CAF	64-CIAM)	1.1				0.02	1000	1.4.0.7
		Y	25.62	102.71	.29.64	_	66.0	
100.157	the statement of the statement	Z	19.45	196,40	35.90	1000	65.0	
10240- CAF	LTE-TOD (SC-FDMA, 1 RE, 15 MHz, QP5K)	×	75,84	131.04	39,71	6.02	65.0	±9.6 %
		X	26.37	109.88	34.14	6	65.0	-
10241-	I SHE SHERE LOOK PERSON AND AND AND A LOOK	2	13.84	97.74	29.11		65.0	1
CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	x	12.34	87.77	28.08	6.98	65,0	±9.8%
		Y	10.07	84,69	26.80		65.0	
18242-	I TE THE ADD DIVER BOOT ON A CAME	Z	9.45	83.27	25.34	1	65.0	-
CAA	LTE-TOD (SC-FDMA, 50% RB, 1.4 MHz, 64-0AW)	x	11.90	86.96	27 58	6.98	65.0	29.0%
_		X	9.43	62.13	25.70	1	65.0	
10243	1 ST TOD ICO COLLE THE OP A STREET	Z	8.68	82.07	24.81	-	6b.0	
CAA	LITE-TIDD (SC-FDMA, 50% RB, 1.4 MHz, OPSK)	3	9,29	83.62	27.37	6.96	85.0	=9.6 %
		4	7.69	79.19	25,41		65.0	1
	I TO TOD IND COMP. COM ON A COM	Z	6.90	78.25	24.23	1.000	85.0	-
CAC	LTE-TOD (SC-FDMA, 50% RE 3 MHz. 16-QAM)	×	11/62	86.25	22.95	3,96	65.0	± 0.6 %
		·Y	9.05	81.02	21.07		85.0	1.1.1.1
10:245-	1 TH Series into well in wood way a line	Z	5.90	74.19	17.01		65.0	
10245- CAC	LTE-TDD (SC-FDMA, 50% R9, 3 MHz 64-GAM)	X	11,21	84.37	22.69	3.98	65.0	19,6 %
		Y	8.74	80.23	20.72	1	85,0	
10246-	THE REAL PROPERTY OF THE REAL PROPERTY OF	- 2	5.76	73.60	16.72		65.0	1.1
10246- CAC	LTE-TOD (SC-FDMA, 50% R8, 3 MHz, QPSK)	X	13,76	91.33	25.01	3.98	65.0	19.8%
_		Y	8.27	82.50	21.35		65.0	
		Z	5 24	75.79	17.95		65.0	
10247- DAF	LTE-TOD (SC-FDMA, 50%, RB; 5 MHz, 16-QAM)	×	8.45	80.38	21.81	3.98	65.0	29.6%
		Y.	6.57	78.53	19,78		66.0	
Dania -	hand the second second	2	5.10	72.95	17.62	200	85.0	
10248+ CAF	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 54-QAM)	8	7.96	79,46	21,43	3.98	65.0	1965
		Y	6.50	75.86	19.49	-	85.0	
	100000000000000000000000000000000000000	Z	5.09	72.45	17.30		65.0	
10249- CAF	LTE-TOD (SC-FDMA 50% RB 5 MHZ OPSK)	X	14.67	92.89	28.21	3.98	65,0	195%
	and the second s	Y	9.72	85.51	23.23		65.0	-
		2	8.59	79.52	20.29		65.0	
10250- CAF	LTE-TOD (SC-FDMA, 50% FIB, 10 MHz, 15-QAM)	x	8.79	81.74	23.60	3.98	65.0	196%
_		· Y ·	7.53	78.89	22.19		65.0	
		2	6.20	76.02	20.42	-	65.0	-
0251- CAF	LTE-TOD (SC-FDMA, 50% RB, 18 MHz, 84-QAM)	×	8,02	78.77	22.12	3.98	65.0	19.6 W
		X	7.01	78.38	20.84		65.0	
0252	Last start, may service over her start	2	5.03	78.77	19.14		05.0	
CAF	LTE-TOD (SC-FDMA, 50% RB, 10 MHz, OPSK)	×	12:21	89.16	25,60	3.56	65.0	19.6%
		Y	8.34	84.33	23.66		85.0	
0253-	TE TER ICC COME YOU BE THE	Z	7.06	50.06	21.48		65.0	
AF	1 TE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-DAM)	×	7.75	17.29	21.77	3.98	85,0	11.19.15 ¹ /16
		Y	6.93	75.28	20.72		65.0	
0254	THE TOR UND PRIME FOR DAY	Z	5.92	73,10	19.25	1	65.0	1000
CAF	LTE-TOD (SC-FDMA, 50% BB; 15 MHz, 04-QAW)	8	£.16	78,13	22.42	3,98	65.0	286 S
		N.	7.34	76.22	21.42	1.000	85.0	-
	a contraction of the second seco	Z	6.32	74:11	19.09		65.0	

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10255+	LTE-TDD (BC-FOMA, SOR RE. 15 MHz.	X	1.52	62,96	21.63	3.58	65.0	+9.6%
CAF	(QPSK)	×	1.02	79.93	29.97		65.0	
		Z	6.80	17.07	20.60		65,0	
10255- CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-DAM)	X	10.25	82.05	21.18	3.90	03.0	土田市 %
wine 1	HITLE, TOTALTING	9	7.42	77.45	18.77		65.0	
		Z	4.37	69.75	14.06		65 0	-
10257- CAA	LTE-TOD (SC-FOMA, 100%) RB, 1.4 MHz, 64-CAMI	8	11.67	81.35	20.00	3.98	65.0	±B6%
		¥ .	7.07	76.38	13.24		0.76	
		Z	-4,27	69.13	13.71	-	65.0	
10258- DAA	LTE-TOD (5C-FDMA, 100% RB, 1.4 MHz, GPSK)	x	11.24	87 41	23 05	3.90	65.0	1953
		Y.	0.22	77,82	18.86		65,0	
-	And an and the set of the set	Z	5.68	71,16	15.20	lease and the	65.U	
10258- CAC	LTE-TDD (SC-FDMA, 1009; R8; 3 MHz, 16-DAM)	x	8:37	60,75	22.38	3.98	65.0	186%
		×.	16.95	11:37	20.62	1000	55.0	
	Stand of States States Television	Z	5.55	74,09	18.58		65.0	
10260- CAC	LTE-TDD (SC-FDMA, 100% RB 3 MHz. 64-DAM)	×	8.81	80.29	22.23	3.98	65,0	196%
		Y	8.94	27.04	20.51		65.0	
a timber of	1717 TEC 105 CD12	2	5.55	73.86	18.49	3.50	65.0	
10261- CAC	LTE-TOD (SC-FDMA_100% R8_3 MHz GP\$K)	×	12.47	89,95	25.58	3,98	65.0	主题原外
		Y	0.00	84.05	23.10		85.0	
10262- CAF	LTE-TOD (SC-FDMA, 100% RB S MHz 16-QMM)	X	6,47 8:78	78,99	20.51 23.56	3.98	05.0 05.0	€8.6 W
une -	(D-52009)	Y	7.52	78.83	22.15	-	65.0	
		Z	6.15	75.95	20.38		65.0	
10263- CAF	LTE-TOD (SC-FDMA: 100% SB, 5 MHz) 64-CAM)	2	6.01	78.76	22.12	3.88	65.0	59.6 %
		N.	1.00	76.35	20.65		65.0	
	the second se	2	5.82	73.75	15.13		65.0	
10264- CAF	LTE-TOD (SC-FDMA, 100%) RB, 5 MHz, OPSK)	*	12.07	88.92	35,56	1.98	650	196%
		Y.	8.25	8411	23.56		65.0	
		2	7,01	79.85	21.36	1.1.1	65.0	1000
10266- CAF	LIE-TOD (SC FDMA, 192% RB 10 MHZ 16-DAM)	X.	8.04	78.00	22.05	3.93	65.0	19.0 K
		Ý	7.13	75,81	201.07	(E	65.0	-
-		Ž.	6.04	73,58	19.44		0.60	-
10286 CAF	LTE-TOD (SC-FDMA, 1005 RB 10 MHz, 64 GAM)	×,	8.44	79.91	22.74	3.90	65.0	1965
-	and the second sec	Y	7.55	76.88	21.73	-	85.0	
10267-	LTE-TDD (SC-FDMA: 100% RSI 10 MHz OPSK)	×	6.47 10:11	74.69	20.29	-3,98	65,0	2089
CAF	ante serente)	¥	541	80.47	22.26		85.0	-
_		Z	0.47	77.07	20.07		85.0	-
10268- CAF	LTE-TUD (SC-FUMA, NUM-HE 15) MHz, 10-QAM)	R	8.39	77,18	22.02	3.96	88.0	2011 W
	the second se	Y.	7.55	75.61	21,20		肠肌	
		2	6.70	73.67	18,92	1.57	85.0	1
10289- CAF	LITE-TOD (SC-FOMA, 100% RB, 19 MHz, 184-DAW)	×	0,28	76.63	21.88	3.98	85.0	-1 B/0 %
		V	Y,58	75.05	21.07	-	65.0	
	and a second sec	Z	6.67	73.30	19.83		65,0	1000
TURTU- CAE	LITE-TEID (BC-FEIMA, 100% RB: 15 MHE (DPSK)	×	88.8	79.53	35.50	8.98	95.0	± 9.6 %
		Y	7.84	77.34	21,20		nh U	
		2	6.74	75.30	19.88		95.0	_

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10274-	UMTS FDD (HSUPA, Subtest 5, 30PP	X	2.69	67.00	15.83	0.00	150.0	E 8.0 %
CAB	Rel8.10	-		85.81				
		Z	2.47	67.27	14.87	-	150.0	-
10275-	UMTS-FDD (HSUPA, Subtest 5, 3GPP	X			15.58	10.00	150.0	- W. O. O.
CAE	RelE 4		1.83	70.14	16.98	0.00	150.0	± 8,6 %
		A.	1,44	66.20	14.31		150.0	
10277-	PHS (OPSK)	Z	1.70	69.74	16.44	-	150.0	1.000
CAA	PHS (GHSK)	×	3,83	66.44	11.35	9.03	50.0	1.9,0 %
		Y	3.47	64.75	10.20	_	50.0	
10278-	PHIS (QPSK, BW 884MHz, Rollett 0.5)	Z	2.82	62.17	7.82	1000	50.0	
CAA	THIS (CONSIN, DWY ODAINING, HOUDT (0.12)	X	14,82	89.25	23.47	\$.03	50.0	19.8%
-		Y	7.61	78.00	18.87		60.0	
10279	PHS (OPSK, B/V 884MHz, Rolloff 0.38)	Z		69.20	13.78	-	50.0	
CAA	PHAIGHAK, BIV 684MHZ, Rolloff 0.36)	x	14,85	89.41	23.56	9.03	50.0	29.6%
_		Y	7.77	76.24	18.99	-	50.0	
10290-	COMA2000, RC1 SO55 FL0 RMM	Z	4.39	68.44	13.93	-	50.0	· · · · · · · ·
AAB	SEAMAZOOD, KCT SOSS, FUT RINN	×	2.10	73.72	17.08	0.00	150,0	19.6%
		70	1.20	65.83	12.24		150.0	
10291-	CDMA2000, RC3, SO55, Full Ride	2	1.79	72.49	15.56	1.000	150.0	
AAB	CONV2000, RG3, SO55, Full Rale	×	1 16	70.51	15.66	0.00	150.0	29.6%
_		Y	0.67	63.17	10.49	l	150.0	
10292-	CDMA2000, RC3, SO32, Full Rate	Z	0.94	68.71	13.80		150.0	-
AAB	GDMA2000, RC3, SO32, Full Raki	×	1.93	79.24	19.72	0.00	150/0	± 9.6 %
		Υ.	0.76	65.41	12.01		150.0	
1/1293-	CONTRACTOR DOL DOL DUNC	Z	2.01	B0.04	18.65		150.0	
AAS	COMA2000, RC3; SO3, Full Rate	×	4.24	91.88	24,62	0.00	150.0	19.8%
		· ¥ ·	0.99	68.94	14.19		150.0	
10290-	WINHAARDON DIST STREET, STREET	2	16.88	110.82	28.51	1000	150.0	
AAE	CDMA2000, RC1, SOS, 1/8th Rate 25 h;	×	12.27	89,65	26,50	9,08	5D.0	÷06%
_		V.	10.64	85.72	24.40	1	50.0	
	LAR PRODUCT PROVIDE AND	2	6.99	77.74	20,11		50.0	
11297- AAD	LTE-FOD (SC-FOMA, 50% RB 20 MHz, DPSK)	8	3.09	X1.44	17.51	0.00	350.0	19.6%
		Y	2.59	58.47	15.73		158.0	
a literature		Z	2.87	71.14	17.24		150.0	
10298- AAD	CTE-FDD (SC-FDMA, 50% RB, 3 MHz, OPSK)	x	2.03	71.15	16.52	0,00	150.0	19.6%
-		Y.	1.39	65.75	12.91		150.0	1
10299	LTT FOR DA COLL DATE OF	Z	1,75	70.22	15.26		150.0	
VAD	LTE-FOD (SC-FDMA, 50% RB, 3 MHz, 16-DAM)	x	4,86	77,12	18.36	0.00	150.0	19,8 %
		Y	3.14	71.60	15,64	-	150.0	
0300-	I DE EDD INC EDMA FAM /m	6	3/75	74.00	15.70	2.00	150.0	
AD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	x	2.97	69.66	14.52	0,00	150.0	29.6%
		Y	2.28	66.29	12.48		150.0	
0301-	IFFE STYL LICE MAIL OF A STRUCK OF	2	2.17	06.32	11.62		150.0	1.
AAA	IEEE 802-16e WWAX (29:10, 5ms, 10MHz, DPSK, PUSC)	X	6.32	86.98	15.36	4.17	50,0	土乐8%
_		Y.	ñ.22	86.88	18,11		50.0	_
0302-	ICEE ON THE MARKED AND TO A	2	4.67	65.61	17.38		50.0	
AAA	IEEE 802 10a WIMAX (29:18, 5ms, 10MHz, OPSK, PUSC, 3 CTRL ayritbols)	x	5,74	67.34	16.93	4:90	10.0E	± 9.8 %
_		Ŷ	5,58	66.87	18.46		50.0	
_		7	5.16	66:25	18.09		50.0	

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10303- AAA	IEEE 802.16e WIMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)	x	5.54	67.22	18.91	4.95	50.0	±9.6 %
000	TUMP12, DRGMM, PUISG)	Y	5.37	66.70	18.39		50.0	
		Z	4.93	65.95	17.95		50.0	
10304- 3,6,6	IEEE 802.16e WIMAX (29:18, 5ms, 10MHz, 64CAM, PUSC)	x	5.28	66.83	18.25	4.17	50.0	± 9.6 %
		Y	5.10	66.29	17.74		50.0	
		Z	4.73	65.82	17.46		50.0	
10305- AAA	IEEE 802.16e WIMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)	x	5.67	72,27	22.34	6.02	35.0	±9.6 %
		Y	5.72	72.48	21.90		35.0	_
1111111		Z	4.66	68.90	20.05	1000000	35.0	10000
10306- AAA	IEEE 802.16s WIMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)	×	5.47	68.37	20.21	6.02	35.0	±9.6 %
		Y.	5.52	69.50	20.64		35.0	
		Z	4.82	67.24	19.32		35.0	
10307- AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)	x	5.58	70.12	21.19	6.02	35.0	±9.6 %
		Y	5.54	70.11	20.79		35.0	
10308-	IFFF BOD 40+ HOMAN IDD 40 40-10	Z	4.75	67.57 70.46	19.37 21.39	6.02	35.0 35.0	± 9.8 %
10308- AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)	X		70.49	21.39	0.02	35.0	1 9.0 %
		Z	5.56	67.84	19.54		35.0	
10309- AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols)	X	5.56	68.68	20.38	6.02	35.0	±9,6%
	TOTAL TOWARD PARTY TO SAULTO SAULTONIE	Y	5.61	69.80	20.81		35.0	
		Ż	4.87	67.43	19.45		35.0	
10310- AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)	х	5.54	69.67	21.04	6.02	35.0	± 9.6 %
		Y	5.51	69.73	20.68		35.0	
×	The second se	Z	4.78	67.38	19.33		35.0	
10311- AAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	×	3.47	70.67	17.10	0.00	150.0	± 9.6 %
		Y.	2.93	67.81	15.48		150.0	-
		Z	3.26	70.40	16.86		150.0	
10313- AAA	IDEN 1:3	X	10.55	84.71	20.54	6.99	70.0	±9.6 %
		Y	5.52	75.51	16.93		70.0	-
		Z	3.35	69.99	14.11	50.00	70.0	±9.6 %
10314- AAA	IDEN 1:6	×	24.93 8.40	102.67	28.79 22.81	10.00	30.0	± 9.0 %
		YZ	4.59	75.67	18.98		30.0	
10315- AAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)	X	1.16	65.40	16.44	0.17	150.0	± 9.6 %
	maps, superand of the	Y	1.01	63.11	14.44		150.0	
		Z	1.08	64.77	15.73		150.0	1
10316- AAB	IEEE 802.11g WiFi 2.4 GHz (ERP- OFDM, 6 Mbps, 96pc duty cycle)	X	4.72	66.92	16.53	0.17	150.0	± 9.6 %
Sec. 1		Y	4.56	66.38	16.12		150.0	
STALL N		Z	4.51	66.86	16.22		150.0	
10317- AAC	IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)	×	4.72	66.92	16.53	0.17	150.0	±9.6%
		Y.	4.56	66.38	16.12		150.0	-
		Z	4.51	66.86	16.22	0.00	150.0	+0.00
10400- AAD	IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)	×	4.84	67.20	16.45	0.00	150.0	±9.6 %
_		Y	4.66	66.61	16.02		1.62-01-57	-
10101	IFFF OOD SALES MUST LOOKING OF COM	ZX	4.63	67.25	16.28	0.00	150.0	±9.6%
10401- AAD	IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)			66.85	16.49	0.00	150.0	1 2.0 3
		Y	5.35	66.85	16.23	-	150.0	-
		Z	5.28	07.24	10.32		1.1.1.1.1.1.1	

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10402	TEEE BUZ TILL WIFT (SOMH), 64-CAM.	X	6.76	67.76	16.60	0.00	150.0	+ 9,6 9
AAD	Stepp auty cycle)	1.1			100	2000	1.54.55	1.016.2
		Y	5.61	67.21	16.26		150.0	1
10000		Z	5.57	67.70	16.42		150.0	1
10403- AAB	CDMA2000 (INEV-DD, Rev. 0)	X	2.10	73.72	17.08	0.00	115.0	2 9.6 5
		·Y	1.20	65.63	12.24		115.0	
inana.		Z	1.79	72.49	15,56	10000	115.0	
AAS	CDMA2000 (1xEV-DD, Rev. A)	×	2:10	73.72	17.06	0.00	115.0	2.9.8.5
		N.	1.20	65.83	12.24		115.0	
10406-	CDMA2000, RC3, SO32, SCH0, Full	Z	1.79	72.49	15.56		115.0	
AAB	Rate	×	100.00	122.19	31,29	0.00	100.0	39.61
_		Ŷ	28.24	105.80	27.50		100.0	
10410-	LTE-TOD (SC-FDMA, 1 RB, 10 MHz.	Z	100.00	114.73	27.11		100.0	-
AAF	OPSK, UL Subkame=2.3,4,7,8,9 Subframe Cohf=4)	×	100.00	121.06	30.81	3.23	90.0	1969
_		Ŷ	100.00	121.88	31.03		80.0	-
and the second		Z	83,71	111.58	25.89		30.0	-
10415- AAA	IEEE 802.116 W 512.4 GHz (DSSS. 1 Mbps, 99pc duty cycla)	×	1,62	63.90	15.54	0.00	150.0	±9.6 S
_		Y	0.91	61.92	13.65		150.0	-
		2	0.99	63.88	15.24		150.0	
10416- AAA	IEEE 802 11g WIFI 2.4 GHz (ERP OFDM, 8 Mbps, 99pc duty cyce)	×	4,84	06.82	18.39	0.00	150,0	÷9/6 %
		18	4.48	65.28	15.67		150.0	-
10417-	IFT'S AND ST IN OTHER & MILLION AND ST	2	-0.48	86.96	16.25		150.0	
AAB	IEEE 802.11 wh WIFI 5 GHz (OFDM; 6 Mbps, 99pc duty cycle)	×	4.84	66,82	16,39	0,00	150.0	29.65
_		Y	4,48	66.26	15.97	1	150.0	
10410	INTER OND AND INTER A DAMAGE MANAGEMENT	Z	4.48	66.95	10,25		150.0	
AAA	IEEE 802 11g WIFL2.4 GHz (DSSS- OFDM 6 Mops: PRoc dway cycle, Long preambule)	×	4.63	98.97	10,41	0,00	150.0	±26%
		Y	4.47	66.40	15.97		150.0	-
	and the second se	Z	4.47	97.14	10.29		150.0	-
10419- AAA	EEE 802,11g WFI 2.4 GHz (DSSS OFDM, 6 Minps, 99pc duty cycle: Short preambule)	8	4.65	96.92	16.41	0.00	150.0	± 9.6 %
-		Y	4.49	66.36	15.96		150.0	-
10422-	International Action of the In	Z. 1	4,49	67.08	16.28		150.0	
10422- AAE	IEEE 802.11/1/HT Greenfield, 7.2 Mbps- BP5Kj	×	4 78	86.92	16.42	0.00	160.0	190%
-		Y	4.51	68.37	16,01		150.0	
10423-	IDDE 600 HALLE BOOK	Z	4.51	07,05	16.28		150.0	1
AAB	IEEE 802.11n UHT Greevifield, 43.3 Mbos: 16-GAMI	x	4.98	67.29	16.55	0.00	150.0	\$ 9.8 %
		Y	4.79	88.71	16.13		150.0	
10424-	HER REALING CONTRACTOR	. Z .	0,77	67.36	16.39		150.0	1.00
A4B	ISEE 802.11n (HT Greenfield, 72.2 Mbps; 64-QAM)	x	4 (85)	67.34	18.52	0.00	150.0	18.0 %
-		X.	4.70	66.65	16,10		150.0	-
0428-	IDEE BIN 655 // P Parcel of the	Z	4.69	67.32	16.37		150.0	
AAB	IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)	8	5,44	-67.47	16.52	0,00	160.0	29.0%
		Y	6.32	67,05	18.33		150.0	
10426	IEEE GOD 1 to 017 Providence College	Z	6.25	67.48	16.46		1.50.0	-
AAE	IEBE 802.11n 0HT Growafield, 90 Mbass, 16-QAM)	x	5.45	67,50	16.63	0.00	150.0	19.0 ¥
		Ŷ	5.32	67.06	16.33		150.0	
		Z	5.26	67,50	16.46		150.0	-

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0427-	IEEE 802 11n (HT Greenheld, 150 Mbps,	X	5.47	87.62	16.61	00.0	150 0	#98%
WB .	64-QAAN	-			1000			
		Y Z	533	87.64	15.31	_	150.0	1
D430-	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)	8	4.44	70.94	18.69	11.00	150.0	±0.6%
AD	LIE-POD (OFDIAN, 8 MHZ; E/1M 3:1)	N N	4.14	19.17		11.00		6.046.29
			4.53	70.00	17.76		150.0	
10231-	LTE-FOD (OFDMA, to MHz, E-TM 3.1)	Z X	4.03	72.71	16.50	0.00	150.0	± 9.6 %
AD	LIE-FUD (OFDMIC TO MHZ, BITM X.()	v	4,17	05.74	15.93	0.00	150.0	a nu și
		Z	4.17	67.60	16.51		150.0	-
10432- AAC	LIE-FDD (OFDMA, 15 MHz, E-TM 2-1)	3	4.87	87.30	16.51	0.00	150.0	± 9.0° %
100		Ŷ	4.47	65.55	10.03		150.0	
		ż	4.47	67.41	16:54		150.0	1.
10433-	LTE-FDD (OFDMA, 20 MHz E-TM 3 1)	X	4.90	67.28	16.55	0,00	150.0	196%
AAG				1000			100.0	
-		Y.	4.72	66.69	16,12	-	150,0	-
10434-	W-CDMA (BS Test Model 1, 64 DPCH)	X	4 71	67.36 71.86	16.34	0.00	150.0	+06%
10434- AAA	VI-COMVAUDS TEEL MODEL 1, 64 DPCH).	A	4.96	×1.00	100.00	0.1ju	150.0	200.0
		Ψ.	421	70.69	17.07		150.0	
		- Z-	4.78	-74.00	19.21		150.0	1
10435 AAF	LTE-TOD (SC-FDMA, 1 RB, 20 MHz, OPSK, UT Subframe=2.3,4,7.8,9)	×	100.90	120.88	30.73	3.22	80.0	39.6-%
		Y.	100.00	(21.69	30,95	1	80.0	
		Z.	66.38	108.68	25.18	-	80.0	
10447 AAD	LTE-FDD (OFDMA: 5 MHz, E-TM 3.1. Gloping 44%)	×	3,72	67.65	48,50	0.00	150.0	=0.6 %
· · · · ·		Y.	3.44	66.58	15.18	-	150.0	
	Contraction and the second	Z	3.50	67.81	15 74		158.0	20.6%
ici44)- AAFI	LTE-FDD (OFDIMA: 10 MHz, E-TM 3.1) Clippin 44%)	×	4.21	67.23	16.37	00.0		± 9.6 %
		N.	00.0	66.50	15.77	-	150.0	
INLANC	Les des sections in this is the section of	X	4.02	67.40	1E-18	0.00	150.0	19.6 %
10448- AAC	LTE-FDD (OFDMA) 15 MHz, E-TM 3-1 Cliping 44%)	1.1	4,40	67.14	16.42	0.00	150.0	39.9.74
		Y	4.27	67.27	15.91	-	150.0	
	Las manufacture on here a title h	Z	4.28	67.06	16.29	0.00	150.0	10.6%
10480- AAG	LTE-FDD (OFDMA, 20 MHz E-TM 3.1 Clipping 44%)	X	4.04	65.43	10.42	0.00	150.0	10.0 %
_		7	4.47	67.16	15.26		150.0	-
10451- AAA	W-CDMA (BS Teal Model 1 64 DPCH Capping 44%)	X	3.06	68.00	15,99	0.00	150.0	296%
in an	California and sul	¥.	3.33	66.69	14.77		150.0	-
		Z	5.40	68.00	15.28	· · · · ·	150.0	
10458- AAB	IEEE 802.11ac W/F) (168MHz: 64-DAM 99pc duty cycle)	×	8.29	68.08	16.78	0.00	150.0	298%
-		×	后.17	67.03	15.50	-	150.0	
	A State of the second sec	XX	6.51	E8.01	16.58	1 1 1 1 1	150.0	
10457- AAA	UMTS-FDD (DC-HSDPA)	1	28.6	66,45	10,13	0.60	150.0	÷0.6.%
		A.	3.72	64.49	15.67		150.0	-
10100		Z	3.74	65.80	15.95	0.65	150.0	1000
10458- AAA	CDMA2000 (1xEV-DO, Roy B, 2 cambins)	X	4.16	70.93	18,07	0.00	150.0	¥ 0.6 /
	1 *	Y	3.85	69.00	17.01	-	150.0	-
	And a base of the base of the	Z	4,25	73.12	18.40	0.00	150.0	+96%
10459- AAA	CDMA2000 (1aEV-DO, Rev. B. 3 camers)	×	5.20	88.90	18:25	0.00	150.0	280.2
		W.	501	£7.77	17.91	-	1.50.0	
		Z.	0.25	04.00	16.70		150 D	

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10460-	LIMTS-FOD (WCOMA, AMR)	X	1.12	72.77	16.83	0.00	150.0	19.6%
AAA	and the second second second second		1.000	1.0	Fulles	a.mp.	196.0	20,0 0
		Y.	0.73	80.44	13.95		150.0	1.
Contract.	Total allocation and the second second	12	1.01	71.76	19.00		150.0	
10461- AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, GPSK, UL Submanie=2.3,4,7,8,9)	x	100.00	126,43	33,93	3.29	80.0	29.6 %
		Ŷ	100.00	125.87	32.93		.80,0	
104872-	LTE-TOD (SC-FDMA, 1'RB) 1.4 MHz.	Z	90.37	116.03	27.82	-	80.0	
AAA	15-QAM, UL Subframe=2.3,4,7,8,9)	X	100.00	109.98	25,58	3.23	80,0	主要医强
-		2	100,00	109,45	25.28		80.0	
10463-	LTE-TOD (SC-FDMA, 1 RS, 1.4 MHz,	X	100.00	106.70	7 88	3.23	0.08	1.000
AAA	64-QAM UL Subframe=2.3.4,7.8.9)	N	49.13	98.79		0.60	30.0	± 9.6 %
		Z	49.13	86.00	22.03		80.0	-
10464-	LTE-TDD (SC-FDMA, 1 RE, 3 MHz.	X	100.00	124.44	32.24	3.23	30.0 80.6	10.25
AAB	DPSK, UL Subtrame=2.3,4,7,8,9)	10	100.00	123.71	100.00	3.49		±06%
		Z	25.98	98.94	23.07		80.0	1
10460-	LT5-T00 (SC-FDMA, 1 R9, 3 MHz; 16-	X	100.00	109.41	23.07	3.23	B0.0 80.0	-0.000
AAB	CAM, UL Subframe=2.3.4.7,8,9	1.1	1.000		Tanica.	3,23		= 8.6 %
		9	100.00	108.89	24.99		80.0	1.1
10456-	LITE-TOD (SC-FDMA, 1 RB, 3 MHz; 84	Z	1.05	80.34	7.60		80.0	1000
AAB	GAM, UL Subirarne=2,3,4,7,8,9)	×	100.00	106,17	23.77	3.23	80.0	£96.W
		Y	17.42	87.73	19.16		80.0	1
104/07	LTE-TED (SC-FDWA, 1 RB, 5 MHz,	X	100.00	60.00 124.87	7,00	3.23	0.08	± 9,8%
AAE	GPSK, UL Sub#ame=2,3,4,7,9,9)				_			
		Y	100.00	123.85	31.88	1	0.08	
1040E-	LTE-TOD (SC-FDMA, THE 3 MHz 18-	X	100.00	102.47	23.96		0.06	
AAE	QAM, UL Subframe -2,3,4,7,8,8)	N V		rearres	1.1.1.1	3.23	80.0	19B %
		1	108.00	109.05	25.07	1	80.0	_
10igen.	LTE-TOD (SC-FDMA, 1 RE, 5 MHz 64-	\$	100.00		7,67		80.0	
AAE	QAM, UL Subframa=2.3.4 7.8,9	Y	190,00	106.18	23.77	3.23	80.0	#38.8
_		Z	15,04	88.11	19.26		80.0	
10470-	LTE-TOD (SC-FDMA, 1 RB, 10 MHz	× X	100.00	80.00	7.00	10.00	80.D	
MAE	DPSK. UL Subframe=2,3,4,7,8,0)	×	100.00			3.23	90.0	⇒9.6%
		2	35.24	102.56	31,88		80.0	
10471- AAE	LTE-TDD (SC #DMA, 1 RB, 10 MHz, 16- QAM, UL Subtrame=2,3,4,7,8,9)	X	100.00	109.53	23.97 25.35	3.23	50.0 30.0	2.9.6 %
	Line source (see)	Y	100.00	109.01	25.04	-	80.0	-
		Z	1.05	60.40	7.64	-	80.0	
10472- LAE	LTE-TOD (SC-FDMA, 1 RB, 10 Minz, 64- DAM, UL Subframe-2.3.4,7 8.9)	*	100,00	106.13	23.74	3,23	80.0	土民貨幣
		¥.	17.90	88.00	19,21		80.0	
alar.	the state of the second second	2	1,02	60.00	8.92		00.0	-
VAE	LTE-TDO (SC-FDMA, 1 RB, 15 MHz, OPSK, LL Subtrame=2,3,4,7,8,9)	x	100.00	124.67	32,34	3.23	86.0	:96%
_		Y	100.00	123.95	31,87		80.0	
0474	TE TOD (SC CDAL) THE LEVEL	Z	34.67	102:34	23:91		90.9	1.000
WAE	LTE-TDD (SC-FDMA, 1 R8, 15 MHz, 16- QAM, UL Sobtrame=2,3,4,7,0,9)	×	100.00	103.54	25.35	3.23	80,0	±9.6 %
		Y	100,00	109.01	25.04		80.0	1.0
11475-	LTE TOD (SC-EDMA, 1 HB) 15 MH2 64-	Z	1.05	80.39	7.63	2 11 2	80,08	
AE	GAM, UL Subframe=2.3,4,7,8,9	×	100.00	106,14	23,74	3,23	80.0	196 %
-		- W	17.52	67.78	19.16		80.0	
		Z	1.03	60.00	6,00		80.0	-

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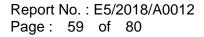
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10877-	LTE-TOD (SC-FDMA, 1 R6 20 MHz 10-	8	100.00	109.37	25.27	3.23	80.0	± 9.6 %
V4F	GAM, UL Sobhame=2,3,4,7,8,9)	Y	100.00	*DE 64	24.96		80.0	-
_		12	1.00	80.28	7.55		80.0	-
11178- VXF	LTE-TDD (SC-FDMA_1 RB, 20 MHz, e4- QAM, UL Subframe=2,3,4,7,8,9)	8	900,001	108.09	23.12	1.22	80.0	±9,8%
		· Y	17:03	67.46	19,06		80.0	
1000	Construction of the local structure of the construction of the	Z	1.03	80.00	0.90		BDD	1.1.1.1
10479- NAA	LTE-TOD (80-FDMA, 50% R8, 1.4 MHz DPSK, UL Subtranie=2,3,4,7,8,6)	A	32.47	108.40	30.35	3.23	80.0	+9.8 M
	the effect of the second se	Ψ.	23.42	102.56	26.35		0.06	
10480-	LTE-TOD (SC-FDMA - 90% FIB. 1.4 MHz.	Z.X	8.33	85.84	23.97	3.25	80.0 80.0	2085
AAA	18-GAM, UL SLOFame=2,3,4,7,0,9)	Ŷ	20.70	94.12	24.14	1.23	80.0	19,0 %
		7	5.08	7674	17.00		80.0	-
10481-	LTE-TOD (SC-FDMA 605, RB, 1.4 MHz, 04-OAM, UL Subframe=2,3,4,7,8,9)	×	32.83	100.01	25.80	3.23	80.0	17,8%
	and rest and the rest state of the state of	W.	15.67	39.38	22.38		80.0	
		Z	4,46	72.49	15.13		80.0	-
10482- 人A白	LTE-TOD (SC-FDMA, 50% RB, 3 MHz, OPSA, UL Subframe=2,3,4,7,6,9)	x	0.50	87 36	23.04	2.23	\$0.0	10.6%
-		Y.	3.94	74.35	17.85		60.0	
	A CONTRACTOR OF A CONTRACTOR	2	2:70	70.00	15:33	-	90.0	
10483- AAE	LTE-TOD (SC-FDMA, 50% RB, 3 MHz 16-QAM, UL Subframe=2.3.4,7.5.9)	8	15.24	90,75	23,81	2.23	80.0	10.6%
		¥.	9.76	83.78	21.08		B0 ()	
_		7	3.87	71,04	15 18		80,0	
40484- AAB	UTE-TDD (SC-FDMA, 50% RB, 3 MH) 64-DAM, UL Subhame=2.3,4,7,8,9)	x	12.87	88.08	23.00	2.23	90.0E	e 0.6.%
		Y	8.49	81,59	20,85	-	90,0	-
CHARGE.	LTT THE RECEIPT THE TARK	X	3.68	70,14 25,70	14.84 23.26	2.23	90.0 90.0	+95%
10185- AAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz OPSK, UL Suthame=2,3,4,7,8,9)	1				2.23		2510 %
_		V.	4.36	75,94	17.26	-	80.0 B0.0	
10498-	LTE-TOD ISC-FOMA, 50% RB, 5 MHz	2 8	3 22	76.17	19.55	2.23	80.0	196%
AAE	15-GAM, UL Sabirarre=2,3,4,7,8,9)		3.79	70.74	16.72	6.60	BO.D	2.3.9 (6
_		1	3.78	68.57	16.26	-	BOU	
10407- AAE	LTE-TOD (\$C-FDMA, 50% RB, 5 MHz, 54-DAM, UL Subtrame=2.3, 4, 7, 6, 9)	X	5.22	75.40	19.25	2.23	BUD	± 9:0.%
COD6	col control one environmente series al restant	Y	TTE	70.31	16.54		80.0	-
	a the second	Z	3.09	68.23	15.40	5.000	80.0	
10488- AAE	LTE-TOD (SC-FDMA, 50% RB, 10 MHz, OPSK, UL Subhame ED:A,7.6,9)	3.	6.58	81.98	22.14	2.23	60.0	± D.E %
		×.	4.49	74.73	18.31		BOUL	-
		I	3.06	72.12	17.94		80.0	10007
10489- AAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subliame=23,4,7,5,0)	х	4.88	73.47	19,42	2.23	90,0	±9.6%
		Y	4.01	70.32	17,71	-	80.0	
10430-	TE THE LOC EDIAL SON ED IN MIL	2	430	72.95	19.23	2.25	80.0	+5.8%
AAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz 64-QAM, UL Subiname=2:3,4,7,0,8)	v	4.10	70.09	18.23	6.64	80.0	a cont in
-		I	4,10	68.77	16.66		60.0	-
10491- AAE	LTE-TOD (SC-FDMA, 50% FB, 15 MHz, OPSK, UL Subfamer(2,3,4,7,8,9)	×	5.95	76.95	20.70	2.25	90.0	±9.6 %
	and the second second second second	1.9	4.52	72.00	18.69		0.03	
	And share a star hardware the same	Z	3.02	70.84	17.60	1	80.0	
10482- AAE	LTE-TOD (SC-FDMA, 50% RE, 15 MHz; 10-DAM: UL Sobhame=2,3,4,7,8,0)	X	4.D4	71/68	18.90	2.23	30,0	主要的问题
-		Y.	4,21	09,40	17.63	1	0.06	
_		E.	3.83	68.32	18.75		80.0	

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10493-	LTE-TOD (SC-FDMA SUS RE 15 MHz	1.8	4.97	71.38	18.79	2.23	80.0	1 29.65
AAE	84-QAM, LIL Subframe=2.3,4,7,8,9)	1.1			1.000	#143		18/0 5
		Y	4.37	89.24	17.58	1	80,0	
10494-	AND THE OWNER PERMIT AND AND AND AND	Z	3.90	68.20	16.76		80.0	1.000
AAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subhame=2,3,4,7,8,9)	×	6.95	79.86	21.50	2.23	90,0	196
		Y	4.99	74.37	19,18	_	80.0	_
10495	LTE-TOD (SC-FDMA: S0% RB: 20 Miltz	Z	4.13	72.26	18.02		80.0	
AAF	15-QAM, UL Subframe=2,3,4,7,8,8)	×	5.07	72,39	18,10	2.23	90.0	±969
_		Y	4.37	89.87	17-84	_	80.0	
10496-	LTE-TDD (SC #DMA, 50% RB; 20 MHz.	T	3.87	88.70	16.98		80.0	
AAF	64-QAM, UL Subframe=2,3,4,7,8,9)	X	5.07	71.80	18.98	2.23	30.0	1969
_			4,43	69.53	17.74		80.0	-
10497-	LTE-TOD (SC.FDMA, 100%, RB, 1.4	Z	3.96	68.45	16.92		80.0	
AAA	MHz, OPSK, UL Subframe=2.3,4,7,6,8	×	1 77	64.28	21.25	2.23	80.0	1963
_		Y	2.76	69,51	14.63		80.0	
10498-	LTE-TOD (SC-FDMA, 100% RB, 1.4	2	1.93	65.26	12.27		80.0	-
AAA	MHz, 16-QAM, UL Subframo=2,3,4,7,8,9)	×	-4.50	72.22	15.94	2.23	80.0	#86%
		1 Y	2.08	63.53	11.20	-	80.0	-
	and the second s	Z	1.49	60.84	9.11	-	80.0	-
10499 AAA	TE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-CAM, LT, Skolrame=2,3,4,7,6,9)	N	388	71,10	15.38	2,23	80.0	19.6%
	Control of the country of the state	Y	2.02	62.98	10.80	-	0.08	
		Z	1.45	60,40	8.75		0,08	-
10900-	LTE-TDD (SC-FDMA: 100% RB, 3 MHz.	x	6.85	82.59	22.44	2.23	80.0	1.00.00.00
AAB	QPBK, UL Subframe=23,4.7.8.9	N	4.50	75.01	19.09	1.25	1.60	+0.6%
-		Z	3.32	71.99		_	0.06	
10001-	LTE-TOD (SC-FDMA, 100% RB, 3 MHz.	X	5.08	74.80	17.46		80.0	1
AAB.	16-QAM, UL Subfraime=2.3,4,7,8,9)	Ŷ	3.580	74.80	19.39	2.23	0.08	± 9.6 %
	1	Z	3,80		17.11	-	80.0	
10502-	LIE-TOD (SC-FDMA, 100% RB, 3 MHz,	8	5.08	68.63	15.87	20.410	0.08	10000
AAB	64-CAM, UL Subframe=2,3,4,7,8,9)	Y.	3.94	74.42	18,19	2.23	80.0	±9.6 M
				70,38	16.98		80,0	-
10503-	LTE-TOD (SC-FDMA, 100% RB 5 MHz	Z	3.32	56.68	15.78	-	80.0	1000
AVE	QPSK, UL Subframe=2.3.4,7,8,9)	X	<u>5.47</u>	80.7E	22,03	2.23	80,0	± 9.6 %
		Y	4,42	74,51	19.24	-	20.0	
10504-	LTE-TOD (SC-FDMA, 100% RE 5 MHS	2	3,53	71.90	17.84	-	80,0	
AAE	15-QAM, UL Subimme=2.3.4.7.8.9)	X	4 84	73.36	19.37	2.23	30,0	±9.6%
		8	8.50	70.22	17.65	_	E0.0	-
10505-	LTE-TOD (SC FDMA, 100% RB, 5 MHz.	Z	3.46	68.82	10.64		80.0	-
AAE	B4-QAM, UL Subireme=2.3.4,7.8.90	X	4 85	72.84	10,17	2.23	0,08	± 8/6 %
			4.07	69.98	17.58	1	80.0	1
0506	LTE-TOO ISC-FDMA, 100% R8, 10	20	3.55	68.67	16.60		80.0	1
MAE	MHz QPSK. UL Sulvisme=2,3,4,7,8,5)	x	6.87	79.65	21.49	2,23	80.0	198.8
		Z	4.10	74.20	19.10		80.0	
0507-	LTE TOD (SC-FDMA, 100% RB, 10	X		72.10	17,94		0.06	
AAE	MHz, 16-GAM, UL Subframe=2.3.4 7,8,9)	0.	5,05	72.32	19.14	2.23	80.0	工品在省
-		Y	4.35	69.81	17.80		60.0	
		Z	3.05				L.L. A.L.	

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10508-	LTE-TDD (SC-FDMA, 100% RB, 10	X	5.05	71.72	18.93	2.23	80.0	±9.6 %
AAE	MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)							
		Y.	4.41	69.46	17.70		80.0	
		Z	3.93	68.38	15.87	21418404	80.0	1312705
10609- VAE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	×	6.42	76.31	20.23	2.23	80.0	±9.6 %
		Y	5.10	72.45	18.45		80.0	
		Z	4,44	71.04	17.56		0.08	
10510- AAE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3.4,7.8,9)	×	5.41	71.43	18.82	2.23	80.0	±9.6 %
		Y.	4.81	69.39	17.73		80.0	
and the second		Z	4.34	68.44	16.99	CHANK	80.0	Sec.
10511- AAE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	×	5.40	70.96	18.67	2.23	80.0	± 9.6 %
	a decision and a second period	Y	4.84	69.09	17.65		80.0	
		Z	4.39	68.21	16.94		80.0	
10512- AAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2.3,4,7,8,9)	X	7,47	79.47	21.24	2.23	80.0	±9.5 %
		Y	5.46	74.25	18.99		80.0	
		Z	4.64	72.47	17.97		0.06	
10513- AAF	LTE-TDD (SC-FDMA, 100% R8, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	x	5.39	72.08	19.07	2.23	80.0	±9.6%
	and the second second second	Y	4.72	69.76	17.86		80.0	
1022107	The second s	Z	4.23	68.69	17.07		80.0	ton an
10514- AAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	x	5 30	71.34	18.83	2.23	80.0	±9.6 %
	A STATUS CONTRACTORY	Y	4.71	69.27	17.73		80.0	
		Z	4.25	68.30	16.97		80.0	
10515- AAA	IEEE 802.11b WIFI 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)	X	0.99	64.18	15.67	0.00	150.0	± 9.6 %
102262		Y	0.87	62.03	13.65		150.0	
000494	Solo Manufacture and Charles Contractor	Z	0.96	64.13	15.35	-cond	150.0	S. Spicewast
10516- AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)	×	1.07	82.62	23.29	0.00	150.0	± 9.6 %
		Y	0.42	66.18	13.67		150.0	-
		Z	0.79	78.03	21.08	-	150.0	
10517- AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)	X	0.89	67.34	17.01	0.00	150.0	± 9.6 %
		Y	0.70	63,35	13.75		150.0	-
100.17	WERE AND ALL & LAURE & MALL LINES.	Z	0.83	66.82	16.43	0.00	150.0	±9.6%
10518- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)	x	4.64	66.90		0.00	1935.4	19.6%
		YZ	4,47	67.04	15.94	-	150.0	
10519-	IEEE 802.11a/h WIFi 5 GHz (OFDM, 12	X	4.47	67.18	16.24	0.00	150.0	±9.6 %
AAB	Mbps, 99pc duty cycle)	Y	4.67	66.59	16.08		150.0	
		Z	4.65	67.25	16.34	-	150.0	
10520- AAB	IEEE 802.11a/h WIFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)	X	4.71	67.17	16.45	0.00	150.0	±9.6 %
		Y	4.52	66.54	15.99		150.0	
	and a subscription of the	Z	4.51	67.23	16.28		150.0	
10521- AAB	IEEE 802.11a/h WIFI 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)	×	4.64	67.19	16.44	0.00	150.0	± 9.6 %
		Y	4.45	66.53	15.97		150.0	
		Z	4.44	67.24	16.27		150.0	
10522- AAB	IEEE 802.11a/h WIFI 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)	×	4.69	67.17	16.48	0.00	150.0	± 9.6 %
		Y	4.51	66.60	16.04		150.0	
		Z	4.50	67.33	16.35		150.0	

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10523-	IEEE 802 11am WHI 5 GHz (OEDM, 48	X	4.56	67.00	16.34	0.00	150.0	1 18.6%
AAB	Mbps, 98pc duty cycla)					940	100.0	+ 14 10 10
		9	4.28	66.45	15.88		150.0	
		2	4.39	67.23	16.22		150.0	
10524- AAB	IEEE 802 11a/h WIR 5 GHz (OFDM, 54 Mbps, B9pc duty cycle)	8	4.64	67.13	16.48	0.00	150.0	+ 9.6 %
		Y.	4.45	66.57	16.01		150.0	
10525-	Company of the second s	Z	4.44	67.24	16.32	10.00	150.0	1
10525- AAE	IEEE 802.11ac WiFi (20MHz, MCS0) Who auty cycle)	8	4.60	Q6.17	18.06	0.00	150.0	± 9.8 %
_		Y	4.43	65.55	15.60		150.0	
10526-	UPPER AND COLORADOR INCOMENTAL AND A	Z	4.64	86.33	15.94		150.0	1
AAE	IEEE 802.11ac WIFI (20MHz, MCS1, 99pc ibity rycke)	X	4.80	06.57	10.20	0.00	150.0	3962
		Y	19.1	85.93	15.75		150.0	-
10527-	IEEE oon star the metric time?	Z	4.61	86.68	16.07	-	150.0	100X
AAB	IEEE 802.11ac WFr (20MHz, MCS2, 99pc duty cyclo)	X	4.72	66.55	16.16	0.00	150,0	当身自ち
_		Ý	4.52	65.88	15,69	1 million (1997)	150.0	
10.2.10	Pres and the same making press	2:	4.53	96.66	16.02	1.	1.50.0	
10528- AAB	(EEE 802.11ac WIF: (20MHz, MQS3, 99pc duty cycle)	×	4.73	66,57	16,19	CO.D	150.0	1BAS
		Y	4.54	B5.90	15.72		150,0	1
10529-	STORE ONLY AN AVAILABLE MARKED AVAILABLE	2	4.55	85.67	16.05		150.0	Law Cal
AAB	IEEE 802.11ac WiFi (20MHz, MCS4, 99bc duty cycle).	X	4.73	66.57	16.19	0.00	150.0	± 9,8 %
_		X	4.54	05.90	15.72		150.0	
		Z	4.55	66.67	16.05	100	150.0	1
10631- AAB	(EEE 802 11ac W/F) (20MHz, MCS6, 99bc duty cycle)	X	4.74	66.72	16,22	0,00	150.0	19.6%
_		Y	4.53	68.01	15.73		150.0	
	There and as a supervised of the second	Z	4.53	66.77	18.00		150.0	1
10532+ AAB	IEEE 802.11ac WIFI (20MHz, MCS7, 90pc duty cycle)	×	# 60	66.69	16.17	0.00	156.0	29.6%
_		Y	4.39	65.8e	15.88	1.0	150.0	-
-		Z	4,40	66.64	16.01		150.0	
10533- AAB	IEEE 802,11ac WFr (20MHz, MCS8) 99pc dety cycle)	×	4.75	66;60	16.17	0.00	150.0	±96%
_		Y	4.55	65.94	15.70		150.0	-
Chart I	The second secon	2	4.56	66.73	18.05	1.000	150.0	
10034 AAB	EEE 802 11ac WiFI (40MHz, MCS0, 99bc duty cycle)	·X	5.24	66.67	16.21	0.00	150.0	19.6%
_		Y.	5,08	66.08	15.82	1	150.0	-
LORG P.		Z	5.06	66.70	16,06		150.0	
10535- NAB	IEEE 802 11sc WiFr (40MHz, MCS1, 99pc duty cycle)	X	5,31	06.61	18.26	0.00	150.0	19.8 W
_	0	Y	- 新禧	66.24	15.88	1.1	150.0	
0536-	DEPT MOTO A 4 A MARCH AND A MARCH	Z	5.12	86.85	16.13	1000	150.0	
VAB	IEEE 802.11ec WiF; (40MHz, MCS2, 98pc skily cyde)	×	5.18	66.81	16.25	0.00	150.0	1985
		Y	5,01	86.19	15,84		150.0	
0537	IEEE 802 11ac WiFI (40MHz, MCS3.	2	8.00	66.34	16.11		130.0	5
VAB	Septiduty cycle)	x	5.24	68,77	16.23	0.00	150.0	主動情報
-		Y	5.07	66.17	15.84		150.0	
0538-	THEF AND ASSA MULTIADAMA, MORE	Z.	5.08	66.79	16.08		150.0	
LAB	IEEE 002-11ac WIFI (40MHz, MCS4) 99pc duty cycle)	X	6.35	66.82	16.29	0,00	150.0	±9.6 %
		Y	5.17	86,21	15.90		150.0	
0540	IEEE 002 the last last last	2	8.14	66.79	16.12	-	150.0	-
AE	IEEE 802.11ac WIFI (40MH); MCSB, 99pc duty cycle)	X	5.25	56,78	16,29	0.00	150.0	29.6 W
	-	Y	5.09	66.21	15.91		150.0	
		Z	5.07	56.78	16.13		150.0	

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10541-	IEEE 802.11ec WIFi (40MHz, MCS7	TXI	5.24	66.69	16.24	0.00	150.0	1.9.8 %
AB	99ps duty cycle)	1.1		0.000		4.vor		1.010.10
		Y	5.05	66.08	15.84		150.0	
0542-	TEEE 802,11ac.WFT (40MHz, MCS8.	Z	5.05	66.69	16.08	10.00	150.0	
AB	99pc duty cycle)	×	5.30	66.72	16.27	0.00	150.0	±9/8 %
		Y.	5.22	86.16	15.50		150.0	
0543-	IEEE 802.11ac WIFI (40MHz, MCS9	ZX	5.20	66.74 66.74	16:12	0.00	150.0	11000
VAB	Babe gaz, the win flowing, wess	4				0.00	0.10	±9.6 %
			5.30	66.21	15.95		150.0	
0544-	IEEE 802 11ec WIFT (80WHz, MCSO,	X	5.27	66.76	16.14	0.00	150.0	19.6%
VVE	Separate view (Separate Second	1.1				0.00		1.8.0 %
_		Y	5.38	56.20	15.82		750.0	
0545-	ICEC BOD AL	Z	5.37	66.80	16.04	0.00	150.0	10000
0545- \AB	IEEE 802.11ac WIFI (80MHz, NCS1 99pc duty cycle)	X	5.72	67.14	16,31	0.00	150.0	主要度強
		Y	5.58	66.63	15.99		150.0	-
1107.47	INTER BOD AN ANTIPECTOR ALL ADDRESS	Z	5.53	67.12	16.15	0.00	150.0	I P S C
10546- AAB	IEEE 802.11eC WIFI (80MHz, MC62, 99pc duty cycle)	×	5.61	67,04	16.28	0.00	150/0	±9.6%
		Y	5.45	66.44	15.91		150.0	
	and a second second second second	Z	5,43	66.99	16.10		150,0	
10547- NAB	IEEE 802.11ac WiFi (80MHz, MCB3) 99pc duty cycle)	x	5.70	67.12	16,31	0.00	150.0	±9.6 %
		Y	5.53	66.49	15.92		150,0	
1	and the second sec	Z	5.50	67.02	15.11		150.0	
0548- VAB	IEEE 802 11ac WiFi (89MHz, MD84, 99pc duty cycle)	X	5.93	67.90	16.70	0.00	150.0	£9.6 %
		Y	5.82	87.53	16.41		150.0	1
		2	5.64	67.E3	46.39	1.2.1	150.0	1000
10550- AAB	IEEE 802 11ec WFi (80MHz, MCS6, 99pc duty cycla)	X	5.63	67.00	16.27	0.00	150.0	±9.6 %
		8	5.47	66.43	15.95		150.0	
		2	5.45	67.00	16.12		150.0	
10551- AAB	IEEE 802.11ac WIFI (BOMHz, MCS7, 99pc duty cycle)	x	5,65	67.07	18.26	0,00	150.0	= 9.6 %
	and the second sec	1.8	5.48	65.48	15.89		150.0	
		Z	5.46	67.04	18.10		150.0	
10552- AAB	IEEE 802 11ac WIFI (80MHz, MCS8 99pc duty rykle)	×	5.55	66.66	18.18	0.00	150.0	19.8%
	and story	Y	5.39	66.26	15.80	-	150,0	1
		Z	5.39	65.89	16.04	-	150.0	1.000
10553- AAB	IEEE 802 thac WIFI (SOMHz, MCS9, 99pc duty cycle)	×	5.00	66.91	16.22	0.00	150,0	±9.6%
-		Y	5,48	68.32	15.86		160.0	
		2	Б.47	66.91	16.07		150.0	1.000
10554- AAC	IEEE 802 11ac WIFI (100MHz, MCS0, 99bc duly cycle)	х	5.92	67.13	18.27	0.00	150.0	±9.6%
		Y	5.78	68.58	15,93		150,0	
		12	5.77	67.13	16.11		150.0	
10555- AAC	IEEE 802 11ac WIFI (100MHz, MCS1, 99pc duty uyde)	х	8.06	67,44	16,39	0.00	150,0	± 9.6 %
		Y	5.92	60.89	16.06		150.0	
		- 2	5.88	67.38	18.21		150.0	
10656+ AAC	IEEE 502.11ac WiFi (160MHz, MCS2, 99pc duty cycle)	×	6,07	67.47	16,40	0.00	150.0	±8.6.%
		Y	5,94	66.94	16.07		150.D	
	and the second second second	Z	5.90	67.42	16.23		150.0	di na
10557- AAC	IEEE 502.11ac WFT (160MHz, MCS3, - 99pc duty cycle)	×	9.08	67.43	16,40	0.00	160.0	29.6 %
		Y	5.91	68.85	16.05		150.0	
		Z	5.87	67.38	36.22		150.D	1

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6658-	LEEE BISZ 11ac WIFI (180MHz, MCS4,	X	6.11	67.60	16.50	0.00	1 150.0	1 18.6 9
AAC	99pc duty cycle)	1				100	1000	
		Y	5.96	67.02	16.15	-	150.0	
10560-	IFFF REALIZED THE THE REAL THE REAL	2	E-91	67.50	16.30	1.000	150.0	
AAC	IEEE 802 11ao WIFI (160MHz, MCS8, 99bs duby cycle)	×	6.91	67.46	16,47	0.00	150.0	± 9.6 %
_		Ŷ	5.95	66.87	18,11		150.0	
10561	TELE BOZ 11ad WIFI (160MHz MCS7,	2	5.52	67.38	16.28		150.0	
AAE	Selbe dury cycle)	X	5.02	67.40	16.48	0.00	150.0	±9.6 %
		7	5.87	E6.84	16:13		150.0	-
10562-	IEEE 802 11sc WIFT (160MHz, MCS8,	X	6.16	67.82	16.69	0.00	150.0	-020
AAS	99pc.duby cycle)	×	6.01	67.25	16.09	.0.00		29,0%
		2	5.03	67.63	16.44		150.0	-
10563-	IEEE 802.11ac WiFi (160MHz, MCS3	×	0.47	68.29	16.80	0.00	150.0	+985
AAG	Sept: duty syste)	7	6.34	67.82		0.00		29.0 3
		2	6.09	67.82	16.58	-	150.0	-
10564-	IEEE 802.11g WIFI 2.4 GHz (DSSS-	X	4.97	68.98	16.53	0.46	150.0	a lock in
AAA	DFDM, 9 Maps, 98pc duty cycle)	1.5				0,46	150.0	= 3.6 W
		- 7	4.81	68.46	15.14		150.0	
10585-	IEEE 802.11g WIFI 2.4 GHz (DSSS-	- 2	4.78	67.02	16.32	2.12	150.0	
AAA	OFDM, 12 Mops, 39pc duty cycla)	-	1.1	87.46	16.85	9.46	150.0	1296%
-		Y	5,05	86.93	16.47	-	150.0	_
10566- 6AA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 18 Mbps, 90pc & (y cycle)	X	5.01	67.49 67.34	16.65 16.69	0.46	150.0	19.6%
ann	OF DRY, 10 BELEY, EASE, DAY CODE)	Y	4.88	96.77	10.00	-		
		Z	4.88		16.28		150.0	
10567	(EEE 802 11g WF/ 2.4 GHz (DSSS-	X	5.09	87.32	16.46		150.0	
AAA	OFDM, 24 Maps. 55pc duty cycle)	N N	4.91	67.74	17.04	0.46	150.0	19.6 %
-		Z	4.85	87.15	16.63		150.0	
10568-	IEEE 802 11g WIF: 2.4 GHz (DSSS-	÷	4.97	87.80	16:87		150.0	
AAA	OFDM, 38 Mbps, 99pc duly cycle)	Ŷ		67 07	16,45	0.46	150.0	19.6 5
_			4.80	68.54	16.05		150,0	
10589+	IEEE 802 119 WIFF 2.4 GHz (DSSS-	2	4.74	67.03	10.19	11.415	150.0	1000
AAA	OFDM 48 Mbps: 39pc daty cycle)	1 A		67.78	17.08	0.46	150,0	± 9,8 %
-		Z	4.86	67.22 67.93	18.68		150,0	-
10570- AAA	IEEE 802 11g WIFI 2.4 CHz (DSSS- OFDM, 64 Mb(b), 30b5 duby cycle)	X	9.85	67 53 R7 62	10.95 17.01	0.46	150.0 150.0	1965
	and the second second second	Ŷ	4.90	67.08	16.82		150.0	-
	and the second sec	2	4.88	67.73	16.86		150.0	-
10571- AAA	IEEE 802,11b W/FI 2:4 GHz (D588, 1 Wbps: 90po duty cycle)	х	1.32	65.77	17 12	0.48	130,0	± 0.8 %
		Y	1.14	64.23	15.06		130.0	
		5	1,17	05:20	15.80		130.0	
10572- AAA	IEEE 802,115 VIIE 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)	X	1,36	67.60	17.59	D,46	130.0	± 9.6 %
_		Y	1.16	64.80	15.38		120.0	-
	And the second s	2	1.19	65.98	18.20	1.1	130.0	1
ET 201	IEEE 802.11b WIFI 2.4 GHz (DSSS, 5.6 / Maps. 90pr duty cycle)	×	100.00	100.25	40,35	0.46	130.0	±8.6 %
_		Y	1.94	61,80	20.21		138.0	1
and a local statement	Commenter Manufacture and and	Z	5:37	101.40	27.76		130.0	
10574- NIA	IEEE 802,116 WIFi 2.4 GHz (DSSS, 11 Mines 90pp duty cycle)	X	1.88	77.53	22:17	0,46	130.0	± 9.6 %
-		Y	1,28	70.31	17.98	1	130.0	-
		Z	1,45	73.83	20.12		130.0	

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10575-	IEEE 802.11g WFi 2.4 GHz (DSSS-	X	4,77	66.82	16.63	0.46	130.0	±9.6 %
a,a,a	OFDM, 6 Mbps, 90pc duty cycle)	Y	4.62	66.32	16.23		130.0	
		Z	4.56	66.75	16.23		130.0	
10576-	IEEE 802.11g WIFi 2.4 GHz (DSSS-	X	4.80	66.99	16.69	0.46	130.0	± 9.6 %
ААА	OFDM, 9 Mbps, 90pc duty cycle)	Y	4.64	66.47	16.29		130.0	
		z	4.59	66.94	16.38		130.0	
10577- AAA	IEEE 802.11g WIFi 2.4 GHz (DSSS- OFDM, 12 Mbps, 90pc duty cycle)	X	5.03	67.31	16.86	0.46	130.0	±9.6 %
		Y.	4.85	66.78	16.47		130.0	
		Z	4.78	67.21	16.54	12.622.45	130.0	
10578- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 18 Mbps, 90pc duty cycle)	×	4.93	67.50	16,96	0.46	130.0	± 9.6 %
		Y	4.75	66.94	16.57		130.0	
		Z	4,69	67.A2	16.68		130.0	
10579- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 24 Mbps, 90pc duty cycle)	×	4.69	66.84	16.33	0.46	130.0	± 9.6 %
		Y	4.52	66.24	15.89		130.0	
10580-	IEEE 802.11g WIFi 2.4 GHz (DSSS-	X	4.43	66.57 66.81	15.89 16.32	0.46	130.0	±9.6%
AAA	OFDM, 36 Mbps, 90pc duty cycla)					0.40		1 8.0 %
2000 V		Y	4.57	66.26	15.90		130.0	
		Z	4.47	66.59	15.90		130,0	
10581- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 48 Mbps, 90pc duty cycla)	x	4.83	67.59	16.95	0.46	130.0	±9.6 %
		Y	4.65	86.98	18.51	_	130.0	
10582-	IEEE 802.11g WIFi 2.4 GHz (DSSS-	X	4.59 4.64	67.47 66.58	16.62 16.12	0.46	130.0 130.0	±9.6 %
AAA	OFDM, 54 Mbps, 90pc duty cycle)	Y	4.47	66.00	15.67		130.0	
		Z	4.36	66.28	15.65		130.0	
10583- AAB	IEEE 802,11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)	×	4.77	66.82	16.63	0.46	130.0	±9.6 %
	and of a set of stand	Y	4.62	66.32	16.23		130.0	
		Z	4.56	66.75	16.29		130.0	
10584- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)	×	4.80	66.99	16.69	0.46	130.0	± 9.6 %
		¥.	4.64	65.47	16.29		130.0	
Second and		Z	4.59	65.94	16.38		130.0	
10585- AAB	IEEE 802.11a/h WIFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)	x	5.03	67.31	16.86	0.46	130.0	± 9.6 %
		Y.	4.85	66.78	16.47		130.0	
1000 C		Z	4.78	67.21	16.54	0.40	130.0	+ 0.0 #
10586- AAB	IEEE 802.11a/h WIFi 5 GHz (OFDM, 18 Mbps. 90pc duty cycle)	×	4.93	67.50	16.98	0.46	130.0	± 9.6 %
		YZ	4.75	66.94 67.42	16.57	-	130.0	
10587- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)	X	4.69	66.84	16.33	0.46	130.0	± 9.6 %
140	stops, supe duty cycle)	Y	4.52	66.24	15.89		130.0	
		Z	4.43	66.57	15.89		130.0	0
10588- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)	X	4.74	66.81	16.32	0.46	130.0	± 9.8 %
		Y	4.57	66.26	15.90		130.0	1
11.11.1		Z	4.47	66.59	15,90		130.0	
10589- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)	×	4.83	67.59	16.95	0.46	130.0	± 9.6 %
		Y	4.65	66.98	16.51		130.0	-
		Z	4.59	67.47	16.62	0.45	130.0	±9.6%
10590- AAB	IEEE 802.11a/h WIFI 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)	×	4.64	66.58	16.12	0,46	10000	18.6.3
		Y	4.47	66.00	15.67		130.0	
		Z	4.36	66.28	15.65		130.0	

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19.6.9	130.0	0.46	16.71	66.87	4,02	X	IEEE 902.11/v (HT Mozer), 20MHz	10591-
10.0 4	Deprise	0.10	1.11.1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-14	1.1	MCSE_90sb duty cycle)	AAB
_	130.0		16,34	EE 38	4.11	Ŷ.,		_
	130.0		16.40	66.82	4,71	Z	OTHER DOLL AND DESCRIPTION OF A DESCRIPTION OF	10592-
19.6 %	130.0	0.46	16.B4	67.22	5.09	8	IEEE 802.11h (IIT Mixed, 20MHz, MCB1.90pt duty cycle)	AAB
1.1.1.	130.0		16.47	8672	4.93	· Y		_
	130.0		16.53	87.15	4.86	2	IEEE 802-11n (HT Missel, 20MHz,	10593-
2 9.6 %	130.0	0.46	16,74	67,17	5,02		MCS2, 90pc duty cycle)	AAE
_	130.0		16.36	88.64	4.85	Y		
	120.0		16,40	87.04	4.77	2	IEE: 802.11n (HT Mixed, 20MHz,	10594-
1964	130.0	0.46	16.89	67.32	5.07		MCS3, 90pc duty cycle)	AAB
	130,0	in case of	16,51	66.80	4.90	Y		
	130.0	-	16.57	67.23	4.83	2	IEEE 802.11n (HT Mosid, 20MHz,	10595
1963	130.0	0.46	16.79	67.29	5,05	×	MCS4, 90pc duty cycle)	AAB
-	130.0	·	16.40	66.75	4.87	Y		_
See	130.0		16.45	67.17	4.80	2	TEEE BO2 11n (HT Mood, 20MHz	10596-
± 9,6 %	130.0	0.46	16.80	67 29	4.58	×	MCS5, 90pc duty cycle)	AAB
	130.0	1	16,40	88.75	4.81	Y		
-	130.0	1.1.1	16.45	67.16	4.73	Z	IEEE 802 11n (HT Mixed, SDMHz	10597-
196%	130.0	0.46	16,70	67.23	4.94	×	MCS5, 90pc (July cycle)	AAB
	130.0		16:29	66.66	4:76	Y		
	130.0	1000	15.33	67.06	4,68	7	If the state we believe a sector	10598-
198%	130.0	0.46	18.98	67.49	4.82	*	IEEE S02.11n (HT Mixed, 26Mirz, MCS7, 90pc duty cycle)	AAB
	130.0	1	16.65	66,90	4.74	Y		
	130.0		16.63	67,34	4.68	1	Here and 111 me by	10000
±9.6%	130.0	0.46	16,88	67.43	5.58	×	IEEE 802.11n (HT Mixed 40MHz, MOSO, 90pc duty cycle)	10599- AAB
	130.0		16.56	66.96	5.44	Y.		_
	130.0		16.55	67.25	5.34	2	and the liter many	
198%	130,0	0.46	17.07	67.88	5.74	x	IEEE 802.11n (HT Mixed, 40MHz MOS1, 90pc duty cycle)	AAB
	130.0	-	16.79	57.47	5,60	- X -		-
	130.0		16.64	67.51	5.43	2	loss and second second second second	
±10,8 %	130.0	0.46	16.95	67.61	5,81	*	IEEE 802.11n (H1 Mixed, 40MHz; MCS2, 90pc duty sydle)	1060 II. NAB
	130.0		16.66	67.17	5,48	4		
_	130.0		15,60	67.37	5,35	2		
*86%	130.0	0.46	HE.BE	67.58	5,70	X	IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty pycks)	10602+ VAB
	130.0	-	18.58	67.17	5.58	Y		1 × 1
	130.0		16.52	67.40	5.45	Z	tables 1000 to one of the last	
± 9,6 %	130.0	9.46	17.16	67.83	5.BO	x	IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc daty cycle)	0603- AB
_	130.0		16.87	67.48	5,65	4		_
	130.0	20.00	10.01	67.69	2.05	2	OTTO AND AN ADDRESS AND ADDRESS	0504-
19.6%	130.0	0.46.	36,87	67.37	5.58	×	IEEE 902.11n (HT Mised, 30MHz, MCSS, 90pc duty cycle)	0804- 48
-	130.0		16.57	86.52	5.44	Y		_
	130.0		16.58	67.27	5.37	2'	INPERIOR AND MADE AND ADDRESS	0005-
19.6%	130.0	0.46	17.00	67.64	0.88	×	IEEE 302 11n (HT Mixed, MMHz, MC68, 90pc duty cycle)	AE
	130.0		16.75	67.28	5,56	Y		-
	130.0		16.88	67.44	5.43	7	International Accounts in the second	0606-
± 9.6 %	150,0	0.48	16,84	57.15	5,46	x	MCS7, 90pc duty cycle)	AB
	130.0		16.32	86.89	5.33	Y		_
	130.0		16.23	68.87	5.20	Z		

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10517- 4,45	TEEE 902 TTac WIFI (20MHz, MCS0, 80pc duty cycl4)	X	476	95,21	16.35	17.46	130.0	19.6 %
-Child	subschold offen	8	4.60	35.66	15.94	-	130.0	-
		7	4.55	56.17	16.05		130.0	
10008- AAB	IEEE 802.11ac WIFI (20MHz MCS1) 90oc duby cycle)	ж	4.97	85.64	16.51	0.46	130.0	±86%
		Y	4.79	65.07	18.11		130.0	-
	A REAL PROPERTY AND A REAL PROPERTY AND A	Z	4,73	86.56	16.21	1.1	130.0	
AAB	EEE BOZ 11ac WiFt (20MHz, MICS2, 90pcduty cycle)	×	4.86	68,52	16,38	0.46	130.0	295 %
		Y	4.63	65.92	15.94		130.0	-
		2	4.62	06.40	10.04	1	130.0	
10610- AAE	EEE 802 11ac WFI (20MHz, MCSS, 90pt duty cycle)	×	4.91	88.68	18,5d	0.46	130.0	394.5
		Y	4.73	66.08	16.11		330 D	
		Z	\$47	86.55	16:22	-	530.0	Sec.
10611 AAB	IEEE 802,11ac WFI (20MHz; MC84. 90pc duty cyclo)	*	4.93	86.50	16,39	0.46	130.0	1988
		Y	4,65	65.89	45.96		130.0	
		Z	4.59	66.36	16.65	1.1.1	130.D	
10612. AAS	IEEE 802.11ac WIFI (20MHz, MCS5. 90pc duty cycle)	x	4.85	96,66	16.44	0.46	130.0	± 9.6 %
		Y	4,66	65.04	16.00		130.0	-
		Z	4.59	66.49	16.08	1000	130.0	
10613- AAB	IEEE 802 11ac WIFI (2004-tz. MCSG) 90pc duty cyclu)	×	4,00	66.57	16.33	0,46	130.0	± 9.6 %
7 I	The second secon	TY.	4.07	65.94	15,89		750.0	-
		Z	4,68	65.36	15.95		130,0	
HIB14- AAE	(EEE 802.11ac WIFI (20MHz, MCS7, 90bc (July cycle)	×	4.80	68.77	16.57	0.48	130.0	± N E S
-	and a state of the state	Ť.	4.00	66.11	16.11		130.0	
		Z	4.55	66.63	18.24		130.0	
1DE15- AAE	IEEE BOZ 11mc Wil- (20MHz, MCS8, 90pc duty cycle)	×	4 83	66,33	16.17	0,48	138.0	# 0,8 %
		4	4.65	65.72	15.74		130.0	
		Z	4.57	66.14	15,79		130.0	
1D616- AAE	IEEE 302.1 (ap WIF) (40MHz, MCSU, 90pc duly cyce)	8	5,40	66.72	16.51	0,46	130.0	=96%
	a destruction of the	- ¥	5.25	66:20	他们		130.0	-
		2	5.18	68.58	46,21	1000	136.0	10.00
10617- AAB	IEEE 902.11as WiFI (30MHz, MCS1. 90pc duty cycle)	x	5.46	66.82	16,52	0.46	120.0	± 9.6 %
		- Y	5.32	66.35	16.21		130.0	
		Z	5.23	66.70	1E.24	-	130.0	
10618- AAB	IEEE 802 1 Iao WiFi (10Militz, MCS2, 90pc daty cycle)	×	5,36	68.91	16.59	0.46	130.0	19.0%
		Ŷ	5.20	66.37	16.23		130.0	-
			5,13	66,77	16.30	-	130.0	-
10819. AAB	IEEE B02 11as WiFi (40WHz, MCS3, 90pc duty cycle)	x	E.38	65.73	16.44	0,48	130.0	±9.6%
		Y.	5.23	66.21	16.09	-	130.0	
0.00	Sector and the sector sector	2	5.14	86.53	16.10		1.90,0	1000
10620- AAB	JEEE 802.11 ac WIFr (40MHz, MCS4, 90 pc duty cycle)	X	5.40	66.81	16.52	11-48	130.0	于自己的
		- X -	5,33	66.26	16.17		130.0	-
		2	5.23	66.56	16.17	10.00	130.0	
10621 - AAB	TEEE ed2.11ac WFH (40MHz, MCS6, 00pc doty cyclin)	×	5,47	66.89	18.68	0.46	130/0	19.0%
		4	5.31	66.35	16:33	-	130.0	-
	and the second second	Z	5.24	66.76	16.40	1 1 25	130.0	1.000
10622- AAE	IEEE 802,11ac WiFi (40MHz, MG56, 50pc puty cycle)	×	5.47	67.00	1672	0.46	130.0	±9.6%
		Y	5.33	66.52	16.41		130.0	
		- T	5.25	66.89	10.45		130.0	1

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10823- AAE	IEEE 802,11ac WiFi (40MHz, MC\$7, 90pc tuty cycle)	×	5.38	66.59	16.41	6.46	130.0	19.6%
19,000	and canny phone	Y.	5.20	66.04	16.05	-	130.0	
		Z	5.12	68.39	16.07	-	130.0	-
10624- AAB	IEEE 802 11ac WEH (40MHz, MESS 90pc duty byold)	×	5.54	66.74	16.54	0.46	130.0	± 9.6 %
_		Y	5,40	66.26	16.22	-	130.0	-
		7	5.31	86.69	18.23		130.0	
TENE25- AAE	IEEE S02 11ec WE1 (60MHz, MCSB, 30pc duty cycle)	×	5.91	67.68	17.05	0,46	130.0	±9.6 %
		Ŷ	5.81	67.35	16.82		130.6	
		- Z	5.60	87.33	16.65	10.000	130.0	1
10628 AAB	JEEE 502.11 at WFi (80MHz, MCS0, 90pc duty cycle)	x	5.68	86.70	16,44	.C.46	130.0	19.5%
		γ	6.54	68.25	16.12		130,0	
		2	5.47	88.84	16.16		130.0	1
10627- AAB	JEEE 802.11ab WiFi (80MHz, MCS1, 90bb duty cycle)	×	5.90	57.28	16,64	0.46	130.0	±96%
_		Ŷ	5.79	- 66.84	16,38		130.0	
		2	5,67	67.08	16:34		130.0	1.1.1.1
AAB	IEEE 802 11ac W/ITI (80MHz, MCS2, 906c duty cycla)	x	5,73	66.91	16,42	0,46	130.0	106%
_		· Y	5.58	66.38	16.08		130.0	-
1000	where and it is a second second	2	5.49	68.66	18.06		130.0	1
10629- AAB	IEEE 802.11ac WiFI (BDMH2, MCS3, 90pc dbiy cycla)	×	5,81	68.97	18,43	0.45	130.0	土田市林
		Y	5.67	66.48	18.13		130.0	
1000	and have a standard and	Z	5.56	66.69	16.07		130.0	1
10630 AAB	IEEE 882.1186 W/Fr (80MHz, MCE4. 90pc duty cycle)	18	6.26	68,50	17.18	0,46	120.0	* 9.6 %
		Y	6.18	88.17	18.96		130.0	
	1	Z	5,83	67,70	18.58		130.0	
10631- AAB	IEEE 802.11an WFi (80MHz: MCS5, 99pp duty cycle)	×	6.19	68.38	17.32	0.46	130.0	+9.8%
		Y	8.03	67.83	18.99		130.0	
		Z	5.88	67.92	15.89		130.0	
106828 AAB	IEEE 802 11ac WiFi (BOMHz, MCS6, 90pc duty cycla)	×	5,89	67 37	16,83	0.46	130.0	¥9.6%
		1.20	5.75	86.88	16.53		130.0	
	and the second second	12	5,87	67.23	16.67		130.0	
AAH	IEEE 802 11ac WiFi (SDMHz, MICS7, 80pc duty cycla)	x	5.81	67.14	16.55	0,46	130.0	29/8 %
	and a second a second second	11	5.84	86.63	18 18		130.0	-
10.4.1.1		Z	5.57	66.89	18.21	1.000	130.0	
10834- AAE	IEEE 802,11ac WF (B0MHz, MCS8, 90pc duty cycle)	x	5 79	87.15	18.62	0.48	130.0	主题标识
		Ŷ	5.63	66.56	16.28		130.0	-
10001	after stor day they wanted	Z	5,56	66.95	16.31		130.0	
10835- AAB	IEEE 802,11ac WilFi (20MHz, MCB9, 90pc duty cycle)	х	0.68	88.48	16.03	0.48	130,0	732 <i>8</i>
		Y	5,52	65.82	15.67		130.0	
0836-	INTE SOL TO THE OWNER	2	16.41	66.16	15.02		130.0	
AAC	IEEE 802.11ac WIFI (180WHz: MCSO, 90pc duty cycle)	x	6.07	67.13	18.52	0.46	120.0	+98%
		1 4	5.85	66.65	16.23		130.0	
10037	INC. OOD 44 - Mar. 1	21	5.87	68,97	16,23	-	130.0	
AAC	IEEE.802.11ac WIFI (160MHz, MCS1, B0pc daty cycle)	×	6.23	67.50	18.68	0,48	130.0	÷9.6%
_		Y	6.14	67.04	16.40		130.0	-
U.Brin	ment and day with home of	7	8.00	\$7.28	16.35		130.0	-
AAG	BEE 802.11ac.WiFt (160MHz, MCS2, 90pc duby cycle)	×	6.23	67,47	16.65	0.46	130.0	±0.6%
1.11		Y	5.11	67.00	16.38		130.0	-
		Z	8.01	67.28	16.34		130.0	

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10539-	JEEE 802 T1ac WIFI (160MHz, MCS3)	X	6.25	67 /49	18.70	0,46	1000	+96%
AAC-	90pc mity cycla)				1000	chien.	10.0	= 9 kl 74
1		Y	6.09	66.97	16.39		130.0	i
		Z.	6.00	67.25	16.37		130.0	10000
10640- NAC	IEEE 802 11a: WIFI (160MHz, MCS4, 90pc duty cycle)	х	6.25	87.53	16.67	0.46	130.0	= 0.6 %
_		٧.	6.41	67,01	16.35	-	130.0	1
	and down and the second second	7	6.99	87.21	16.25	-	130.0	10.000
10641- AAC	EEE 802 11ad W/FI (160MHz, MCS5) 90pc duty cycle)	8	6.25	87.31	16.67	0.46	10.0 0	#88%
		Y	0.13	86.85	16.30		130.0	1
		Z	6,03	87.11	16.26	10.00	1000	in the second
10642- MC	EEE 802,11ec WFI (160MHz, MCS6, 30pc duty cycle)	×	8.33	67,65	16,91	11.46	130.0	4 9.6 %
		¥.	0,10	67 13	16.60		130,0	1
		.7	6,10	67.47	16.62		130.0	-
10643- AAC	IEEE 802 11ac W/Fi (160MHz, MCS7 90pc duty cyclei	×	6.15	67.31	18:65	0.46	130.0	49.6%
-		· 9	0.02	05.62	10.24		120.0	-
1000		Z	5.91	67.08	16:30	1000	130.0	1.000
10644 AAC	IEEE 802 11ee WIFI (160MHz, MCSS) 90pc dety cycle)	×.	8,35	67.93	16,98	0,46	130.0	7 3 Q M
		¥.	6.21	87.40	15.65	_	1393.0	-
		7	6.05	时期	16.53		130.0	
10646- AAC-	IEEE 802 11 ac W/FI (160/MHz, MCS9, 80pc duly cycle)	×	8.71	88.51	17.21	11.46	130.0	± 9.6 %
		18	6,68	-68,36	17.09		15010	
	and the second second second	1.2	6.25	67.70	TESIX	20.00	130.0	1000
10846- AAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, OPSK, UL Subframe=2,7)	x	86.17	140.37	45.40	9.30	60,0	+0.5 %
-		Y.	39.64	122.66	40.63		69.0	
		2	18,19	1EM 43	33.83	15 m	60.0	1
10847- AAF	LTE-TOD (SG-FDMA, 1 RB, 20 MHz. OPSK, UL Subfrance 2.7)	x	80.45	139.77	45.45	9.30	60.0	3 8/F 9
	a second a second	¥.	36.72	121.04	40.66	-	63.0	
		2	16.41	102,96	33.52		60.0	1
10648- AAA	COMA2000 (1# Advanced)	X	10.87	\$65.51	13.20	0.00	150.0	10.01
		- Y -	0.58	81.72	9.15		150.0	1
1000	Second	Z	0.69	54.HU	11.24	1000	150.0	1.1.1.1.1.1
10652- AAD	(TE-TOD (OFDMA, E MHz, E-TM 3.1, Clipping 44%)	x	431	69.00	17.79	2.23	0,0,0	= 96%
		Y	3.89	67.20	16.71		0.08	
		Z	46.E	67,40	16,29		80,0	
10653- AAD	ETE-TDO (OFDMA: 10 MHz, E-TM 3.1, Ofgsing 44%)	×	4.72	07.91	17.64	2.22	80,0	10.0%
	and a second sec	Y.	4.40	66.72	16.87	1.000	BD D	1.
	1 Contractor and the second	1	4.16	66.48	10.48	1.5.5	80,0	1000
10854- AAD	LTE-TOD (OFDMA: 15 MRz E-TM 3.1 Clipping 44%)	x	4,64	67.52	17,60	2.25	80,0	19.6 %
		Y	4.35	60.39	18.88		80.0	-
	Later and the second	L	6.16	65.16	76.60	1.12	80.0	1.1.1
10855- AAE	LTE-TIDD (GFOMA, 20 MHz, E-TM 3.1. Olipping 44%)	×	4.69	67.54	17.84	2,23	60.0	29.6%
		Ψ.	4.42	66.40	16.92	-	80.0	
		- Z.	4.19	66.14	16.53	-	0.08	
10658- AAA	Pulas Weweform (200Hz, 10%)	8	100.00	116,88	30 15	10.00	50.0	÷9.6 S
-		Y	27.27	97.34	24.81	-	50,0	
		12	二点航三	73.00	14.99	10.00	0.08	-
10fffli-	Palsa Waveform (200Hz, 20%)	8	100.00	114,08	97 78	9.30	60,0	÷ø'e 4
		Y	100.00	111.99	26.70		0.00	
		7	5.09	79,98	14,50		eu u	

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10660- AAA	Pulse Waveform (200Hz, 40%)	×	100.00	113.57	26.20	3.98	80.0	± 9.6 %
		Y	100.00	108.48	23.71		80.0	
		Z	17,55	86.88	16.64		0.06	
10661- AAA	Pulse Waveform (200Hz, 60%)	X	100.00	116.76	26.28	2.22	100.0	± 9.6 %
		Y	100.00	105.43	21.11	-	100.0	
_		Z	100.00	100.82	18.62		100.0	
10662- AAA	Pulse Waveform (200Hz, 80%)	×	100.00	127.89	28.96	0.97	120.0	± 9.6 %
		Y	3.43	74.94	10.68	-	120.0	
and the second	The second s	Z.	100.00	98.67	16.42		120.0	
10670- AAA	Bluetooth Low Energy	×	100.00	117.22	26.83	2.19	100.0	± 9.6 %
		Y.	100.00	107.88	22.47		100.0	
_		Z	100.00	104.58	20.49		100.0	

⁶ Uncertainty is determined using the max, deviation from linear response applying rectangular distribution and is expressed for the square of the field value

Certificate No: EX3-3938_Oct18

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Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

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7. Uncertainty Budget

A	с	D	е		f	g	h=c * f / e	i=c * g / e	k
Source of Uncertainty	Tolerance/ Uncertainty	Probability Distributio	Div	Div Value	ci (1g)	ci (10g)	Standard uncertainty	Standard uncertainty	vi, or Veff
Measurement system									
Probe calibration	6.00%	N	1	1	1	1	6.00%	6.00%	∞
lsotropy , Axial	3.50%	R	√3	1.732	1	1	2.02%	2.02%	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
lsotropy, Hemispherical	9.60%	R	√3	1.732	1	1	5.54%	5.54%	∞
Modulation Response	2.40%	R	√3	1.732	1	1	1.40%	1.40%	∞
Boundary Effect	1.00%	R	√3	1.732	1	1	0.58%	0.58%	∞
Linearity	4.70%	R	√3	1.732	1	1	2.71%	2.71%	∞
Detection Limits	1.00%	R	√3	1.732	1	1	0.58%	0.58%	∞
Readout Electronics	0.30%	Ν	1	1	1	1	0.30%	0.30%	∞
Response time	0.80%	R	√3	1.732	1	1	0.46%	0.46%	∞
Integration Time	2.60%	R	√3	1.732	1	1	1.50%	1.50%	∞
Measurement drift (class A evaluation)	1.75%	R	√3	1.732	1	1	1.01%	1.01%	∞
RF ambient condition -	3.00%	R	√3	1.732	1	1	1.73%	1.73%	∞
RF ambient conditions - reflections	3.00%	R	√3	1.732	1	1	1.73%	1.73%	∞
Probe positioner Mechanical restrictions	0.40%	R	√3	1.732	1	1	0.23%	0.23%	~
Probe Positioning with respect to phantom shell	2.90%	R	√3	1.732	1	1	1.67%	1.67%	8
Post-processing	1.00%	R	√3	1.732	1	1	0.58%	0.58%	8
Max SAR Eval	1.00%	R	√3	1.732	1	1	0.58%	0.58%	8
Test Sample related									
Test sample positioning	2.90%	N	1	1	1	1	2.90%	2.90%	M-1
Device Holder Uncertainty	3.60%	N	1	1	1	1	3.60%	3.60%	M-1
Drift of output power	5.00%	R	√3	1.732	1	1	2.89%	2.89%	8
Phantom and Setup									
Phantom Uncertainty	4.00%	R	√3	1.732	1	1	2.31%	2.31%	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Liquid permittivity (mea.)	3.14%	N	1	1	0.64	0.43	2.01%	1.35%	М
Liquid Conductivity (mea.)	2.82%	N	1	1	0.6	0.49	1.69%	1.38%	М
Combined standard uncertainty		RSS					11.72%	11.57%	
Expant uncertainty (95% confidence interval), K=2							23.43%	23.14%	

Measurement Uncertainty evaluation template for DUT SAR test (0.3-3G)

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8. Phantom Description

Schmid & Partner Engineering AG

s а D е a

Zeughausstrasse 43, 8004 Zurich, Switzerland Phone +41 44 245 9700, Fax +41 44 245 9779 info@speag.com, http://www.speag.com

Certificate of Conformity / First Article Inspection

Item	Oval Flat Phantom ELI 5.0	
Type No	QD OVA 002 A	
Series No	1108 and higher	
Manufacturer	Untersee Composites Knebelstrasse 8, CH-8268 Mannenbach, Switzerland	

Tests

Complete tests were made on the prototype units QD OVA 001 A, pre-series units QD OVA 001 B as well as on some series units QD OVA 001 B. Some tests are made on all series units QD OVA 002 A.

Test	Requirement	Details	Units tested	
Shape	Internal dimensions, depth and sagging are compatible with standards	Bottom elliptical 600 x 400 mm, Depth 190 mm, dimension compliant with [1] for f > 375 MHz	Prototypes	
Material thickness Bottom: 2.0mm +/- 0.2mm		dimension compliant with [3] for f > 800 MHz	all	
Material rel. permittivity 2 – 5, loss tangent ≤ 0.05, at f ≤ 6 GHz		rel. permittivity 3.5 +/- 0.5 loss tangent ≤ 0.05	Material samples	
Material resistivity	Compatibility with tissue simulating liquids .	Compatible with SPEAG liquids. **	Phantoms, Material sample	
Sagging	Sagging of the flat section in tolerance when filled with tissue simulating liquid.	within tolerance for filling height up to 155 mm	Prototypes, samples	

Note: Compatibility restrictions apply certain liquid components mentioned in the standard, containing e.g. DGBE, DGMHE or Triton X-100. Observe technical note on material compatibility.

Standards

**

- OET Bulletin 65, Supplement C, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields", Edition 01-01
 IEEE 1528-2003, "Recommended Practice for Determining the Peak Spatial-Average Specific
- Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques, December 2003
- [3] IEC 62209-1 ed1.0, "Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Human models, instrumentation, and procedures - Part 1: Procedure to determine the specific absorption rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)*, 2005-02-18 [4] IEC 62209-2 ed1.0, "Human exposure to radio frequency fields from hand-held and body-mounted
- wireless communication devices Human models, instrumentation, and procedures Part 2: Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", 2010-03-30

Conformity

Based on the sample tests above, we certify that this item is in compliance with the uncertainty requirements of body-worn SAR measurements and system performance checks as specified in [1-4] and further standards

Date 25.7.2011

Signature / Stamp

eag s nd & Barther Engineering AG bayestrassa 43, 8004 Kulch, Shiteriar 8/441 44/25/9708 Fext-44 (4/55/9779

Doc No 881 - QD OVA 002 A - A

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9. System Validation from Original Equipment Supplier

Engineering AG ughausstrasse 43, 8004 Zurict	y of		S Schweizerischer Kalibrierdienst C Service suisse d'étaionnage Servizio svizzero di taratura S Swiss Calibration Service
correction by the Swiss Accredita he Swiss Accreditation Service fulfilateral Agreement for the re	is one of the signatorie		Accreditation No.: SCS 0108
Ileni SGS-TW (Aude	~~	1. 0 H.L.	18 No: D2450V2-727_Apr18
CALIBRATION C	ERTIFICATE		
Daject	D2450V2 - SN:73		
Calibration proceedure(s)	QA CAL-05.v10 Calibration proce	edure for dipole validation kits	above 700 MHz
Calibration date:	April 24, 2018		
All calibrations have been conduc	cloci in the closed laborato	ry taclify: environment temperature (22	+ 37°C and humidity < 70%
Calibration Equipment used (M&)	TE ontical for calibration)	ry tacility: environment lemperature (22	
Calibration Equipment used (M&) Primary Standards	TE critical for calibration)	Cal Data (Certificate No.)	Schedued Calibration
Calibration Equipment used (M& Inmery Standards Power meter NRP	TE onlical for calibration)	Cal Data (Certificaté No.) 04-Apr-18 (No. 217-02672/02673)	Scheduled Calibration Apr-19
Calibration Equipment used (M&) Primary Standards Power mater (MRP Power sensor NRP-291	TE ontical for cellibration) ID & SN: 104778 SN: 103244	Cal Data (Certificate No.) 04-Apr-18 (No. 217-02672)/C6673) 04-Apr-18 (No. 217-08672)	Sceedured Calibration Apr-19 Apr-19
Calibration Equipment used (M8) Primary Standards Power mater NRP Power sensor NRP-Z2H Power sensor NRP-Z2H	7E onlical for calibration) ID 4 SN: 104779 SN: 103244 SN: 103245	Cal Data (Certificate No.) D4-Apr-18 (No. 217-02672/02673) O4-Apr-18 (No. 217-02672) O4-Apr-18 (No. 217-02673)	Scredued Calibration Apr-19 Apr-19 Apr-19
Calibration Equipment used (M& Primary Standantis Power mater NRP Power sensor NRP-Z91 Reference 20 dB Attenuator	TE onlical for calibration) ID # SN: 104778 SN: 103244 SN: 103245 SN: 103245 SN: 5058 (20k)	Cal Data (Cerificate No.) 04-Apr-16 (No. 217-02672/02673) 04-Apr-18 (No. 217-02672) 04-Apr-18 (No. 217-02673) 04-Apr-18 (No. 217-02673)	Scheduled Calibration Apr-19 Apr-19 Apr-19 Apr-19
Calibration Equipment used (M8: Primary Standards Power mater MRP Power sensor NRP-291 Reference 20 dB Attenuation Type-N mismatch combination	7E onlical for calibration) ID 4 SN: 104779 SN: 103244 SN: 103245	Cal Data (Certificate No.) D4-Apr-18 (No. 217-02672/02673) O4-Apr-18 (No. 217-02672) O4-Apr-18 (No. 217-02673)	Scredued Calibration Apr-19 Apr-19 Apr-19
Calibration Equipment used (M81 Primary Standards Power mater MRP Power sensor MRP-291 Power sensor NRP-291 Reference 20 dB Attenuation Type-N mismatch combination Reference Probe EX30V4	TE critical for celiberation) ID # SN: 104778 SN: 103244 SN: 103245 SN: 103245 SN: 5047.2 / 06327	Cal Data (Certificate No.) 04-Apr-16 (No. 217-02672X2673) 04-Apr-18 (No. 217-02672) 04-Apr-18 (No. 217-02672) 04-Apr-18 (No. 217-02682) 04-Apr-18 (No. 217-02682)	Screedured Calibration Apr-19 Apr-19 Apr-19 Apr-19 Apr-19
Calibration Equipment used (M81 Primary Standantis Power motor NRP Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 20 dB Atterustor Type-N mismatch combination Reference Probe EX30V4 DAE4	TE ontical for calibration) ID # SN: 104778 SN: 103244 SN: 103244 SN: 103245 SN: 5058 (20k) SN: 5058 (20k) SN: 5047.2 / 06327 SN: 7349	Cal Data (Certificate No.) D4-Apr-18 (No. 217-02672/02673) D4-Apr-18 (No. 217-02672) O4-Apr-18 (No. 217-02673) O4-Apr-18 (No. 217-02682) O4-Apr-18 (No. 217-02683) 3D-Dac-17 (No. EX3-7349_Dec17)	Sceedured Calibration Apr-19 Apr-19 Apr-19 Apr-19 Apr-19 Dec-18
Calibration Equipment used (M8: Primary Standards Power mater (M8 ² Power sensor NRP-291 Reterence 20 dB Attenuation Type-N mismatch combination Ratesance Probe EX30V4 DAE4 Secondary Seandards	TE onlical for calibration) ID 4 SN: 104778 SN: 103244 SN: 103245 SN: 5055 (20K) SN: 5047.2 / 06327 SN: 5047.2 / 06327 SN: 501	Cal Data (Certificate No.) 04-Apr-18 (No. 217-02672/02673) 04-Apr-18 (No. 217-02672) 04-Apr-18 (No. 217-02673) 04-Apr-18 (No. 217-02682) 04-Apr-18 (No. 217-02682) 04-Apr-18 (No. EX3-0340_Dec17) 25-Oct-17 (No. DAE4-601_Dc17)	Scredured Calibration Apr-19 Apr-19 Apr-19 Apr-19 Apr-19 Disc-18 Oct-18
Calibration Equipment used (M81 Primary Standards Power mater MRP Power sensor NRP-291 Reference 20 dB Attenuator Type-N mismatch combination Raterance Probe EX30V4 DAE4 Secondary Standards Power mater EPM-442A	TE critical for celiberation) ID # SN: 104778 SN: 103244 SN: 103245 SN: 504752 / 06327 SN: 50472 / 06327 SN: 50472 / 06327 SN: 504	Cal Data (Certificate No.) 04-Apr-18 (No. 217-02672/X2673) 04-Apr-18 (No. 217-02672) 04-Apr-18 (No. 217-02672) 04-Apr-18 (No. 217-02682) 04-Apr-18 (No. 217-02682) 30-Dato-17 (No. EX3-7349_Dec17) 28-Oct-17 (No. DAE4-601_Dot17) Dheck Date (in bouse)	Screedured Calibration Apr-19 Apr-19 Apr-19 Apr-19 Dac-18 Dac-18 Scheduled Check In focuse check: Oct-18 In focuse check: Oct-18 In focuse check: Oct-18
Calibration Equipment used (M81 Prover mater MRP Power sensor MRP-291 Power sensor NRP-291 Reference 20 45 Attenuator Type-N mismatch combination Reference Probe EX30V4 DAE4 Secondary Senderds Power mater EPM-442A Power sensor HP 8481A	TE ontical for calibration) ID # SN: 104778 SN: 103244 SN: 103245 SN: 5047.2 / 06327 SN: 5047.2 / 0637 SN: 5047	Cal Data (Certificate No.) 04-Apr-18 (No. 217-02672/02673) 04-Apr-18 (No. 217-02672) 04-Apr-18 (No. 217-02673) 04-Apr-18 (No. 217-02682) 04-Apr-18 (No. 217-02682) 04-Apr-18 (No. 217-02683) 30-Dec-17 (No. EX-37442_Dec17) 28-Oct-17 (No. EX-37442_Dec17) 28-Oct-17 (No. DAE4-601_Dci17) Dreck: Date (in house) 07-Oct-15 (in house check Oct-16) 07-Oct-15 (in house check Oct-16)	Screeduled Calibration Apr-19 Apr-19 Apr-19 Apr-19 Apr-19 Das-18 Oct-18 Scheduled Check In focuse check: Oct-18 In focuse check: Oct-18 In focuse check: Oct-18 In focuse check: Oct-18
Calibration Equipment used (M8: Primary Standards Power mater MRP Power sensor NRP-291 Reterence 20 dB Attenuation Type-N mismatch combination Ratesance Probe EX30V4 DAE4 Sociondary Saindards Power mater EPM-442A Power mater EPM-442A Power sensor HP 0481A RF genuration PAS SMT-06	TE critical for celibration) ID # SN: 103244 SN: 103244 SN: 103245 SN: 50455(20K) SN: 5047.2 / 06327 SN: 6047.2 / 0637 SN: 6047.2 / 0647 SN: 6047.2 / 0647.2 / 0647 SN: 6047.2 / 0647.2 / 0	Cal Data (Certificaté No.) 04-Apr-18 (No. 217-02672/X2673) 04-Apr-18 (No. 217-02672) 04-Apr-18 (No. 217-02672) 04-Apr-18 (No. 217-02682) 04-Apr-18 (No. 217-02682) 00-Dat-17 (No. DAE4-601_Dat17) 28-Oct-17 (No. DAE4-601_Dat17) Dheok Date (in house) 07-Oct-16 (in house check Oct-16) 07-Oct-16 (in house check Oct-16) 07-Oct-16 (in house check Oct-16) 07-Oct-16 (in house check Oct-16) 07-Oct-16 (in house check Oct-16)	Screeduled Calibration Apr-19 Apr-19 Apr-19 Apr-19 Dac-18 Oct-18 Scheduled Check In focuse check: Oct-18 In focuse check: Oct-18 In focuse check: Oct-18 In focuse check: Oct-18 In focuse check: Oct-18
Calibration Equipment used (M8: Primary Standards Power mater MRP Power sensor NRP-291 Reterence 20 dB Attenuation Type-N mismatch combination Ratesance Probe EX30V4 DAE4 Sociondary Saindards Power mater EPM-442A Power mater EPM-442A Power sensor HP 0481A RF genuration PAS SMT-06	TE ontical for calibration) ID # SN: 104778 SN: 103244 SN: 103245 SN: 5047.2 / 06327 SN: 5047.2 / 0637 SN: 5047	Cal Data (Certificate No.) 04-Apr-18 (No. 217-02672/02673) 04-Apr-18 (No. 217-02672) 04-Apr-18 (No. 217-02673) 04-Apr-18 (No. 217-02682) 04-Apr-18 (No. 217-02682) 04-Apr-18 (No. 217-02683) 30-Dec-17 (No. EX-37442_Dec17) 28-Oct-17 (No. EX-37442_Dec17) 28-Oct-17 (No. DAE4-601_Dci17) Dreck: Date (in house) 07-Oct-15 (in house check Oct-16) 07-Oct-15 (in house check Oct-16)	Screeduled Calibration Apr-19 Apr-19 Apr-19 Apr-19 Apr-19 Das-18 Oct-18 Scheduled Check In focuse check: Oct-18 In focuse check: Oct-18 In focuse check: Oct-18
Calibration Equipment used (M81 Primary Standards Power sensor NRP-Z91 Power sensor NRP-Z91 Power sensor NRP-Z91 Reteence 20 45 Atterustor Type-N mismatch combination Reteence 20 45 Atterustor Type-N mismatch combination Reteence 20 45 Atterustor Power meter EPM-442A Power sensor NP 8481A Power sensor Power sensor NP 8481A Power sensor Power sensor NP 8481A Power sensor Power sensor sensor Power sensor Power sensor sensor sensor	TE ontical for cellbration) ID # SN: 103244 SN: 103244 SN: 103245 SN: 5047.2 / 08327 SN: 5047.2 / 08327 SN: 501 ID # SN: GB37450704 SN: GB37450704 SN: US37202783 SN: MY41082517 SN: 10537380585 Name	Cal Data (Certificate No.) Di-Apr-18 (No. 217-02672/02673) Di-Apr-18 (No. 217-02672) Di-Apr-18 (No. 217-02673) Di-Apr-18 (No. 217-02682) Di-Apr-18 (No. 217-02683) Di-Dio-17 (No. EX3-7342_Disc17) 25-Oct-17 (No. DAE4-601_Dci17) Disco: Data (in house) 07-Oct-18 (in house check Oct-16) 07-Oct-18 (in house check Oct-16) 07-Oct-15 (in house check Oct-16) 15-Jun-15 (in house check Oct-16) 15-Jun-15 (in house check Oct-17) Fünction	Screedured Calibration Apr-19 Apr-19 Apr-19 Apr-19 Dac-18 Oct-18 Scheduled Check In focuse check: Oct-18 In focuse check: Oct-18 In focuse check: Oct-18 In focuse check: Oct-18 In focuse check: Oct-18
Calibration Equipment used (M81 Primary Standards Power sensor NRP-Z91 Power sensor NRP-Z91 Power sensor NRP-Z91 Reteence 20 45 Atterustor Type-N mismatch combination Reteence 20 45 Atterustor Type-N mismatch combination Reteence 20 45 Atterustor Power meter EPM-442A Power sensor NP 8481A Power sensor Power sensor NP 8481A Power sensor Power sensor NP 8481A Power sensor Power sensor sensor Power sensor Power sensor sensor sensor	TE ontical for celibration) ID # SN: 103244 SN: 103244 SN: 103244 SN: 003245 SN: 5058 (20K) SN: 5047 2 / 06327 SN: 7349 SN: 601 ID # SN: GB37450704 SN: U637202783 SN: MY41002517 SN: 400972 SN: U537390585	Cal Data (Certificate No.) 04-Apr-18 (No. 217-02672)/C2673) 04-Apr-18 (No. 217-02672) 04-Apr-18 (No. 217-02672) 04-Apr-18 (No. 217-02682) 04-Apr-18 (No. 217-02682) 04-Apr-18 (No. 217-02682) 05-Dat-17 (No. EX3-7349_Dec17) 26-Od-17 (No. DAE4-601_Det17) Dheak Date (in house) 07-Od-15 (in house check Od-16) 07-Od-15 (in house check Od-16) 15-Jun-15 (in house check Od-16) 15-Jun-15 (in house check Od-17)	Screedured Calibration Apr-19 Apr-19 Apr-19 Apr-19 Dec-18 Dec-18 Dec-18 Scheduled Check In focuse check: Dct-18 In focuse check: Dct-18
Al csilbralion Equipment used (M8) Calibration Equipment used (M8) Primary Standards Power mater NRP Power mater NRP-291 Reference 20 d6 Attenuation Type-N mismatch combination Type-N mismatch combination Reference 20 d6 Attenuation Type-N mismatch combination Reference 20 d6 Attenuation Type-N mismatch combination Reference 20 d6 Attenuation Reference 20 d6 Atten	TE ontical for cellbration) ID # SN: 103244 SN: 103244 SN: 103245 SN: 5047.2 / 08327 SN: 5047.2 / 08327 SN: 501 ID # SN: GB37450704 SN: GB37450704 SN: US37202783 SN: MY41082517 SN: 10537380585 Name	Cal Data (Certificate No.) Di-Apr-18 (No. 217-02672/02673) Di-Apr-18 (No. 217-02672) Di-Apr-18 (No. 217-02673) Di-Apr-18 (No. 217-02682) Di-Apr-18 (No. 217-02683) Di-Dio-17 (No. EX3-7342_Disc17) 25-Oct-17 (No. DAE4-601_Dci17) Disco: Data (in house) 07-Oct-18 (in house check Oct-16) 07-Oct-18 (in house check Oct-16) 07-Oct-15 (in house check Oct-16) 15-Jun-15 (in house check Oct-16) 15-Jun-15 (in house check Oct-17) Fünction	Screedured Galibration Apr-19 Apr-19 Apr-19 Apr-19 Deci-18 Deci-18 Scheduled Check In focuse check: Dci-18 In focuse check: Dci-18
Calibration Equipment used (M81 Primary Standards Power sensor NRP-291 Power sensor NRP-291 Reference 20 dB Attenuation Reference 20 dB Attenuation Referen	TE ontical for calibration) ID # SN: 104778 SN: 103244 SN: 103244 SN: 103244 SN: 003245 SN: 5058 (20K) SN: 5058 (20K) SN: 5047.2 / 06327 SN: 7349 SN: 60374 SN: 6037450704 SN: 6037287583 SN: 400972 SN: 4039729 SN: 4039729 SN: 4039729 SN: 403972 SN: 403972 SN: 403972 SN: 403972	Cal Data (Certificate No.) 04-Apr-18 (No. 217-02672/CG673) 04-Apr-18 (No. 217-02672) 04-Apr-18 (No. 217-02672) 04-Apr-18 (No. 217-02682) 04-Apr-18 (No. 217-02682) 04-Apr-18 (No. 217-02682) 30-Date-17 (No. EX3-7349_Dec17) 26-Oct-17 (No. DAE4-601_Dot17) Dhoas Date (n house) 07-Oct-15 (n house check Oct-16) 07-Oct-15 (n house check Oct-16) 07-Oct-15 (n house check Oct-16) 15-Jun-15 (n house check Oct-16) 15-Jun-15 (n house check Oct-16) 14-Oct-01 (n house check Oct-17) Fünction Exboratory Technicten	Screedured Calibration Apr-19 Apr-19 Apr-19 Apr-19 Dac-18 Oct-18 Scheeduled Check In Nouse check: Oct-78 In Nouse check: Oct-78
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Calibration Laboratory of Schmid & Partner

Engineering AG rases 43, 8904 Zurich, Switzerland



Sanweizerischer Kallbrierdi s Service suisse d'étalormagé C Servizio evizzoro di tarabura Swiss Calibration Service

Accreditation No.: SCS 0108

Accredited by the Swiss Accreditation Service (SAS)

The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of caliberation coefficience Glossary:

TSL

tissue simulating liquid sensitivity in TSL / NORM x,y,z ConvF N/A not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless
- Communications Devices: Measurement Techniques", June 2013
- b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010.
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

e) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented. parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay: One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Certificate No: D2450V2-727_Apr18

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Measurement Conditions

DASY system configuration, as far as not given on page 1

DASY Version	DASYS	V52.10.0
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	da, dy, dz. = 5 mm	
Frequency	2450 MHz = 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 "C	39.2	1.80 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	38.3 ± 8 %	1.86 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	13.3 W/kg
SAR for nominal Head TSL parameters	Wt of bezilamon	52.1 W/kg ± 17.0 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR averaged over 10 cm ³ (10 g) of Head TSL SAR measured	condition 250 mW input power	6.16 W/kg
		6.16 W/kg 24.3 W/kg ± 16.5 % (

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	52.7	1.95 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	52.5 ± 6 %	2.01 mhc/m = 6 %.
Body TSL temperature change during test	< 0,5 °C	_	

SAR result with Body TSL

SAR sveraged over 1 cm ¹ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	12.9 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	50.8 W/kg ± 17.0 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR averaged over 10 cm ³ (10 g) of Bbdy TSL SAR measured	condition 250 mW input power	6.00 W/kg

Certificale No: D2450V2-727_Apr18

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Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	55.2 Ω + 2.7 jΩ
Return Loss	= 25.1 dB

Antenna Parameters with Body TSL

Impiedance, transformed to lead point	51.2 Q + 5.8 Q
Fietum Loss	- 25.0 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.149 ns	
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After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semingid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end capaare added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole emits, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG	
Manufactured on	January 09, 2003	

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DASY5 Validation Report for Head TSL

Date: 24.04.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:727

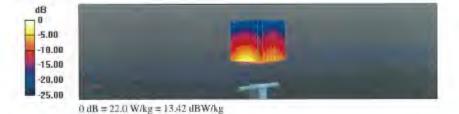
Communication System: UID 0 - CW; Frequency: 2450 MHz Medium parameters used: f = 2450 MHz; $\sigma = 1.86 \text{ S/m}$; $\epsilon_t = 38.3$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(7.88, 7.88, 7.88); Calibrated: 30.12.2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 26.10.2017 .
- Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001 ٠
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid; dx=5mm, dy=5mm, dz=5mm

Reference Value = 116.0 V/m; Power Drift = -0.06 dB Peak SAR (extrapolated) = 26.7 W/kg SAR(1 g) = 13.3 W/kg; SAR(10 g) = 6.16 W/kg Maximum value of SAR (measured) = 22.0 W/kg



Centificate No: D2450V2-727_April8

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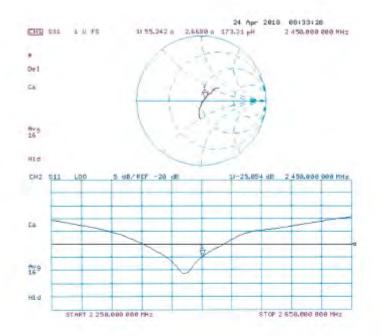
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Impedance Measurement Plot for Head TSL



Certificate No: D2450V2-727_Apr18

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DASY5 Validation Report for Body TSL

Date: 24.04.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:727

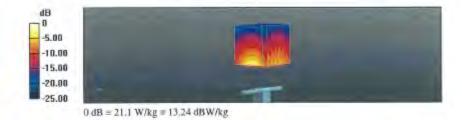
Communication System: UID 0 - CW; Frequency: 2450 MHz Medium parameters used: f = 2450 MHz; $\sigma = 2.01$ S/m; $v_r = 52.5$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(8.01, 8.01, 8.01); Calibrated: 30.12.2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 26.10.2017
- Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 108.4 V/m; Power Drift = -0.07 dB Peak SAR (extrapolated) = 25.5 W/kg

SAR(1 g) = 12.9 W/kg; SAR(10 g) = 6 W/kg Maximum value of SAR (measured) = 21.1 W/kg



Certificate No: D2450V2-727 April8

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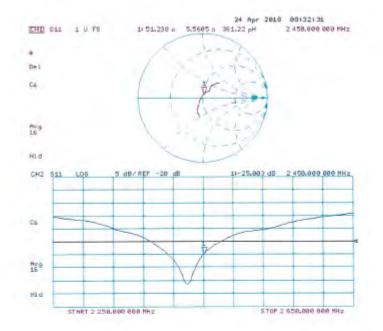
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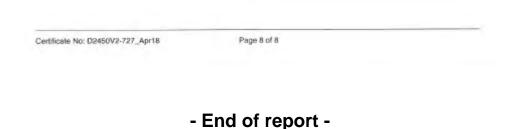
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Impedance Measurement Plot for Body TSL





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