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# **TEST REPORT**

ACCORDING TO: FCC 47 CFR part 27

FOR:

Alvarion Ltd. Microbase station Model:BreezeMAX Micro Outdoor

This report is in conformity with ISO/ IEC 17025. The "A2LA Accredited" symbol endorsement applies only to the tests and calibrations that are listed in the scope of Hermon Laboratories accreditation. The test results relate only to the items tested. This test report shall not be reproduced in any form except in full with the written approval of Hermon Laboratories Ltd.



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## **1** Applicant information

Client name:	Alvarion Ltd.
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Fax:	972 3645 6222
E-mail:	Moti.Ezra@alvarion.com
Contact name:	Mr. Moti Ezra

## 2 Equipment under test attributes

Product name:	Microbase station
Product type:	Transciever
Model(s):	BreezeMAX Micro Outdoor
Serial number:	90068294
Hardware version:	TA0125-01
Software release:	3.0.5.33
Receipt date	4/15/2010

## 3 Manufacturer information

Manufacturer name:	Alvarion Ltd.
Address:	21A Habarzel street, Ramat Hachayal, Tel Aviv 69710, Israel
Telephone:	972 3645 7859
Fax:	972 3645 6222
E-Mail:	Moti.Ezra@alvarion.com
Contact name:	Mr. Moti Ezra

## 4 Test details

Project ID:	20709
Location:	Hermon Laboratories Ltd. Harakevet Industrial Zone, Binyamina 30500, Israel
Test started:	4/15/2010
Test completed:	7/25/2010
Test specification(s):	FCC 47 CFR part 27



## 5 Tests summary

Test	Status
Transmitter characteristics	
Section 27.50(h), Peak output power at RF antenna connector	Pass
Section 27.50(h)(4), Spectral power density	Pass
Section 2.1091, 27.52, RF safety	Pass, exhibit provided in Application for certification
Section 27.53(m)(2), Spurious emissions at RF antenna connector	Pass
Section 27.53(m)(2), Band edge emissions at RF antenna connector	Pass
Section 27.53(m)(2), Radiated spurious emissions	Pass
Section 27.54, Frequency stability	Pass
Section 2.1049, Occupied bandwidth	Pass

Testing was not completed against all relevant requirements of the test standard. However, results obtained indicate that the product under test complies in full with the requirements tested.

	Name and Title	Date	Signature
Tested by:	Mr. L. Markel, test engineer	July 19, 2010	R
Reviewed by:	Mrs. M. Cherniavsky, certification engineer	July 27, 2010	Chur
Approved by:	Mr. M. Nikishin, EMC and Radio group manager	July 28, 2010	540°

The test results relate only to the items tested. Pass/ fail decision was based on nominal values.



## 6 EUT description

## 6.1 General information

The EUT, BreezeMAX Micro Outdoor base station is a high capacity, IP services oriented Broadband Wireless Access system. The BreezeMAX Micro Outdoor is digital modulated TDD system covering 2483.5 MHz up to 2690 MHz range. The system contains a base station unit and a subscriber unit. The basic base station system configuration is an all outdoor-box configuration that contain power supply, modem and the radio.

## 6.2 Ports and lines

Port type	Port description	Connected from	Connected to	Qty.	Cable type	Cable length	Indoor / outdoor
Power	DC power	EUT	EUT DC power supply		Unshielded	3 m	Outdoor
Signal	Ethernet	EUT	Ethernet switch	1	Shielded	10 m	Outdoor
RF*	Antenna	EUT	CPE (subscriber)	2	Coax	10 m	Outdoor

\* - connected to external antenna in normal use

## 6.3 Support and test equipment

Description	Manufacturer	Model number	Serial number
Smartbits Spirent Communications		SmartBits 2000	63673610
ETH SWITCH X 2	Dynamode	SW80010-M	NA
CPE X 2	Alvarion	4M-K2-CPE-Si-1D-2.5	NA
PC	Lenovo	NA	9637W1N LMVR4K
Laptop Lenovo		T60	L3-DZK37-07/01
DC power supply	Horizon	DHR3655D-10	773352 (Alvarion internal)

## 6.4 Changes made in the EUT

No changes were implemented in the EUT.



## 6.5 Test configuration





## 6.6 Transmitter characteristics

Type of equipment										
V	V Stand-alone (Equipment with or without its own control provisions)									
	Combined equipment (Equipment where the radio part is fully integrated within another type of equipment)									
	Plug-in card (Equipment intended for a variety of host systems)									
Intend	Intended use Condition of use									
V	fixed	Alwa	iys at a d	istance	more than	2 m fro	m all people			
mobile Always at a c			ys at a d	istance	tance more than 20 cm from all people					
	portable May operate at a distance closer than 20 cm to human body									
Assigr	Assigned frequency range 2496.0 – 2690.0 MHz									
Operat	ting frequency			2498.	5 - 2687.5	MHz				
RF cha	annel spacing			5 MH	z, 10 MHz					
Maxim	um rated output powe	er		At trai	nsmitter 50	$\Omega  \text{RF}$ (	output connector		37 dBm	
					No					
							continuous vari	iable	9	
Is tran	smitter output power	variab	ole?		Vee	V	stepped variab	le wi	ith stepsize 1 dB	
				v	res	minim	um RF power		27 dBm	
						maxim	um RF power		37.27 dBm	
Anten	Antenna connection									
	unique coupling	v	star	ndard c	onnector		Integral	-	without temporary RF connector	
Anten	na/s technical charact	eristic	· e							
T										
Type	al Omni		Manufac	Cturer Model number		el number		Gain		
Externa			IVIII			P/N	300650		9 (B)	
Externa	al Tilt Panel		Argus			1-08	5-54		18 dBi	
Tra	nsmitter 99% power b	andwi	idth	Transmitter aggregate data rate/s, MBps			Type of modulation			
	5 MHz		-	1.64		_	QPSK			
				8.22				-	OPSK	
	10 MHz		-	3.34				-	GEOR 640AM	
Type o	f multiplexing					<del>ו</del> ס.סד				
Modul	ating tost signal (base	(hand)	1							
Maxim	um transmitter duty o		n normal		F NL					
Trapar		yue li	niorina	u36	00%	U				
rransr		ninal	rated vol	tago			Patton/ tuna			
v		ninal i	rated vol	tage	Via		ballery lype	; n m	aine	
	AC mains Nor	ninal r	rated vol	tage	120	<u>-0 vDC</u> V	Frequency	11110	60 Hz	
					120	v	Тециспсу	_	00112	
Common power source for transmitter and receiver V yes no										



Test specification: Section 90.209, Occupied bandwidth					
Test procedure:	47 CFR, Section 2.1049				
Test mode:	Compliance	Vardict: DASS			
Date:	4/18/2010	verdict. PAS			
Temperature: 23.8 °C	Air Pressure: 1015 hPa	Relative Humidity: 42 %	Power Supply: 48 VDC		
Remarks:					

## 7 Transmitter tests according to 47CFR part 27 requirements

## 7.1 Occupied bandwidth test

#### 7.1.1 General

This test was performed to measure transmitter occupied bandwidth. Specification test limits are given in Table 7.1.1.

#### Table 7.1.1 Occupied bandwidth limits

Assigned frequency,	Modulation envelope reference points,	Maximum allowed bandwidth,
MHz	dBc	kHz
2496.0 - 2690.0	26	NA

#### 7.1.2 Test procedure

- 7.1.2.1 The EUT was set up as shown in Figure 7.1.1, energized and its proper operation was checked.
- 7.1.2.2 The EUT was set to transmit the modulated carrier and the output power was measured.
- **7.1.2.3** The EUT was set to transmit the normally modulated carrier.
- **7.1.2.4** The transmitter occupied bandwidth was measured with spectrum analyzer as a frequency delta between the reference points on modulation envelope and provided in Table 7.1.2 and the associated plots.

#### Figure 7.1.1 Occupied bandwidth test setup





Test specification:	Section 90.209, Occupied	Section 90.209, Occupied bandwidth						
Test procedure:	47 CFR, Section 2.1049							
Test mode:	Compliance	Vordict	DAGG					
Date:	4/18/2010	verdict.	FA33					
Temperature: 23.8 °C	Air Pressure: 1015 hPa	Relative Humidity: 42 %	Power Supply: 48 VDC					
Remarks:								

#### Table 7.1.2 Occupied bandwidth test results

DETECTOR USED: RESOLUTION BAND VIDEO BANDWIDTH MODULATION ENVE MODULATING SIGN, CHANNEL BW:	WIDTH: : :LOPE REFEI AL:	RENCE POINTS:	Average 51 kHz (0.5-2% o 510 kHz 99% PRBS 5 MHz	f OBW)		
Carrier frequency, MHz	Modulatio n	26 dBc bandwidth, kHz	99% power bandwidth, kHz	Limit, kHz	Margin, kHz	Verdict
2498.50	QPSK	4718.0	4560.6	NA	NA	Pass
2498.50	64QAM	4752.0	4542.3	NA	NA	Pass
2593.00	QPSK	4719.0	4553.0	NA	NA	Pass
2593.00	64QAM	4740.0	4542.9	NA	NA	Pass
2687.50	QPSK	4734.0	4554.3	NA	NA	Pass
2687.50	64QAM	4688.0	4540.4	NA	Pass	
DETECTOR USED: RESOLUTION BAND VIDEO BANDWIDTH MODULATION ENVE MODULATION: MODULATING SIGN CHANNEL BW:	WIDTH: : :LOPE REFEI AL:	RENCE POINTS:	Average 110 kHz (0.5-2% 1100 kHz 99% QPSK PRBS 10 MHz	of OBW)		
Carrier	Modulatio	Occupied	99% power	Limit, kHz	Margin, kHz	Verdict
trequency, MHz	n	bandwidth, kHz	bandwidth, kHz			
2501.00	QPSK	9466.0	9091.6	NA	NA	Pass
2501.00	64QAM	9441.0	9076.2	NA	NA	Pass

## Reference numbers of test equipment used

QPSK

64QAM

QPSK

64QAM

9458.0

9481.0

9478.0

9456.0

#1	#2	#3			

9088.2

9094.6

9070.5

9070.0

NA

NA

NA

NA

NA

NA

NA

NA

Pass

Pass

Pass

Pass

Full description is given in Appendix A.

2593.00

2593.00

2685.00

2685.00



Test specification:	Section 90.209, Occupie	Section 90.209, Occupied bandwidth						
Test procedure:	47 CFR, Section 2.1049							
Test mode:	Compliance	Vardiat: DASS						
Date:	4/18/2010	verdict.	FA33					
Temperature: 23.8 °C	Air Pressure: 1015 hPa	Relative Humidity: 42 %	Power Supply: 48 VDC					
Remarks:								

#### Plot 7.1.1 Occupied bandwidth test result for 5 MHz CBW, QPSK





#### High channel

Agilent S	Spectrum Analy	zer Occupie	J BW							
XI ⊺ Gate Lo	∞ 2 ength 2.4	496 ms		Center Freq: 2.68	37500000 GHz AvelHeid	ALIGNAUTO	Radio Std	M/pr 11, 2010 None		Gate
	Gale: LO	input: RF	#IEGain:Low	#Atten: 18 dB	Ext Gain:	-33.50 dB	Radio Dev	lce: BTS		Gate
10 dB/dlv	Ref	40 dBm							<u>On</u>	Off
.n										Gate View
20			- AND THE AND	matternation	(MAR HAR HAR)	ank.			On	Off
10						i N				Cote View
0 -10										Sweep Time 5.00 ms
-20		ush Hild				the second	dinasiana	(har		
-n <b>~W</b> i	-relefion road	1949 MAX.					n di Mare	and horizontal and		Gate Delay 895.00 µs
-11										
~L										Gate Length
Center #Res B	2.688 GHz W 51 kHz			VBW 510	kHz		Spa Swee	n 10 MHz 20 ms	_	2.4496 ms
Occ	upied Ba	andwidt	h	Tota	l Power	36.7	2 dBm		G	ate Method
		4.	5543 MI	Ηz						LO
Tran	smit Freq	Error	-12807	Hz OBV	V Power	9	9.00 %			
x dB	Bandwid	th	4.734 N	NHz x dE		-26	00 dB			More 1 of 2
MGG						STATU	6			



Test specification:	Section 90.209, Occupie	Section 90.209, Occupied bandwidth						
Test procedure:	47 CFR, Section 2.1049							
Test mode:	Compliance	Verdict: PASS						
Date:	4/18/2010							
Temperature: 23.8 °C	Air Pressure: 1015 hPa	Relative Humidity: 42 %	Power Supply: 48 VDC					
Remarks:								

#### Plot 7.1.2 Occupied bandwidth test result for 10 MHz BW, QPSK





#### High channel 07:34:38 PMApr 11 Radio Std: None Freq / Channe enter Freq 2.685000000 GHz ALIGNAU 000 GHz Avg|Hold: 100/100 Ext Gain: -34.50 dF enter Freq: : rig: RF Bur<del>s</del> Radio Device: BT Ref 40 dBm Center Freq 2.68600000 GHz Strange Bar mappine the CF Step 2.000000 MHz Man Span 20 MHz Sweep 20 ms Center 2.685 GHz #Res BW 110 kHz VBW 1.1 MHz Occupied Bandwidth 9.0705 MHz Total Power 36.34 dBm Transmit Freq Error -17263 Hz OBW Power 99.00 % x dB Bandwidth 9.478 MHz x dB -26.00 dB



Test specification:	Section 90.209, Occupie	Section 90.209, Occupied bandwidth						
Test procedure:	47 CFR, Section 2.1049							
Test mode:	Compliance	Vardiat: DASS						
Date:	4/18/2010	verdict.	FA33					
Temperature: 23.8 °C	Air Pressure: 1015 hPa	Relative Humidity: 42 %	Power Supply: 48 VDC					
Remarks:								

#### Plot 7.1.3 Occupied bandwidth test result for 5 MHz BW, 64QAM



## Radio Std: None enter Freg 2.687500000 GHz Center Freq: 2.68 Trig: Free Run #Atten: 18 dB GH2 Avg|Hold: 100/100 Ext Gain: -33.50 dB ... n han an heiser an heiser h

High channel

# Radio Device: BTS Ref 40 dBm where the second states and the states which and a manufactory w

Center 2.688 GHz Res BW 51 kHz Span 10 MHz Sweep 20 ms VBW 510 kHz Occupied Bandwidth Total Power 36.53 dBm 4.5404 MHz Transmit Freq Error -9810 Hz OBW Power 99.00 %

-26.00 dB

x dB

4.688 MHz

x dB Bandwidth



Test specification:	Section 90.209, Occupie	Section 90.209, Occupied bandwidth						
Test procedure:	47 CFR, Section 2.1049							
Test mode:	Compliance	Vardiat: DASS						
Date:	4/18/2010	verdict.	FA33					
Temperature: 23.8 °C	Air Pressure: 1015 hPa	Relative Humidity: 42 %	Power Supply: 48 VDC					
Remarks:								

#### Plot 7.1.4 Occupied bandwidth test result at low frequency, 10 MHz BW, 64QAM



High channel

DI As	Agjient Spectrum Analyzer - Occupied DW														
Av	g/Hold	50 Ω Numt	∣ ber 1	00			Center Fi	NGE/INT  req: 2.68500	0000 GHz	ALIGN	лото	07:26:51 P Radio Std:	МАрг 21, 2010 None	N	leas Setup
10 ເ	Celer:L0 Improf.10 — Trig:Free Run Avgill-loid: 100/100 = all Culm.Low #Atten: 14 dB Ext Gain: -33,60 dB Radio Device: BTS								Av <u>On</u>	r <b>g/Hold Num</b> 100 Off					
<b>Log</b> Э 2.					pilit	ooliyohan kale	entel-trestige	phytophytophytophytophytophytophytophyto	phylantrytu	lipsi,				Exp	Avg Mode Repeat
10 1 11															
20 -30 -41	und ber	49.0464	hypersfift	disayd)						-	ligity.	iliation and the second se	authiadh.lhal		OBW Power 99.00 %
्य Cer #Re	nter 2.6 es BW	110 ki	iz iz				VBI	W 1.1 MF	iz			Spa Swee	n 20 MHz P 20 ms		
Ċ	Эссир	ied E	land	widtl 9.0	י 77	00 MI	٩z	Total P	ower	3	36.49	dBm			x dB -26.00 dB
T X	ransm dB Ba	it Fre Indwi	q Err dth	or		-16261 9.456 N	Hz AHz	OBW P x dB	ower		99 -26.	00 % 00 dB			More 1 of 2
MNG											STATUS				



Test specification:	Section 27.50(h), Peak output	Section 27.50(h), Peak output power						
Test procedure:	Section 27.50(h)							
Test mode:	Compliance	Vardiat: DASS						
Date:	4/14/2010	verdict.	FA33					
Temperature: 23.1 °C	Air Pressure: 1001 hPa	Relative Humidity: 42 %	Power Supply: 48VDC					
Remarks:								

## 7.2 Peak output power test

#### 7.2.1 General

This test was performed to measure the peak output power at RF antenna connector. Specification test limits are given in Table 7.2.1.

#### Table 7.2.1 Peak output power limits

Assigned frequency range, MHz	Maximum peak output power dBm
	63+10log(OBW*/CBW**)+10log(360/beamwidth)
2496.0 – 2690.0	Maximum peak power density dBm/100 kHz
	EIRP+10log(0.1/CBW**)

\*OBW – actual channel width (occupied bandwidth)

\*\*CBW - channel bandwidth.

NOTE: For 5 MHz EUT transmission bandwidth the limit was calculated according to 6 MHz Channel Bandwidth and for EUT transmission bandwidth 10 MHz the limit was calculated according to dual block 12 MHz Channel Bandwidth as the worst case scenario.

#### 7.2.2 Test procedure

- 7.2.2.1 The EUT was set up as shown in Figure 7.2.1, energized and its proper operation was checked.
- 7.2.2.2 The EUT was adjusted to produce maximum available to the end user RF output power.
- **7.2.2.3** The resolution bandwidth of spectrum analyzer was set about 1% of the emission bandwidth and the average power was integrated over EBW with spectrum analyzer.
- 7.2.2.4 The resolution bandwidth was changed to 100 kHz and power spectral density was measured.
- **7.2.2.5** The test results are provided in the tables below and associated plots.

#### Figure 7.2.1 Peak output power test setup





Test specification:	Section 27.50(h), Peak outp	Section 27.50(h), Peak output power						
Test procedure:	Section 27.50(h)							
Test mode:	Compliance	Verdict:	DV66					
Date:	4/14/2010	verdict.	FA33					
Temperature: 23.1 °C	Air Pressure: 1001 hPa	Relative Humidity: 42 %	Power Supply: 48VDC					
Remarks:								

#### Table 7.2.2 Peak output power test results for 5 MHz RF channel BW

ASSIGNED FREQUENCY RANGE: 2496.0 - 2690.0 MHz DETECTOR USED: Average **RESOLUTION BANDWIDTH:** 51 kHz VIDEO BANDWIDTH: 510 kHz MODULATING SIGNAL: PRBS DEDICATED ANTENNA: 18 dBi with 65° horizontal beamwidth DUTY CYCLE: 66%

MODULATIO	ON:			QPSK			
Channel, MHz	OBW, MHz	Pmeas, dBm	Antenna gain, dBi	EIRP, dBm	Limit, dBm	Margin, dB	Verdict
2498.50	4.72	36.73	18.00	54.73	69.39	-14.66	Pass
2593.00	4.72	36.88	18.00	54.88	69.39	-14.51	Pass
2687.50	4.73	36.68	18.00	54.68	69.40	-14.72	Pass
MODULATIO	ON:			64QAM			
Channel, MHz	OBW, MHz	Pmeas, dBm	Antenna gain, dBi	EIRP, dBm	Limit, dBm	Margin, dB	Verdict
2498.50	4.72	36.37	18.00	54.37	69.39	-15.02	Pass
2593.00	4.72	36.22	18.00	54.22	69.39	-15.17	Pass
2687.50	4.73	36.67	18.00	54.67	69.40	-14.73	Pass

Total EIRP, dBm = Pmeas, dBm + Antenna Gain, dBi

#### Table 7.2.3 Peak output power spectral density test results for 5 MHz RF channel BW

ASSIGNED FREQUENCY RANGE: DETECTOR USED: **RESOLUTION BANDWIDTH:** VIDEO BANDWIDTH: MODULATING SIGNAL: DEDICATED ANTENNA: DUTY CYCLE:

2496.0 - 2690.0 MHz Average 100 kHz 1000 kHz PRBS 18 dBi with 65° horizontal beamwidth 66%

MODULATIO	ON:		QPSK			
Channel, MHz	Pmeas, dBm/100 kHz	Antenna gain, dBi	EIRP, dBm/100kHz	Limit, dBm/100 kHz	Margin, dB	Verdict
2498.50	23.15	18.00	41.15	51.61	-10.45	Pass
2593.00	22.52	18.00	40.52	51.61	-11.09	Pass
2687.50	22.09	18.00	40.09	51.62	-11.53	Pass
MODULATIO	ON:		64QAM			
Channel, MHz	Pmeas, dBm/100 kHz	Antenna gain, dBi	EIRP, dBm/100kHz	Limit, dBm/100 kHz	Margin, dB	Verdict
2498.50	21.82	18.00	39.82	51.61	-11.79	Pass
2593.00	22.74	18.00	40.74	51.61	-10.87	Pass
2687.50	22.26	18.00	40.26	51.62	-11.36	Pass

Total EIRP, dBm/100 kHz = Pmeas, dBm/100 kHz + Antenna Gain, dBi



Test specification:	Section 27.50(h), Peak outp	Section 27.50(h), Peak output power				
Test procedure:	Section 27.50(h)					
Test mode:	Compliance	Verdict:	DV66			
Date:	4/14/2010	verdict.	FA33			
Temperature: 23.1 °C	Air Pressure: 1001 hPa	Relative Humidity: 42 %	Power Supply: 48VDC			
Remarks:						

#### Table 7.2.4 Power output power test results for 10 MHz RF channel BW

ASSIGNED FREQUENCY RANGE:2496.0 - 2690.0 MHzDETECTOR USED:AverageRESOLUTION BANDWIDTH:110 kHzVIDEO BANDWIDTH:1100 kHzMODULATING SIGNAL:PRBSDEDICATED ANTENNA:18 dBi with 65° horizontal beamwidthDUTY CYCLE:66%

MODULATION: QPSK Channel, OBW, Pmeas, Antenna gain, EIRP, Limit, Margin, Verdict dBm dBi dBm dBm dĐ MHz MHz 2501.00 9.466 36.87 18.00 54.87 69.40 -14.53 Pass 2593.00 9.458 37.27 18.00 55.27 69.40 -14.13 Pass 2685.00 9.478 36.39 18.00 54.39 69.41 -15.02 Pass MODULATION: 64QAM Channel, OBW, Pmeas, Antenna gain, EIRP, Limit, Margin, Verdict dBm dBi dBm dBm dB MHz MHz 2501.00 9.466 36.86 18.00 69.40 -14.54 Pass 54.86 2593.00 9.458 36.88 18.00 54.88 69.40 -14.52 Pass 2685.00 9.478 36.60 18.00 54.60 69.41 -14.81 Pass

Total EIRP, dBm = Pmeas (A),dBm + Antenna Gain, dBi

#### Table 7.2.5 Peak output power spectral density test results for 10 MHz RF channel BW

ASSIGNED FREQUENCY RANGE: DETECTOR USED: RESOLUTION BANDWIDTH: VIDEO BANDWIDTH: MODULATING SIGNAL: DEDICATED ANTENNA: DUTY CYCLE: 2496.0 – 2690.0 MHz Average 100 kHz 1000 kHz PRBS 18 dBi with 65° horizontal beamwidth 66%

MODULATI	ON:		QPSK			
Channel, MHz	Pmeas, dBm/100 kHz	Antenna gain, dBi	EIRP, dBm/100kHz	Limit, dBm/100 kHz	Margin, dB	Verdict
2501.00	21.10	18.00	39.10	48.61	-9.51	Pass
2593.00	21.80	18.00	39.80	48.61	-8.81	Pass
2685.00	21.10	18.00	39.10	48.62	-9.52	Pass
MODULATIO	ON:		64QAM			
1	-					
Channel, MHz	Pmeas, dBm/100 kHz	Antenna gain, dBi	EIRP, dBm/100kHz	Limit, dBm/100 kHz	Margin, dB	Verdict
Channel, MHz 2501.00	Pmeas, dBm/100 kHz 19.37	Antenna gain, dBi 18.00	EIRP, dBm/100kHz 37.37	Limit, dBm/100 kHz 48.61	Margin, dB -11.25	Verdict Pass
Channel, MHz 2501.00 2593.00	Pmeas, dBm/100 kHz 19.37 20.03	Antenna gain, dBi 18.00 18.00	EIRP, dBm/100kHz 37.37 38.03	Limit, dBm/100 kHz 48.61 48.61	Margin, dB -11.25 -10.57	Verdict Pass Pass

Total EIRP, dBm/100 kHz = Pmeas, dBm/100 kHz + Antenna Gain, dBi



Test specification:	Section 27.50(h), Peak outp	Section 27.50(h), Peak output power				
Test procedure:	Section 27.50(h)					
Test mode:	Compliance	Verdict:	DASS			
Date:	4/14/2010	verdict.	FA33			
Temperature: 23.1 °C	Air Pressure: 1001 hPa	Relative Humidity: 42 %	Power Supply: 48VDC			
Remarks:						

#### Table 7.2.6 Peak output power test results for 5 MHz RF channel BW

ASSIGNED FREQUENCY RANGE:	2496.0 – 2690.0 MHz
DETECTOR USED:	Average
RESOLUTION BANDWIDTH:	51 kHz
VIDEO BANDWIDTH:	510 kHz
MODULATING SIGNAL:	PRBS
DEDICATED ANTENNA:	9 dBi Omni
DUTY CYCLE:	66%

## MODULATION:

Channel, MHz	OBW, MHz	Pmeas, dBm	Antenna gain, dBi	EIRP, dBm	Limit, dBm	Margin, dB	Verdict
2498.50	4.72	36.73	9.00	45.73	61.96	-16.23	Pass
2593.00	4.72	36.88	9.00	45.88	61.96	-16.08	Pass
2687.50	4.73	36.68	9.00	45.68	61.97	-16.29	Pass
MODULATI	ON:			64QAM			

QPSK

#### MODULATION:

Channel, MHz	OBW, MHz	Pmeas, dBm	Antenna gain, dBi	EIRP, dBm	Limit, dBm	Margin, dB	Verdict
2498.50	4.72	36.37	9.00	45.37	61.96	-16.59	Pass
2593.00	4.72	36.22	9.00	45.22	61.96	-16.74	Pass
2687.50	4.73	36.67	9.00	45.67	61.97	-16.30	Pass

Total EIRP, dBm = Pmeas (A),dBm + Antenna Gain, dBi

#### Table 7.2.7 Peak output power spectral density test results for 5 MHz RF channel BW

ASSIGNED FREQUENCY RANGE:	2496.0 – 2690.0 MHz
DETECTOR USED:	Average
RESOLUTION BANDWIDTH:	100 kHz
VIDEO BANDWIDTH:	1000 kHz
MODULATING SIGNAL:	PRBS
DEDICATED ANTENNA:	9 dBi Omni
DUTY CYCLE:	66%

#### MODULATION:

MODULATI	ON:		QPSK			
Channel, MHz	Pmeas, dBm/100 kHz	Antenna gain, dBi	EIRP, dBm/100kHz	Limit, dBm/100 kHz	Margin, dB	Verdict
2498.50	23.15	9.00	32.15	44.17	-12.02	Pass
2593.00	22.52	9.00	31.52	44.18	-12.66	Pass
2687.50	22.09	9.00	31.09	44.19	-13.10	Pass
MODULATI	ON:		64QAM			

#### MODULATION:

Channel, MHz	Pmeas, dBm/100 kHz	Antenna gain, dBi	EIRP, dBm/100kHz	Limit, dBm/100 kHz	Margin, dB	Verdict
2498.50	21.82	9.00	30.82	44.17	-13.36	Pass
2593.00	22.74	9.00	31.74	44.18	-12.44	Pass
2687.50	22.26	9.00	31.26	44.19	-12.93	Pass

Total EIRP, dBm/100 kHz = Pmeas, dBm/100 kHz + Antenna Gain, dBi



Test specification:	Section 27.50(h), Peak outp	Section 27.50(h), Peak output power				
Test procedure:	Section 27.50(h)					
Test mode:	Compliance	Vordict	DAGG			
Date:	4/14/2010	verdict.	PA33			
Temperature: 23.1 °C	Air Pressure: 1001 hPa	Relative Humidity: 42 %	Power Supply: 48VDC			
Remarks:						

#### Table 7.2.8 Power output power test results for 10 MHz RF channel BW

ASSIGNED FREQUENCY RANGE: DETECTOR USED: RESOLUTION BANDWIDTH: VIDEO BANDWIDTH: MODULATING SIGNAL: DEDICATED ANTENNA: DUTY CYCLE:

Average 110 kHz 1100 kHz PRBS 9 dBi Omni 66%

2496.0 - 2690.0 MHz

ON:			QPSK			
OBW, MHz	Pmeas, dBm	Antenna gain, dBi	Limit, dBm	Margin, dB	Verdict	
9.466	36.87	9.00	45.87	61.97	-16.10	Pass
9.458	37.27	9.00	46.27	61.97	-15.70	Pass
9.478	36.39	9.00	45.39	61.98	-16.59	Pass
ON:			64QAM			
Channel, OBW, Pmeas , MHz MHz dBm		Antenna gain, dBi	EIRP, dBm	Limit, dBm	Margin, dB	Verdict
9.466	36.86	9.00	45.86	61.97	-16.11	Pass
9.458	36.88	9.00	45.88	61.97	-16.09	Pass
9.478	36.60	9.00	45.60	61.98	-16.38	Pass
	DN: 0BW, MHz 9.466 9.458 9.478 DN: 0BW, MHz 9.466 9.458 9.478	OBW, MHz Pmeas, dBm   9.466 36.87   9.458 37.27   9.478 36.39   ON: Pmeas, dBm   9.466 36.86   9.458 36.39	ON: Pmeas , dBm Antenna gain, dBi   9.466 36.87 9.00   9.458 37.27 9.00   9.478 36.39 9.00   OBW, MHz Pmeas , dBm Antenna gain, dBm   OBW, MHz Pmeas , dBm Antenna gain, dBi   9.466 36.86 9.00   9.458 36.88 9.00   9.478 36.60 9.00	ON: QPSK   OBW, MHz Pmeas, dBm Antenna gain, dBi EIRP, dBm   9.466 36.87 9.00 45.87   9.458 37.27 9.00 46.27   9.478 36.39 9.00 45.39   ON: 64QAM   OBW, MHz Pmeas, dBm Antenna gain, dBi EIRP, dBm   9.466 36.86 9.00 45.86   9.458 36.88 9.00 45.88   9.478 36.60 9.00 45.60	ON: QPSK   OBW, MHz Pmeas, dBm Antenna gain, dBi EIRP, dBm Limit, dBm   9.466 36.87 9.00 45.87 61.97   9.458 37.27 9.00 46.27 61.97   9.478 36.39 9.00 45.39 61.98   ON: EIRP, dBm Limit, dBm Limit, dBm   0BW, MHz Pmeas, dBm Antenna gain, dBi EIRP, dBm Limit, dBm   9.466 36.86 9.00 45.86 61.97   9.458 36.88 9.00 45.88 61.97   9.478 36.60 9.00 45.88 61.97	ON: QPSK   OBW, MHz Pmeas, dBm Antenna gain, dBi EIRP, dBm Limit, dBm Margin, dBm   9.466 36.87 9.00 45.87 61.97 -16.10   9.458 37.27 9.00 46.27 61.97 -15.70   9.478 36.39 9.00 45.39 61.98 -16.59   ON: 64QAM Margin, dBm Margin, dB Margin, dB Margin, dB Margin, dB Margin, dB   9.466 36.86 9.00 45.86 61.97 -16.11   9.458 36.88 9.00 45.88 61.97 -16.11   9.458 36.88 9.00 45.88 61.97 -16.11   9.458 36.60 9.00 45.88 61.97 -16.11   9.478 36.60 9.00 45.60 61.98 -16.38

Total EIRP, dBm = Pmeas (A),dBm + Antenna Gain, dBi

#### Table 7.2.9 Peak output power spectral density test results for 10 MHz RF channel BW

ASSIGNED FREQUENCY RANGE:
DETECTOR USED:
RESOLUTION BANDWIDTH:
VIDEO BANDWIDTH:
MODULATING SIGNAL:
DEDICATED ANTENNA:
DUTY CYCLE:

2496.0 – 2690.0 MHz Average 100 kHz 1000 kHz PRBS 9 dBi Omni 66%

MODULATI	ON:		QPSK			
Channel, MHz	Pmeas, dBm/100 kHz	Antenna gain, dBi	EIRP, dBm/100kHz	Limit, dBm/100 kHz	Margin, dB	Verdict
2501.00	21.10	9.00	30.10	41.18	-11.08	Pass
2593.00	21.80	9.00	30.80	41.17	-10.37	Pass
2685.00	21.10	9.00	30.10	41.18	-11.08	Pass
MODULATIO	ON:		64QAM			
Channel, MHz	Pmeas, dBm/100 kHz	Antenna gain, dBi	EIRP, dBm/100kHz	Limit, dBm/100 kHz	Margin, dB	Verdict
2501.00	19.37	9.00	28.37	41.18	-12.81	Pass
2593.00	20.03	9.00	29.03	41.17	-12.14	Pass
2685.00	19.68	9.00	28.68	41.18	-12.50	Pass

Total EIRP, dBm/100 kHz = Pmeas, dBm/100 kHz + Antenna Gain, dBi

#### Reference numbers of test equipment used

#1	#2	#3			

Full description is given in Appendix A.



Test specification:	Section 27.50(h), Peak out	Section 27.50(h), Peak output power								
Test procedure:	Section 27.50(h)									
Test mode:	Compliance	Vordict	DASS							
Date:	4/14/2010	veruict.	FA33							
Temperature: 23.1 °C	Air Pressure: 1001 hPa	Relative Humidity: 42 %	Power Supply: 48VDC							
Remarks:										

Plot 7.2.1 Peak output power test results at low frequency, 5 MHz, QPSK









Test specification:	Section 27.50(h), Peak out	Section 27.50(h), Peak output power								
Test procedure:	Section 27.50(h)									
Test mode:	Compliance	Vordict	DASS							
Date:	4/14/2010	verdict.	FA33							
Temperature: 23.1 °C	Air Pressure: 1001 hPa	Relative Humidity: 42 %	Power Supply: 48VDC							
Remarks:										

### Plot 7.2.3 Peak output power test results at high frequency, 5 MHz, QPSK

🌆 Agilent Sp	ectrum Analy	zer Channel	Power									BX
Contox	30Ω	2750000		AL SE Center Et	NSE:INT reg: 2 68750	0000 GHz	ALIGN	OTUAL	10:01:51 Radio Std	MApr 11, 2010	Freq / Chan	nel
Center P	Gate: LO	Input: RF		Trig: Free	e Run	Avg Hold:	100/1	100	Thursday of a	. Here		
			#IFGain:1 ow	#Atten: 18	BdB	Ext Gain:	-33.50	0 dB	Radio Dev	lice: BTS		
10 dB/div Log	Ret	40 dBm										
20											Contor	From
											2 697500000	
20			MANNA	Man Mark	机成内中间	<b>University</b>	M				2.087500000	GHZ
10							f t					
0												
-10							<mark>,</mark>					
-20 . lu .	and Human	Why When						"Here in	all work all	Manardan		
-30 <b>- 4444</b>										- Hilling web		
411												
-50												
											CF	Step
Center 2	2.688 GHz								Spa	n 10 MHz	Auto	Man
#Res BW	/ 51 kHz			VB۱	№ 510 kH	z			Swe	ep 20 ms		
Chan	nel Pov	ver			Power	Spectr	al I	Dens	ilty			
	36.68 dBm/ 4.8 MHz -30.13 dBm/Hz											
MSG 🜙 Alre	ady in Sing	le, press Re	estart to initiate	a new swee	p or seque	nce		STATU	8			



Test specification:	Section 27.50(h), Peak out	Section 27.50(h), Peak output power								
Test procedure:	Section 27.50(h)									
Test mode:	Compliance	Vordict:	DASS							
Date:	4/14/2010	verdict.	FA33							
Temperature: 23.1 °C	Air Pressure: 1001 hPa	Relative Humidity: 42 %	Power Supply: 48VDC							
Remarks:		•	-							

Plot 7.2.4 Peak output power density test results at low frequency, 5 MHz, QPSK



Plot 7.2.5 Peak output power density test results at mid frequency, 5 MHz, QPSK





Test specification:	Section 27.50(h), Peak out	Section 27.50(h), Peak output power								
Test procedure:	Section 27.50(h)									
Test mode:	Compliance	Verdict	DV66							
Date:	4/14/2010	veruict.	FA33							
Temperature: 23.1 °C	Air Pressure: 1001 hPa	Relative Humidity: 42 %	Power Supply: 48VDC							
Remarks:										

Plot 7.2.6 Peak output power density test results at high frequency, 5 MHz, QPSK





Test specification:	Section 27.50(h), Peak out	Section 27.50(h), Peak output power								
Test procedure:	Section 27.50(h)									
Test mode:	Compliance	Vordict	DASS							
Date:	4/14/2010	verdict.	FA33							
Temperature: 23.1 °C	Air Pressure: 1001 hPa	Relative Humidity: 42 %	Power Supply: 48VDC							
Remarks:										

Plot 7.2.7 Peak output power test results at low frequency, 5 MHz, 64QAM

🗊 Agil	ent Spectrur	n Analyzer										FBX
L)XII		102			AL.	SENSE:INT	AL	JGNAUTO			01:36:0	U AM Apr 22, 2010
Cent	er Freq	2.4985	00000 GH	z		Center Fr	eq: 2.49850000	0 GHz			Radio Std: N	one
		Gate: LO	Input: RF	IFGai	n:luw	#Atten: 16	dB	Ext Gain: -3	3.50 e	, B	Radio Devic	e: BTS
10 dE	Vdiv	Ref 40 c	IBm									
Log												
- DD												
20				and and	cacumla		a all the late have	and the set	dat.			
10				diser-last	ister inder sold	alle ta dible sus da	tallissa. DA . b	a little and the second second	1			
아												
-10										_		
-20												
	Ale In the lot	-	work where							<b>Winder</b>	W. Marchall March	wednesday is
31	he. After at a	- Print - Print										1
-40												
-50												
Cent	er 2.499	GHz									Sp	an 10 MHz
#Res	BW 51	kHz				VB	W 510 kHz				Sw	eep 20 ms
C	hannel	Power				Power	r Spectra	l Density				
		36 37	dBmi	4 9 M	47		-30.4	5 dBm/l	4.7			
		00.07	uDiii/	4.0 IVI	12							
MSG								STATUS				

Plot 7.2.8 Peak output power test results at mid frequency, 5 MHz, 64QAM

🇊 Agilent Sp	ectrum Anal	yzer -										
W Center	50Ω	930000	00 GH	7	AC	SENSE:INT	AL a: 2.69300000	IGNAUTO			01:05:5 Radio Std: N	i4 AM Apr 22, 2010 <b>Ione</b>
Contor I	Gate:	10 1	nput: RF		→ Gaintlow	Trig: Free #Atten: 16	Run dB	Avg Hold: 1 Ext Gain: -3	100/10 34 50 k	0 18	Radio Devic	e BTS
					Call.LOW							
10 dB/dlv	Ref	40 dBm		_								
Log												
20				, då	while and the second	a. Alika tarahi	ustabbald	i kurillalanan a	a lan			
10				1	, indefinition of the	iken ikontik.	אראנעיע אי ער <u>יי</u> א מייא	and the state	in the second			
10												
20	had the	Had APP	uliphi						ļ	the tip	hhimma	ANN MAN
-30											1 P. F. F.	
40 61												
Center 2 #Res BW	.593 GH 51 kHz	Z				VBI	N 510 kHz				Sp Sw	an 10 MHz eep 20 ms
Сһап	nel Po	wer				Power	Spectral	Density				
	36.22 dBm/ 4.8 MHz					-30.59 dBm/Hz						
MSG								STATUS				



Test specification:	Section 27.50(h), Peak out	Section 27.50(h), Peak output power						
Test procedure:	Section 27.50(h)							
Test mode:	Compliance	Vordict	DV66					
Date:	4/14/2010	verdict.	FA33					
Temperature: 23.1 °C	Air Pressure: 1001 hPa	Relative Humidity: 42 %	Power Supply: 48VDC					
Remarks:		•	-					

#### Plot 7.2.9 Peak output power test results at high frequency, 5 MHz, 64QAM

📕 Agilent Spect	rum Analyzer										- 6 🛛
	- 3U Ω			A(_	SENSE:INT	AL	JGNAUTO			U2:46:1	4 AM Apr 22, 2010
Center Fre	eq 2.68750	00000 GI	z			eq: 2.68/50000 Run	AvalHold: 1	100/100	,	Radio Std: N	one
	04(8. LU	mpuc Kr	IF	Gain:Luw	#Atten: 18	dB	Ext Gain: -3	33.50 d	в	Radio Devic	e: BTS
10 dB/div	Ref 40 d	Bm									
Log											
30											
SIL				a lulan	discon at			en.			
			相關	ik, here	i Alfahar	的保持内障的	前的小小小	14			
10			11	a serve de	l i la ai	how of the	dia mang	1			
			1								
-10											
-20	turner	11	-						ta tak	de de comercia	al e e l
JA.odA	的复数的复数								and the	能用時間。	ind all all all all all all all all all al
ավատանի մի	La dan trifa - a	1 P - 1							11	an a	t al. e a la año
-40											1 "
-50											
Center 26	00 CH7				1					Qn	on 10 MHz
#Res BW	51 kHz				VB	A/ 510 kHz				Swi	en 20 ms
											oop zame
~					-	<b>•</b> • •					
Chann	ei Power				Power	Spectra	i Density				
	36.67	dBm/	48	MHz		-30.1	5 dBm/l	Hz			
MSG							STATUS				



Test specification:	Section 27.50(h), Peak out	Section 27.50(h), Peak output power						
Test procedure:	Section 27.50(h)							
Test mode:	Compliance	Vordict	DASS					
Date:	4/14/2010	veruict.	FA33					
Temperature: 23.1 °C	Air Pressure: 1001 hPa	Relative Humidity: 42 %	Power Supply: 48VDC					
Remarks:		•	-					

Plot 7.2.10 Peak output power density test results at low frequency, 5 MHz, 64QAM



Plot 7.2.11 Peak output power density test results at mid frequency, 5 MHz, 64QAM





Test specification:	Section 27.50(h), Peak out	Section 27.50(h), Peak output power						
Test procedure:	Section 27.50(h)							
Test mode:	Compliance	Vordict	DASS					
Date:	4/14/2010	verdict.	FA33					
Temperature: 23.1 °C	Air Pressure: 1001 hPa	Relative Humidity: 42 %	Power Supply: 48VDC					
Remarks:								

Plot 7.2.12 Peak output power density test results at high frequency, 5 MHz, 64QAM

📖 Aglient Spectrur	n Analyzer - Swe	pt SA							
<b>X</b> 3.			AL S	SENSE:INI	AL	GNAUTO	ww/DMC)	02:52:21	8 AM Apr 22, 2010
VIGEO BVV	Gate: LO	Input: RF F	NO: Far · • ·	Trig: Free F Atten: 18 d	Run IB	Avg Hold: 10 Ext Gain: -33	0/100 1.50 dB	1	
10 dB/div R	ef 40.00 dB	m					Mk	r1 2.685 22.3	897 GHz 264 dBm
Log									
30.0		<u></u> 1							
20.0	1	res later provides for	WARMEN I NAME OF THE OWNER	JANNA ANAMA	lander for the second	han <del>t fan han a</del> g	ril bypotrations	<u>م</u>	
10.0									
0.00									
10.0									
.20 0	rd when the							- North to	Approximation of the second
-30.0									
40.0									
-50.0									
Center 2.687 #Res BW 100	500 GHz		#VB	M			#Swee	Span n 75 0 ms	7.000 MHz (1001 pts)
MSG				<u> </u>		STATUS			The state



Test specification:	Section 27.50(h), Peak out	Section 27.50(h), Peak output power						
Test procedure:	Section 27.50(h)							
Test mode:	Compliance	Vordict	DASS					
Date:	4/14/2010	veruict.	FA33					
Temperature: 23.1 °C	Air Pressure: 1001 hPa	Relative Humidity: 42 %	Power Supply: 48VDC					
Remarks:								

Plot 7.2.13 Peak output power test results at low frequency, 10 MHz, QPSK



Plot 7.2.14 Peak output power test results at mid frequency, 10 MHz, QPSK





Test specification:	Section 27.50(h), Peak out	Section 27.50(h), Peak output power						
Test procedure:	Section 27.50(h)							
Test mode:	Compliance	Vordict	DASS					
Date:	4/14/2010	verdict.	FA33					
Temperature: 23.1 °C	Air Pressure: 1001 hPa	Relative Humidity: 42 %	Power Supply: 48VDC					
Remarks:								

Plot 7.2.15 Peak output power test results at high frequency, 10 MHz, QPSK

🌉 Agilent Spectrum Analyzer - Chann	el Power									EB
Avg/Hold Number 100 Gate: L0 Input: RI	#IFGain:Luw	Center Fre Trig: Free F #Atten: 16	se:INT :q: 2.685000 Run dB	0000 GHz Avg Hold: Ext Gain:	ALIGN 100/1 -34.50	00 00 dB	Radio Std: Radio Dev	MApr 11, 2010 : None Ice: BTS	M Av	eas Setup g/Hold Num
10 dB/div Ref 36 dBm									<u>On</u>	Off
20 16	paladanputramiter	ppphotecup	nation first	wyhataka mit	rites				<u>Exp</u>	Avg Mode Repeat
-4										Integ BW 9.6000 MHz
-24 <b>(34) (34) (34) (34) (34) (34) (34)</b> 34 -44 -51							ederinali	hire and a line		
Center 2.685 GHz #Res BW 110 kHz		VBW	1.1 MH	z			Spa Swee	n 19 MHz ep 20 ms		
Channel Power			Power	Spectr	al C	ens	sity			
<b>36.39</b> d	Bm/ 9.5 MH	lz		-33.:	38	dB	m/Hz			More 1 of 2
MSG						STATU	s			



Test specification:	Section 27.50(h), Peak out	Section 27.50(h), Peak output power						
Test procedure:	Section 27.50(h)							
Test mode:	Compliance	Vordict	DASS					
Date:	4/14/2010	verdict.	FA33					
Temperature: 23.1 °C	Air Pressure: 1001 hPa	Relative Humidity: 42 %	Power Supply: 48VDC					
Remarks:		•	-					

Plot 7.2.16 Peak output power density test results at low frequency, 10 MHz, QPSK



Plot 7.2.17 Peak output power density test results at mid frequency, 10 MHz, QPSK

🗊 Agilent Sp	ectrum Analyze	r - Swept SA									
Video B	50 Ω W 1.0 MH	z	1	AC SE	NSE:INT	Avg Type	ALIGNAUTO Pwr{RMS	07:07:14 TRA	M Apr 11, 2010		BW
	Gate: 1.0	Input: RF	PNO: Fast IFGain:Low	Trig: Fre Atten: 16	eRun idB	Avg Hold: Ext Gain:	-34.50 dB	TY D	TANNNN T		Res BW
10 dB/dlv	Ref 39.5	0 dBm					Mkr	1 2.590 21.8	10 GHz 00 dBm	Auto	100 kHz <u>Man</u>
29.5			. 1							Auto	Video BW 1.0 MHz Man
18.5			and the state of the	in which	mpalellar:	and the second second	(kaj			VBW	:3dB RBW
9.50										<u>Auto</u>	Man
-0.50										Spar	1:3dB RBW
10.5										<u>Auto</u>	Man
-20.5	hugh fra dhain	y <b>nn</b> llwf					hyper	ryallon aphiliti	un an den	RBV [Gaus	V Control slan,-3 dB]
-30.5											
40.5											
-50.5											
Center 2	50300 CH							Enan 2	0.00 MHz		
#Res BW	100 kHz		#VBW				Sweep	20.0 ms (	1001 pts)		
MSG							STATU	IS			



Test specification:	Section 27.50(h), Peak out	Section 27.50(h), Peak output power						
Test procedure:	Section 27.50(h)							
Test mode:	Compliance	Verdict	DV66					
Date:	4/14/2010	veruict.	FA33					
Temperature: 23.1 °C	Air Pressure: 1001 hPa	Relative Humidity: 42 %	Power Supply: 48VDC					
Remarks:								

Plot 7.2.18 Peak output power density test results at high frequency, 10 MHz, QPSK

🕅 Agilent Spectrum Analyzer - Swept S	A				- 6 🛛
V T 50Ω Marker 1 2 68372000000	AL 35	Avg Type	ALIGNAUTO 07:37:3 2: Pwr(RMS) II-	ACL 12 3 4 5 6	Peak Search
Gate: LO Input: RF	PNO: Fast C Trig: Free IF Gain: Luxy Atten: 16	eRun Avg Hold: dB ExtGaln:	>100/100 -34.50 dB	DET A NNNNN	
			Mkr1 2.68	3 72 GHz	Next Peak
10 dB/div Ref 39.50 dBm			21.	102 dBm	
Log					
29.5					Next Right
	<b>∮</b> 1				
19.5	alar-And with this have	attive to the second design of the second	(Alice		
0.00	and the state of the	والمراجع والمروا ورواريه	Υr.		Next Left
531					
0.50					
					Marker Delta
10.5					
المالية ومحمد ومحمد المراجع			altradiant of		
A THE WAY PARTY AND A THE WAY AND A THE W			Contraction of the second s	WWW. And WING	Mkr→CF
-30.5				a sa ka	
40.5					Mkr→RefLvl
-50.5					
					More
Center 2 69500 CHz			Snan	20.00 MHz	1 of 2
#Res BW 100 kHz	#VBW		Sweep 20.0 ms	(1001 pts)	
MSG			STATUS		



Test specification:	Section 27.50(h), Peak out	Section 27.50(h), Peak output power							
Test procedure:	Section 27.50(h)								
Test mode:	Compliance	Vordict	DASS						
Date:	4/14/2010	verdict.	FA33						
Temperature: 23.1 °C	Air Pressure: 1001 hPa	Relative Humidity: 42 %	Power Supply: 48VDC						
Remarks:									

Plot 7.2.19 Peak output power test results at low frequency, 10 MHz, 64QAM

🔟 Agi	ilent Spectrur	n Analyzer -										
LXI	51	10			Al <sup>-</sup>	SENSE:INT	A	IGN AUTO			09:31:2	15 PM Apr 21, 2010
Cen	iter Frea	2.5010	00000 G	Hz		Center Fre	eq: 2.50100000	0 GHz		Radio Std: None		
		Gate: LO	Input: KH	•		🛶 Trig: Free	Run	Avg Hold:	100/100			
				IL	Gain:Low	#Atten: 14	dB	Ext Gain: -	33.50 dE	3	Radio Devic	e: BTS
10 di	B/div	Ref 40 c	Bm									
Log												
30												
20						in Lawren hl.	hours black	and and and blocks				
				<b>ANNY</b>	an a share w	Advertise and the second second	Mahabaha Ja	hally a shirt	abubater <sup>1</sup>			
n												
10												
-20	tate 1.4	ARALINE.	add the lose of							<b>Wite</b>	alent a styletyl	A DUNAR INC. ALL
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Con	ter 2.501	CH7										an 10 MHz
#Do	C PW/ 11					UDI	M 11 MH-7				op Sw	un 19 minz
#NC	S DVV II	V KHZ				8D1					34	eep zvilla
L C	nannei	Power				Power	Spectra	I Density				
			_									
36.86 dBm/9.5 MHz					-32.91 dBm/Hz							
MSG								STATUS				

Plot 7.2.20 Peak output power test results at mid frequency, 10 MHz, 64QAM

Agilent Spectr	um Analyzer -										
enter Fre	q 2.5930000 Gate: L0	)00 G Input: RH	Hz	A)_ ←	Center Fre , Trig: Free #Atten: 14	eq: 2.59300000 Run dB	0 GHz Avg Hold:	100/100 34.50 dF	4	Radio Std: N	lone e: BTS
0 dB/div	Pef 40 dBn	•		Gain:Low	#ACCOIL: 14	40	Ext Gall. 4	54.50 UL		Radio Devid	e. D13
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<sup>20</sup> ritterth	Alfalianter al de la	M-L							an the state	window (	a na
-40											
-m											
enter 2.59 Res BW 1	93 GHz 10 kHz				VB	₩ 1.1 MHz				Sp Sw	an 19 Mi eep 20 r
Channe	el Power				Power	Spectra	I Density	,			
	36.00	-1 D (		M11-		32.0	0.40				
	50.00	a D III/	9.5	IVI TI Z		-52.5		Π2			
G							STATUS				



Test specification:	Section 27.50(h), Peak out	Section 27.50(h), Peak output power							
Test procedure:	Section 27.50(h)								
Test mode:	Compliance	Vordict	DASS						
Date:	4/14/2010	verdict.	FA33						
Temperature: 23.1 °C	Air Pressure: 1001 hPa	Relative Humidity: 42 %	Power Supply: 48VDC						
Remarks:									

Plot 7.2.21 Peak output power test results at high frequency, 10 MHz, 64QAM

🕮 Agilent Spectrum Analyzer - Channe	Power								
Sweep Time 20.0 ms	4	Center Fi	NSE:INT req: 2.68500	0000 GHz	ALTGN:	AUTO	Radio Std	РМАрг 21, 2010 : None	File
Gate: LO Input: RF	IFGain:Low	#Atten: 1-	⊵Run 1∣dB	Avg Hold: Ext Gain:	100/1 -33.50	00 dB	Radio Der	/Ice: BTS	Ella
									Explorer
10 dB/div Ref 40 dBm			1	1			_		
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-30 Alf Weill Mails In Address of All						ωj []	A MALINING	al, an the state	Print
-40									
-51									
Center 2 685 CHz								n 10 MHz	
#Res BW 110 kHz		VB	N 1.1 MH	iz			Swe	ep 20 ms	
Channel Power			Power	Spectr	al D	ens	sity		
36.60 -		-		22	10	an	ma (I I m		
<b>30.00</b> at	<b>30.00</b> aBm/ 9.5 WHZ <b>-33.10</b> aBm/Hz								
									Exit
MSG						STATUS	6		



Test specification:	Section 27.50(h), Peak out	Section 27.50(h), Peak output power							
Test procedure:	Section 27.50(h)								
Test mode:	Compliance	Vordict	DASS						
Date:	4/14/2010	verdict.	FA33						
Temperature: 23.1 °C	Air Pressure: 1001 hPa	Relative Humidity: 42 %	Power Supply: 48VDC						
Remarks:									

Plot 7.2.22 Peak output power density test results at low frequency, 10 MHz, 64QAM

🗊 Agi	lent Spectrum Analyzer - Sv	vept SA							
Vide	o BW 10 MHz		AC :	SENSE:INT	ALI	AVG TVPS:	Pwr(RMS)	10:01:2 TR	5 PM Apr 21, 2016 PAGE 1 2 3 4 5 4
- Here	Gate: 1.0	Input: RF	PNO: Fast (	) Trig: Free R #Atten: 14 di	un B	Avg Hold>	100/100 34.50 dB		
			n oani.cow		-		M	kr1 2 502	311 GH7
10 dE	3/div Ref 37.50 dl	Bm						19.	366 dBm
Log									
27.5									
					♦ <sup>1</sup>				
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2.11									
-2.50									
-12.5		and a sector					<b>b</b> .		
-22.5	whether whether the strain and the strain of	televi-vila etc.					والمحالية والمحالية	and and a state of the state of	with my band from
32.5									
12.5									
-42.5									
-52.5									
Cen	ter 2.501000 GHz							Span	19.00 MHz
#Res	s BW 100 kHz		#VB	w			#Swe	ep 75.0 ms	(1001 pts)
MSG						STATUS			

Plot 7.2.23 Peak output power density test results at mid frequency, 10 MHz, 64QAM

Agilent Spec	trum Analyzer - Sw	ept SA							
	20 0		AC.	SENSE:INT		ALIGNAUTO	Decer(DMC)	10:21:	25 PM Apr 21, 20
IGEO BVV	Gate: LO	Input: RF	PNO: Fast IFGain:Luw	Trig: Fr #Atten:	ee Run 14 dB	Avg Hold> Ext Gain: -	100/100 34.60 dB		
0 dB/div	Ref 37.50 dB	m					М	kr1 2.590 20.	815 GH 034 dB
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75									
2.5									
2.5									
enter 2.5	93000 GHz							Span	19.00 MI
Res BW 1	100 kHz		#	/BW			Swe	ep 75.0 m	s (1001 pt
G						STATUS			



Test specification:	Section 27.50(h), Peak out	Section 27.50(h), Peak output power							
Test procedure:	Section 27.50(h)								
Test mode:	Compliance	Vordict	DV66						
Date:	4/14/2010	verdict.	FA33						
Temperature: 23.1 °C	Air Pressure: 1001 hPa	Relative Humidity: 42 %	Power Supply: 48VDC						
Remarks:									

Plot 7.2.24 Peak output power density test results at high frequency, 10 MHz, 64QAM

📕 Agilent Spe	strum Analyzer - Sv	wept SA							
	50.0		A(*	SENSERINT	ALI		Dwr(DMC)	12:14:1	0 AM Apr 22, 2010
VIGEO BV	Gate: 1.0	Input: BF	PNO: Fast 🔸	Trig: Free	Run	Avg Hold: '	100/100		TYPE A VALUEALAL
	_		FGaln:Low	#Atten: 14	dB	Ext Gain: -	34.50 dB		DET <b>MARKAREN</b>
							M	kr1 2.681	523 GHz
10 dB/div	Ref 37.50 d	Bm						19.	684 dBm
Log									
27.5									
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Center 2.0	100 kHz		#1/5	210/			#Sura	Span 25 0 me	19.00 MHz
	1999 NH2		#90				<i></i>	sh varning	r, roori pisj
MSG						STATUS			