

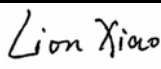
FCC PART 22H, PART 24E
FCC PART 27
MEASUREMENT AND TEST REPORT

For

Dynamics Hong Kong Limited

Room F, 16/F, Block1, Golden Dragon Industrial Center, 152-160 Tai Lin Pai Road, Kwai Chung, N.T.

FCC ID: C89-G8LTE

Report Type: Original Report	Product Type: MID
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Report Number: RDG150731005-00C	
Report Date: 2015-10-09	
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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *Dynamics Hong Kong Limited* 's product, model number: *G8 LTE (FCC ID: C89-G8LTE)* (the "EUT") in this report was a *MID*, which was measured approximately: 18.8 cm (L) x 10.8 cm (W) x 1.0 cm (H), rated input voltage: DC 3.7V rechargeable Li-ion battery or DC5V charging from adapter.

Adapter information:

MODEL: DSC-5CU-05 050 100

Input: AC 100-240V, 50/60Hz 0.2A

Output: DC+5V, 1A

All measurement and test data in this report was gathered from production sample serial number: 150731005 (Assigned by BACL, Dongguan). The EUT was received on 2015-08-24.

Objective

This report is prepared on behalf of *Dynamics Hong Kong Limited* in accordance with: Part 2-Subpart J, Part 22-Subpart H, and Part 24-Subpart E of the Federal Communications Commission's rules. Part 2, Part 27 of the Federal Communication Commissions rules.

The objective is to determine compliance with FCC rules for output power, modulation characteristic, occupied bandwidth, spurious emissions at antenna terminal, spurious radiated emission, frequency stability and band edge.

Related Submittal(s)/Grant(s)

FCC Part 15B JBP submissions with FCC ID: C89-G8LTE
FCC Part 15C DSS submissions with FCC ID: C89-G8LTE
FCC Part 15C DTS submissions with FCC ID: C89-G8LTE

Test Methodology

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47 Part 2, Sub-part J as well as the following parts:

Part 22 Subpart H - Public Mobile Services
Part 24 Subpart E - Personal Communication Services
Part 27 – Miscellaneous wireless communications services

Applicable Standards: TIA/EIA 603-D-2010.

All radiated and conducted emissions measurements were performed at Bay Area Compliance Laboratories Corp.(Dongguan).

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Dongguan) to collect test data is located on the No.69 Pulongcun, Puxinhu Industrial Zone, Tangxia, Dongguan, Guangdong, China

Test site at Bay Area Compliance Laboratories Corp. (Dongguan) has been fully described in reports submitted to the Federal Communications Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on February 06, 2015.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 273710. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

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SYSTEM TEST CONFIGURATION

Justification

The EUT was configured for testing according to TIA/EIA-603-D-2010.

The test items were performed with the EUT operating at testing mode.

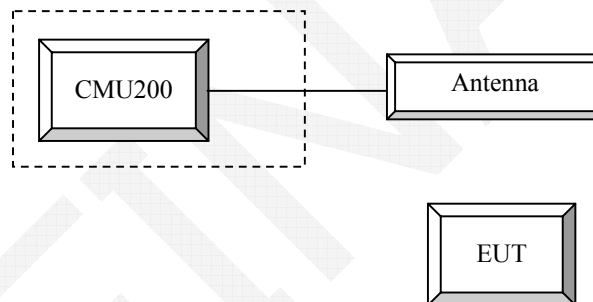
Equipment Modifications

No modification was made to the EUT.

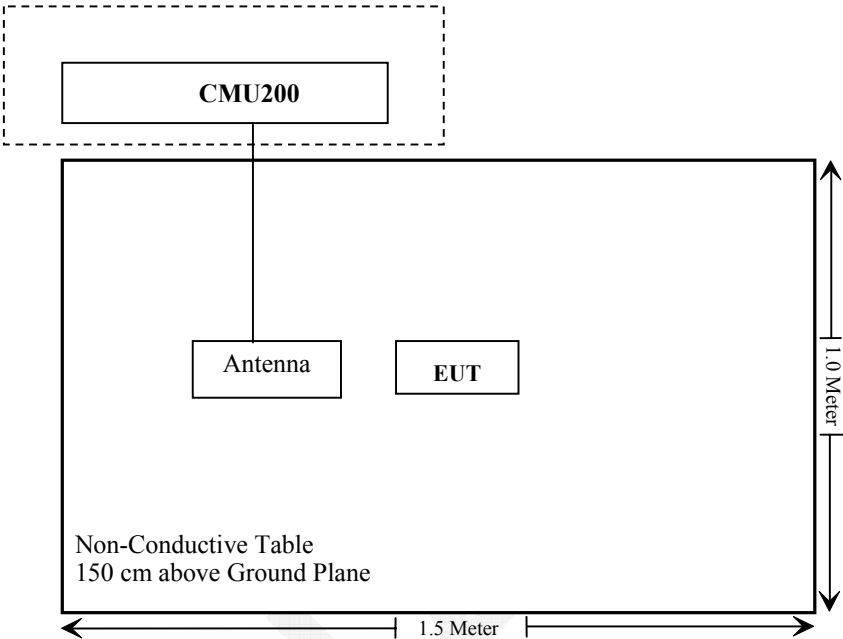
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
R&S	Universal Radio Communication Tester	CMU200	109038
R&S	Wideband Radio Communication Tester	CMW500	106891

Configuration of Test Setup



Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§1.1310, §2.1093	RF Exposure	Compliance
§2.1046; § 22.913 (a); § 24.232 (c); §27.50	RF Output Power	Compliance
§ 2.1047	Modulation Characteristics	Not Applicable
§ 2.1049; § 22.905 § 22.917; § 24.238; §27.53	Occupied Bandwidth	Compliance
§ 2.1051, § 22.917 (a); § 24.238 (a); §27.53	Spurious Emissions at Antenna Terminal	Compliance
§ 2.1053 § 22.917 (a); § 24.238 (a); §27.53	Field Strength of Spurious Radiation	Compliance
§ 22.917 (a); § 24.238 (a); §27.53	Out of band emission, Band Edge	Compliance
§ 2.1055 § 22.355; § 24.235; §27.54	Frequency stability vs. temperature Frequency stability vs. voltage	Compliance

FCC §1.1310 & §2.1093- RF EXPOSURE

Applicable Standard

FCC§1.1310 and §2.1093.

Test Result

Compliant, please refer to the SAR report: RDG150731005-20& RDG150923006-20.

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FCC §2.1047 - MODULATION CHARACTERISTIC

According to FCC § 2.1047(d), Part 22H & 24E, Part 27 there is no specific requirement for digital modulation, therefore modulation characteristic is not presented.

FINAL

FCC § 2.1046, § 22.913 (a) & § 24.232 (c) & § 27.50 - RF OUTPUT POWER**Applicable Standard**

According to FCC §2.1046 and §22.913 (a), the ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

According to FCC §2.1046 and §24.232 (C), mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications..

According to FCC §2.1046 and §27.50 (d), (4) Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP. Fixed stations operating in the 1710-1755 MHz band are limited to a maximum antenna height of 10 meters above ground. Mobile and portable stations operating in these bands must employ a means for limiting power to the minimum necessary for successful communications.

According to §24.232 (d) Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (e) of this section. In both instances, equipment employed must be authorized in accordance with the provisions of §24.51. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

According to §27.50 (c), (10) Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.

Test Procedure**GSM/GPRS/EGPRS**

Function: Menu select > GSM Mobile Station > GSM 850/1900

Press Connection control to choose the different menus

Press RESET > choose all the reset all settings

Connection Press Signal Off to turn off the signal and change settings

Network Support > GSM + GPRS or GSM + EGSM

Main Service > Packet Data

Service selection > Test Mode A – Auto Slot Config. off

MS Signal Press Slot Config Bottom on the right twice to select and change the number of time slots and power setting

> Slot configuration > Uplink/Gamma

> 33 dBm for GPRS 850

> 30 dBm for GPRS 1900

> 27 dBm for EGPRS 850

> 26 dBm for EGPRS 1900

BS Signal Enter the same channel number for TCH channel (test channel) and BCCH channel

Frequency Offset > + 0 Hz

Mode > BCCH and TCH

BCCH Level > -85 dBm (May need to adjust if link is not stable)

BCCH Channel > choose desire test channel [Enter the same channel number for TCH channel (test channel) and BCCH channel]

Channel Type > Off

P0 > 4 dB

Slot Config > Unchanged (if already set under MS signal)

TCH > choose desired test channel

Hopping > Off

Main Timeslot > 3
 Network Coding Scheme > CS4 (GPRS) and MCS5 (EGPRS)

Bit Stream > 2E9-1 PSR Bit Stream
 AF/RF Enter appropriate offsets for Ext. Att. Output and Ext. Att. Input
 Connection Press Signal on to turn on the signal and change settings

WCDMA-Release 99

The following tests were conducted according to the test requirements outlines in section 5.2 of the 3GPP TS34.121-1 specification. The EUT has a nominal maximum output power of 24dBm (+1.7/-3.7).

WCDMA General Settings	Loopback Mode	Test Mode 1
	Rel99 RMC	12.2kbps RMC
	Power Control Algorithm	Algorithm2
	β_c / β_d	8/15

WCDMA HSDPA

The following tests were conducted according to the test requirements outlines in section 5.2 of the 3GPP TS34.121-1 specification.

	Mode Subset	HSDPA 1	HSDPA 2	HSDPA 3	HSDPA 4
WCDMA General Settings	Loopback Mode	Test Mode 1			
	Rel99 RMC	12.2kbps RMC			
	HSDPA FRC	H-Set1			
	Power Control Algorithm	Algorithm2			
	β_c	2/15	12/15	15/15	15/15
	β_d	15/15	15/15	8/15	4/15
	β_d (SF)	64			
	β_c / β_d	2/15	12/15	15/8	15/4
	β_{hs}	4/15	24/15	30/15	30/15
	MPR(dB)	0	0	0.5	0.5
HSDPA Specific Settings	DACK	8			
	DNAK	8			
	DCQI	8			
	Ack-Nack repetition factor	3			
	CQI Feedback	4ms			
	CQI Repetition Factor	2			
	$A_{hs} = \beta_{hs} / \beta_c$	30/15			

WCDMA HSUPA

The following tests were conducted according to the test requirements outlines in section 5.2 of the 3GPP TS34.121-1 specification.

	Mode	HSUPA	HSUPA	HSUPA	HSUPA	HSUPA
	Subset	1	2	3	4	5
WCDMA A General Settings	Loopback Mode	Test Mode 1				
	Rel99 RMC	12.2kbps RMC				
	HSDPA FRC	H-Set1				
	HSUPA Test	HSUPA Loopback				
	Power Control Algorithm	Algorithm2				
	β_c	11/15	6/15	15/15	2/15	15/15
	β_d	15/15	15/15	9/15	15/15	0
	β_{ec}	209/225	12/15	30/15	2/15	5/15
	β_c/β_d	11/15	6/15	15/9	2/15	-
	β_{hs}	22/15	12/15	30/15	4/15	5/15
	CM(dB)	1.0	3.0	2.0	3.0	1.0
	MPR(dB)	0	2	1	2	0
HSDPA Specific Settings	DACK	8				
	DNAK	8				
	DCQI	8				
	Ack-Nack repetition factor	3				
	CQI Feedback	4ms				
	CQI Repetition Factor	2				
	$A_{hs}=\beta_{hs}/\beta_c$	30/15				
HSUPA Specific Settings	DE-DPCCH	6	8	8	5	7
	DHARQ	0	0	0	0	0
	AG Index	20	12	15	17	21
	ETFCI	75	67	92	71	81
	Associated Max UL Data Rate kbps	242.1	174.9	482.8	205.8	308.9
	Reference E_FCI	E-TFCI 11 E E-TFCI PO 4 E-TFCI 67 E-TFCI PO 18 E-TFCI 71 E-TFCI PO23 E-TFCI 75 E-TFCI PO26 E-TFCI 81 E-TFCI PO 27	E-TFCI 11 E-TFCI PO4 E-TFCI 92 E-TFCI PO 18		E-TFCI 11 E E-TFCI PO 4 E-TFCI 67 E-TFCI PO 18 E-TFCI 71 E-TFCI PO23 E-TFCI 75 E-TFCI PO26 E-TFCI 81 E-TFCI PO 27	

HSPA+

The following tests were conducted according to the test requirements in Table C.11.1.4 of 3GPP TS 34.121-1

Sub-test	β_c (Note 3)	β_d	β_{HS} (Note 1)	β_{ec}	β_{ed} (2xSF2) (Note 4)	β_{ed} (2xSF4) (Note 4)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 4)	E-TFCI (Note 5)	E-TFCI (boost)
1	1	0	30/15	30/15	β_{ed1} : 30/15 β_{ed2} : 30/15	β_{ed3} : 24/15 β_{ed4} : 24/15	3.5	2.5	14	105	105

Note 1: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$.

Note 2: CM = 3.5 and the MPR is based on the relative CM difference, MPR = MAX(CM-1,0).

Note 3: DPDCH is not configured, therefore the β_c is set to 1 and $\beta_d = 0$ by default.

Note 4: β_{ed} can not be set directly; it is set by Absolute Grant Value.

Note 5: All the sub-tests require the UE to transmit 2SF2+2SF4 16QAM EDCH and they apply for UE using E-DPDCH category 7. E-DCH TTI is set to 2ms TTI and E-DCH table index = 2. To support these E-DCH configurations DPDCH is not allocated. The UE is signalled to use the extrapolation algorithm.

DC-HSDPA

The following tests were conducted according to the test requirements in Table C.8.1.12 of 3GPP TS 34.121-1

Table C.8.1.12: Fixed Reference Channel H-Set 12

Parameter	Unit	Value
Nominal Avg. Inf. Bit Rate	kbps	60
Inter-TTI Distance	TTI's	1
Number of HARQ Processes	Processes	6
Information Bit Payload (N_{INF})	Bits	120
Number Code Blocks	Blocks	1
Binary Channel Bits Per TTI	Bits	960
Total Available SML's in UE	SML's	19200
Number of SML's per HARQ Proc.	SML's	3200
Coding Rate		0.15
Number of Physical Channel Codes	Codes	1
Modulation		QPSK
Note 1: The RMC is intended to be used for DC-HSDPA mode and both cells shall transmit with identical parameters as listed in the table.		
Note 2: Maximum number of transmission is limited to 1, i.e., retransmission is not allowed. The redundancy and constellation version 0 shall be used.		

LTE:

The following tests were conducted according to the test requirements in 3GPP TS36.101

The following tests were conducted according to the test requirements outlined in section 6.2 of the 3GPP TS36.101 specification.

UE Power Class: 3 (23 +/- 2dBm). The allowed Maximum Power Reduction (MPR) for the maximum output power due to higher order modulation and transmit bandwidth configuration (resource blocks) is specified in Table 6.2.3-1 of the 3GPP TS36.101.

Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 3

Modulation	Channel bandwidth / Transmission bandwidth (RB)						MPR (dB)
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2

The allowed A-MPR values specified below in Table 6.2.4.-1 of 3GPP TS36.101 are in addition to the allowed MPR requirements. All the measurements below were performed with A-MPR disabled, by using Network Signaling Value of "NS_01".

Table 6.2.4-1: Additional Maximum Power Reduction (A-MPR)

Network Signalling value	Requirements (sub-clause)	E-UTRA Band	Channel bandwidth (MHz)	Resources Blocks (N_{RB})	A-MPR (dB)
NS_01	6.6.2.1.1	Table 5.5-1	1.4, 3, 5, 10, 15, 20	Table 5.6-1	NA
NS_03	6.6.2.2.1	2, 4, 10, 23, 25, 35, 36	3	>5	≤ 1
			5	>6	≤ 1
			10	>6	≤ 1
			15	>8	≤ 1
			20	>10	≤ 1
NS_04	6.6.2.2.2	41	5	>6	≤ 1
			10, 15, 20	See Table 6.2.4-4	
NS_05	6.6.3.3.1	1	10,15,20	≥ 50	≤ 1
NS_06	6.6.2.2.3	12, 13, 14, 17	1.4, 3, 5, 10	Table 5.6-1	n/a
NS_07	6.6.2.2.3	13	10	Table 6.2.4-2	Table 6.2.4-2
	6.6.3.3.2				
NS_08	6.6.3.3.3	19	10, 15	> 44	≤ 3
NS_09	6.6.3.3.4	21	10, 15	> 40	≤ 1
				> 55	≤ 2
NS_10		20	15, 20	Table 6.2.4-3	Table 6.2.4-3
NS_11	6.6.2.2.1	23 ¹	1.4, 3, 5, 10	Table 6.2.4-5	Table 6.2.4-5
..					
NS_32	-	-	-	-	-

Note 1: Applies to the lower block of Band 23, i.e. a carrier placed in the 2000-2010 MHz region.

Radiated method:

ANSI/TIA 603-D section 2.2.17

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	EMI Test Receiver	ESCI	100224	2015-05-09	2016-05-09
Sunol Sciences	Antenna	JB3	A060611-3	2014-11-06	2017-11-05
HP	Amplifier	8447E	2434A02181	2015-09-01	2016-09-01
R&S	Spectrum Analyzer	FSEM	DE31388	2015-05-09	2016-05-09
ETS LINDGREN	Horn Antenna	3115	000 527 35	2015-09-06	2018-09-06
Mini-Circuit	Amplifier	ZVA-213-S+	054201245	2015-02-19	2016-02-19
Giga	Signal Generator	1026	320408	2015-05-09	2016-05-09
EMCO	Adjustable Dipole Antenna	3121C	9109-753	N/A	N/A
TDK RF	Horn Antenna	HRN-0118	130 084	2015-09-06	2018-09-06

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data**Environmental Conditions**

Temperature:	27 °C
Relative Humidity:	52%
ATM Pressure:	101kPa

The testing was performed by Lion Xiao on 2015-09-06&2015-09-09.

Conducted Power**Cellular Band (Part 22H) & PCS Band (Part 24E)**

Band	Channel No.	Peak Output Power (dBm)								
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Cellular	128	32.90	32.81	31.81	30.35	29.29	26.38	24.98	22.52	21.07
	190	33.04	32.33	31.32	29.77	28.78	25.88	25.31	22.97	21.31
	251	32.81	32.62	31.57	29.93	29.01	26.33	24.95	22.64	21.23
PCS	512	29.51	28.97	27.63	26.23	24.49	25.34	23.86	22.30	21.00
	661	29.63	28.94	27.71	26.16	24.53	24.79	23.36	21.95	20.63
	810	29.91	29.45	28.07	26.51	25.09	25.47	23.91	22.47	21.08

WCDMA Band (PART 24E)

Mode	3GPP Sub Test	Average Output Power (dBm)					
		Low Channel (Ave. Power)	Low Channel (PAR)	Middle Channel (Ave. Power)	Middle Channel (PAR)	High Channel (Ave. Power)	High Channel (PAR)
Rel 99	1	22.53	3.04	22.74	3.20	22.56	2.80
HSDPA	1	21.29	3.18	21.59	3.15	21.41	2.89
	2	21.24	2.97	21.53	3.22	21.45	2.68
	3	21.30	2.94	21.50	3.19	21.43	2.87
	4	21.37	2.90	21.57	3.27	21.52	2.97
HSUPA	1	21.42	3.07	21.69	3.2	21.56	2.90
	2	21.35	3.18	21.63	3.25	21.5	2.81
	3	21.39	2.93	21.60	3.31	21.49	2.84
	4	21.31	3.19	21.64	3.06	21.40	2.89
	5	21.33	3.00	21.58	3.16	21.46	2.92
DC-HSDPA	1	21.27	2.98	21.5	3.12	21.37	2.68
	2	21.23	3.11	21.44	3.31	21.39	2.90
	3	21.29	3.05	21.47	3.37	21.33	2.71
	4	21.24	3.10	21.43	3.34	21.35	2.87
HSPA+	1	21.17	3.14	21.31	3.15	21.29	2.92

WCDMA Band IV (PART 27)

Mode	3GPP Sub Test	Conducted Output Power (dBm)					
		Low Channel (Ave. Power)	Low Channel (PAR)	Middle Channel (Ave. Power)	Middle Channel (PAR)	High Channel (Ave. Power)	High Channel (PAR)
Rel 99	1	22.28	2.68	22.40	3.08	22.55	2.40
HSDPA	1	21.23	2.82	21.49	3.21	21.34	2.43
	2	21.20	2.77	21.51	3.00	21.30	2.56
	3	21.29	2.54	21.43	3.04	21.38	2.49
	4	21.28	2.81	21.46	3.23	21.40	2.54
HSUPA	1	21.35	2.62	21.53	3.2	21.47	2.52
	2	21.30	2.73	21.5	3.07	21.43	2.48
	3	21.29	2.79	21.41	3.21	21.39	2.51
	4	21.22	2.70	21.48	2.98	21.31	2.39
	5	21.19	2.74	21.43	2.94	21.35	2.34
DC-HSDPA	1	21.24	2.65	21.45	3.13	21.28	2.38
	2	21.16	2.72	21.40	3.20	21.21	2.53
	3	21.10	2.78	21.37	3.05	21.26	2.58
	4	21.13	2.69	21.34	3.11	21.20	2.42
HSPA+	1	21.06	2.57	21.29	2.97	21.14	2.52

WCDMA Band (PART 22H)

Mode	3GPP Sub Test	Average Output Power (dBm)					
		Low Channel (Ave. Power)	Low Channel (PAR)	Middle Channel (Ave. Power)	Middle Channel (PAR)	High Channel (Ave. Power)	High Channel (PAR)
Rel 99	1	22.70	2.76	22.74	3.12	22.67	2.84
HSDPA	1	21.57	2.81	21.78	3.03	21.63	2.74
	2	21.50	2.92	21.70	3.19	21.60	2.92
	3	21.54	2.65	21.75	3.22	21.53	2.97
	4	21.47	2.90	21.69	3.30	21.55	2.81
DC-HSDPA	1	21.41	2.82	21.56	3.09	21.49	2.87
	2	21.45	2.87	21.63	3.20	21.43	2.78
	3	21.40	2.62	21.60	3.17	21.40	2.89
	4	21.36	2.89	21.54	3.29	21.48	2.83
	5	21.31	2.66	21.57	3.21	21.46	2.91
HSUPA	1	21.33	2.84	21.5	3.07	21.41	2.76
	2	21.28	2.85	21.52	3.13	21.36	2.82
	3	21.24	2.70	21.55	3.10	21.32	2.95
	4	21.29	2.83	21.48	3.18	21.37	3.00
HSPA+	1	21.10	2.78	21.35	3.25	21.24	2.79

Note: peak-to-average ratio (PAR) <13 dB.

LTE Band II (PART 24)

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4 MHz	QPSK	1#0	22.73	22.54	22.59
		1#3	22.96	22.34	22.61
		1#5	22.88	22.46	22.57
		3#0	22.37	22.12	22.03
		3#1	22.28	22.39	22.11
		3#3	22.15	22.21	22.06
		6#0	21.37	21.18	21.31
	16QAM	1#0	22.50	21.99	22.19
		1#3	22.59	22.15	21.97
		1#5	22.47	21.99	21.91
		3#0	21.88	21.48	21.61
		3#1	21.72	21.56	21.76
		3#3	21.84	21.69	21.70
		6#0	21.09	21.05	21.07
3 MHz	QPSK	1#0	22.59	22.32	22.69
		1#7	22.62	22.57	22.41
		1#14	22.40	22.48	22.23
		8#0	22.07	22.17	22.07
		8#4	22.05	22.06	22.05
		8#7	22.00	21.99	21.97
		15#0	21.19	21.22	21.14
	16QAM	1#0	22.48	22.09	21.91
		1#7	22.56	21.94	21.80
		1#14	22.49	21.97	21.96
		8#0	21.80	21.58	21.62
		8#4	21.99	21.43	21.53
		8#7	21.84	21.69	21.65
		15#0	20.98	20.95	20.83
5 MHz	QPSK	1#0	22.98	22.37	22.62
		1#12	22.81	22.11	22.10
		1#24	22.61	20.23	22.25
		12#0	21.71	21.74	21.58
		12#6	21.88	21.57	21.86
		12#11	21.57	21.50	21.68
		25#0	21.03	21.06	21.02
	16QAM	1#0	21.90	21.63	21.96
		1#12	22.03	21.39	21.82
		1#24	21.26	21.36	21.86
		12#0	21.65	21.40	21.17
		12#6	21.54	21.63	21.39
		12#11	21.49	21.14	21.24
		25#0	20.70	20.76	20.70

	10 MHz	QPSK	1#0	22.64	22.27	22.18
			1#24	22.79	22.09	22.20
			1#49	22.53	22.24	22.34
			25#0	21.90	21.57	21.65
			25#12	22.04	21.65	21.76
			25#24	22.01	21.56	21.70
			50#0	21.42	20.91	21.05
		16QAM	1#0	22.41	22.01	21.90
			1#24	22.33	21.99	21.86
			1#49	21.27	21.86	21.74
			25#0	21.81	21.54	21.17
			25#12	21.60	21.63	21.29
			25#24	20.73	20.84	21.11
			50#0	20.65	20.57	20.20
	15 MHz	QPSK	1#0	22.38	22.37	22.44
			1#37	22.41	22.43	22.37
			1#74	22.16	22.42	22.71
			36#0	21.83	21.94	21.95
			36#17	21.78	22.01	21.86
			36#35	21.65	22.09	22.09
			75#0	21.64	20.87	21.00
		16QAM	1#0	22.26	21.68	21.86
			1#37	22.31	21.51	21.67
			1#74	22.20	21.53	21.75
			36#0	21.53	20.64	20.94
			36#17	21.65	20.96	21.07
			36#35	21.49	20.71	20.93
			75#0	20.74	20.26	20.23
	20 MHz	QPSK	1#0	22.46	21.96	22.13
			1#49	22.58	22.11	22.58
			1#99	22.42	22.27	22.30
			50#0	21.85	21.42	21.96
			50#24	21.61	21.52	22.00
			50#49	22.76	21.63	21.83
			100#0	21.50	20.89	21.06
		16QAM	1#0	22.05	21.88	21.93
			1#49	22.11	21.74	21.80
			1#99	22.09	21.79	21.99
			50#0	21.41	20.99	21.13
			50#24	21.30	21.13	21.21
			50#49	21.24	21.15	21.09
			100#0	20.47	20.58	20.46

Test Modulation		Channel Bandwidth	Low Channel PAR (dB)	Middle Channel PAR (dB)	High Channel PAR (dB)	Limit (dB)
QPSK	1 RB	20 MHz	4.56	5.00	4.84	≤ 13
	Full RB		6.28	6.44	6.28	≤ 13
16QAM	1 RB	20 MHz	5.56	5.92	5.40	≤ 13
	Full RB		7.24	7.28	7.24	≤ 13

LTE Band IV (PART 27)

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4 MHz	QPSK	1#0	23.61	23.25	23.01
		1#3	23.35	23.28	23.03
		1#5	23.12	23.30	22.96
		3#0	22.51	22.30	22.47
		3#1	22.59	22.56	22.16
		3#3	22.40	22.44	22.30
		6#0	21.92	21.99	21.76
	16QAM	1#0	22.50	22.26	22.47
		1#3	22.63	22.44	22.20
		1#5	22.42	22.73	22.29
		3#0	21.75	21.63	21.59
		3#1	21.36	21.37	21.42
		3#3	21.48	21.71	21.38
		6#0	21.98	20.87	20.88
3 MHz	QPSK	1#0	23.64	23.13	22.88
		1#7	23.72	23.51	22.75
		1#14	23.52	23.23	23.03
		8#0	22.99	22.64	22.10
		8#4	22.68	22.53	22.31
		8#7	22.74	22.48	22.24
		15#0	22.09	22.08	21.62
	16QAM	1#0	22.59	22.46	22.41
		1#7	22.33	22.63	22.55
		1#14	22.47	22.57	22.29
		8#0	21.53	21.70	21.33
		8#4	21.60	21.46	21.24
		8#7	21.67	21.53	21.19
		15#0	20.75	20.93	20.68
5 MHz	QPSK	1#0	23.10	23.03	22.89
		1#12	23.34	22.94	22.70
		1#24	23.21	22.96	22.97

			12#0	22.46	22.56	22.26
			12#6	22.74	22.39	22.38
			12#11	22.53	22.46	22.13
			25#0	22.03	21.84	21.59
		16QAM	1#0	22.54	22.54	22.23
			1#12	22.73	22.37	22.43
			1#24	22.59	22.85	22.18
			12#0	21.71	21.55	21.21
			12#6	21.39	21.72	21.39
			12#11	21.45	21.76	21.16
			25#0	20.87	21.04	20.87
	10 MHz	QPSK	1#0	23.40	22.90	22.24
			1#24	23.13	23.13	22.51
			1#49	23.04	23.01	22.29
			25#0	22.36	22.51	21.83
			25#12	22.55	22.66	22.06
			25#24	22.40	22.64	22.01
			50#0	22.00	21.95	21.38
		16QAM	1#0	22.75	22.27	22.16
			1#24	22.54	22.15	22.13
			1#49	22.42	22.37	22.20
			25#0	21.65	21.92	21.39
			25#12	21.83	21.90	21.63
			25#24	21.88	21.98	21.70
			50#0	20.57	21.09	20.78
	15 MHz	QPSK	1#0	23.58	23.36	22.55
			1#37	23.55	23.37	22.72
			1#74	23.47	23.24	22.80
			36#0	22.49	22.69	21.62
			36#17	22.60	22.49	21.58
			36#35	22.73	22.58	21.76
			75#0	22.03	21.95	21.16
		16QAM	1#0	22.54	22.24	22.43
			1#37	22.70	22.43	22.15
			1#74	22.53	22.12	21.96
			36#0	21.61	21.75	21.68
			36#17	21.50	21.80	21.51
			36#35	21.44	21.73	21.48
			75#0	20.63	21.10	20.90
	20 MHz	QPSK	1#0	23.06	23.26	22.60
			1#49	23.03	23.23	22.40
			1#99	23.22	23.35	22.57
			50#0	22.74	22.59	21.89
			50#24	22.39	22.21	22.03
			50#49	22.52	21.89	21.99
			100#0	21.90	21.10	21.02

	16QAM	1#0	22.54	22.13	21.92
		1#49	22.45	22.30	22.14
		1#99	22.33	22.33	22.32
		50#0	21.63	21.49	21.15
		50#24	21.60	21.35	21.16
		50#49	21.58	21.38	21.43
		100#0	20.98	21.09	20.50

Test Modulation		Channel Bandwidth	Low Channel PAR (dB)	Middle Channel PAR (dB)	High Channel PAR (dB)	Limit (dB)
QPSK	1 RB	20 MHz	5.04	4.36	4.60	≤ 13
	Full RB		6.84	6.20	6.80	≤ 13
16QAM	1 RB	20 MHz	5.60	4.84	4.96	≤ 13
	Full RB		7.96	7.76	7.08	≤ 13

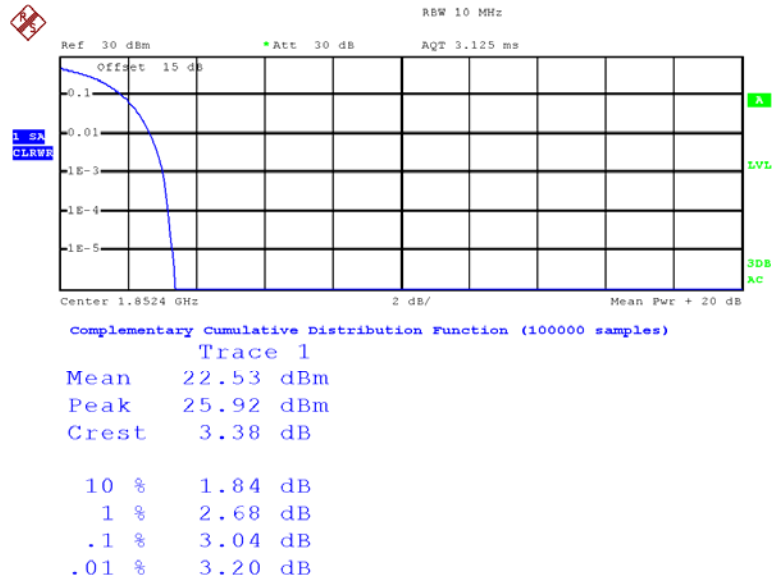
LTE Band 17 (PART 27)

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5 MHz	QPSK	1#0	23.11	22.60	22.97
		1#12	22.70	22.45	22.70
		1#24	22.58	22.81	22.61
		12#0	22.17	22.05	22.66
		12#6	22.03	22.14	22.59
		12#11	22.19	22.09	22.34
		25#0	21.66	21.25	21.71
	16-QAM	1#0	22.25	21.72	22.34
		1#12	22.17	21.45	22.19
		1#24	22.37	21.69	22.18
		12#0	21.39	21.09	21.02
		12#6	21.26	20.95	21.65
		12#11	21.55	20.90	21.64
		25#0	20.31	20.52	20.46
10 MHz	QPSK	1#0	22.76	22.57	22.63
		1#24	22.81	22.45	22.74
		1#49	22.79	22.36	22.66
		25#0	22.05	21.69	21.92
		25#12	22.12	21.91	22.26
		25#24	21.94	21.78	22.07
		50#0	21.57	21.36	21.67
	16-QAM	1#0	22.28	21.60	22.33
		1#24	22.12	21.54	22.34
		1#49	21.33	21.37	22.38
		25#0	21.78	21.01	21.51
		25#12	21.84	21.12	21.38
		25#24	21.96	21.03	21.11
		50#0	20.87	20.53	20.86

Test Modulation		Channel Bandwidth	Low Channel PAR (dB)	Middle Channel PAR (dB)	High Channel PAR (dB)	Limit (dB)
QPSK	1 RB	5 MHz	5.40	5.56	5.44	≤ 13
	Full RB		5.44	5.52	5.44	≤ 13
16QAM	1 RB	10 MHz	6.52	6.16	6.40	≤ 13
	Full RB		6.32	6.32	6.36	≤ 13

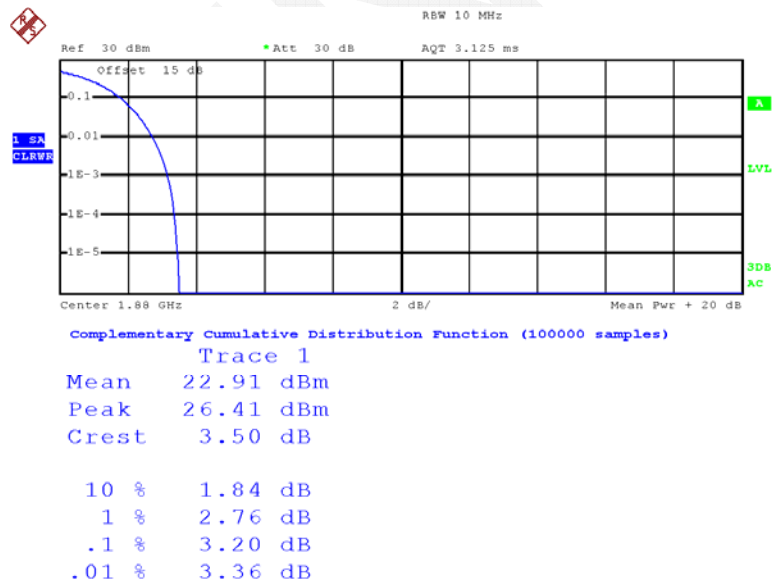
Peak-to-average ratio (PAR)
WCDMA Band (PART 24E)

Low Channel

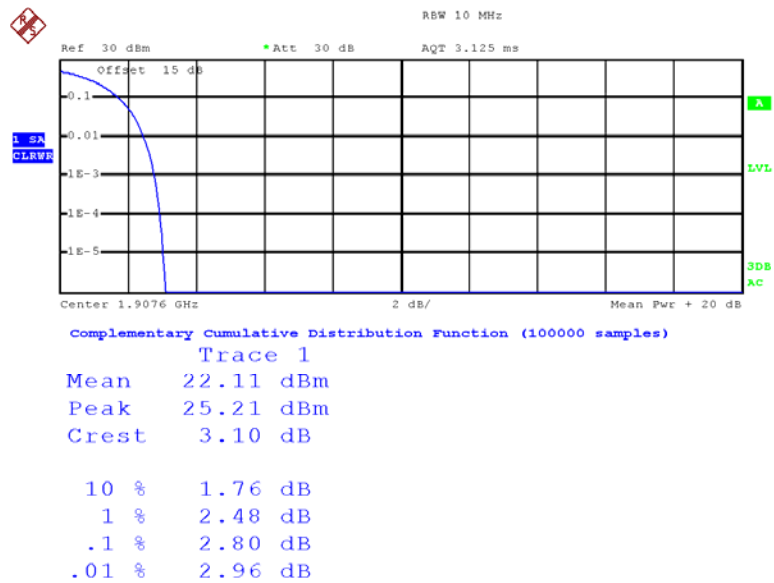


Date: 6.SEP.2015 17:35:01

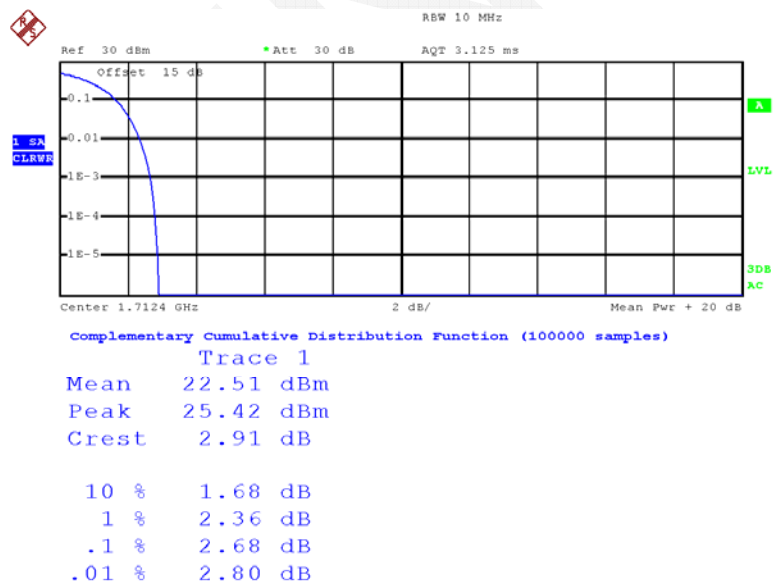
Middle Channel



Date: 6.SEP.2015 17:34:45

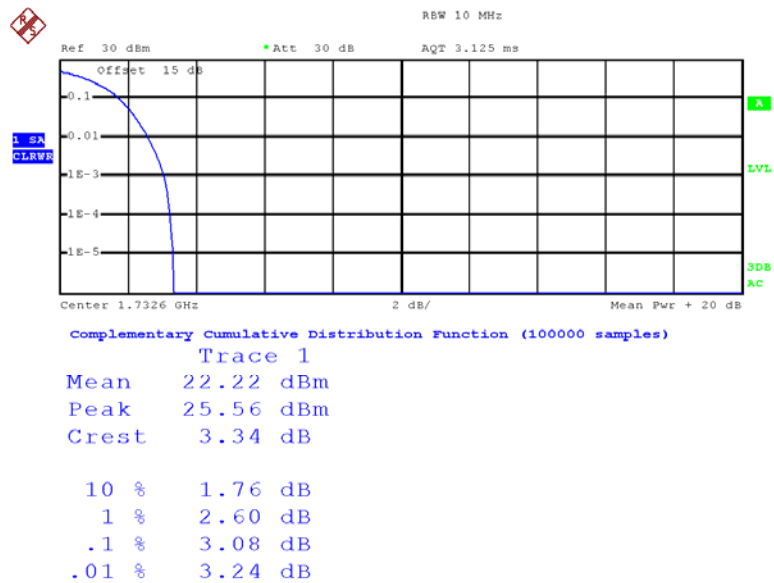
High Channel

Date: 6.SEP.2015 17:34:29

WCDMA Band IV (PART 27)**Low Channel**

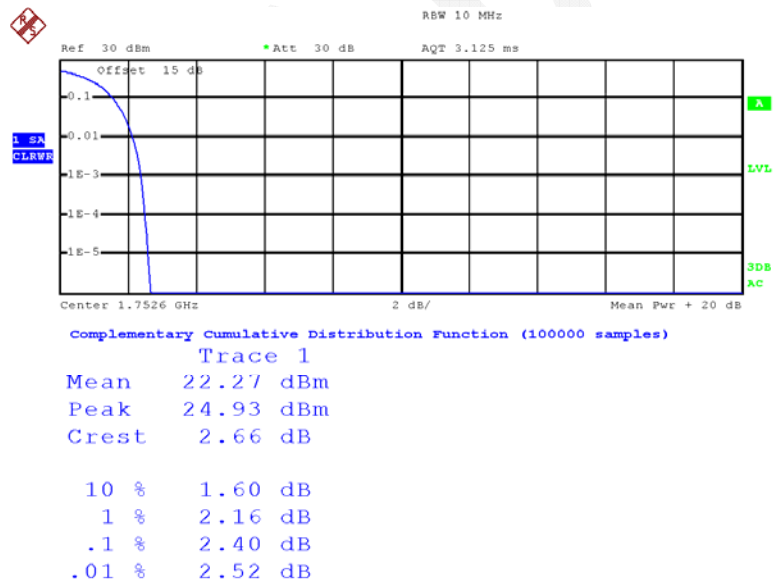
Date: 6.SEP.2015 17:31:48

Middle Channel

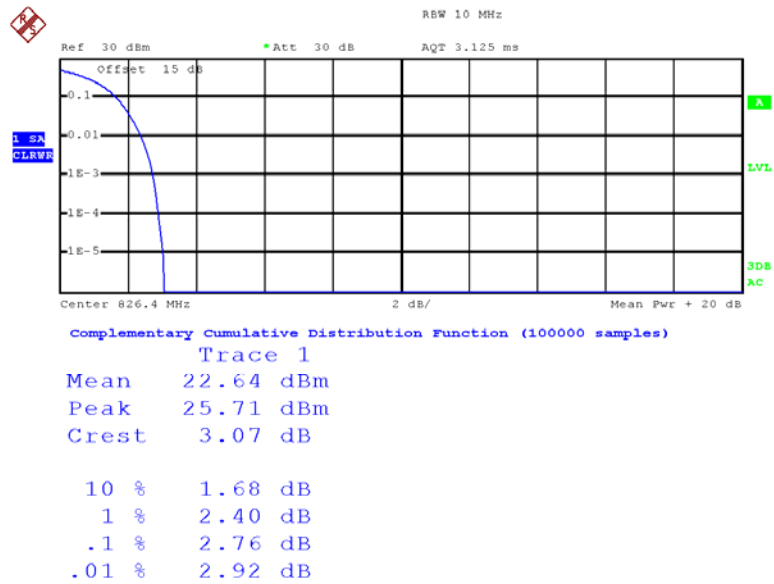


Date: 6.SEP.2015 17:31:37

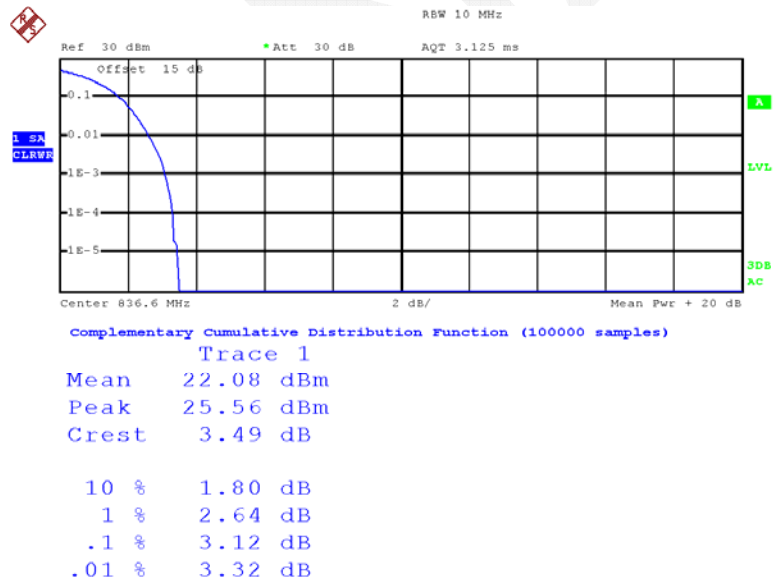
High Channel



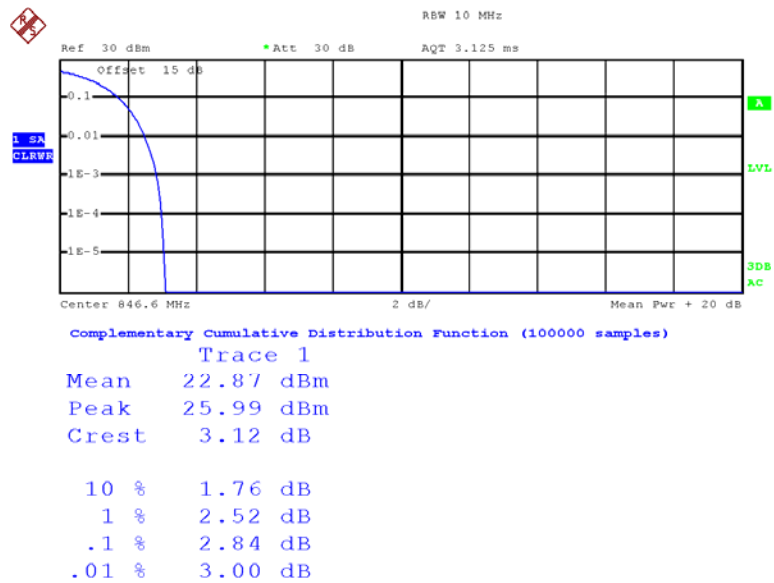
Date: 6.SEP.2015 17:31:59

WCDMA Band V (PART 22H)**Low Channel**

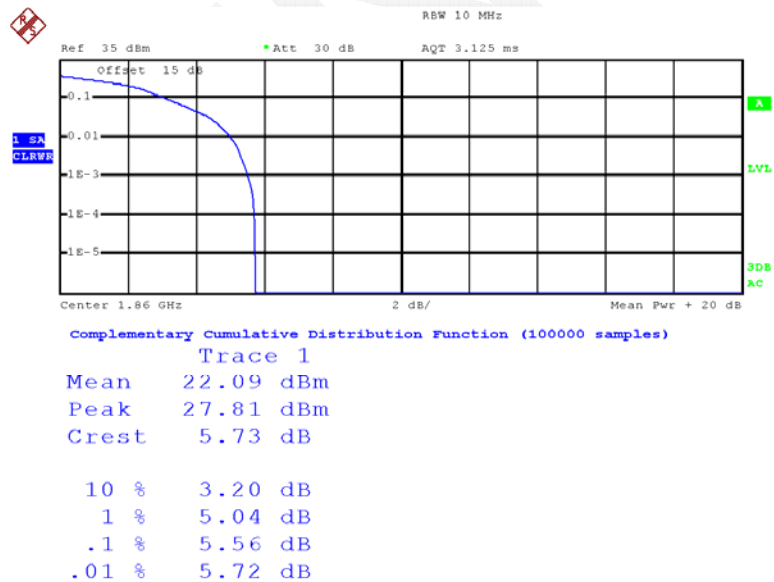
Date: 6.SEP.2015 17:38:07

Middle Channel

Date: 6.SEP.2015 17:37:58

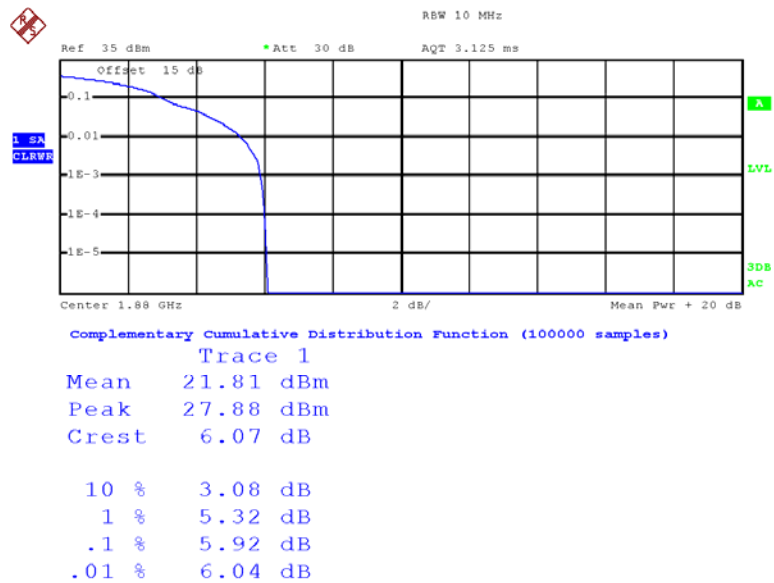
High Channel

Date: 6.SEP.2015 17:37:45

LTE Band (PART 24)**20 MHz RB#1_16QAM Low Channel**

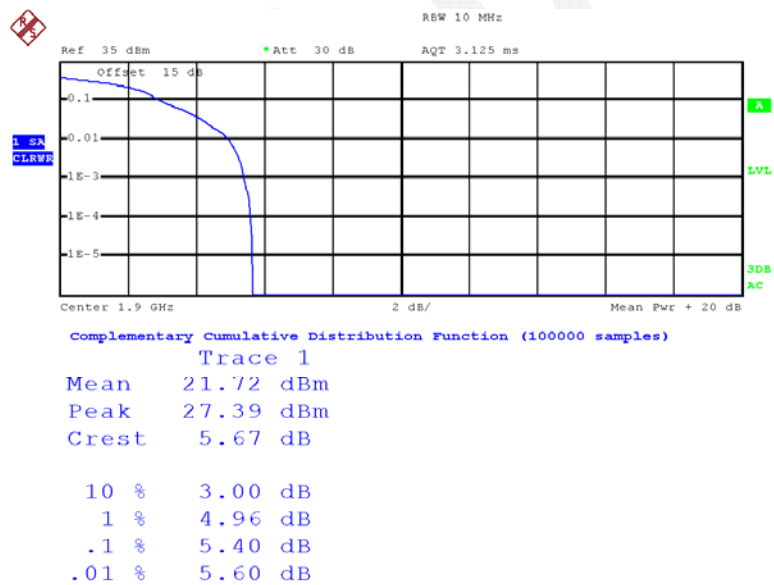
Date: 9.SEP.2015 00:28:00

20 MHz RB#1_16QAM Middle Channel



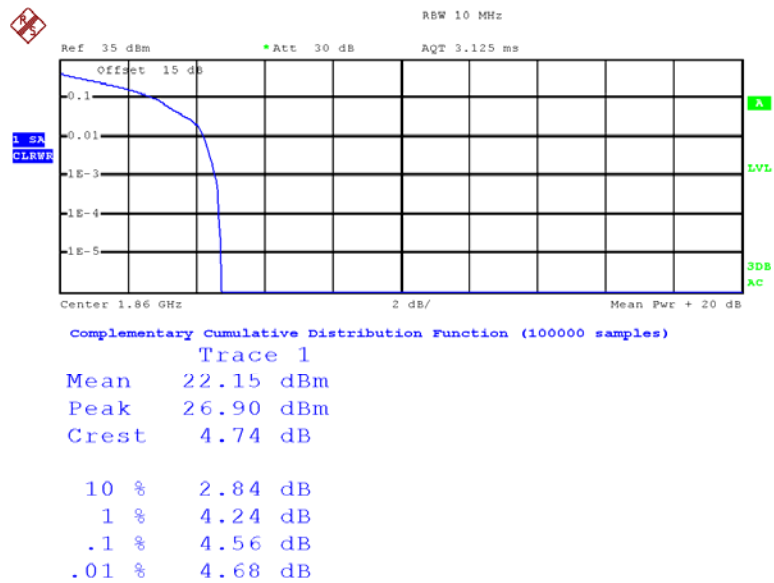
Date: 9.SEP.2015 00:26:41

20 MHz RB#1_16QAM High Channel



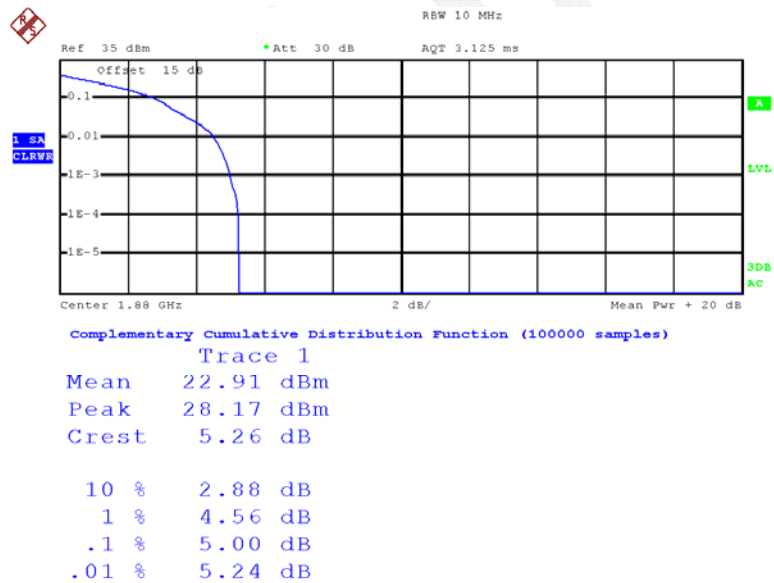
Date: 9.SEP.2015 00:27:25

20 MHz RB#1_QPSK Low Channel

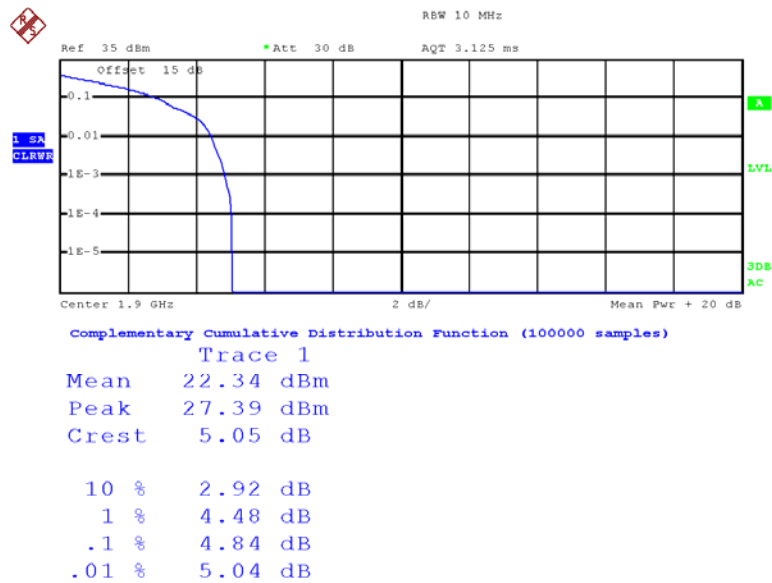


Date: 9.SEP.2015 00:28:14

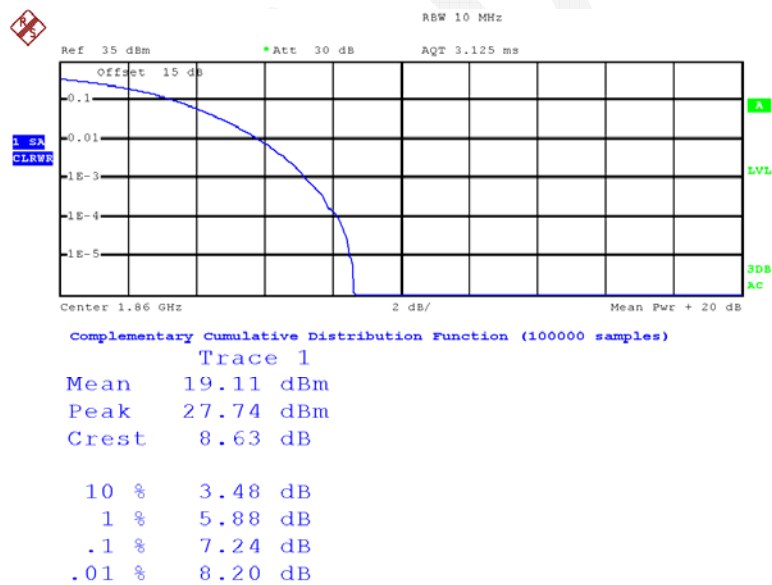
20 MHz RB#1_QPSK Middle Channel



Date: 9.SEP.2015 00:26:51

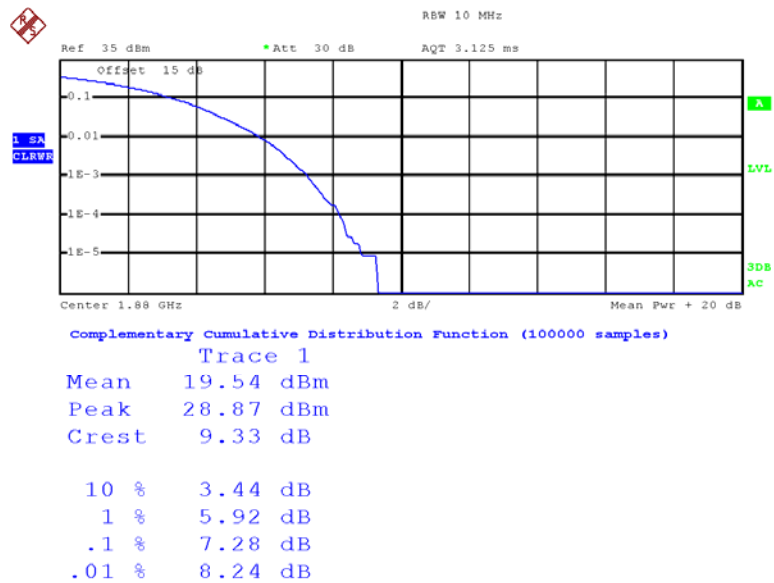
20 MHz RB#1_QPSK High Channel

Date: 9.SEP.2015 00:27:15

20 MHz RB#100_16QAM Low Channel

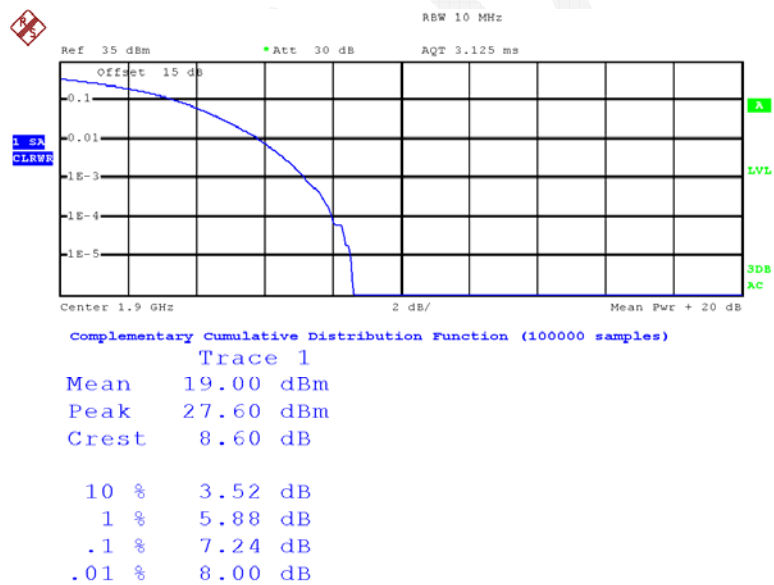
Date: 9.SEP.2015 00:24:31

20 MHz RB#100_16QAM Middle Channel



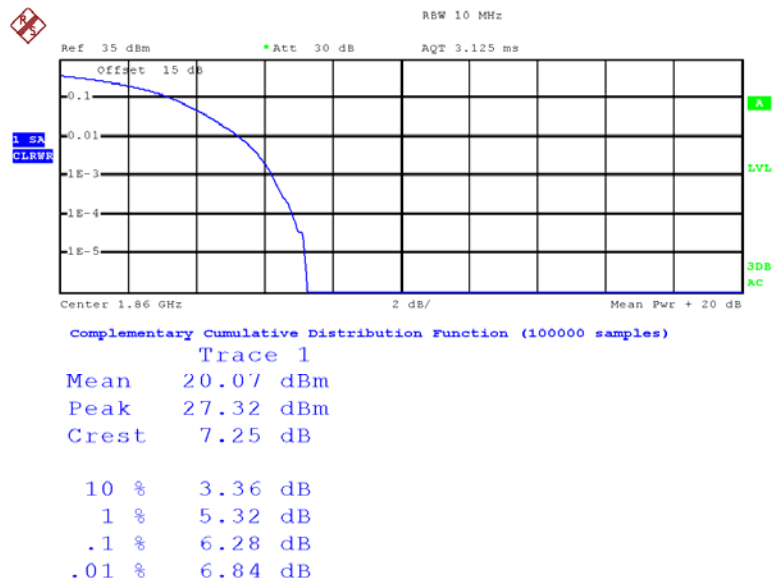
Date: 9.SEP.2015 00:24:51

20 MHz RB#100_16QAM High Channel



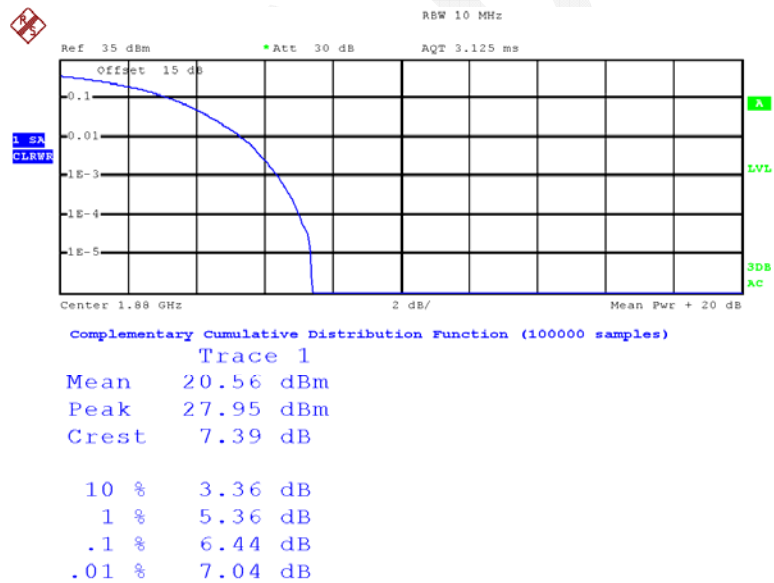
Date: 9.SEP.2015 00:23:52

20 MHz RB#100_QPSK Low Channel

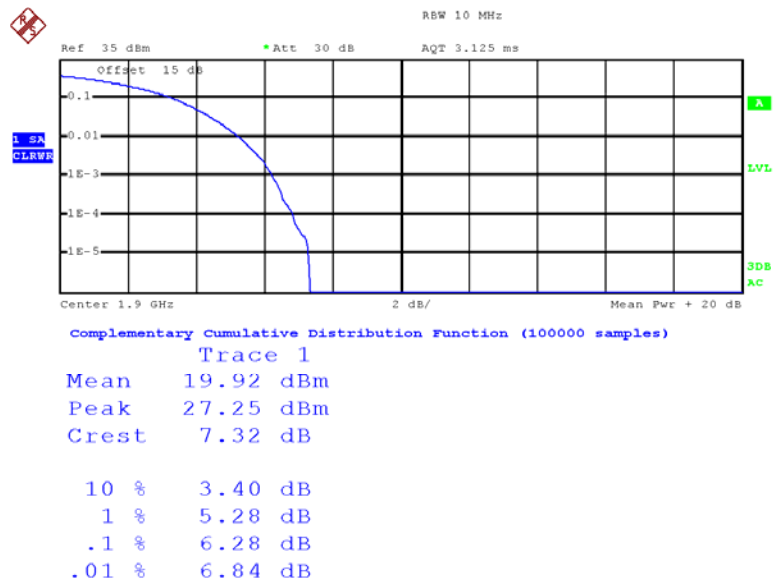


Date: 9.SEP.2015 00:23:12

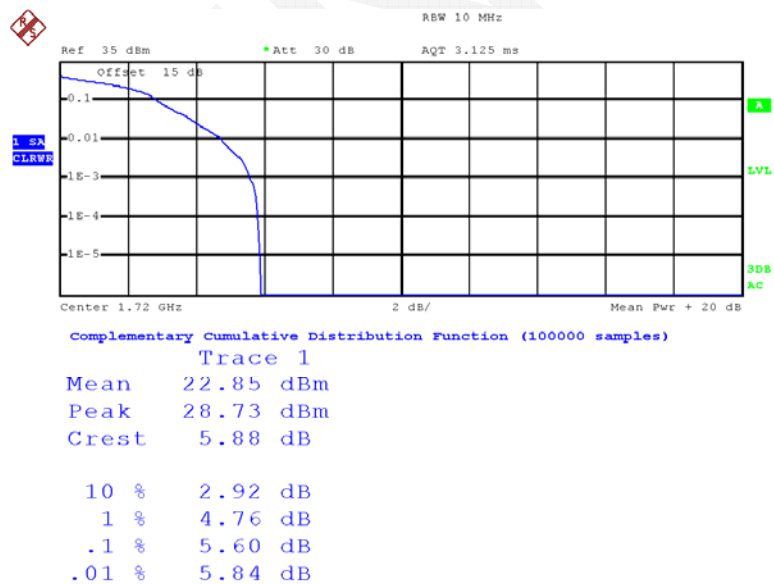
20 MHz RB#100_QPSK Middle Channel



Date: 9.SEP.2015 00:22:38

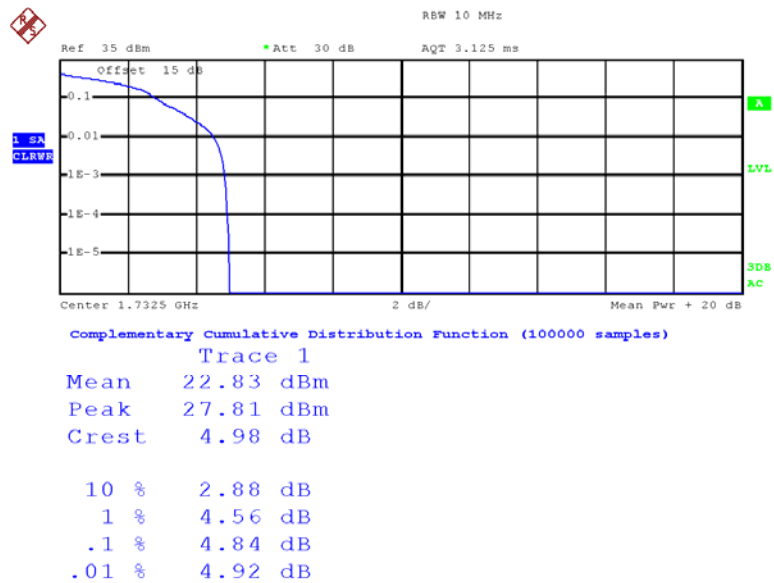
20 MHz RB#100_QPSK High Channel

Date: 9.SEP.2015 00:23:27

LTE Band IV (PART 27)**20 MHz RB#116QAM Low Channel**

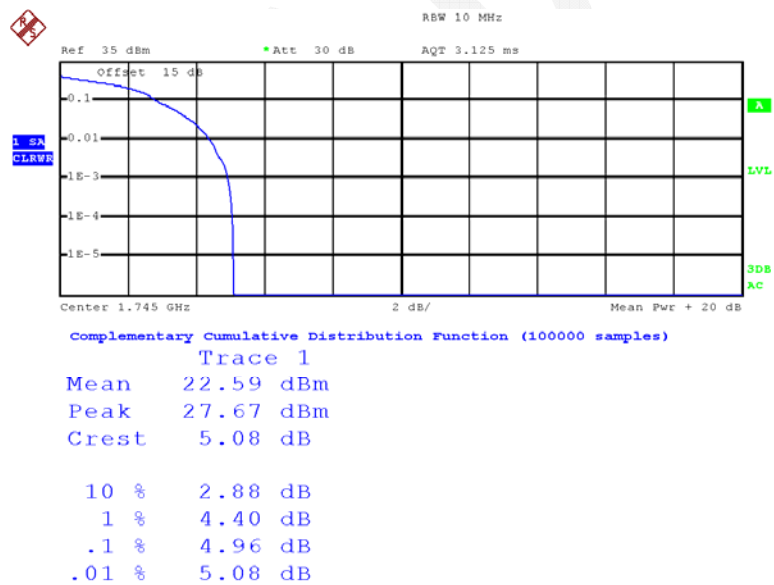
Date: 9.SEP.2015 01:53:50

20 MHz RB#1_16QAM Middle Channel



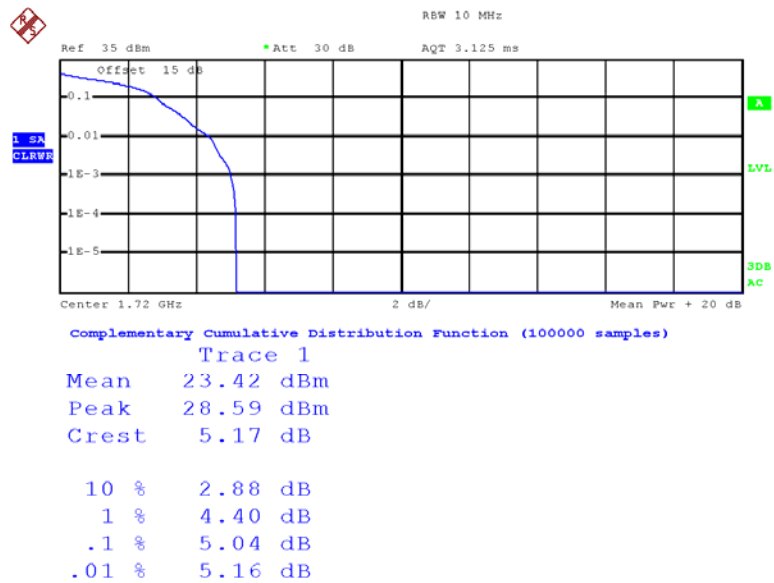
Date: 9.SEP.2015 01:53:09

20 MHz RB#1_16QAM High Channel



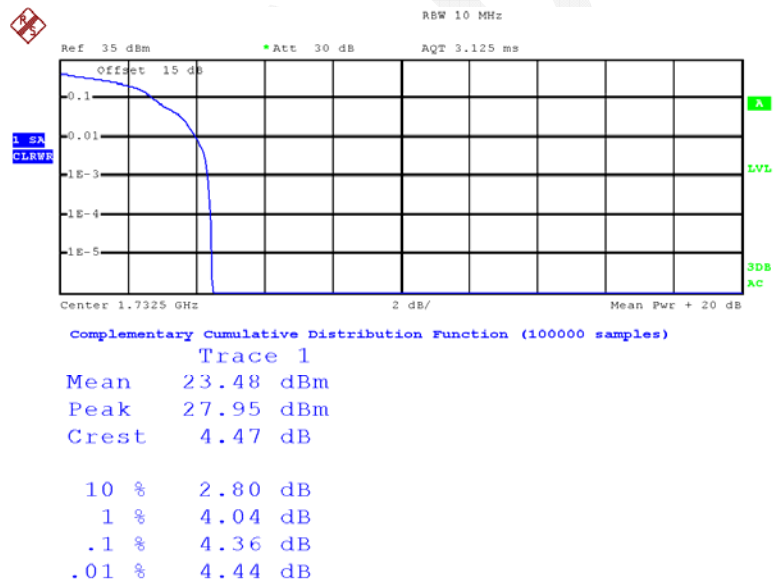
Date: 9.SEP.2015 01:52:47

20 MHz RB#1_QPSK Low Channel

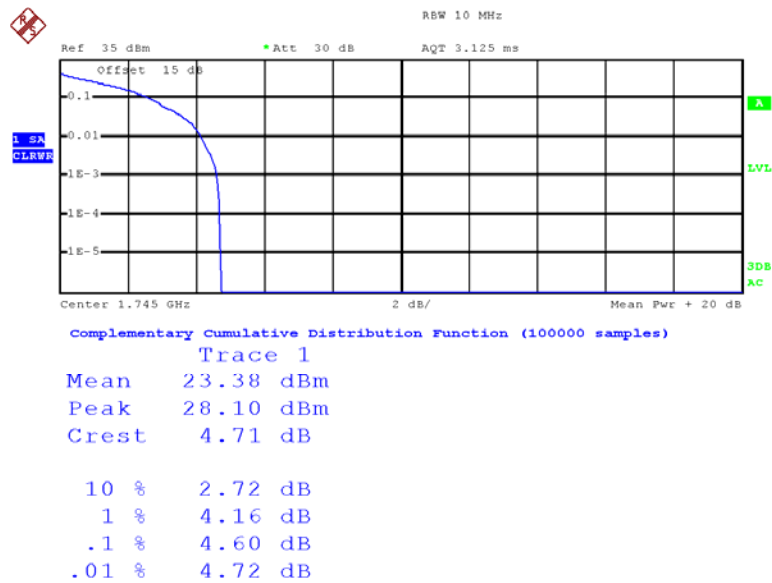


Date: 9.SEP.2015 01:54:02

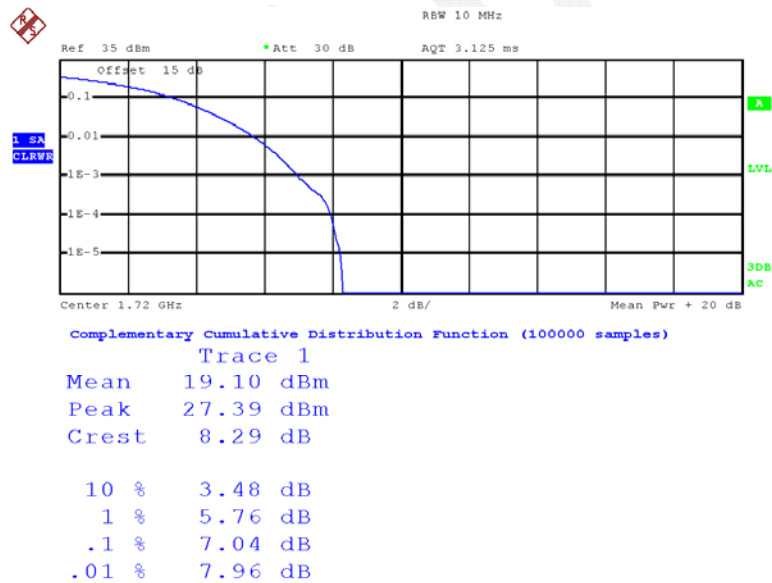
20 MHz RB#1_QPSK Middle Channel



Date: 9.SEP.2015 01:53:07

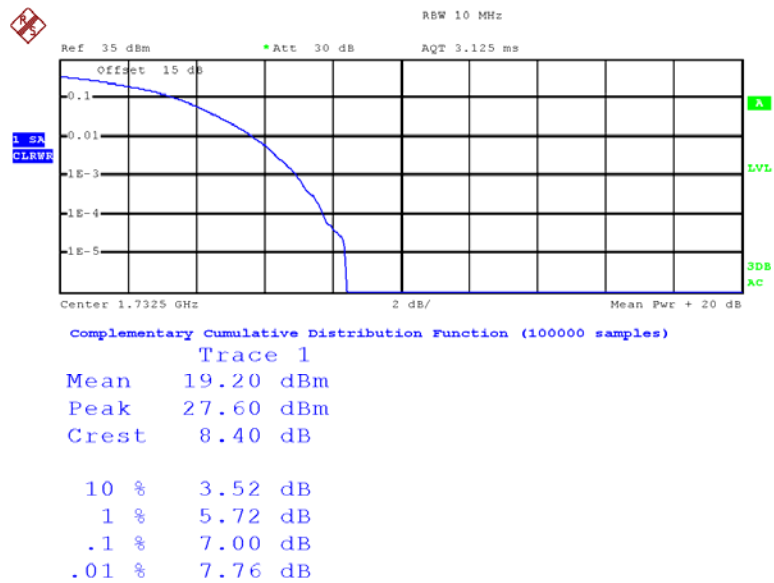
20 MHz RB#1_QPSK High Channel

Date: 9.SEP.2015 01:52:38

20 MHz RB#100_16QAM Low Channel

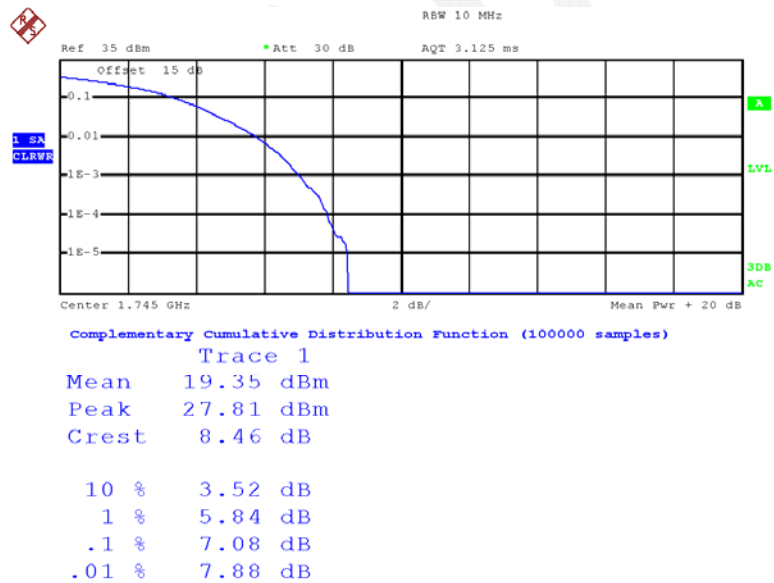
Date: 9.SEP.2015 01:50:45

20 MHz RB#100_16QAM Middle Channel



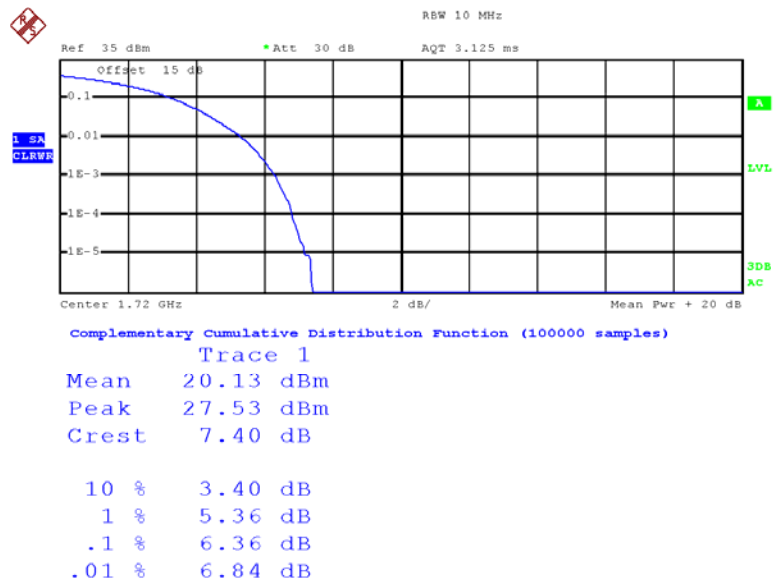
Date: 9.SEP.2015 01:50:08

20 MHz RB#100_16QAM High Channel



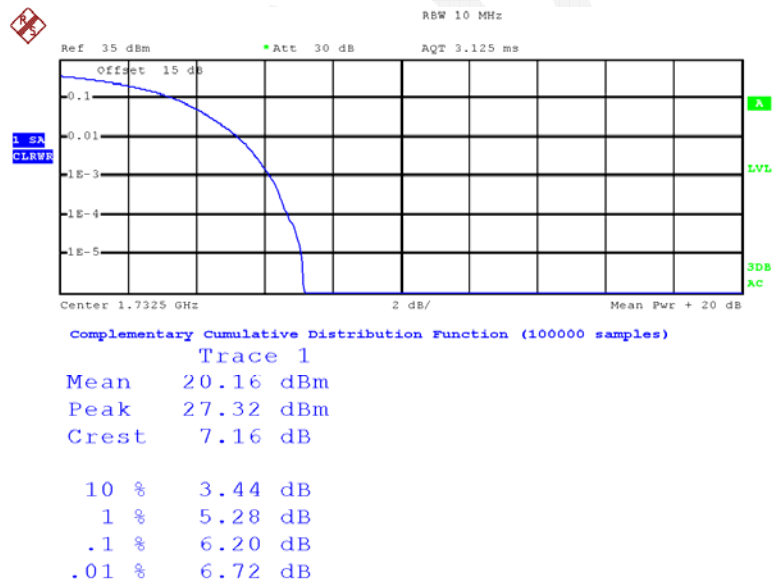
Date: 9.SEP.2015 01:51:14

20 MHz RB#100_QPSK Low Channel

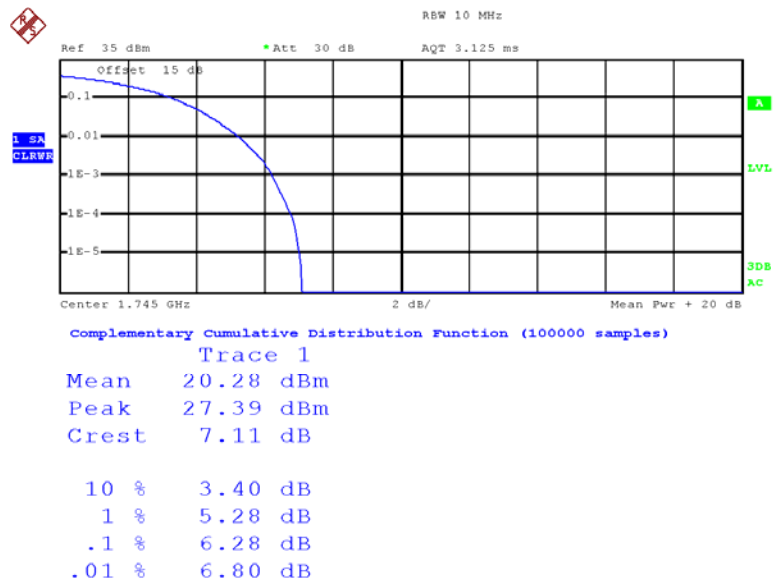


Date: 9.SEP.2015 01:50:37

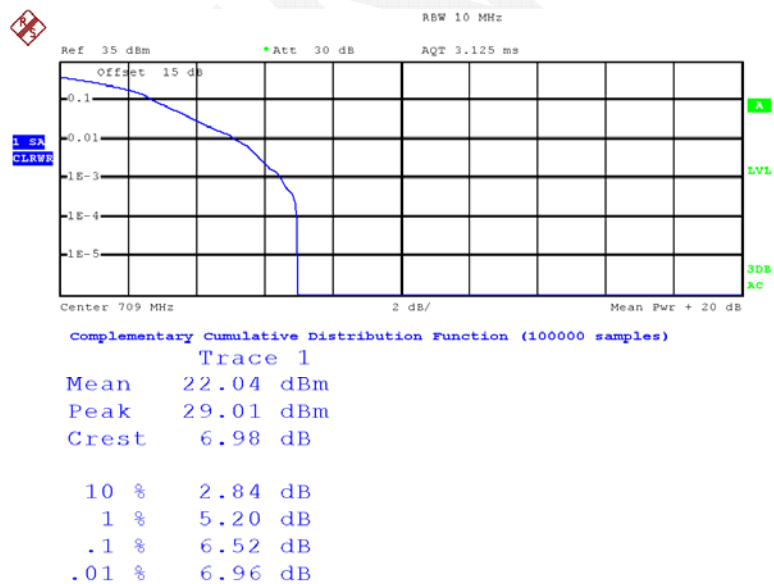
20 MHz RB#100_QPSK Middle Channel



Date: 9.SEP.2015 01:50:18

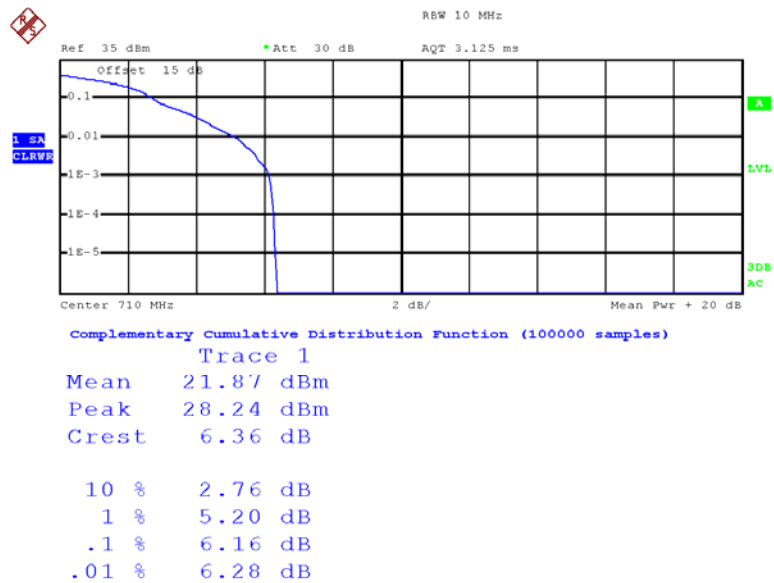
20 MHz RB#100_QPSK High Channel

Date: 9.SEP.2015 01:51:21

LTE Band 17 (PART 27)**5 MHz RB#1_16QAM Low Channel**

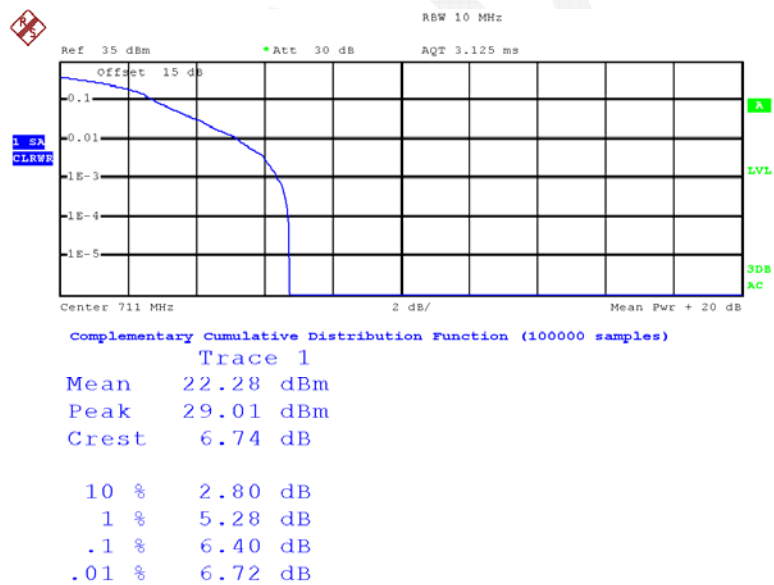
Date: 9.SEP.2015 00:14:15

5 MHz RB#1_16QAM Middle Channel



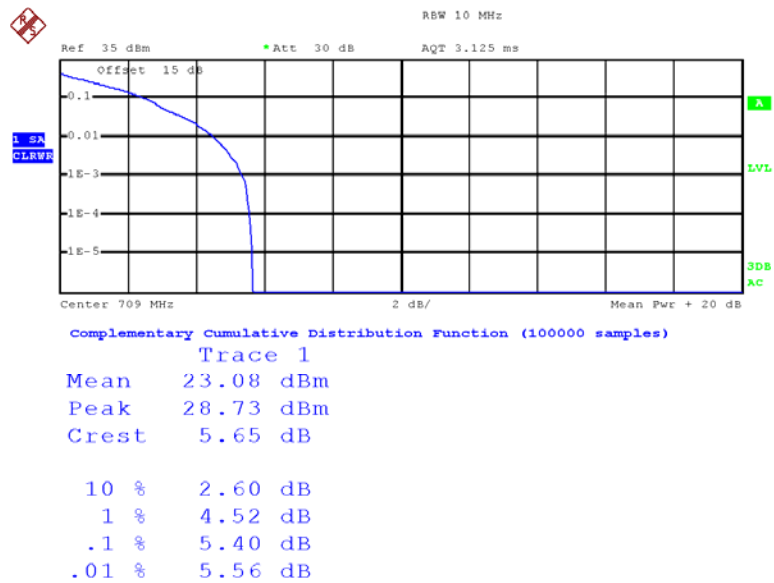
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5 MHz RB#1_16QAM High Channel



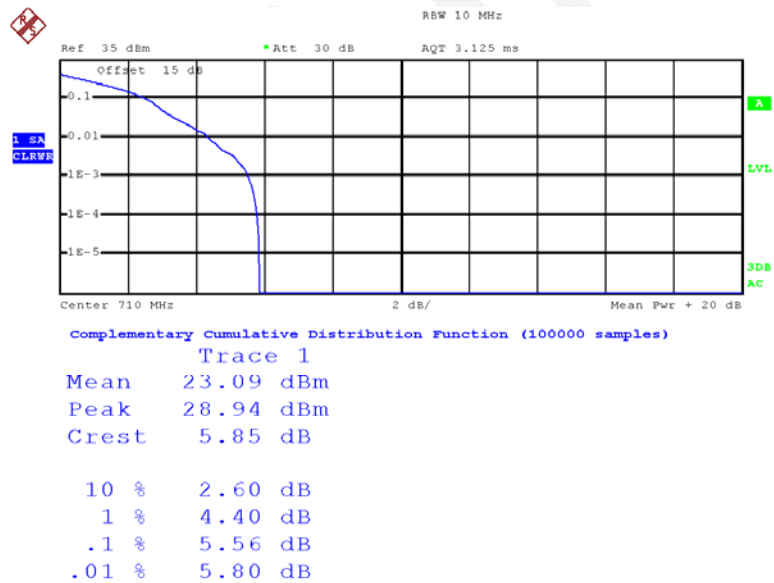
Date: 9.SEP.2015 00:15:00

5 MHz RB#1_QPSK Low Channel

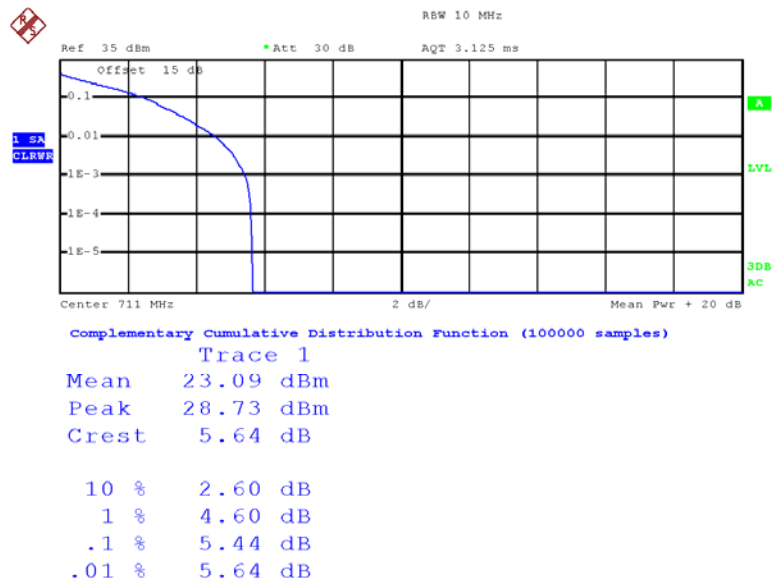


Date: 9.SEP.2015 00:15:39

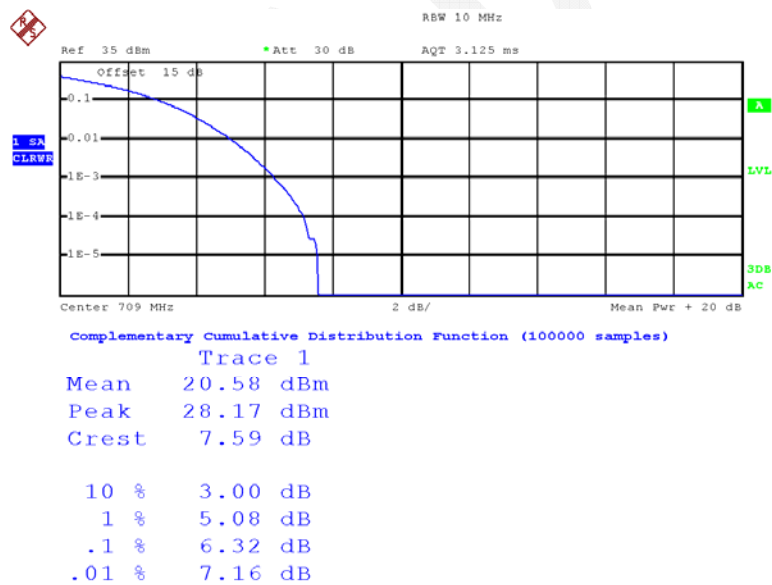
5 MHz RB#1_QPSK Middle Channel



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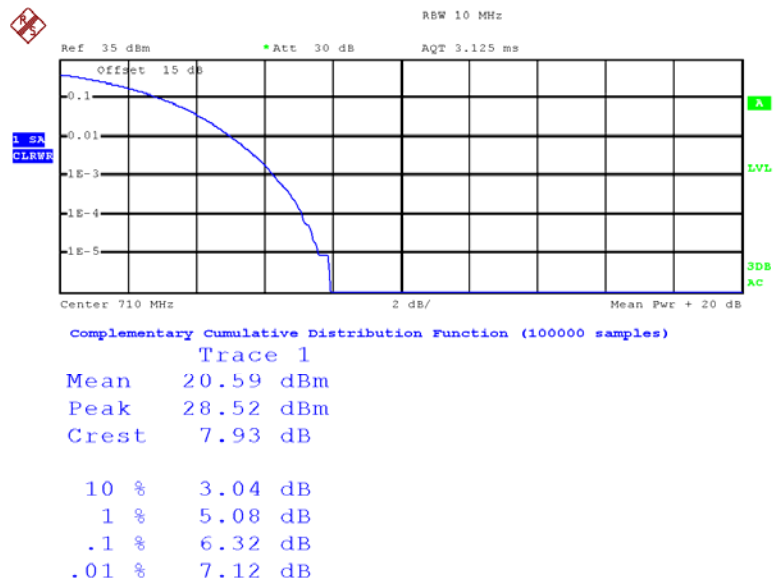
5 MHz RB#1_QPSK High Channel

Date: 9.SEP.2015 00:15:12

10 MHz RB#50_16QAM Low Channel

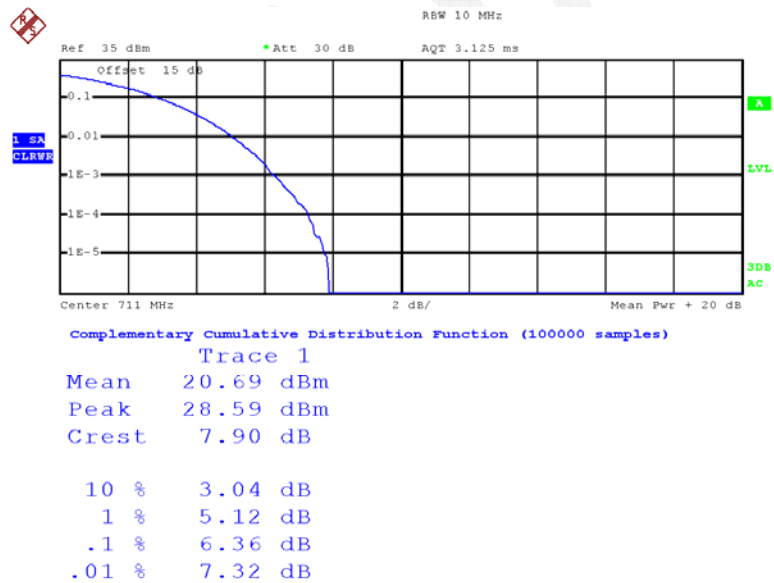
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10 MHz RB#50_16QAM Middle Channel



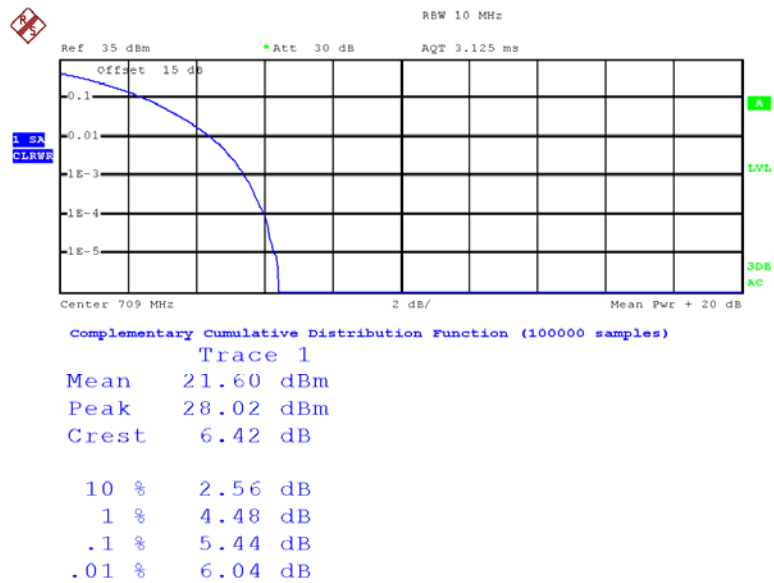
Date: 9.SEP.2015 00:13:02

10 MHz RB#50_16QAM High Channel



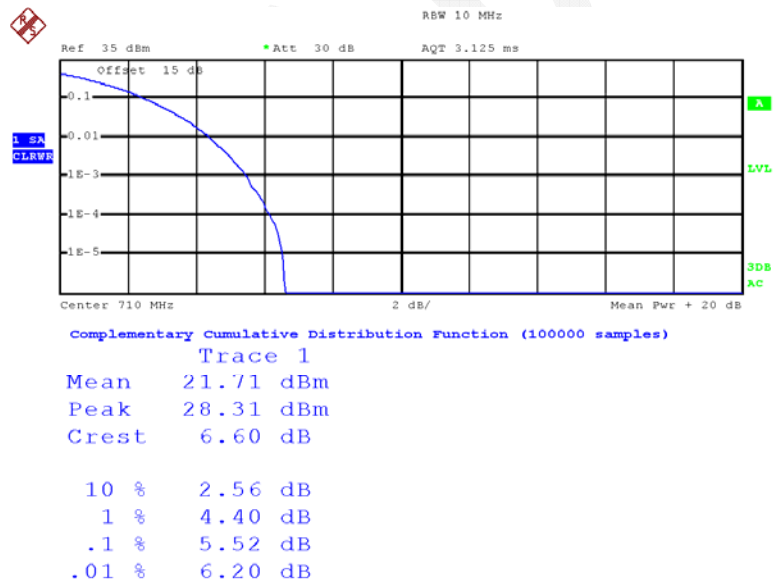
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10 MHz RB#50_QPSK Low Channel



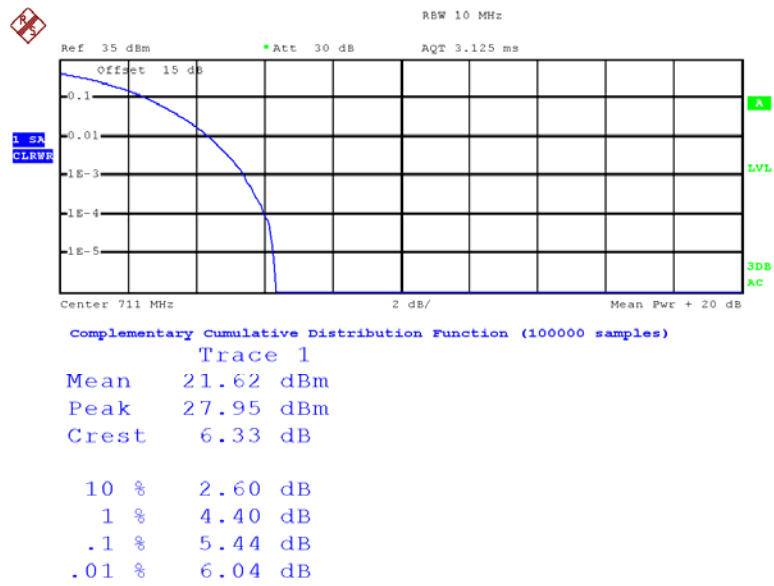
Date: 9.SEP.2015 00:12:06

10 MHz RB#50_QPSK Middle Channel



Date: 9.SEP.2015 00:11:34

10 MHz RB#50_QPSK High Channel



Date: 9.SEP.2015 00:12:22

ERP & EIRP

PART 22H

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			S.G. Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
GSM 850_Middle Channel								
836.600	H	96.31	21.4	0.0	1.0	20.4	38.50	18.1
836.600	V	103.63	31.8	0.0	1.0	30.8	38.50	7.7
EDGE 850_Middle Channel								
836.600	H	93.35	18.4	0.0	1.0	17.4	38.50	21.1
836.600	V	97.12	25.3	0.0	1.0	24.3	38.50	14.2
WCDMA Band_V Middle Channel								
836.600	H	87.79	12.9	0.0	1.0	11.9	38.50	26.6
836.600	V	91.97	20.2	0.0	1.0	19.2	38.50	19.3

PART 24E

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			S.G. Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
PCS 1900_Middle Channel								
1880.000	H	85.05	13.5	11.7	1.4	23.8	33.00	9.2
1880.000	V	89.23	17.8	11.7	1.4	28.1	33.00	4.9
EDGE 1900_Middle Channel								
1880.000	H	82.68	11.1	11.7	1.4	21.4	33.0	11.6
1880.000	V	85.26	13.8	11.7	1.4	24.1	33.0	8.9
WCDMA Band II_Middle Channel								
1880.000	H	77.03	5.4	11.7	1.4	15.7	33.0	17.3
1880.000	V	80.46	9.0	11.7	1.4	19.3	33.0	13.7

PART 27

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			S.G. Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
WCDMA Band IV Middle Channel								
1732.600	H	76.80	3.8	10.9	1.4	13.3	30.0	16.7
1732.600	V	83.25	9.9	10.9	1.4	19.4	30.0	10.6

LTE Band (PART 24)

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			S.G. Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK 1.4 MHz Middle Channel								
1880.000	H	84.14	12.5	11.7	1.4	22.8	33.00	10.2
1880.000	V	81.51	10.1	11.7	1.4	20.4	33.00	12.6
QPSK 3 MHz Middle Channel								
1880.000	H	83.62	12	11.7	1.4	22.3	33.00	10.7
1880.000	V	81.24	9.8	11.7	1.4	20.1	33.00	12.9
QPSK 5 MHz Middle Channel								
1880.000	H	82.09	10.5	11.7	1.4	20.8	33.00	12.2
1880.000	V	79.71	8.3	11.7	1.4	18.6	33.00	14.4
QPSK 10 MHz Middle Channel								
1880.000	H	81.47	9.9	11.7	1.4	20.2	33.00	12.8
1880.000	V	78.23	6.8	11.7	1.4	17.1	33.00	15.9
QPSK 15 MHz Middle Channel								
1880.000	H	80.58	9.0	11.7	1.4	19.3	33.00	13.7
1880.000	V	77.15	5.7	11.7	1.4	16.0	33.00	17.0
QPSK 20 MHz Middle Channel								
1880.000	H	80.24	8.6	11.7	1.4	18.9	33.00	14.1
1880.000	V	76.48	5.0	11.7	1.4	15.3	33.00	17.7
16QAM 1.4 MHz Middle Channel								
1880.000	H	84.26	12.7	11.7	1.4	23.0	33.00	10.0
1880.000	V	82.00	10.5	11.7	1.4	20.8	33.00	12.2
16QAM 3 MHz Middle Channel								
1880.000	H	83.77	12.2	11.7	1.4	22.5	33.00	10.5
1880.000	V	81.63	10.2	11.7	1.4	20.5	33.00	12.5
16QAM 5 MHz Middle Channel								
1880.000	H	82.21	10.6	11.7	1.4	20.9	33.00	12.1
1880.000	V	80.19	8.7	11.7	1.4	19.0	33.00	14.0
16QAM 10 MHz Middle Channel								
1880.000	H	80.72	9.1	11.7	1.4	19.4	33.00	13.6
1880.000	V	78.54	7.1	11.7	1.4	17.4	33.00	15.6
16QAM 15 MHz Middle Channel								
1880.000	H	80.03	8.4	11.7	1.4	18.7	33.00	14.3
1880.000	V	77.14	5.7	11.7	1.4	16.0	33.00	17.0
16QAM 20 MHz Middle Channel								
1880.000	H	80.35	8.8	11.7	1.4	19.1	33.00	13.9
1880.000	V	75.76	4.3	11.7	1.4	14.6	33.00	18.4

LTE Band IV (PART 27)

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			S.G. Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK 1.4 MHz Middle Channel								
1732.500	H	84.54	11.5	10.9	1.4	21.0	30.00	9.0
1732.500	V	81.31	8	10.9	1.4	17.5	30.00	12.5
QPSK 3 MHz Middle Channel								
1732.500	H	84.42	11.4	10.9	1.4	20.9	30.00	9.1
1732.500	V	81.23	7.9	10.9	1.4	17.4	30.00	12.6
QPSK 5 MHz Middle Channel								
1732.500	H	83.57	10.6	10.9	1.4	20.1	30.00	9.9
1732.500	V	80.35	7	10.9	1.4	16.5	30.00	13.5
QPSK 10 MHz Middle Channel								
1732.500	H	82.58	9.6	10.9	1.4	19.1	30.00	10.9
1732.500	V	79.36	6	10.9	1.4	15.5	30.00	14.5
QPSK 15 MHz Middle Channel								
1732.500	H	82.02	9	10.9	1.4	18.5	30.00	11.5
1732.500	V	79.95	6.6	10.9	1.4	16.1	30.00	13.9
QPSK 20 MHz Middle Channel								
1732.500	H	81.55	8.5	10.9	1.4	18.0	30.00	12.0
1732.500	V	78.48	5.2	10.9	1.4	14.7	30.00	15.3
16QAM 1.4 MHz Middle Channel								
1732.500	H	84.63	11.6	10.9	1.4	21.1	30.00	8.9
1732.500	V	80.77	7.4	10.9	1.4	16.9	30.00	13.1
16QAM 3 MHz Middle Channel								
1732.500	H	84.67	11.7	10.9	1.4	21.2	30.00	8.8
1732.500	V	80.58	7.3	10.9	1.4	16.8	30.00	13.2
16QAM 5 MHz Middle Channel								
1732.500	H	82.73	9.7	10.9	1.4	19.2	30.00	10.8
1732.500	V	79.62	6.3	10.9	1.4	15.8	30.00	14.2
16QAM 10 MHz Middle Channel								
1732.500	H	82.48	9.5	10.9	1.4	19.0	30.00	11.0
1732.500	V	78.39	5.1	10.9	1.4	14.6	30.00	15.4
16QAM 15 MHz Middle Channel								
1732.500	H	82.31	9.3	10.9	1.4	18.8	30.00	11.2
1732.500	V	78.24	4.9	10.9	1.4	14.4	30.00	15.6
16QAM 20 MHz Middle Channel								
1732.500	H	81.84	8.8	10.9	1.4	18.3	30.00	11.7
1732.500	V	78.09	4.8	10.9	1.4	14.3	30.00	15.7

LTE Band 17 (PART 27)

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			S.G. Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK 5 MHz Middle Channel								
710.000	H	98.19	21.4	0.0	0.9	20.5	34.77	14.3
710.000	V	94.73	20.4	0.0	0.9	19.5	34.77	15.3
QPSK 10 MHz Middle Channel								
710.000	H	97.80	21	0.0	0.9	20.1	34.77	14.7
710.000	V	93.47	19.1	0.0	0.9	18.2	34.77	16.6
16QAM 5 MHz Middle Channel								
710.000	H	98.05	21.2	0.0	0.9	20.3	34.77	14.5
710.000	V	94.12	19.8	0.0	0.9	18.9	34.77	15.9
16QAM 10 MHz Middle Channel								
710.000	H	97.26	20.4	0.0	0.9	19.5	34.77	15.3
710.000	V	93.33	19	0.0	0.9	18.1	34.77	16.7

Note:

- 1) The unit of Antenna Gain is dBd for frequency below 1GHz, and the unit of Antenna Gain is dBi for frequency above 1GHz.
- 2) Absolute Level = SG Level - Cable loss + Antenna Gain
- 3) Margin = Limit-Absolute Level

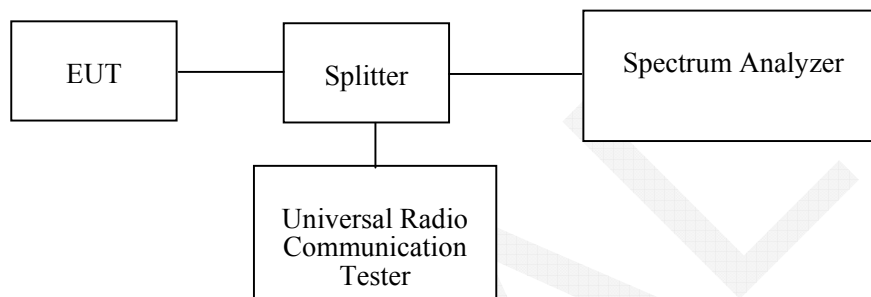
FCC §2.1049, §22.917, §22.905 & §24.238 & §27.53- OCCUPIED BANDWIDTH**Applicable Standard**

FCC §2.1049, §22.917, §22.905, §24.238 and §27.53.

Test Procedure

The RF output of the transmitter was connected to the simulator and the spectrum analyzer through sufficient attenuation.

The 26 dB & 99% bandwidth was recorded.

**Test Equipment List and Details**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSP 38	100478	2015-05-09	2016-05-09
R&S	Universal Radio Communication Tester	CMU200	109038	2015-05-09	2016-05-09
R&S	Wideband Radio Communication Tester	CMW500	106891	2014-11-23	2015-11-23

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data**Environmental Conditions**

Temperature:	27-27.2 °C
Relative Humidity:	52-58%
ATM Pressure:	99.9-101kPa

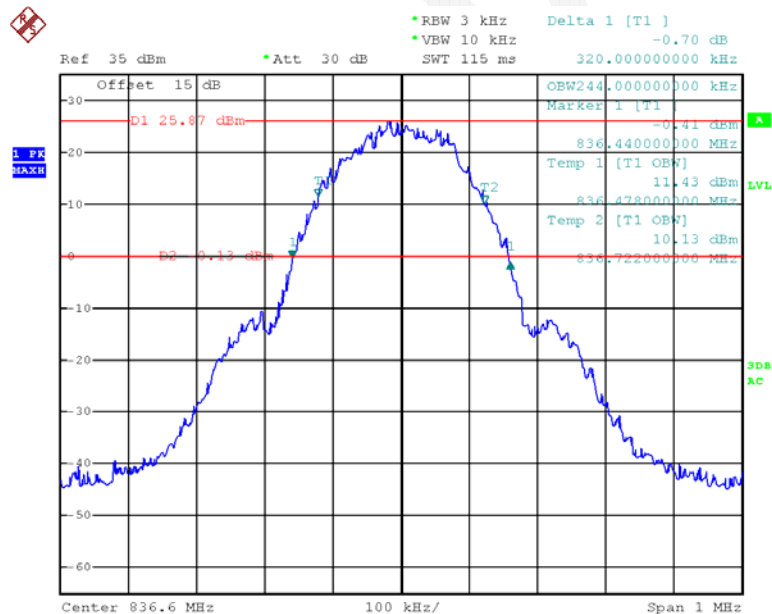
The testing was performed by Lion Xiao on 2015-08-20&2015-09-06.

Test Mode: Transmitting

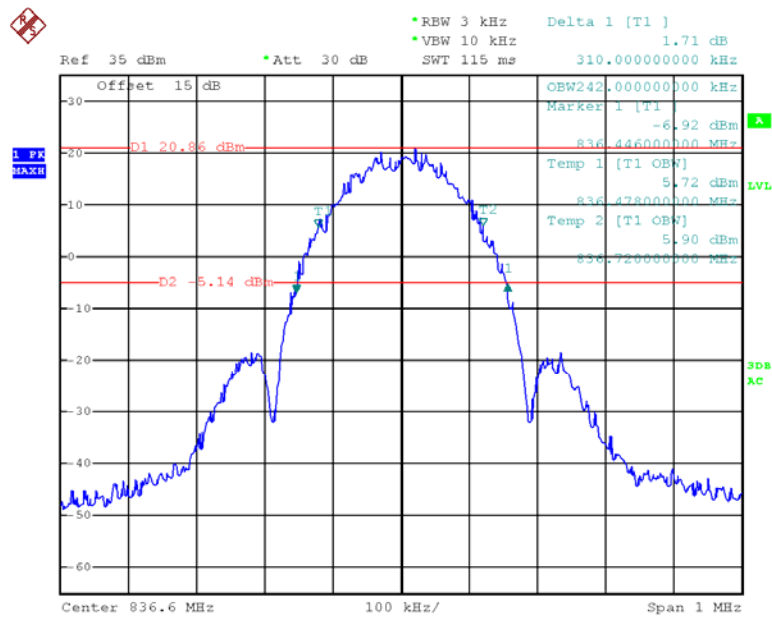
Test Result: Compliant. Please refer to the following table and plots.

Band	Channel No.	Mode	99% Occupied Bandwidth (kHz)	26 dB Occupied Bandwidth (kHz)
Cellular	190	GSM	244	320
		EDGE	242	310
PCS	661	PCS	246	322
		EDGE	242	312
WCDMA Band	9400	Rel 99	4180	4700
	9400	HSDPA	4180	4700
	9400	HSUPA	4180	4700
WCDMA Band V	4183	Rel 99	4180	4700
	4183	HSDPA	4180	4700
	4183	HSUPA	4180	4720
WCDMA Band IV	1413	Rel 99	4180	4680
	1413	HSDPA	4180	4720
	1413	HSUPA	4160	4700

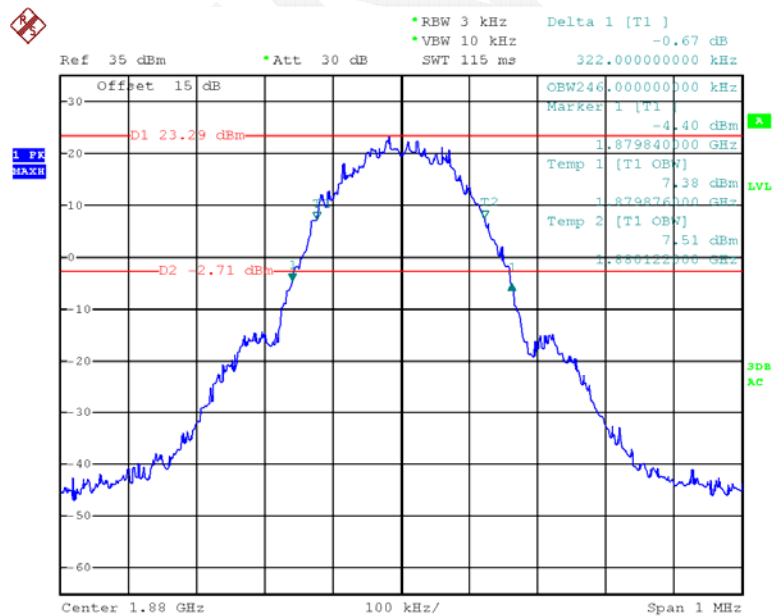
GMSK 850 Cellular Band



Date: 6.SEP.2015 16:26:30

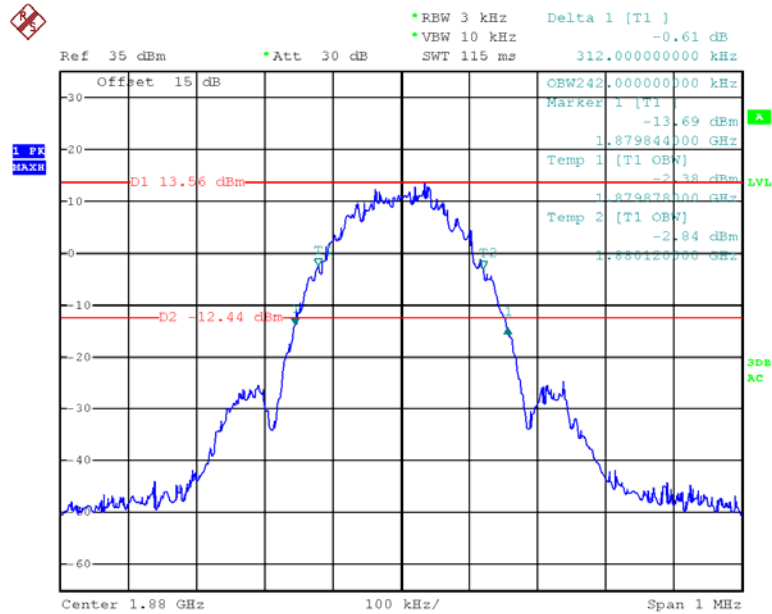
EDGE 850 Cellular Band

Date: 6.SEP.2015 16:05:09

GMSK PCS Band

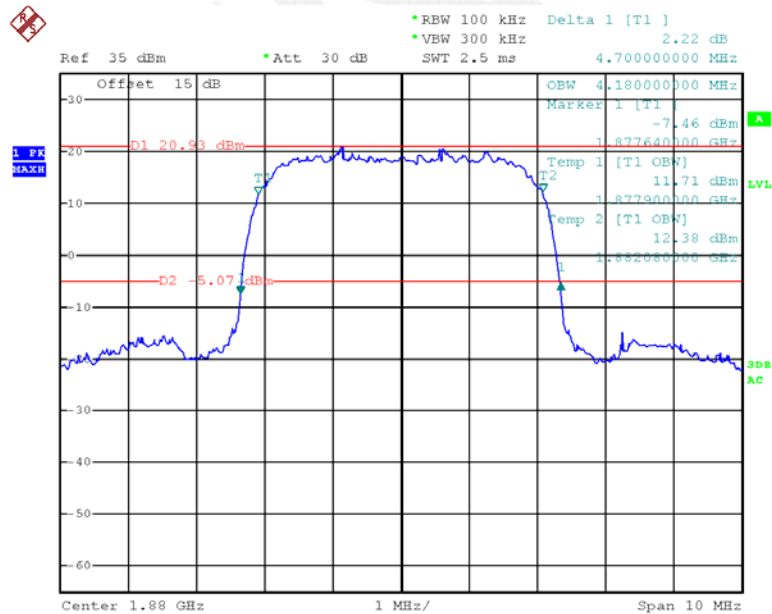
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EDGE 1900 Cellular Band

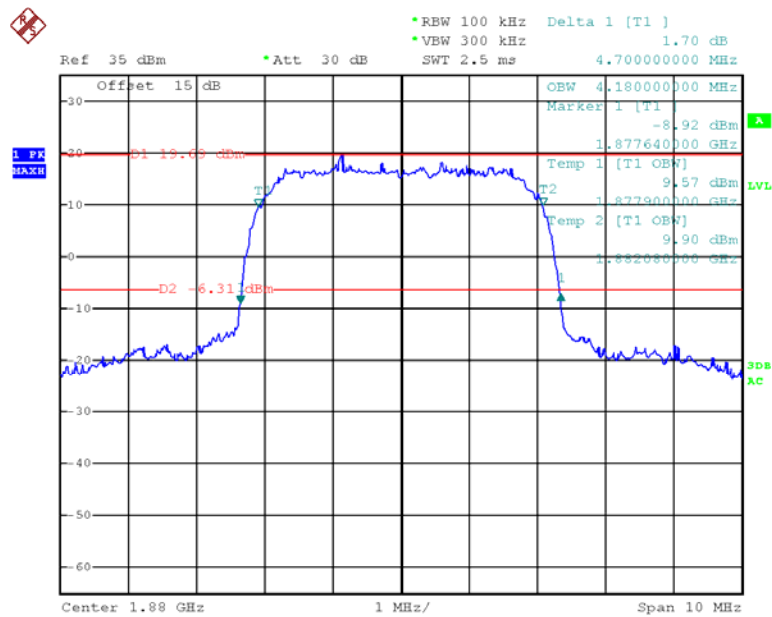


Date: 6.SEP.2015 16:24:03

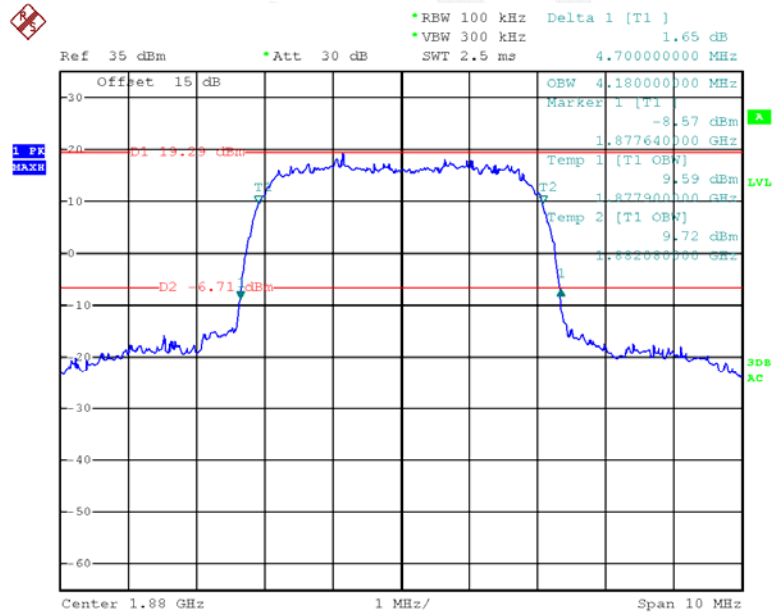
REL99 Band II



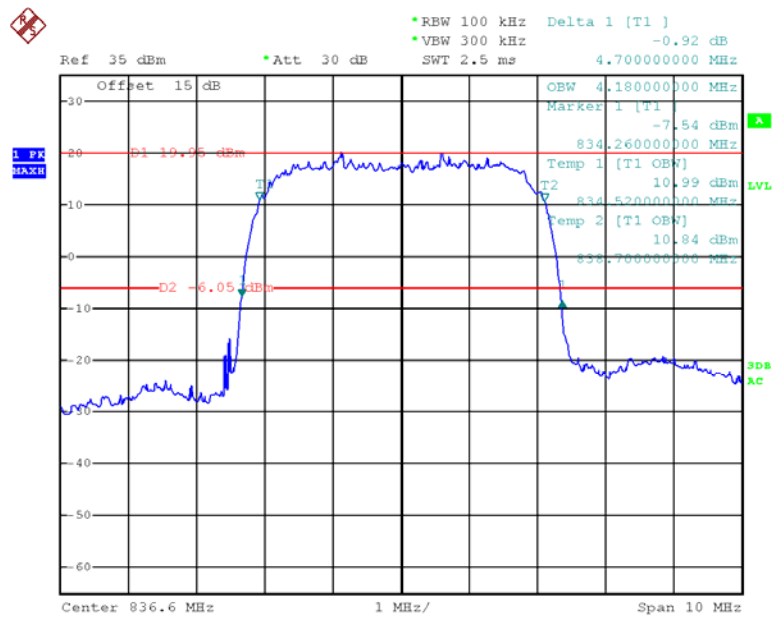
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HSDPA Band II

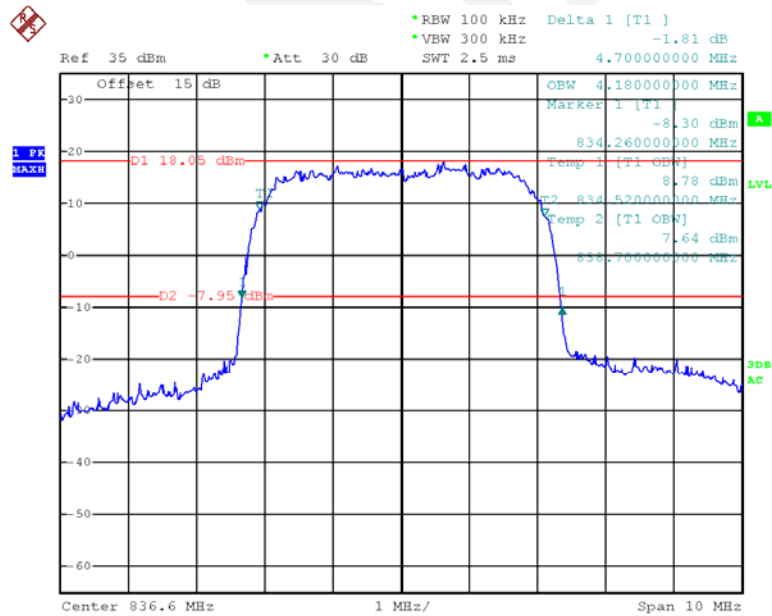
Date: 6.SEP.2015 16:43:00

HSUPA Band II

Date: 6.SEP.2015 16:46:56

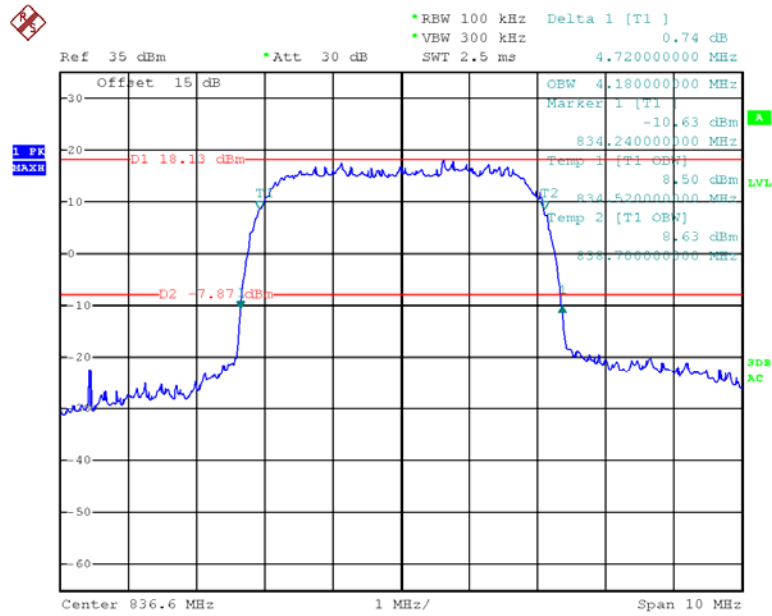
REL99 Band V

Date: 6.SEP.2015 17:55:19

HSDPA Band V

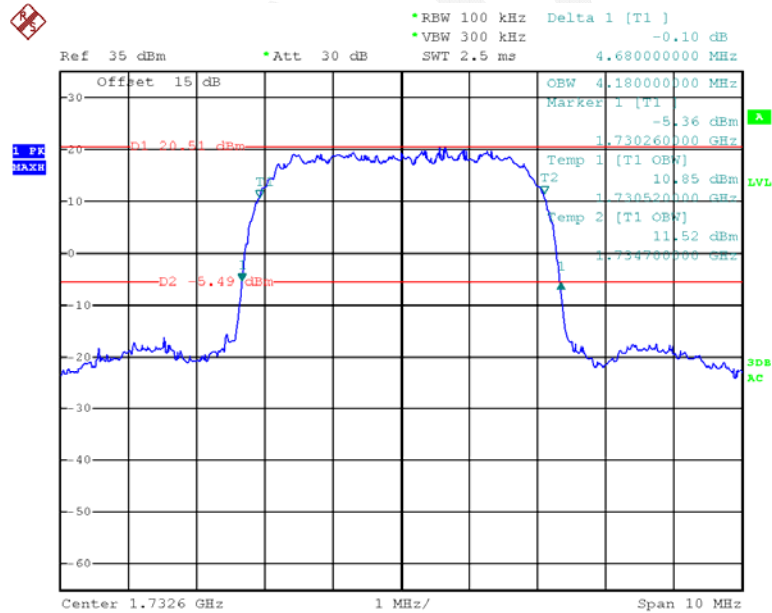
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HSUPA Band V



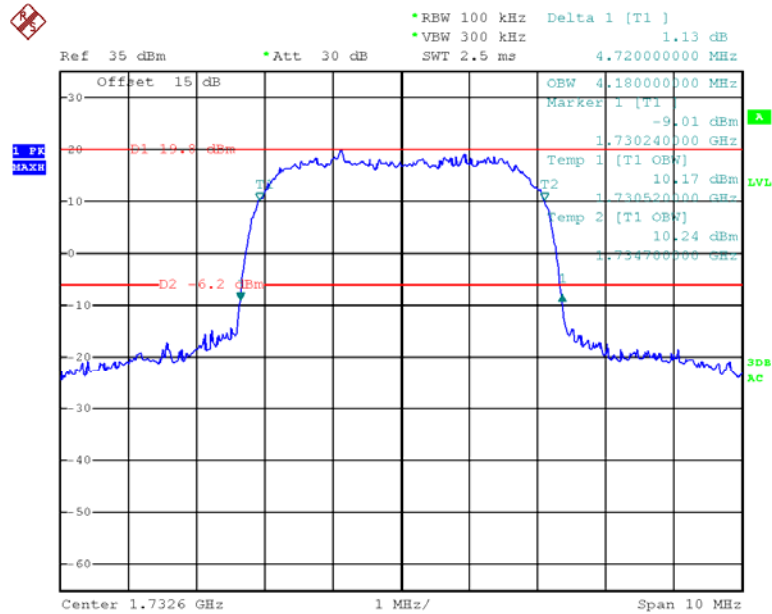
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REL99 Band IV



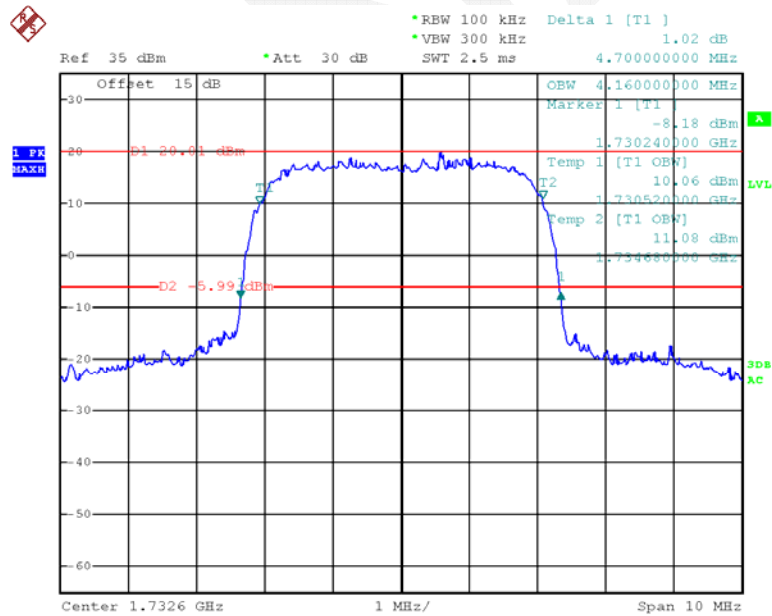
Date: 6.SEP.2015 17:23:02

HSDPA Band IV



Date: 6.SEP.2015 17:28:29

HSUPA Band IV

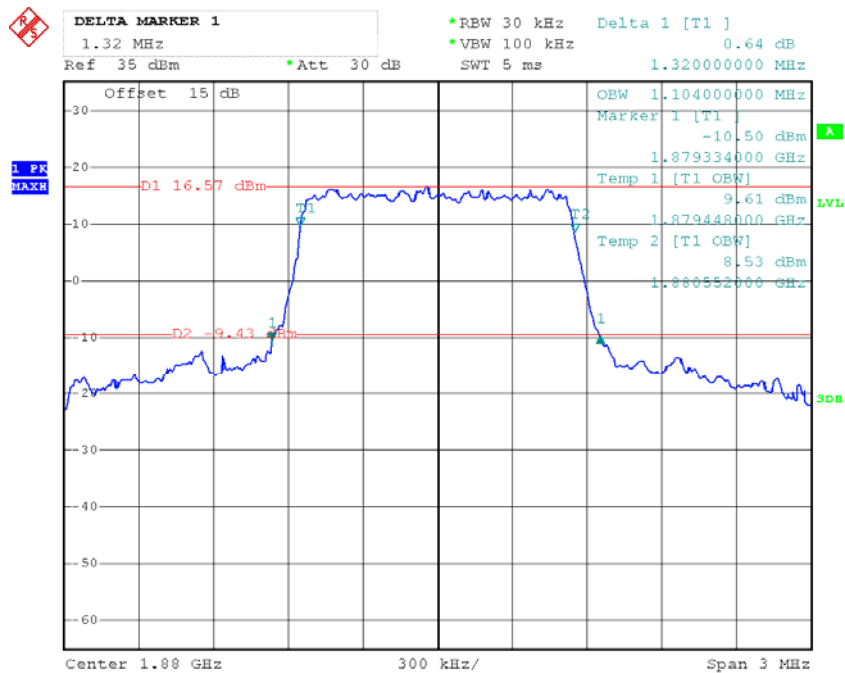


Date: 6.SEP.2015 17:24:12

LTE:

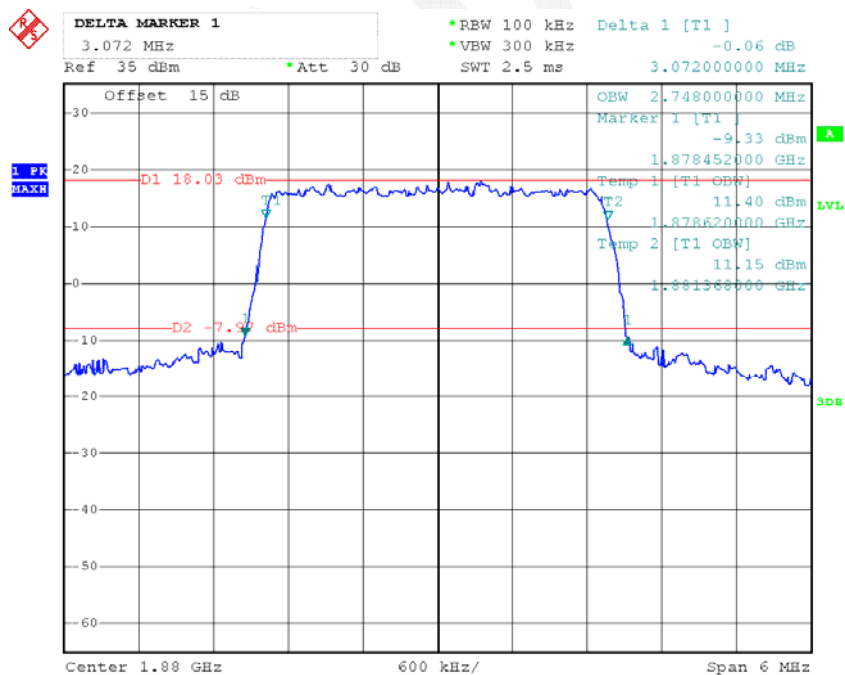
Band	Test Modulation	Test Bandwidth (MHz)	Test Channel	99% Occupied Bandwidth (MHz)	26 dB Bandwidth (MHz)
II	QPSK	1.4	Middle	1.104	1.320
		3		2.748	3.072
		5		4.560	5.160
		10		9.120	10.440
		15		13.560	15.000
		20		17.920	19.440
	16QAM	1.4	Middle	1.104	1.302
		3		2.760	3.084
		5		4.540	5.080
		10		9.120	10.280
		15		13.560	15.060
		20		18.000	19.440
IV	QPSK	1.4	Middle	1.104	1.302
		3		2.748	3.072
		5		4.560	5.100
		10		9.120	10.400
		15		13.560	15.180
		20		18.000	19.360
	16QAM	1.4	Middle	1.110	1.290
		3		2.760	3.096
		5		4.520	5.140
		10		9.120	10.280
		15		13.560	15.000
		20		18.000	19.440
17	QPSK	5	Middle	4.560	5.100
		10		9.200	10.520
	16QAM	5	Middle	4.540	5.120
		10		9.200	10.360

1.4 MHz QPSK Band II



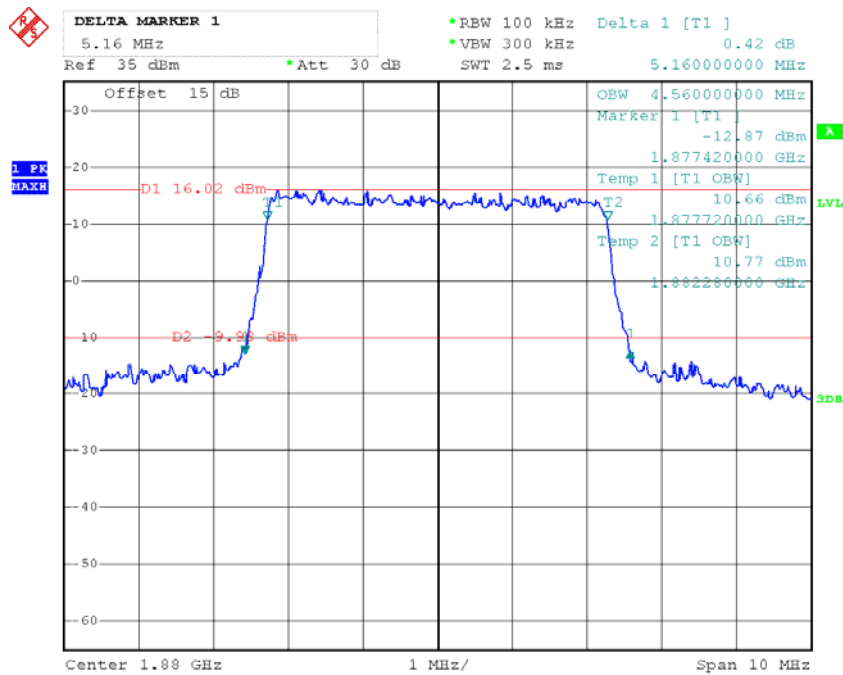
Date: 30.AUG.2015 20:15:50

3 MHz_QPSK Band II



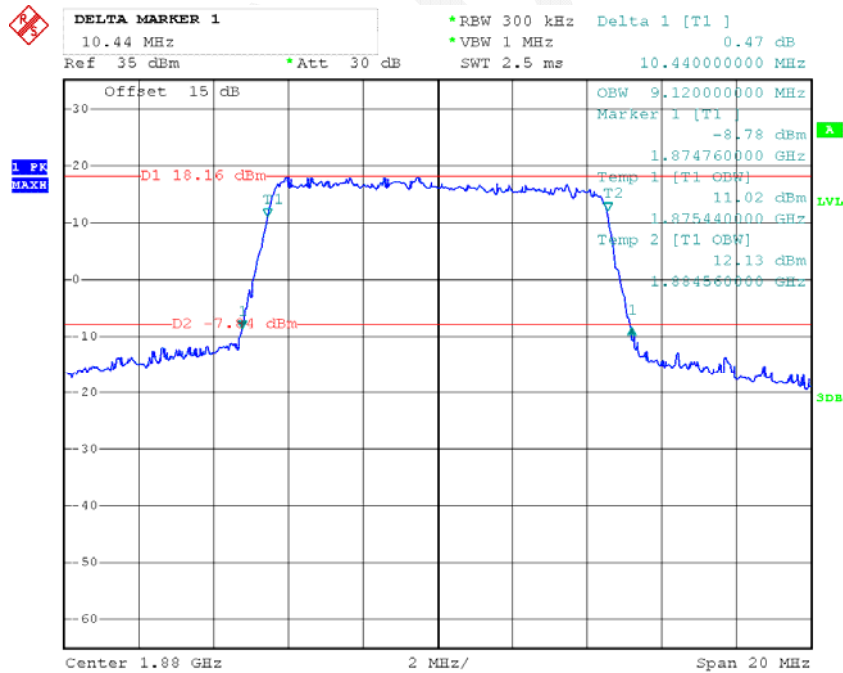
Date: 30.AUG.2015 20:18:04

5 MHz QPSK Band II



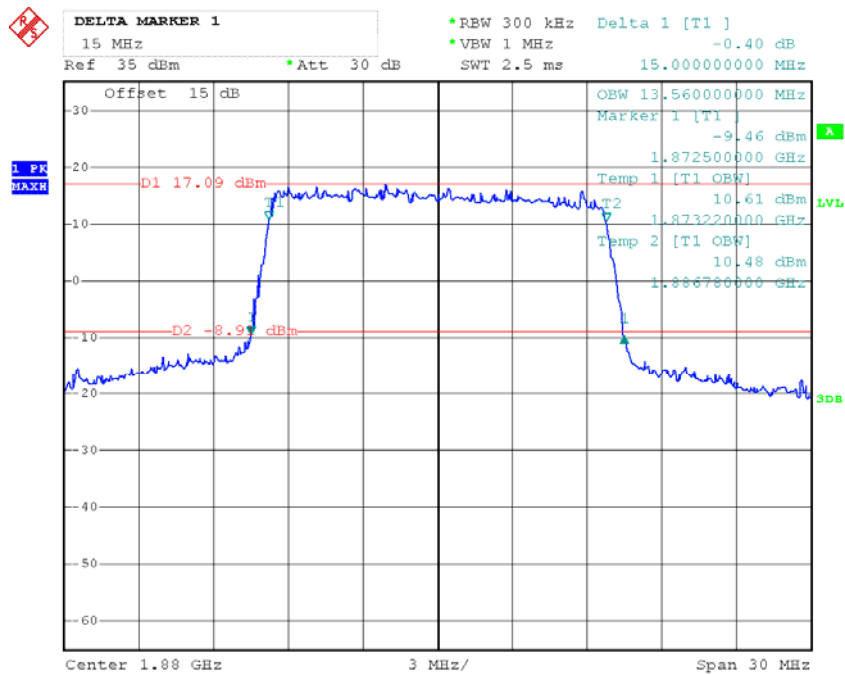
Date: 30.AUG.2015 20:21:15

10 MHz QPSK Band II



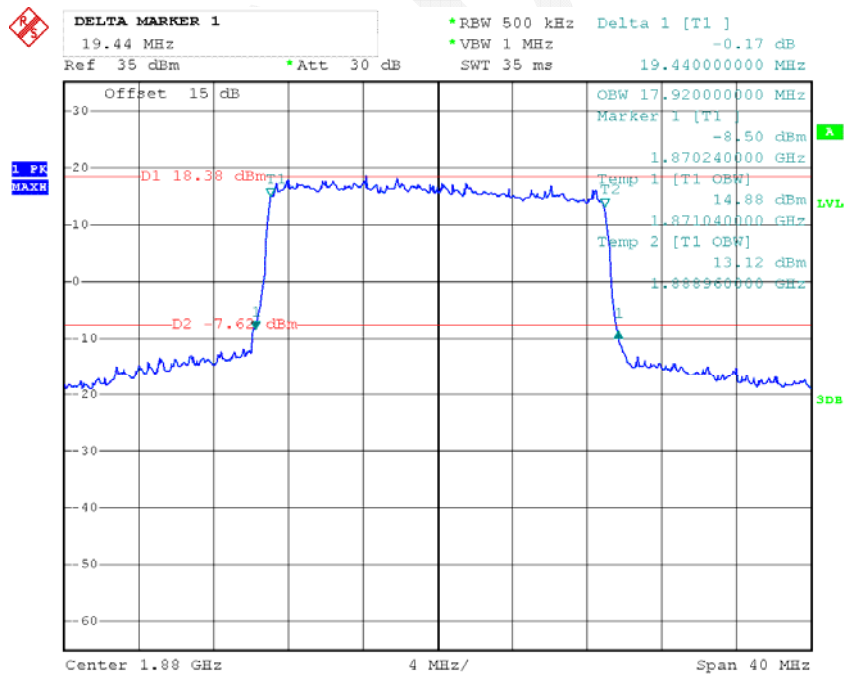
Date: 30.AUG.2015 20:22:19

15 MHz_QPSK Band II



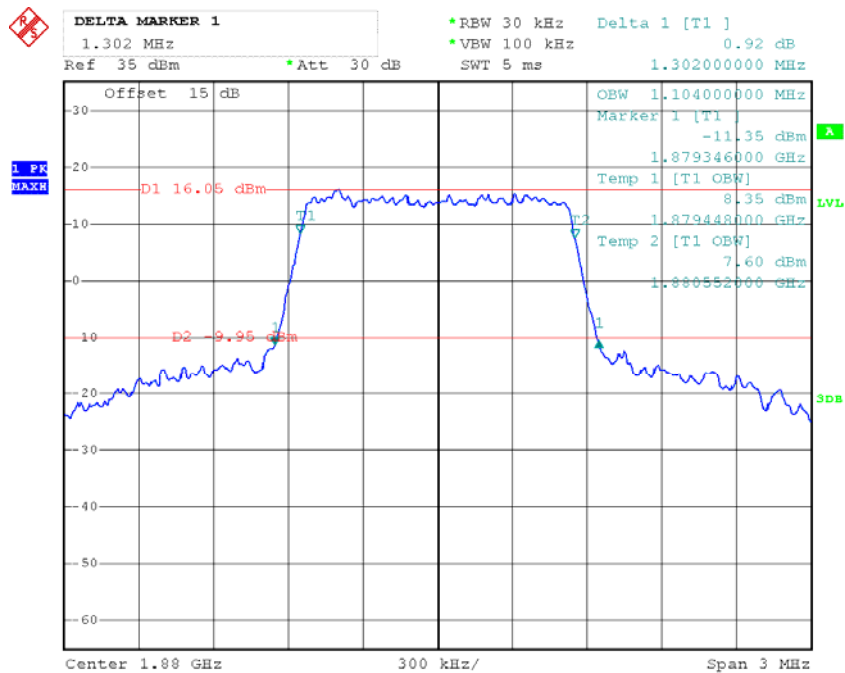
Date: 30.AUG.2015 20:24:48

20 MHz_QPSK Band II



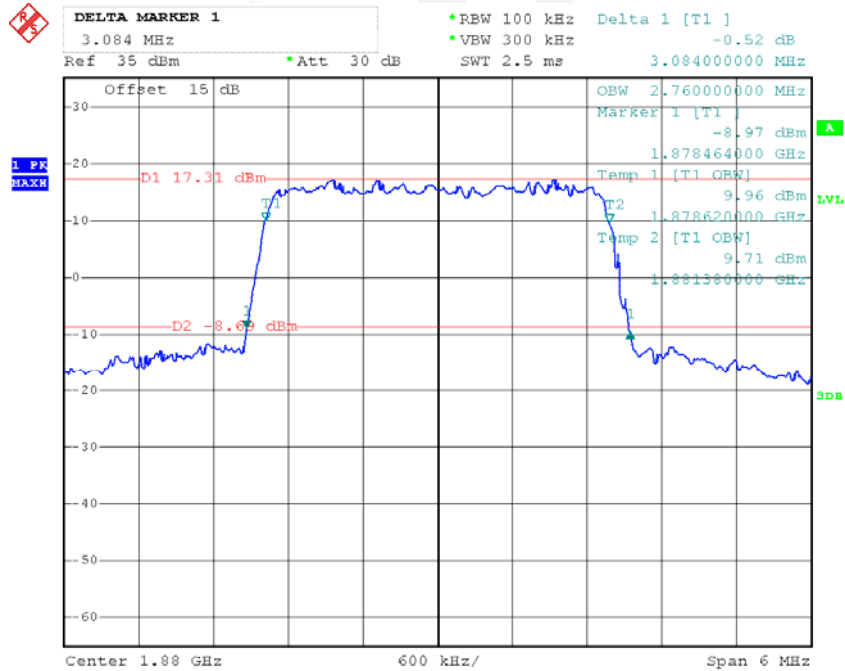
Date: 30.AUG.2015 20:27:37

1.4 MHz_16QAM Band II



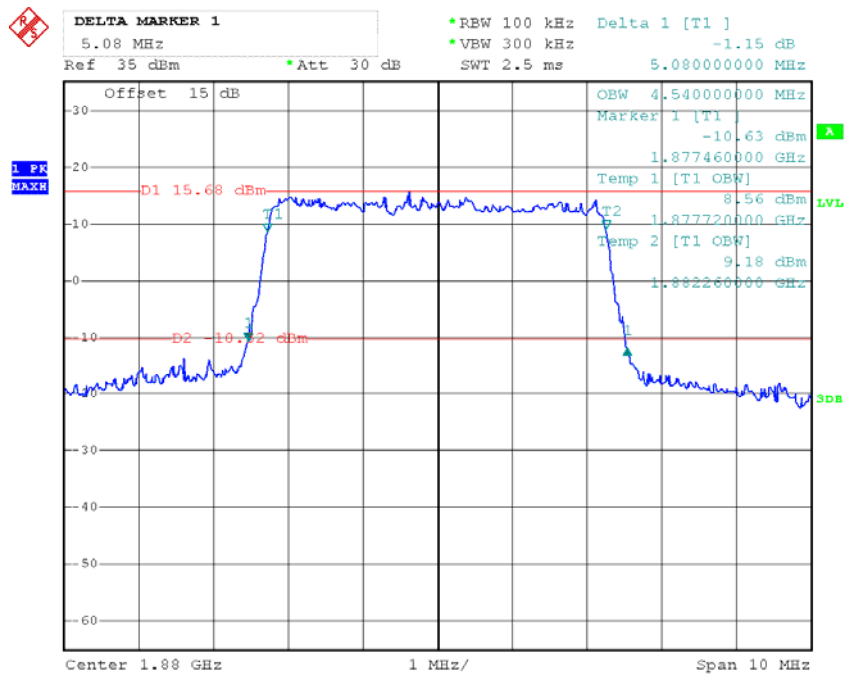
Date: 30.AUG.2015 20:16:56

3 MHz_16QAM Band II



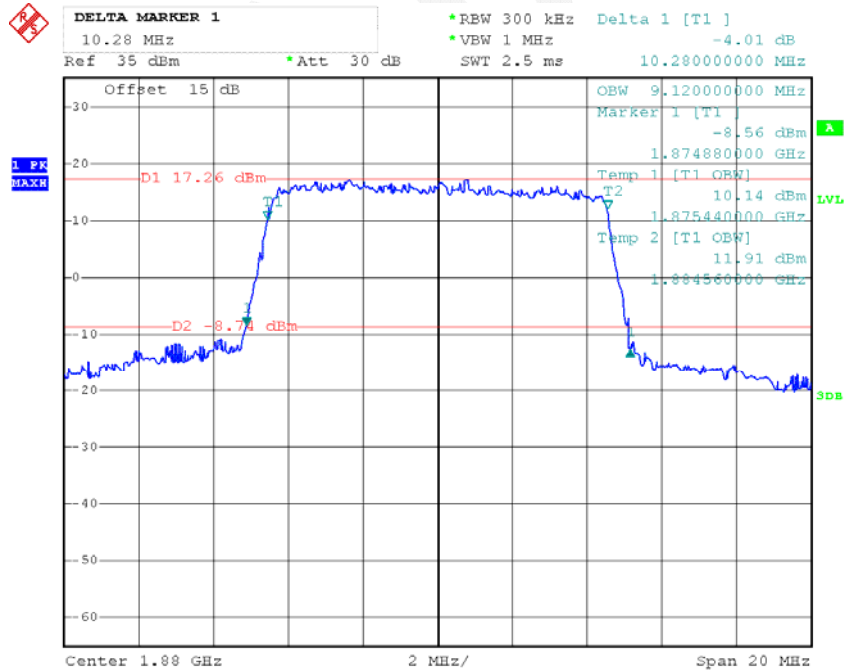
Date: 30.AUG.2015 20:19:16

5 MHz 16QAM Band II



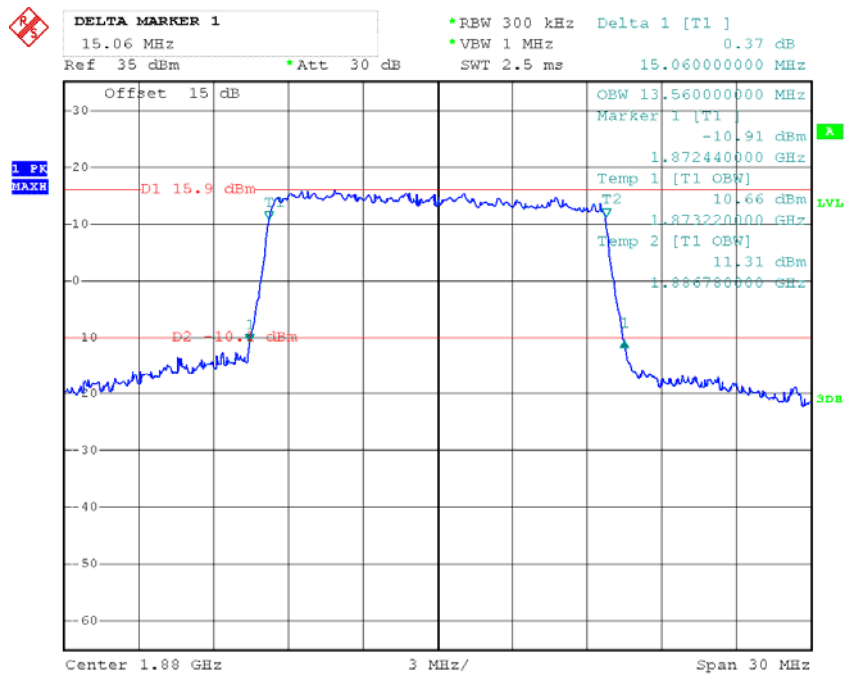
Date: 30.AUG.2015 20:20:30

10 MHz 16QAM Band II



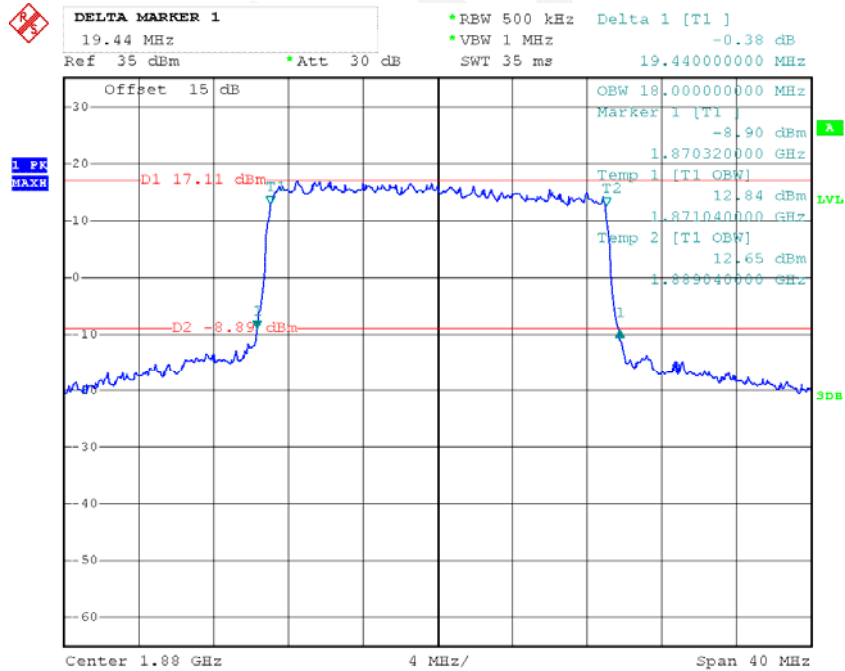
Date: 30.AUG.2015 20:22:58

15 MHz_16QAM Band II



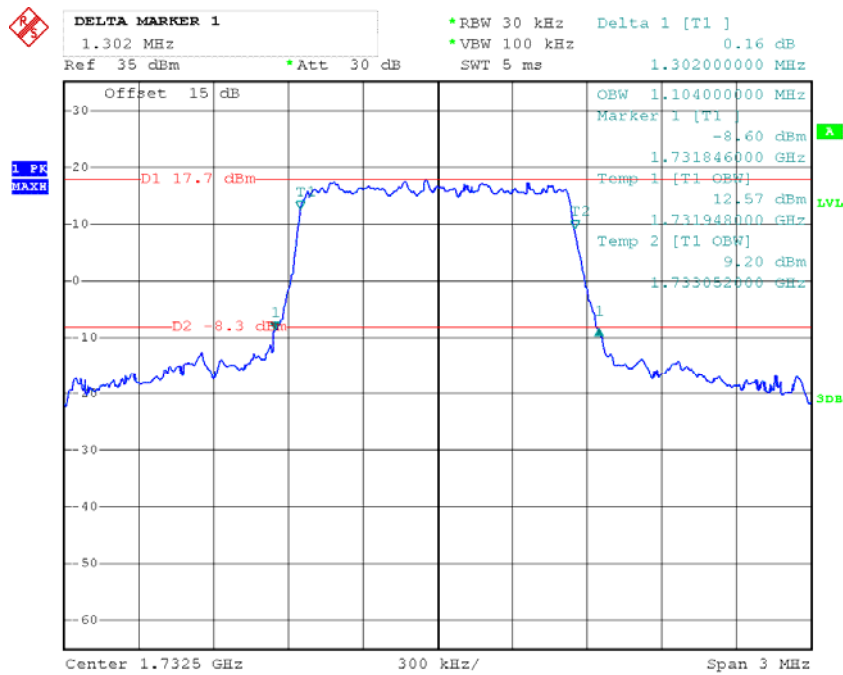
Date: 30.AUG.2015 20:24:12

20 MHz_16QAM Band II



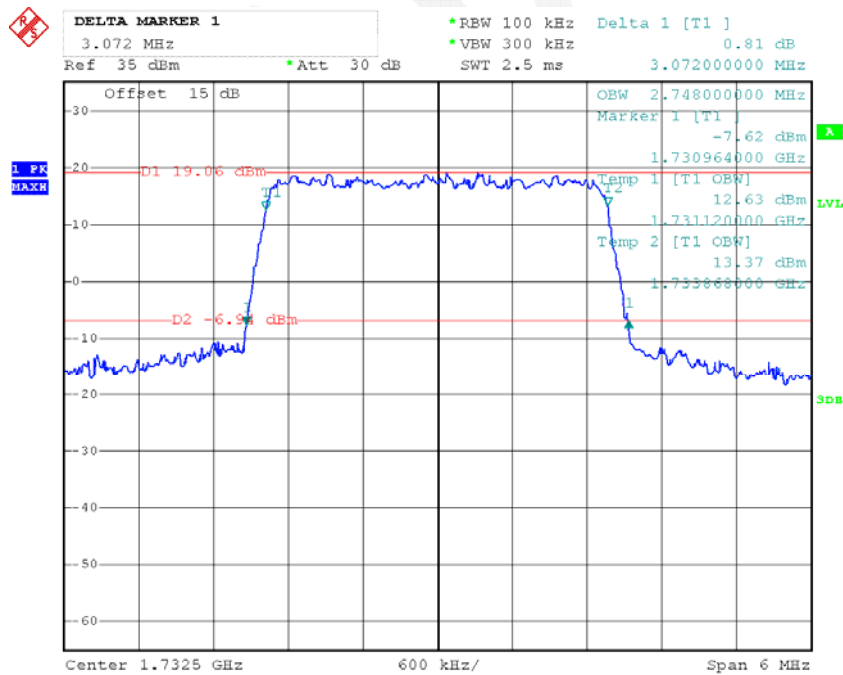
Date: 30.AUG.2015 20:26:49

1.4 MHz QPSK Band IV



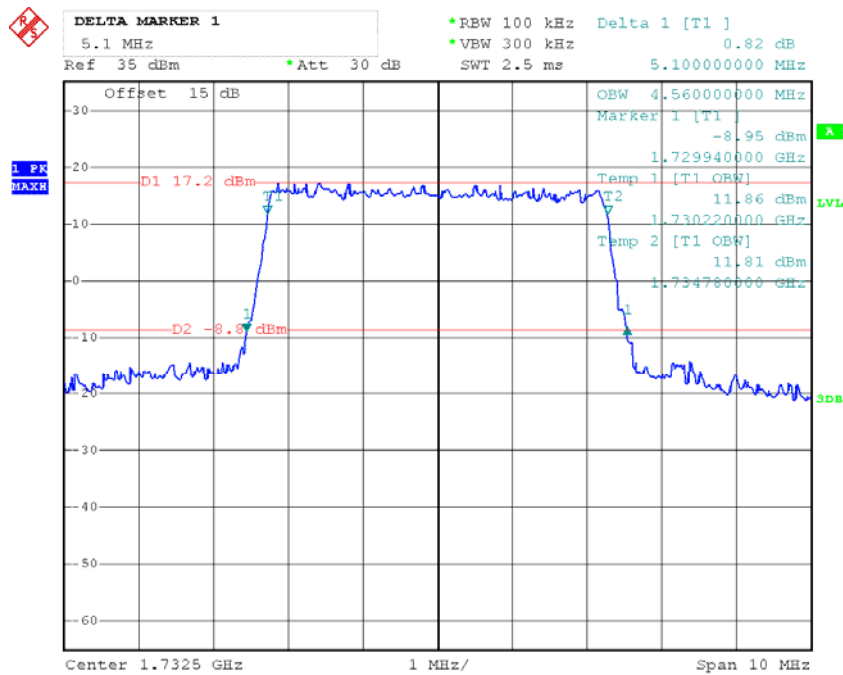
Date: 30.AUG.2015 20:43:27

3 MHz_QPSK Band IV



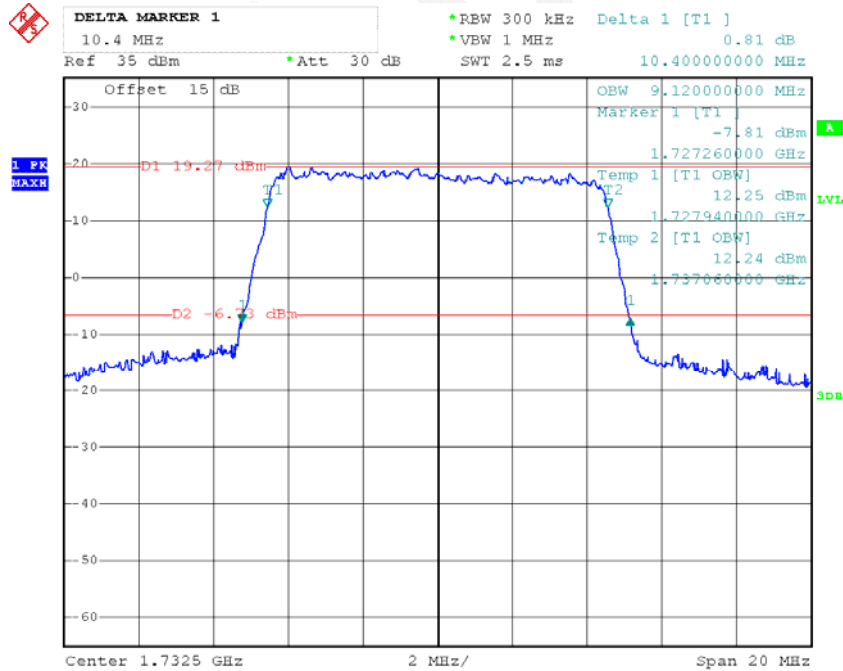
Date: 30.AUG.2015 20:41:41

5 MHz_QPSK Band IV



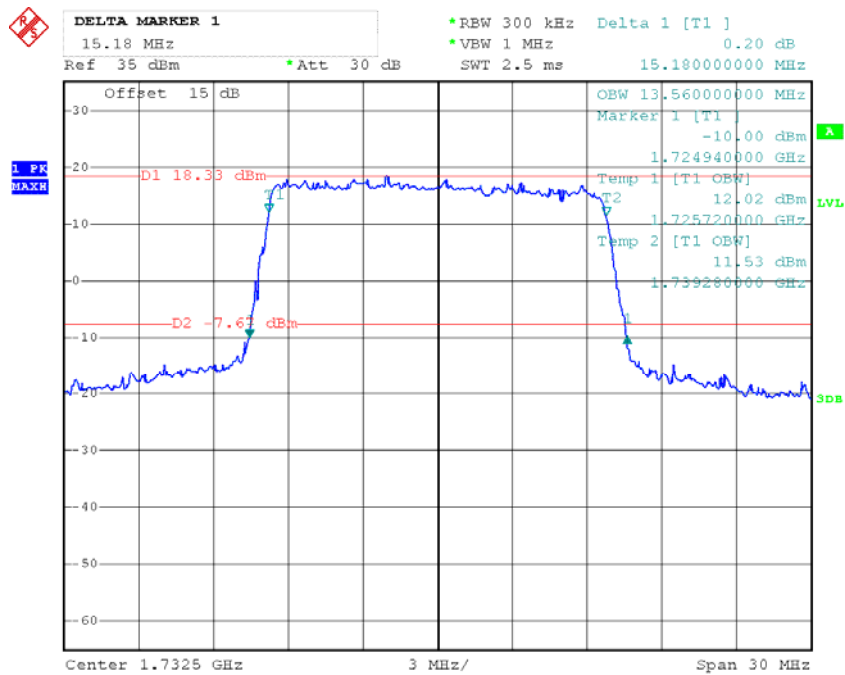
Date: 30.AUG.2015 20:39:21

10 MHz_QPSK Band IV



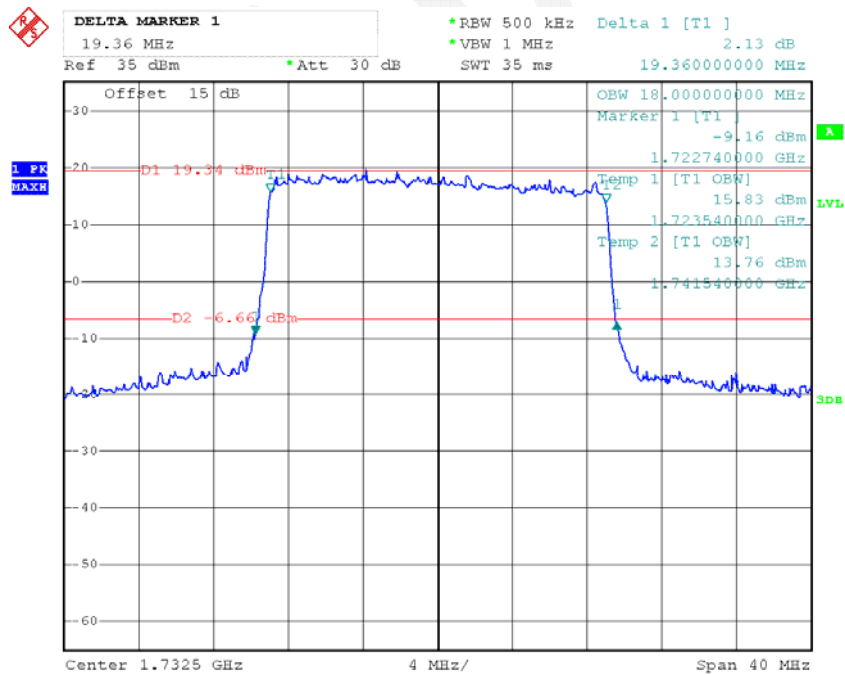
Date: 30.AUG.2015 20:38:23

15 MHz_QPSK Band IV



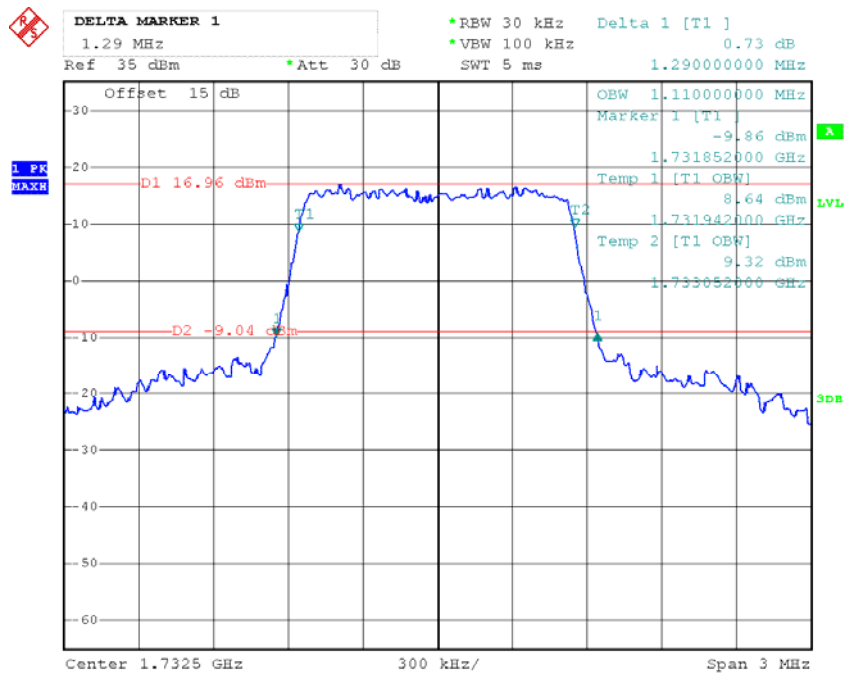
Date: 30.AUG.2015 20:35:41

20 MHz_QPSK Band IV



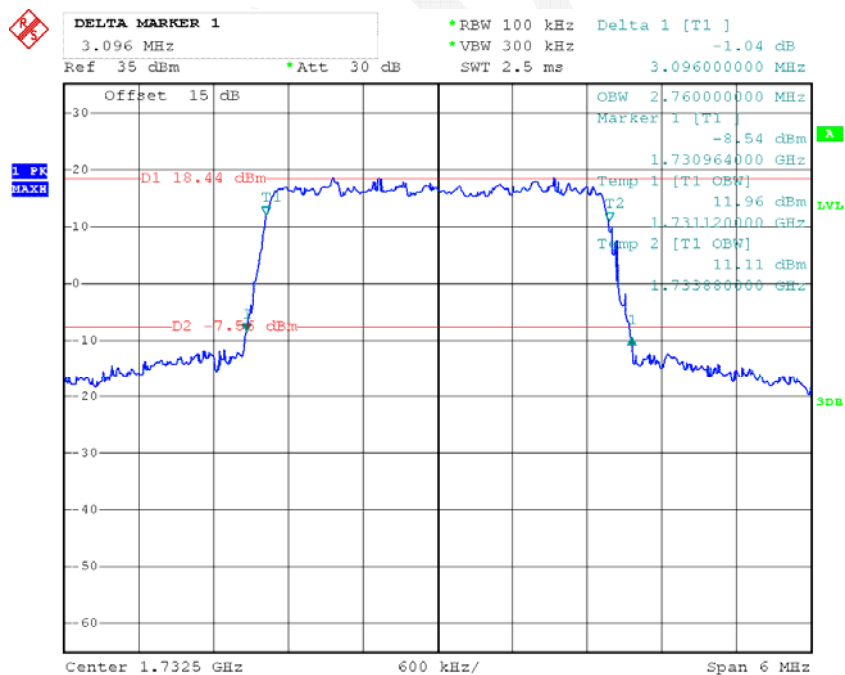
Date: 30.AUG.2015 20:33:25

1.4 MHz_16QAM Band IV



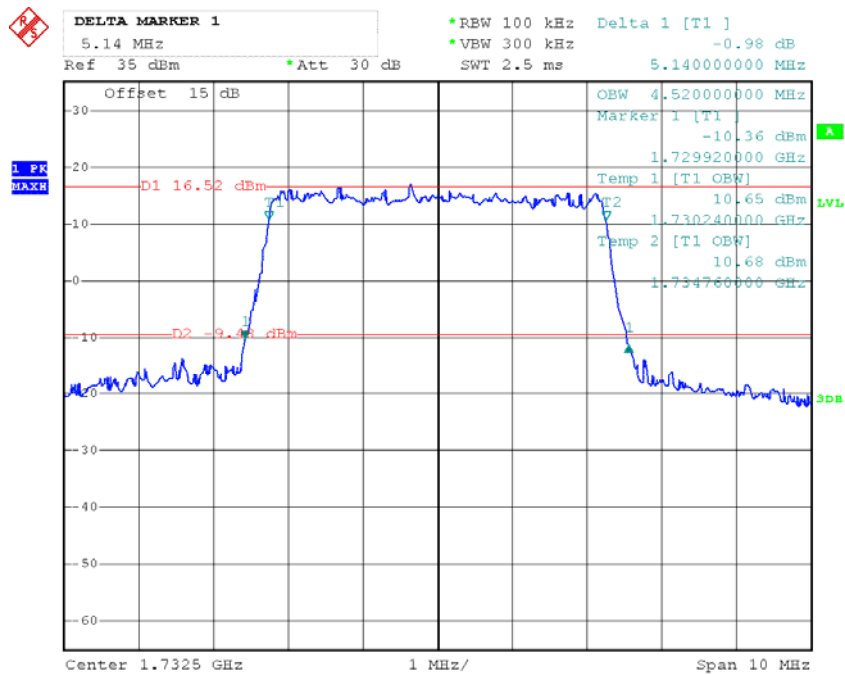
Date: 30.AUG.2015 20:42:45

3 MHz 16QAM Band IV



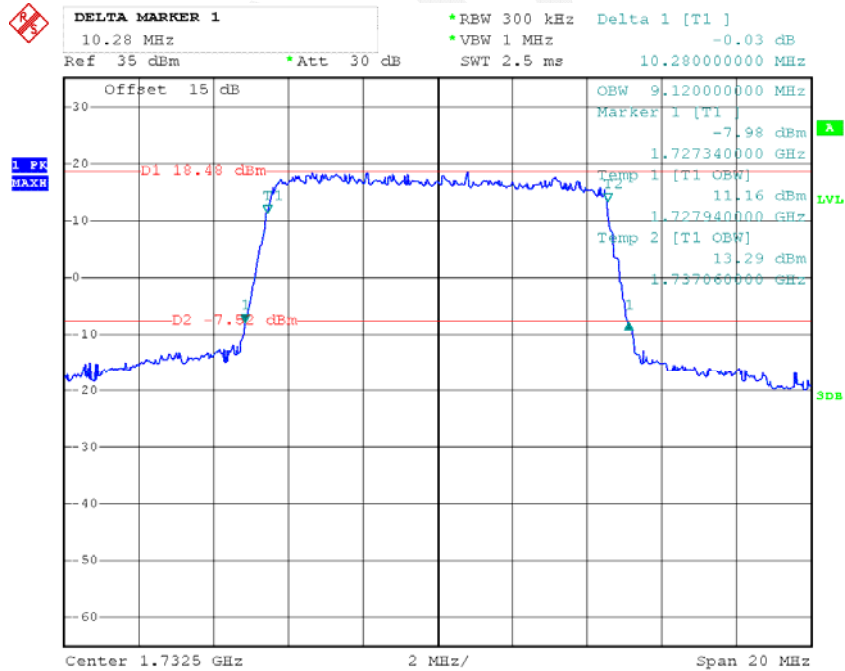
Date: 30.AUG.2015 20:40:58

5 MHz_16QAM Band IV



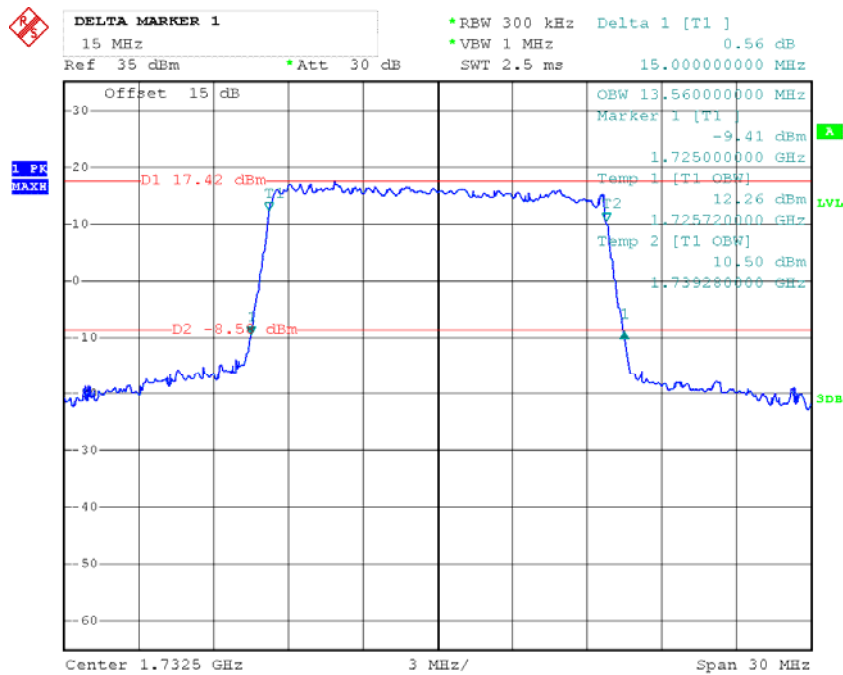
Date: 30.AUG.2015 20:40:08

10 MHz_16QAM Band IV



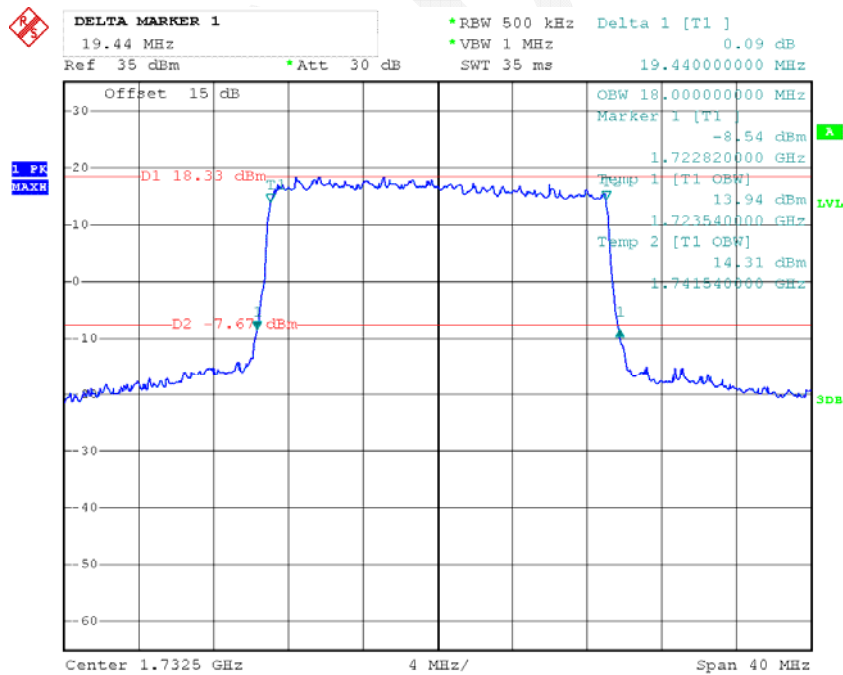
Date: 30.AUG.2015 20:37:42

15 MHz_16QAM Band IV



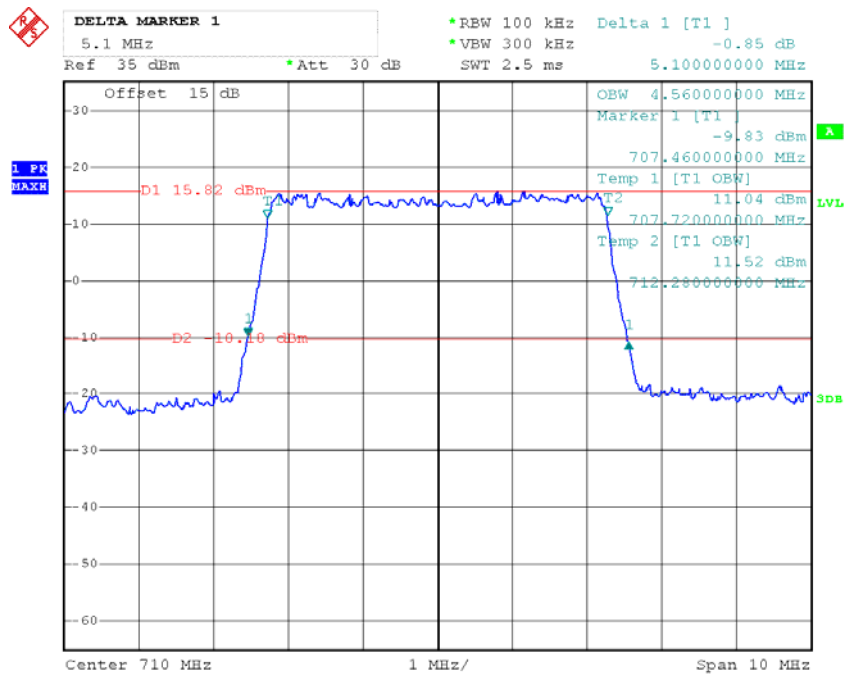
Date: 30.AUG.2015 20:36:47

20 MHz_16QAM Band IV



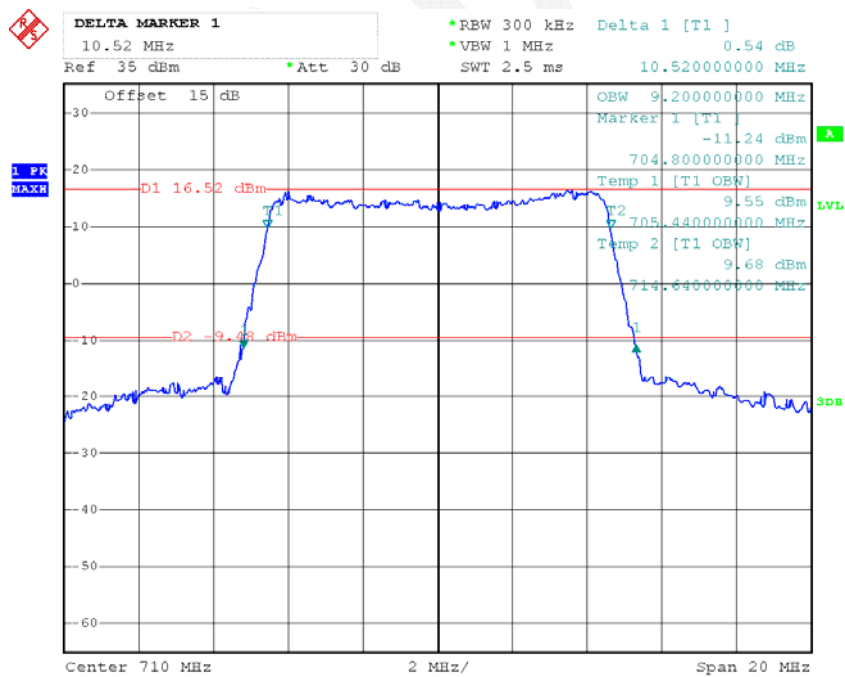
Date: 30.AUG.2015 20:34:29

5 MHz_QPSK Band 17



Date: 30.AUG.2015 19:59:04

10 MHz_QPSK Band 17



Date: 30.AUG.2015 19:56:46

DELTA MARKER 1
5.12 MHz

Ref 35 dBm Att 30 dB SWT 2.5 ms 5.120000000 MHz

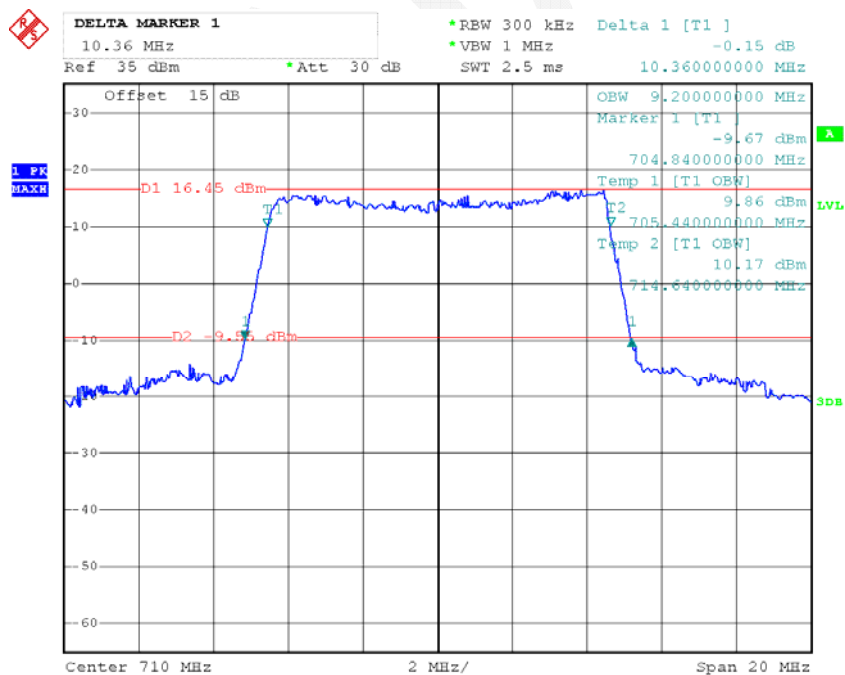
Offset 15 dB

OBW 4.540000000 MHz
Marker 1 [T1] -11.10 dBm
707.440000000 MHz
Temp 1 [T1 OBW] 9.18 dBm
T2 707.740000000 MHz
Temp 2 [T1 OBW] 8.58 dBm
712.280000000 MHz

D1 15.33 dBm
D2 -10.67 dBm

Center 710 MHz 1 MHz/ Span 10 MHz

10 MHz_16QAM Band 17



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