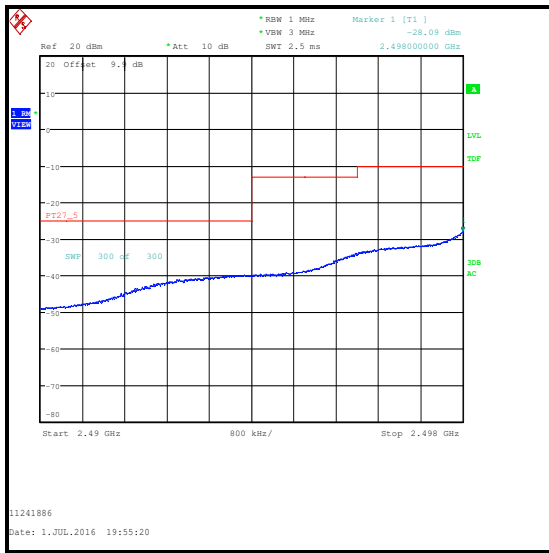


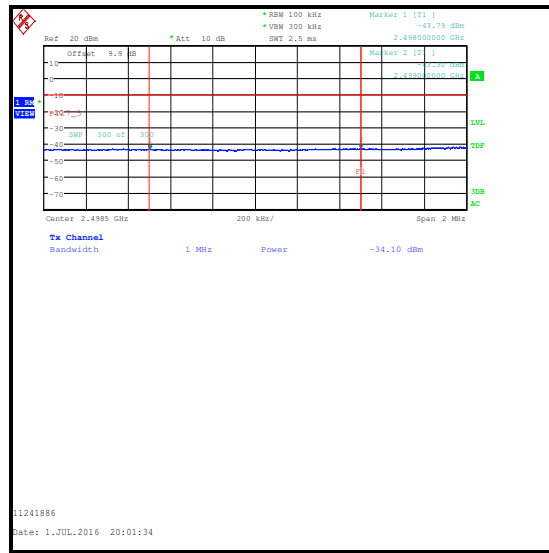
Transmitter Radiated Emissions at Band Edges \pm X MHz (continued)

Results: 5 MHz Channel Bandwidth / 2490 to 2499 MHz & 2571 to 2580 MHz / QPSK

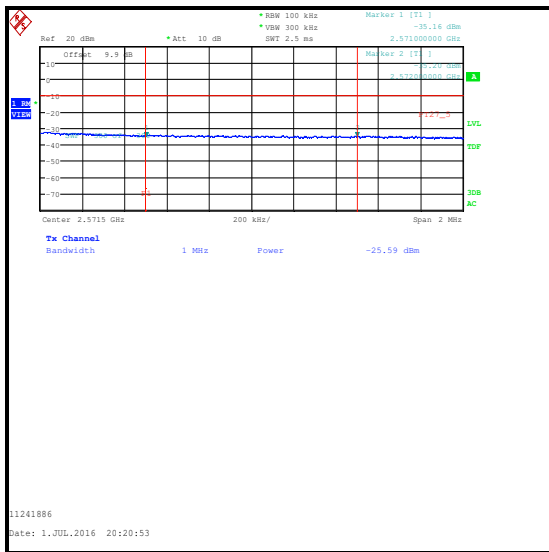
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2498	25	0	-28.1	-10.0	18.1	Complied
2498 to 2499	25	0	-34.1*	-10.0	24.1	Complied
2571 to 2572	25	0	-25.6*	-10.0	15.6	Complied
2572	25	0	-22.8	-10.0	12.8	Complied



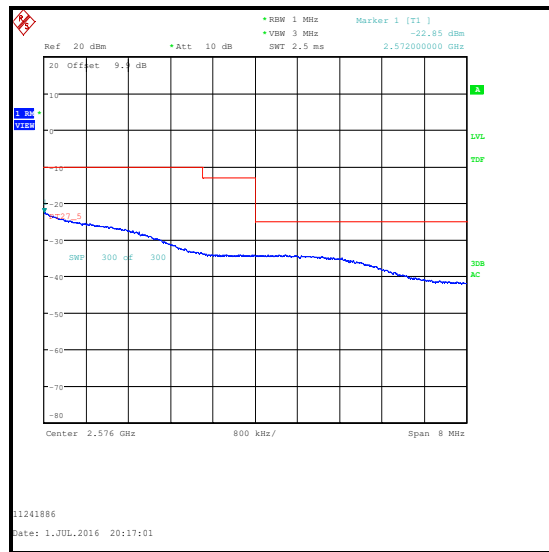
QPSK / 25 RB 0 Offset / 2490 to 2498 MHz



QPSK / 25 RB 0 Offset / 2498 to 2499 MHz / Integrated level



QPSK / 25 RB 0 Offset / 2571 to 2572 MHz / Integrated level



QPSK / 25 RB 0 Offset / 2572 to 2580 MHz

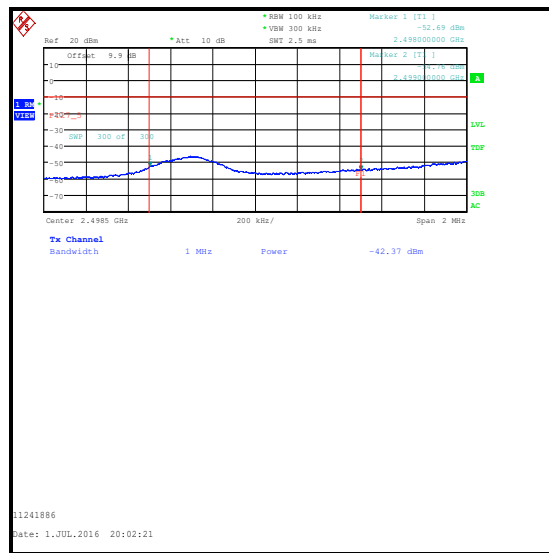
Transmitter Radiated Emissions at Band Edges \pm X MHz (continued)

Results: 5 MHz Channel Bandwidth / 2490 to 2499 MHz & 2571 to 2580 MHz / QPSK

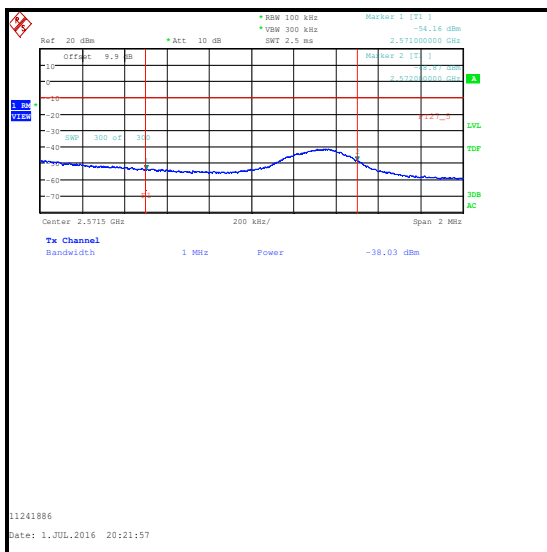
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2498	1	0	-17.4	-10.0	7.4	Complied
2498 to 2499	1	0	-42.4*	-10.0	32.4	Complied
2571 to 2572	1	24	-38.0*	-10.0	28.0	Complied
2572	1	24	-14.3	-10.0	4.3	Complied



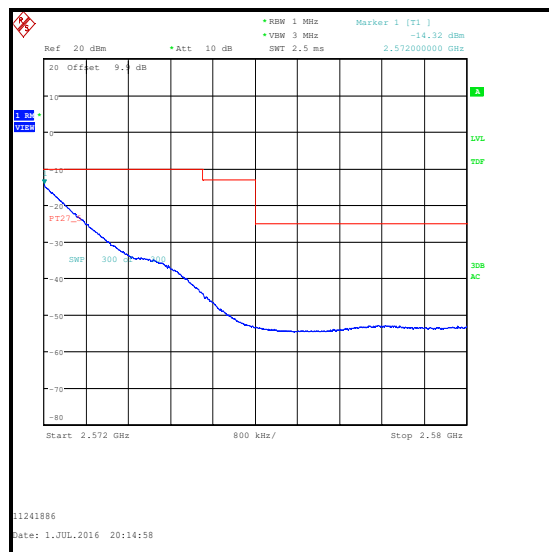
QPSK / 1 RB 0 Offset / 2490 to 2498 MHz



QPSK / 1 RB 0 Offset / 2498 to 2499 MHz / Integrated level



QPSK / 1 RB 24 Offset / 2571 to 2572 MHz / Integrated level



QPSK / 1 RB 24 Offset / 2572 to 2580 MHz

Transmitter Radiated Emissions at Band Edges ± X MHz (continued)

Results: 5 MHz Channel Bandwidth / 2490 to 2499 MHz & 2571 to 2580 MHz / QPSK

Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2499	1	24	-47.7	-10.0	37.7	Complied
2571	1	0	-47.8	-10.0	37.8	Complied



QPSK / 1 RB 24 Offset / 2490 to 2499 MHz

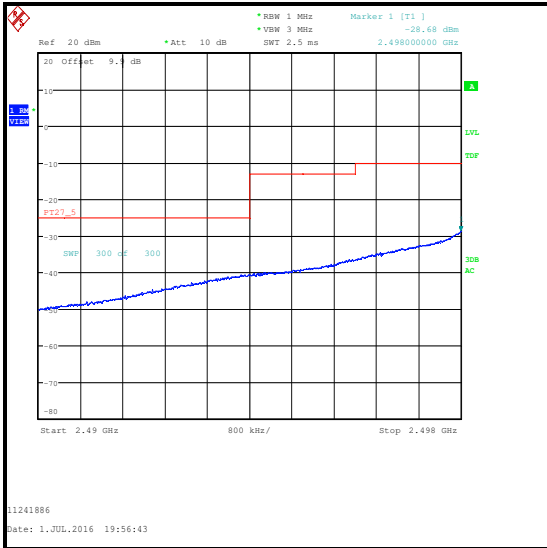


QPSK / 1 RB 0 Offset / 2571 to 2580 MHz

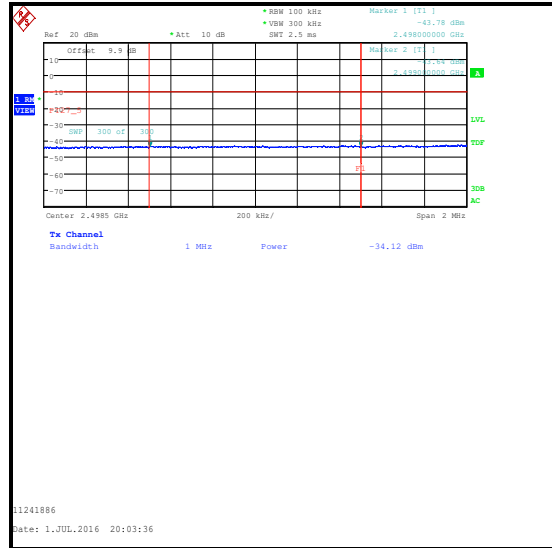
Transmitter Radiated Emissions at Band Edges ± X MHz (continued)

Results: 5 MHz Channel Bandwidth / 2490 to 2499 MHz & 2571 to 2580 MHz / 16QAM

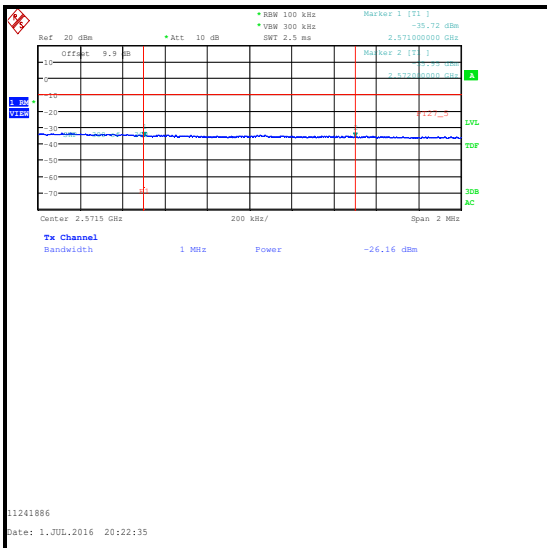
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2498	25	0	-28.7	-10.0	18.7	Complied
2498 to 2499	25	0	-34.1*	-10.0	24.1	Complied
2571 to 2572	25	0	-26.2*	-10.0	16.2	Complied
2572	25	0	-23.5	-10.0	13.5	Complied



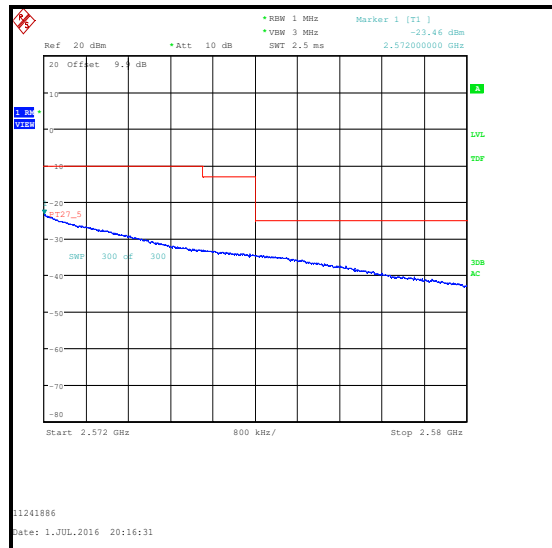
16QAM / 25 RB 0 Offset / 2490 to 2498 MHz



16QAM / 25 RB 0 Offset / 2498 to 2499 MHz / Integrated level



16QAM / 25 RB 0 Offset / 2571 to 2572 MHz / Integrated level

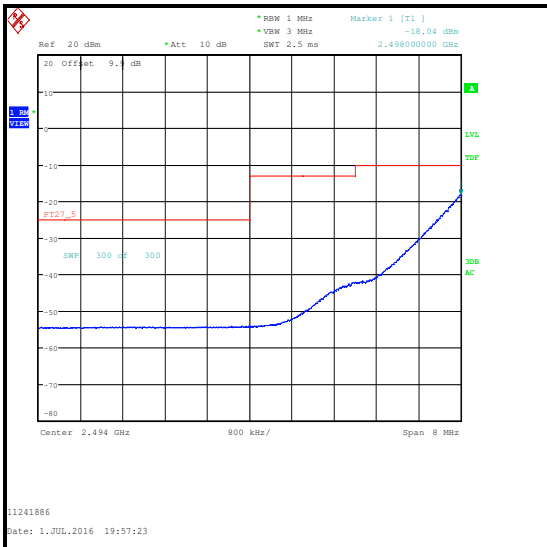


16QAM / 25 RB 0 Offset / 2572 to 2580 MHz

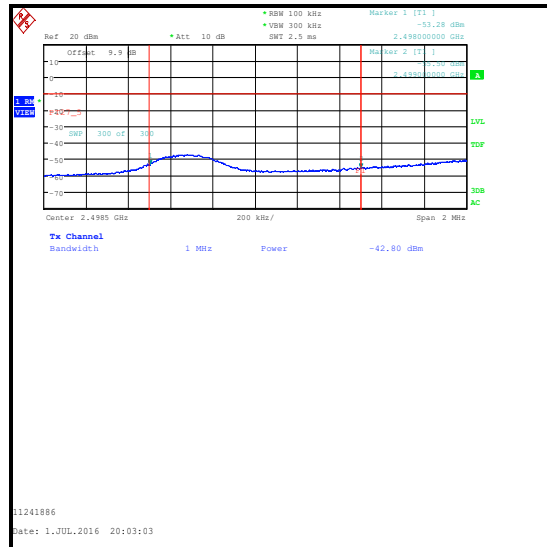
Transmitter Radiated Emissions at Band Edges ± X MHz (continued)

Results: 5 MHz Channel Bandwidth / 2490 to 2499 MHz & 2571 to 2580 MHz / 16QAM

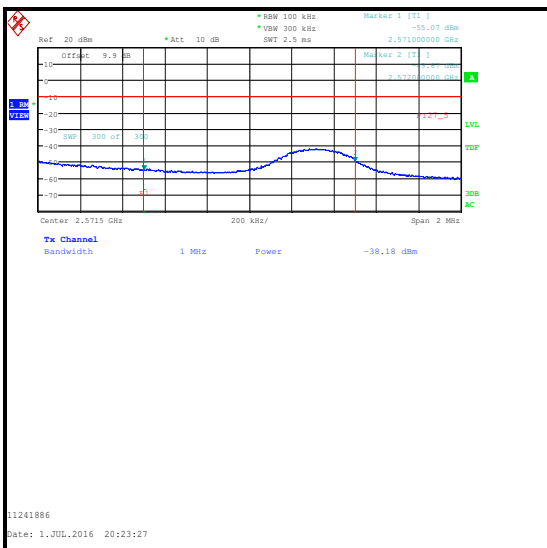
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2498	1	0	-18.0	-10.0	8.0	Complied
2498 to 2499	1	0	-42.8*	-10.0	32.8	Complied
2571 to 2572	1	24	-38.2*	-10.0	28.2	Complied
2572	1	24	-14.6	-10.0	4.6	Complied



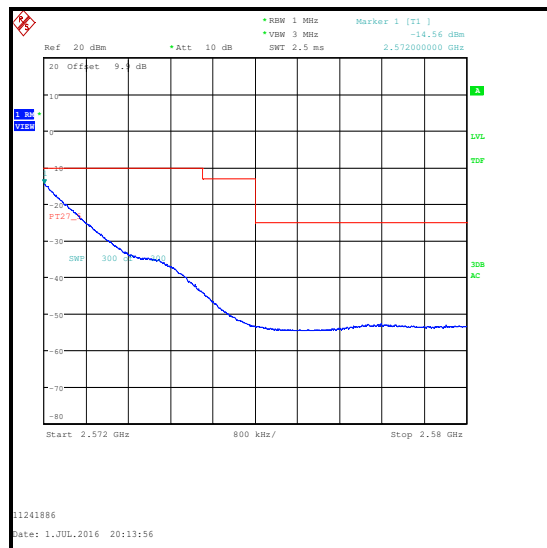
16QAM / 1 RB 0 Offset / 2490 to 2498 MHz



16QAM / 1 RB 0 Offset / 2498 to 2499 MHz / Integrated level



16QAM / 1 RB 24 Offset / 2571 to 2572 MHz / Integrated level



16QAM / 1 RB 24 Offset / 2572 to 2580 MHz

Transmitter Radiated Emissions at Band Edges ± X MHz (continued)

Results: 5 MHz Channel Bandwidth / 2490 to 2499 MHz & 2571 to 2580 MHz / 16QAM

Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2499	1	24	-48.6	-10.0	38.6	Complied
2571	1	0	-48.4	-10.0	38.4	Complied



16QAM / 1 RB 24 Offset / 2490 to 2499 MHz



16QAM / 1 RB 0 Offset / 2571 to 2580 MHz

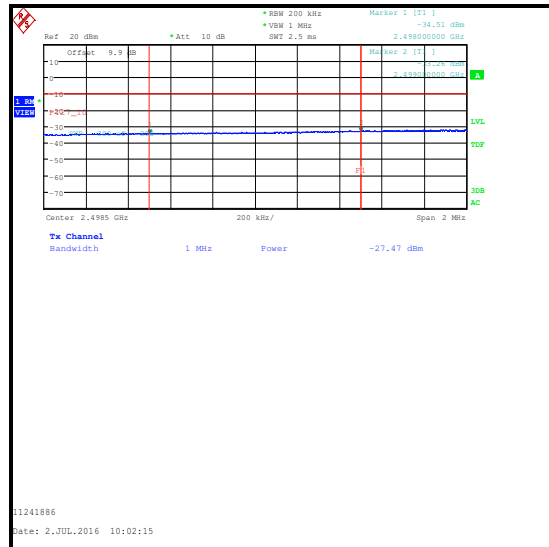
Transmitter Radiated Emissions at Band Edges \pm X MHz (continued)

Results: 10 MHz Channel Bandwidth / 2483 to 2499 MHz & 2571 to 2586 MHz / QPSK

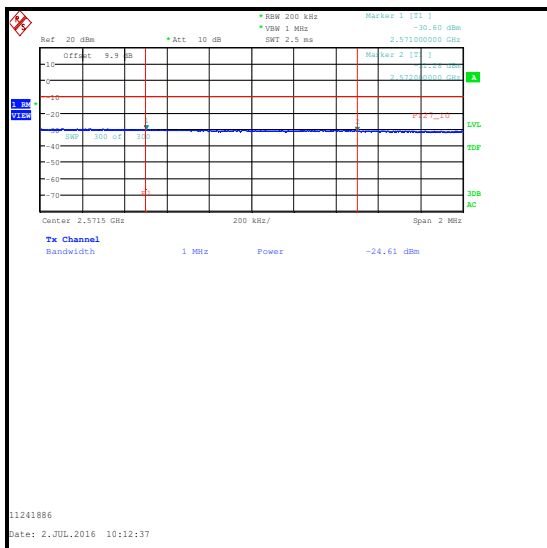
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2498	50	0	-25.3	-10.0	15.3	Complied
2498 to 2499	50	0	-27.5*	-10.0	17.5	Complied
2571 to 2572	50	0	-24.6*	-10.0	14.6	Complied
2572	50	0	-24.1	-10.0	14.1	Complied



QPSK / 50 RB 0 Offset / 2483 to 2498 MHz



QPSK / 50 RB 0 Offset / 2498 to 2499 MHz / Integrated level



QPSK / 50 RB 0 Offset / 2571 to 2572 MHz / Integrated level

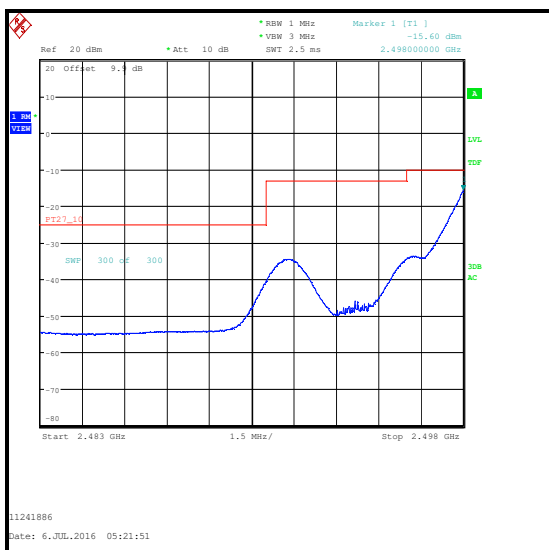


QPSK / 50 RB 0 Offset / 2572 to 2586 MHz

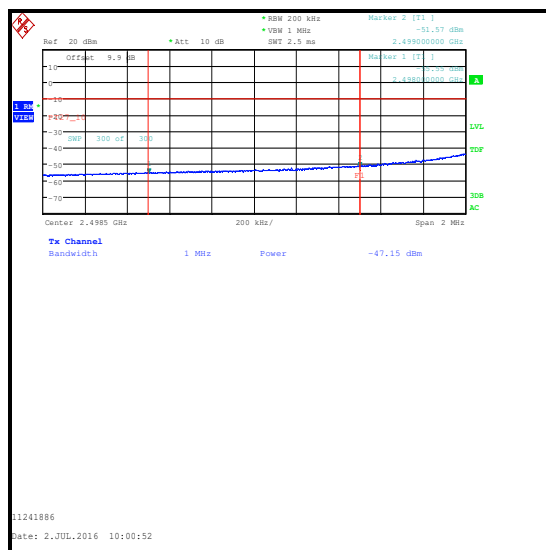
Transmitter Radiated Emissions at Band Edges \pm X MHz (continued)

Results: 10 MHz Channel Bandwidth / 2483 to 2499 MHz & 2571 to 2586 MHz / QPSK

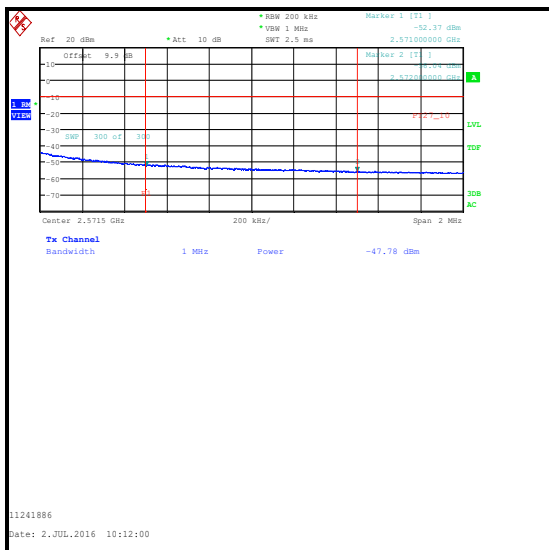
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2498	1	0	-15.6	-10.0	5.6	Complied
2498 to 2499	1	0	-47.1*	-10.0	37.1	Complied
2571 to 2572	1	49	-47.8*	-10.0	37.8	Complied
2572	1	49	-17.9	-10.0	7.9	Complied



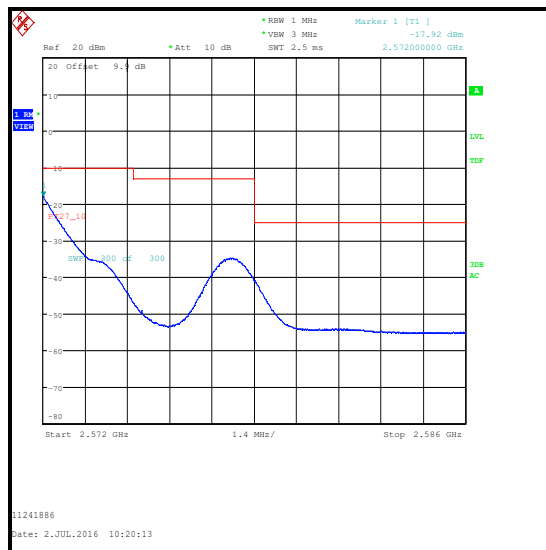
QPSK / 1 RB 0 Offset / 2483 to 2498 MHz



QPSK / 1 RB 0 Offset / 2498 to 2499 MHz / Integrated level



QPSK / 1 RB 49 Offset / 2571 to 2572 MHz / Integrated level

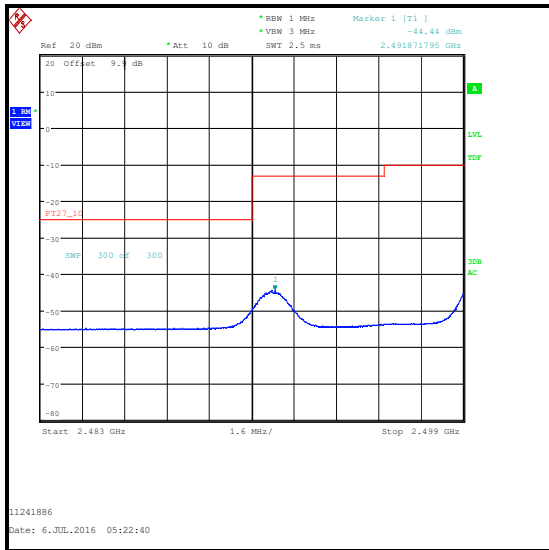


QPSK / 1 RB 49 Offset / 2572 to 2586 MHz

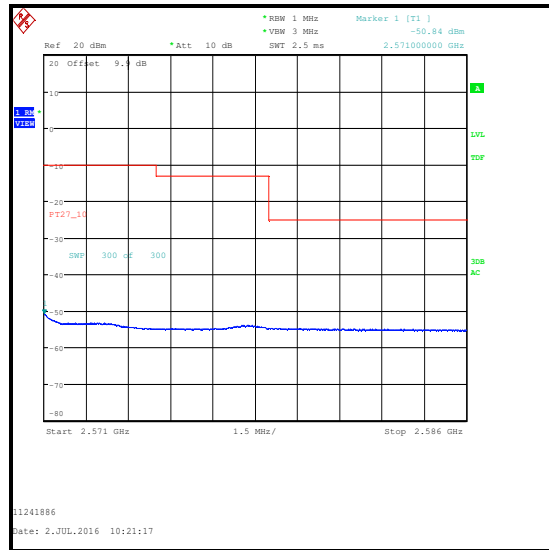
Transmitter Radiated Emissions at Band Edges ± X MHz (continued)

Results: 10 MHz Channel Bandwidth / 2483 to 2499 MHz & 2571 to 2586 MHz / QPSK

Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2491.872	1	49	-44.4	-13.0	31.4	Complied
2571	1	0	-50.8	-10.0	40.8	Complied



QPSK / 1 RB 49 Offset / 2483 to 2499 MHz



QPSK / 1 RB 0 Offset / 2571 to 2586 MHz

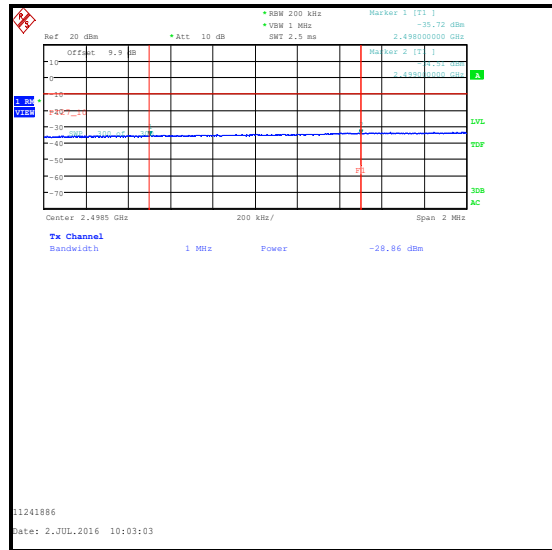
Transmitter Radiated Emissions at Band Edges ± X MHz (continued)

Results: 10 MHz Channel Bandwidth / 2483 to 2499 MHz & 2571 to 2586 MHz / 16QAM

Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2498	50	0	-25.3	-10.0	15.3	Complied
2498 to 2499	50	0	-28.9*	-10.0	18.9	Complied
2571 to 2572	50	0	-25.9*	-10.0	15.9	Complied
2572	50	0	-25.4	-10.0	15.4	Complied



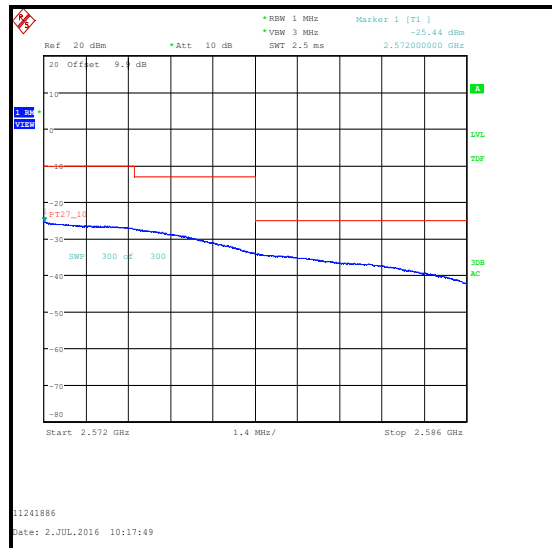
16QAM / 50 RB 0 Offset / 2483 to 2498 MHz



16QAM / 50 RB 0 Offset / 2498 to 2499 MHz / Integrated level



16QAM / 50 RB 0 Offset / 2571 to 2572 MHz / Integrated level

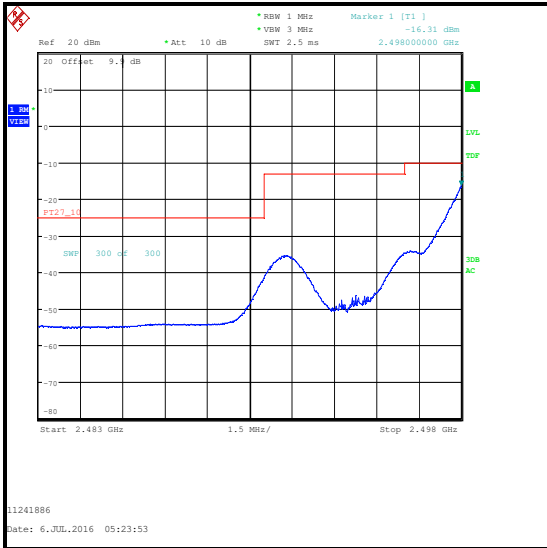


16QAM / 50 RB 0 Offset / 2572 to 2586 MHz

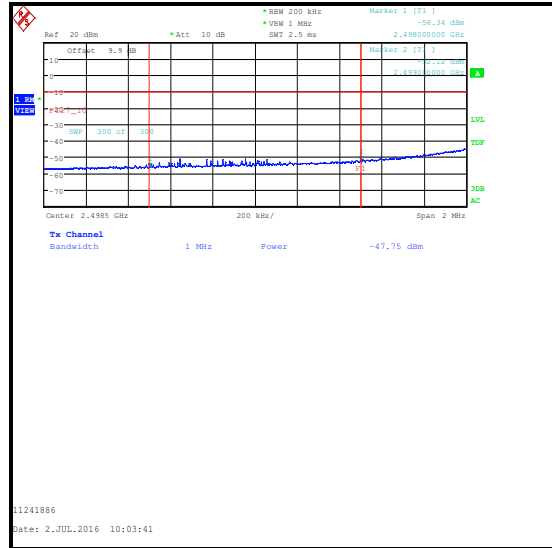
Transmitter Radiated Emissions at Band Edges \pm X MHz (continued)

Results: 10 MHz Channel Bandwidth / 2483 to 2499 MHz & 2571 to 2586 MHz / 16QAM

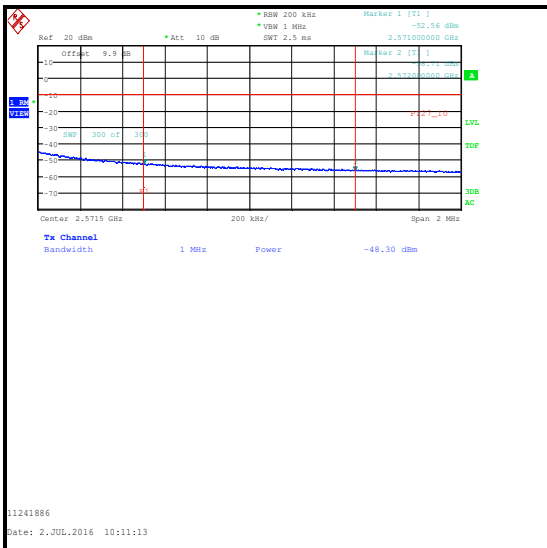
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2498	1	0	-16.3	-10.0	6.3	Complied
2498 to 2499	1	0	-47.7*	-10.0	37.7	Complied
2571 to 2572	1	49	-48.3	-10.0	38.3	Complied
2572	1	49	-18.9	-10.0	8.9	Complied



16QAM / 1 RB 0 Offset / 2483 to 2498 MHz



16QAM / 1 RB 0 Offset / 2498 to 2499 MHz / Integrated level



16QAM / 1 RB 49 Offset / 2571 to 2572 MHz / Integrated level

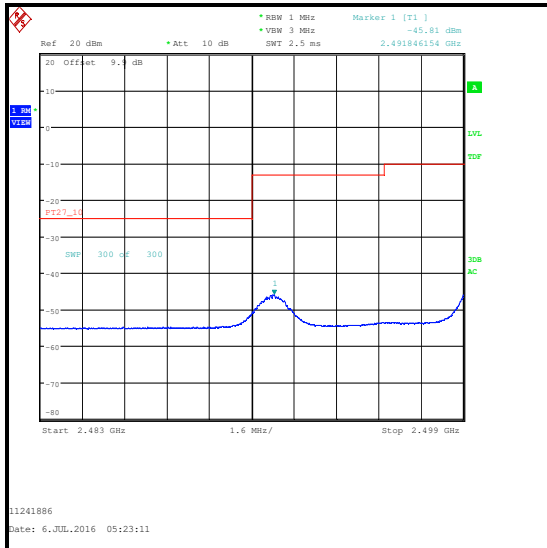


16QAM / 1 RB 49 Offset / 2572 to 2586 MHz

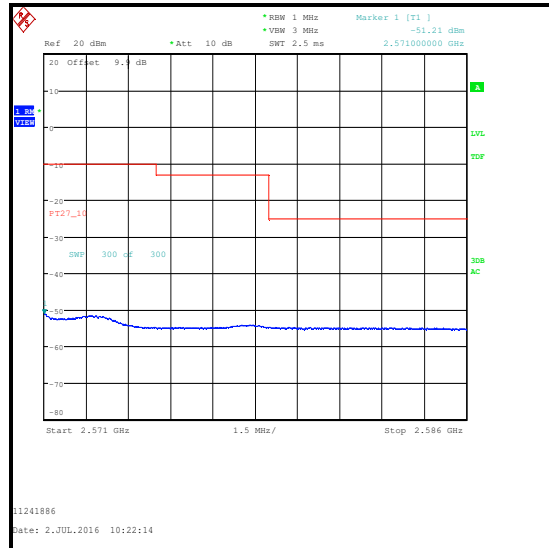
Transmitter Radiated Emissions at Band Edges ± X MHz (continued)

Results: 10 MHz Channel Bandwidth / 2483 to 2499 MHz & 2571 to 2586 MHz / 16QAM

Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2491.846	1	49	-45.8	-13.0	32.8	Complied
2572	1	0	-51.2	-10.0	41.2	Complied



16QAM / 1 RB 49 Offset / 2483 to 2499 MHz

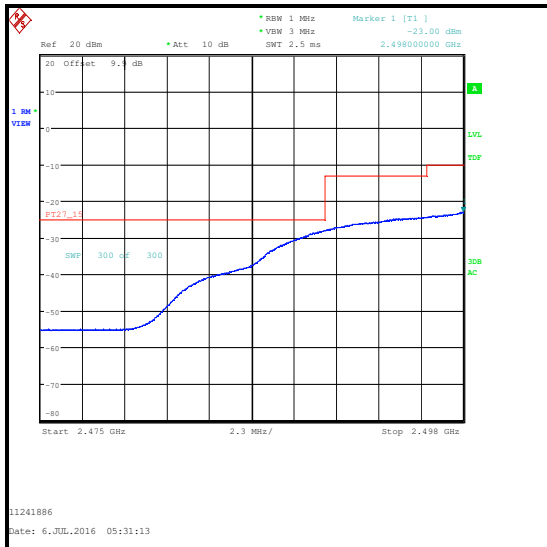


16QAM / 1 RB 0 Offset / 2571 to 2586 MHz

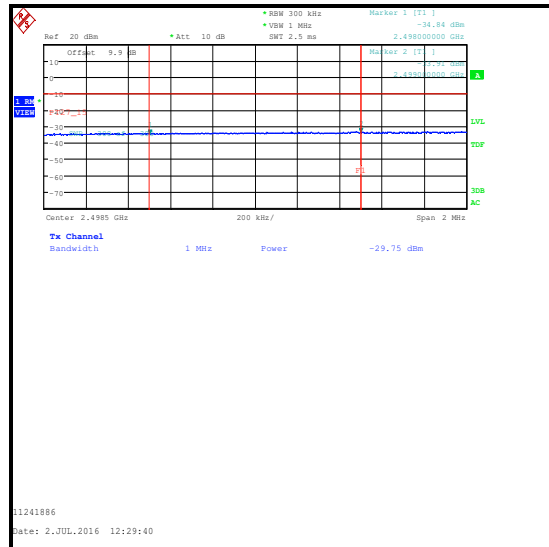
Transmitter Radiated Emissions at Band Edges ± X MHz (continued)

Results: 15 MHz Channel Bandwidth / 2475 to 2499 MHz & 2571 to 2595 MHz / QPSK

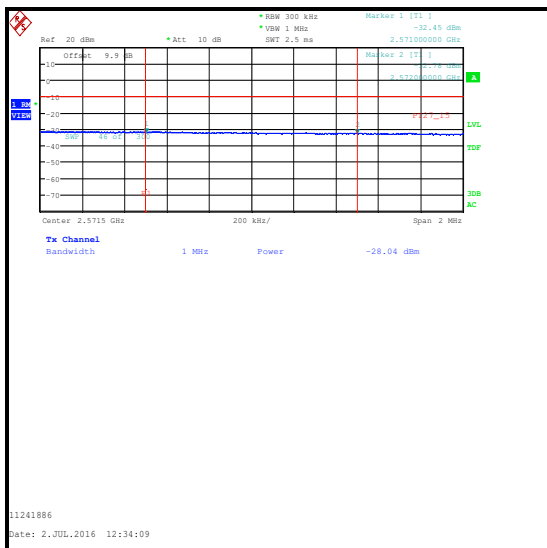
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2498	75	0	-23.0	-10.0	13.0	Complied
2498 to 2499	75	0	-29.7*	-10.0	19.7	Complied
2571 to 2572	75	0	-28.0*	-10.0	18.0	Complied
2572	75	0	-27.8	-10.0	17.8	Complied



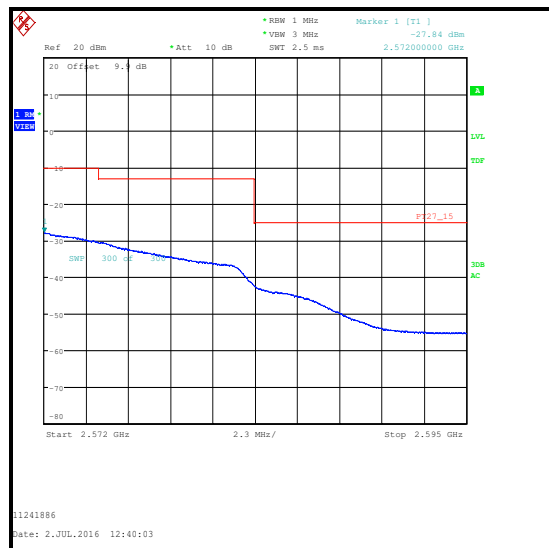
QPSK / 75 RB 0 Offset / 2475 to 2498 MHz



QPSK / 75 RB 0 Offset / 2498 to 2499 MHz / Integrated level



QPSK / 75 RB 0 Offset / 2571 to 2572 MHz / Integrated level

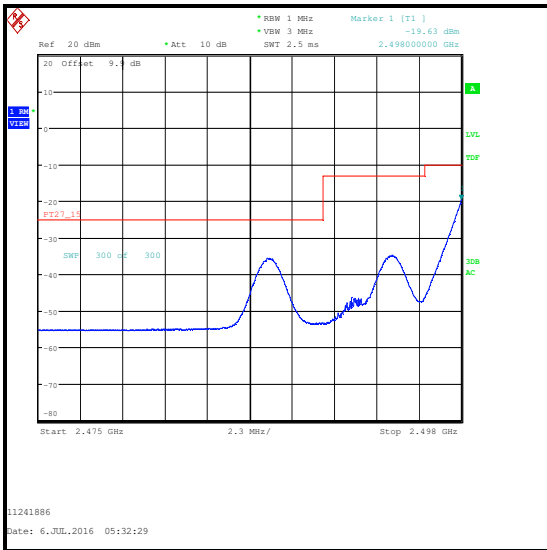


QPSK / 75 RB 0 Offset / 2572 to 2595 MHz

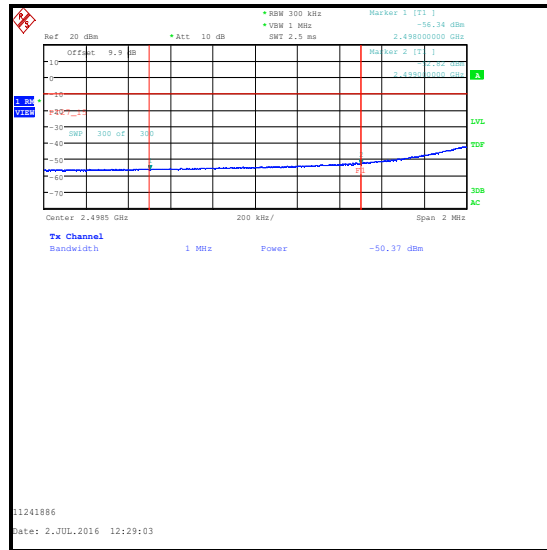
Transmitter Radiated Emissions at Band Edges \pm X MHz (continued)

Results: 15 MHz Channel Bandwidth / 2475 to 2499 MHz & 2571 to 2595 MHz / QPSK

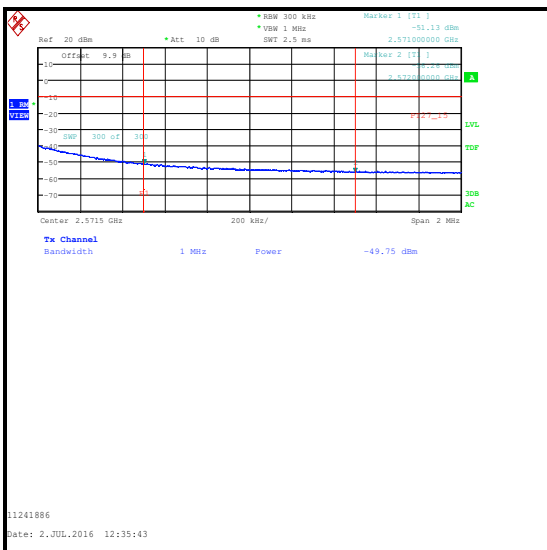
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2498	1	0	-19.6	-10.0	9.6	Complied
2498 to 2499	1	0	-50.4*	-10.0	40.4	Complied
2571 to 2572	1	74	-49.7*	-10.0	39.7	Complied
2572	1	74	-23.2	-10.0	13.2	Complied



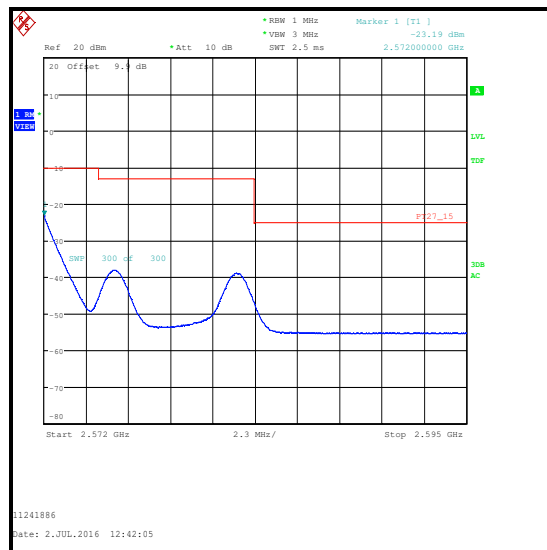
QPSK / 1 RB 0 Offset / 2475 to 2498 MHz



QPSK / 1 RB 0 Offset / 2498 to 2499 MHz / Integrated level



QPSK / 1 RB 74 Offset / 2571 to 2572 MHz / Integrated level

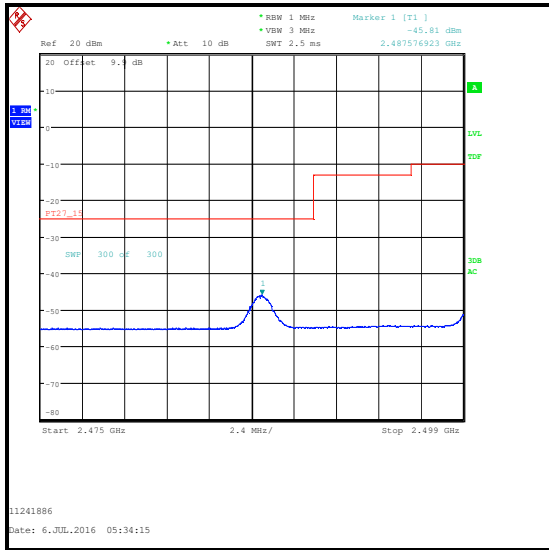


QPSK / 1 RB 74 Offset / 2572 to 2595 MHz

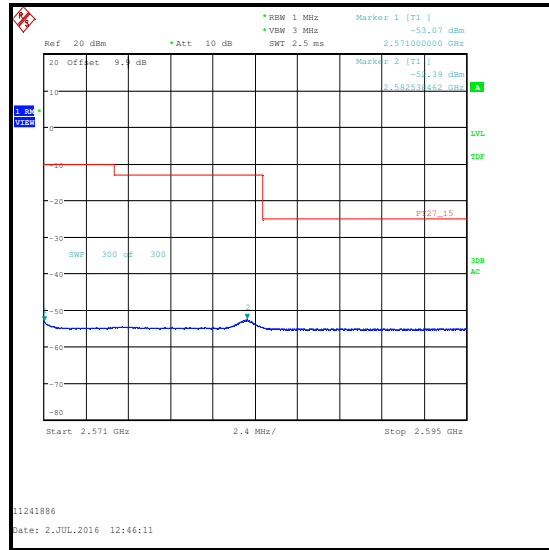
Transmitter Radiated Emissions at Band Edges \pm X MHz (continued)

Results: 15 MHz Channel Bandwidth / 2475 to 2499 MHz & 2571 to 2595 MHz / QPSK

Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2487.577	1	74	-45.8	-25.0	20.8	Complied
2571	1	0	-53.1	-10.0	43.1	Complied
2582.538	1	0	-52.4	-13.0	39.4	Complied



QPSK / 1 RB 74 Offset / 2475 to 2499 MHz



QPSK / 1 RB 0 Offset / 2571 to 2595 MHz

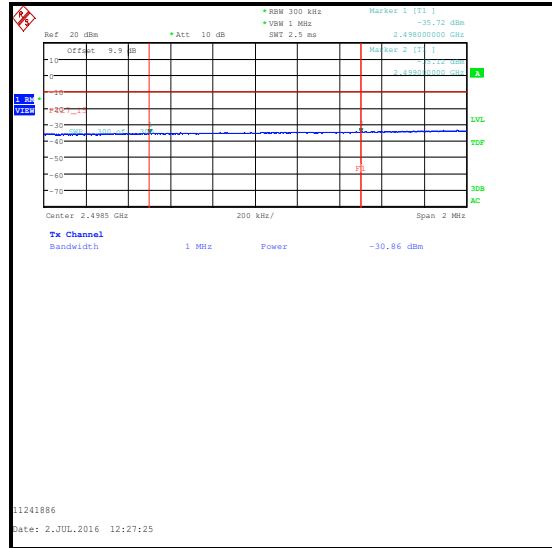
Transmitter Radiated Emissions at Band Edges ± X MHz (continued)

Results: 15 MHz Channel Bandwidth / 2475 to 2499 MHz & 2571 to 2595 MHz / 16QAM

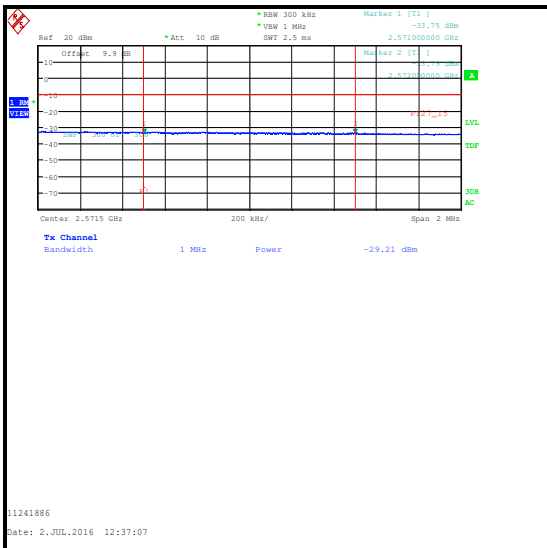
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2497.963	75	0	-24.7	-10.0	14.7	Complied
2498 to 2499	75	0	-30.9*	-10.0	20.9	Complied
2571 to 2572	75	0	-29.2*	-10.0	19.2	Complied
2572	75	0	-29.4	-10.0	19.4	Complied



16QAM / 75 RB 0 Offset / 2475 to 2498 MHz



16QAM / 75 RB 0 Offset / 2498 to 2499 MHz / Integrated level



16QAM / 75 RB 0 Offset / 2571 to 2572 MHz / Integrated level

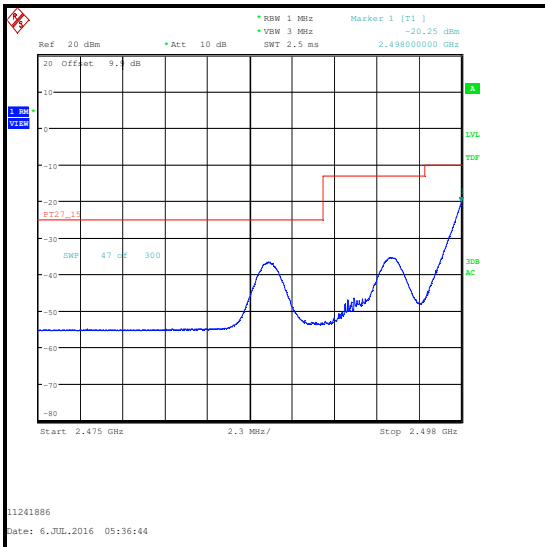


16QAM / 75 RB 0 Offset / 2572 to 2595 MHz

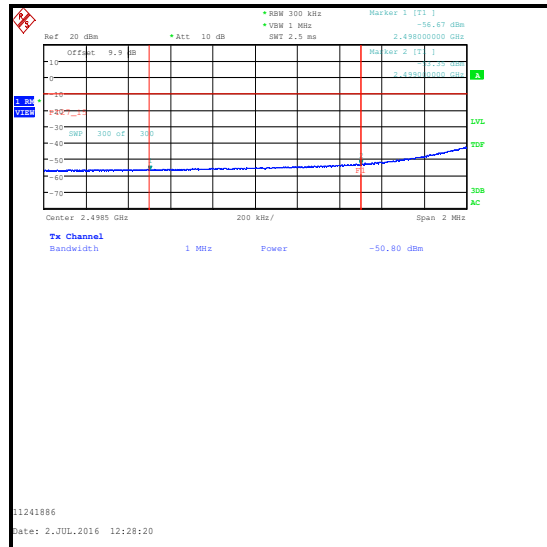
Transmitter Radiated Emissions at Band Edges \pm X MHz (continued)

Results: 15 MHz Channel Bandwidth / 2475 to 2499 MHz & 2571 to 2595 MHz / 16QAM

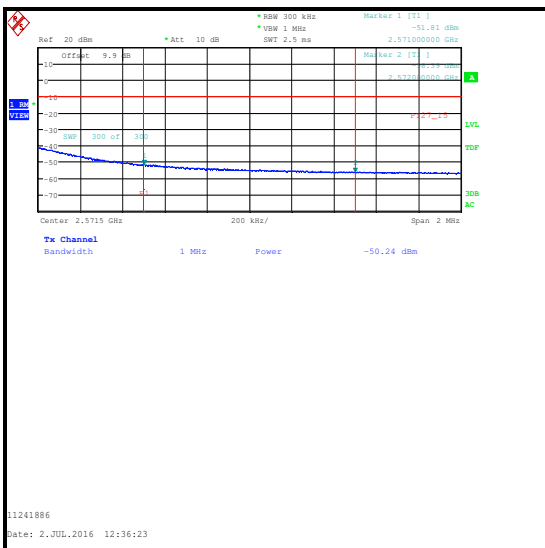
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2498	1	0	-20.2	-10.0	10.2	Complied
2498 to 2499	1	0	-50.8*	-10.0	40.8	Complied
2571 to 2572	1	74	-50.2*	-10.0	40.2	Complied
2572	1	74	-24.1	-10.0	14.1	Complied



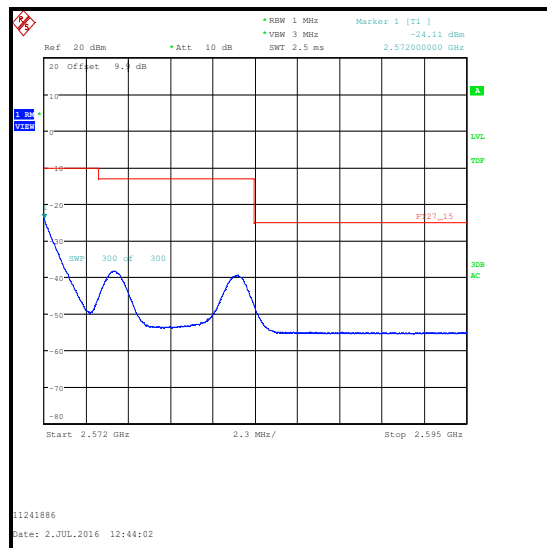
16QAM / 1 RB 0 Offset / 2475 to 2498 MHz



16QAM / 1 RB 0 Offset / 2498 to 2499 MHz / Integrated level



16QAM / 1 RB 74 Offset / 2571 to 2572 MHz / Integrated level

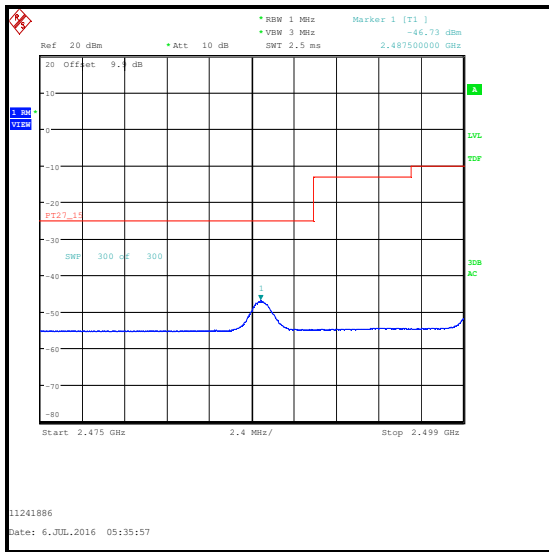


16QAM / 1 RB 74 Offset / 2572 to 2595 MHz

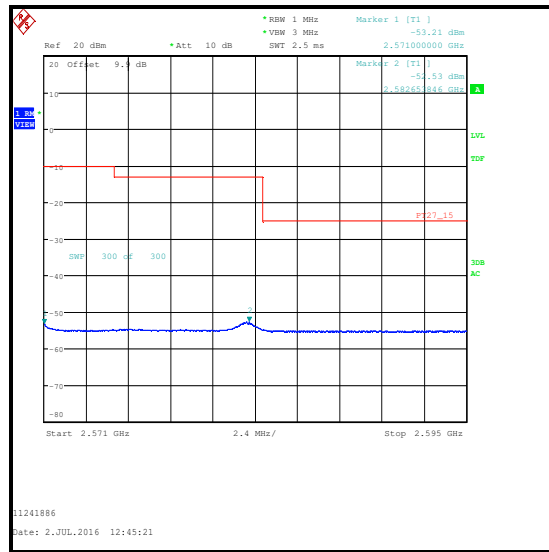
Transmitter Radiated Emissions at Band Edges \pm X MHz (continued)

Results: 15 MHz Channel Bandwidth / 2475 to 2499 MHz & 2571 to 2595 MHz / 16QAM

Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2487.500	1	74	-46.7	-10.0	36.7	Complied
2571	1	0	-53.2	-10.0	43.2	Complied
2582.654	1	0	-52.5	-10.0	42.5	Complied



16QAM / 1 RB 74 Offset / 2475 to 2499 MHz



16QAM / 1 RB 0 Offset / 2571 to 2595 MHz

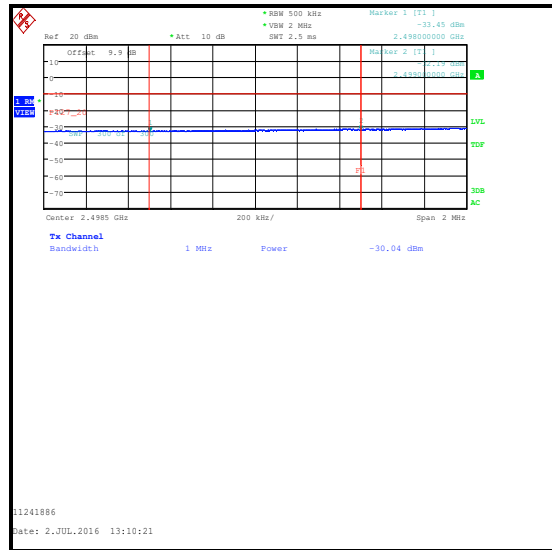
Transmitter Radiated Emissions at Band Edges ± X MHz (continued)

Results: 20 MHz Channel Bandwidth / 2466 to 2499 MHz & 2571 to 2604 MHz / QPSK

Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2490.401	100	0	-39.4	-10.0	29.4	Complied
2498 to 2499	100	0	-30.0*	-10.0	20.0	Complied
2571 to 2572	100	0	-26.9*	-10.0	16.9	Complied
2572	100	0	-26.5	-10.0	16.5	Complied



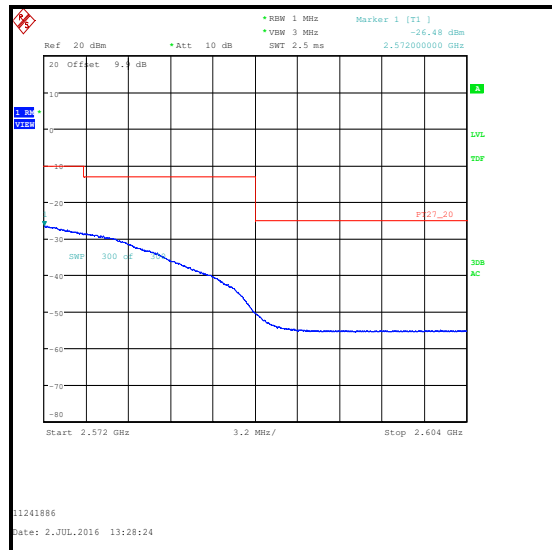
QPSK / 100 RB 0 Offset / 2466 to 2498 MHz



QPSK / 100 RB 0 Offset / 2498 to 2499 MHz / Integrated level



QPSK / 100 RB 0 Offset / 2571 to 2572 MHz / Integrated level

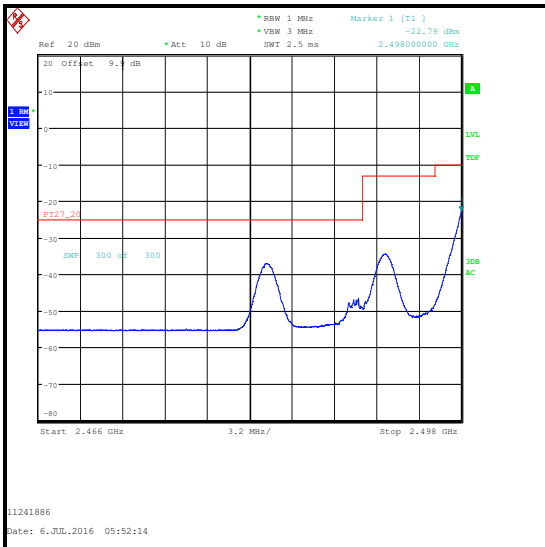


QPSK / 100 RB 0 Offset / 2572 to 2604 MHz

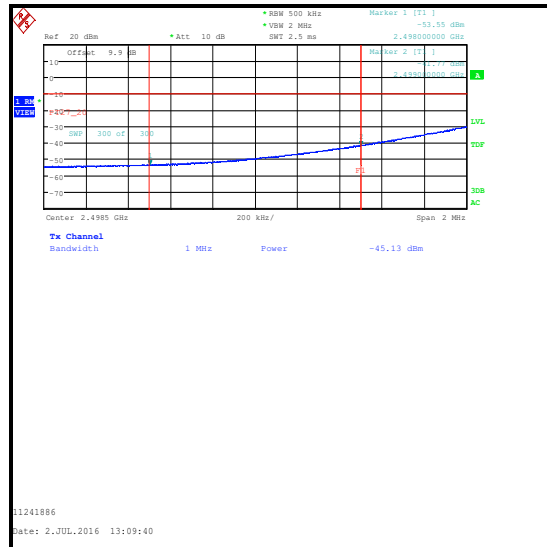
Transmitter Radiated Emissions at Band Edges ± X MHz (continued)

Results: 20 MHz Channel Bandwidth / 2466to 2499 MHz & 2571 to 2604 MHz / QPSK

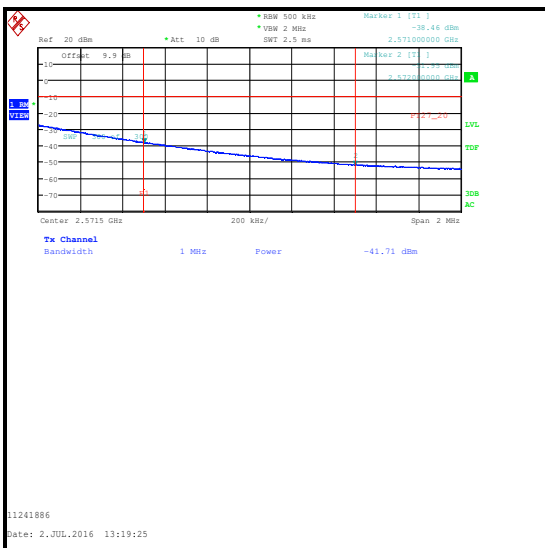
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2498	1	0	-22.8	-10.0	12.8	Complied
2498 to 2499	1	0	-45.1*	-10.0	35.1	Complied
2571 to 2572	1	99	-41.7*	-10.0	31.7	Complied
2572	1	99	-26.3	-10.0	16.3	Complied



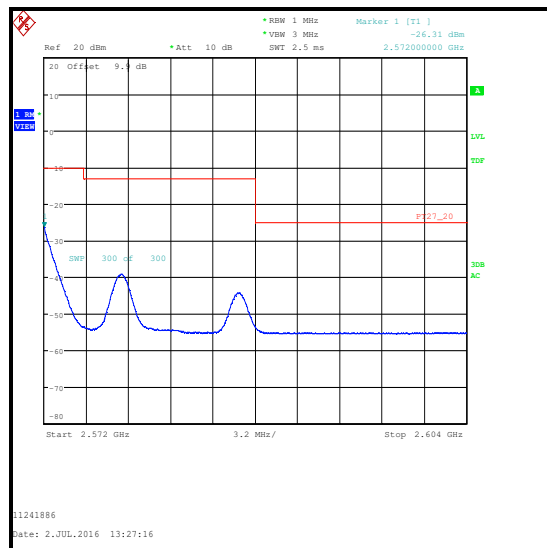
QPSK / 1 RB 0 Offset / 2466 to 2498 MHz



QPSK / 1 RB 0 Offset / 2498 to 2499 MHz / Integrated level



QPSK / 1 RB 99 Offset / 2571 to 2572 MHz / Integrated level

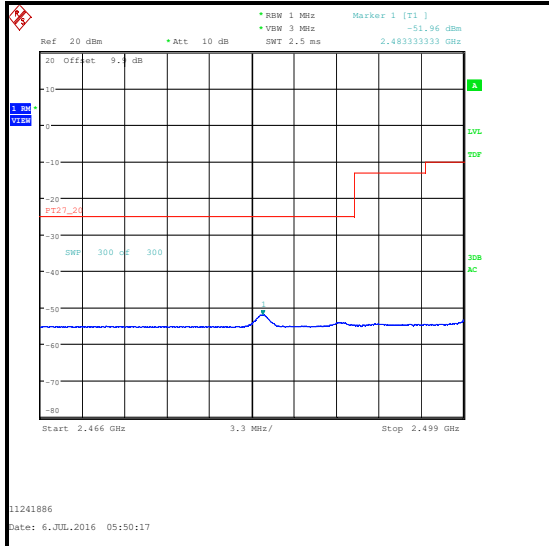


QPSK / 1 RB 99 Offset / 2572 to 2604 MHz

Transmitter Radiated Emissions at Band Edges ± X MHz (continued)

Results: 20 MHz Channel Bandwidth / 2466 to 2499 MHz & 2571 to 2604 MHz / QPSK

Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2483.333	1	99	-52.0	-10.0	42.0	Complied
2571	1	0	-54.0	-10.0	44.0	Complied



QPSK / 1 RB 99 Offset / 2466 to 2499 MHz



QPSK / 1 RB 0 Offset / 2571 to 2604 MHz

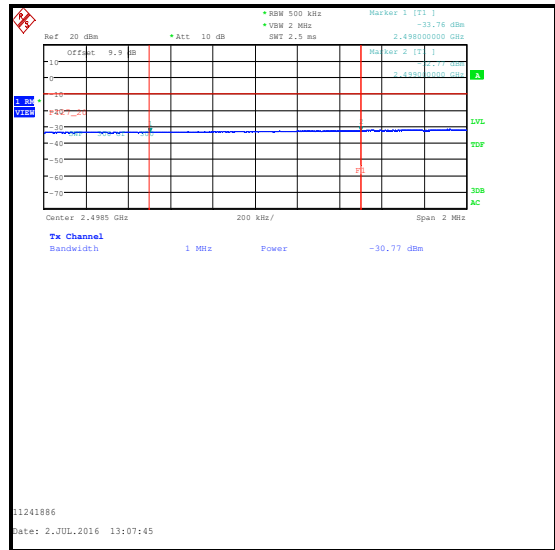
Transmitter Radiated Emissions at Band Edges \pm X MHz (continued)

Results: 20 MHz Channel Bandwidth / 2466 to 2499 MHz & 2571 to 2604 MHz / 16QAM

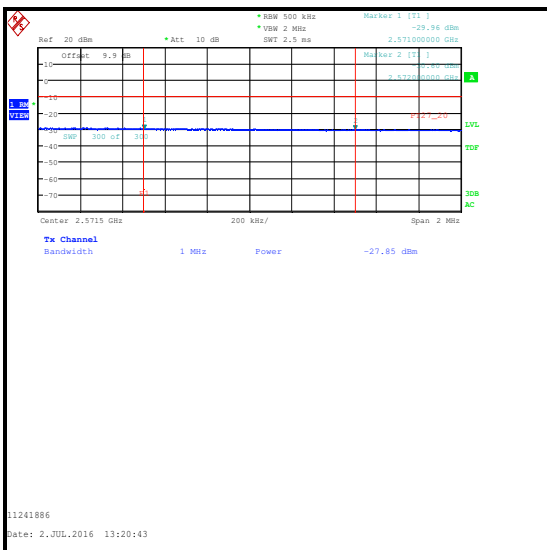
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2497.846	100	0	-23.3	-10.0	13.3	Complied
2498 to 2499	100	0	-30.8*	-10.0	20.8	Complied
2571 to 2572	100	0	-27.8*	-10.0	17.8	Complied
2572	100	0	-27.5	-10.0	17.5	Complied



16QAM / 100 RB 0 Offset / 2466 to 2498 MHz



16QAM / 100 RB 0 Offset / 2498 to 2499 MHz / Integrated level



16QAM / 100 RB 0 Offset / 2571 to 2572 MHz / Integrated level

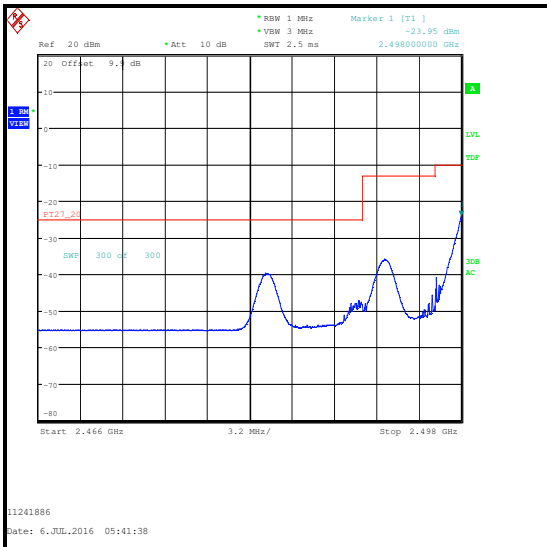


16QAM / 100 RB 0 Offset / 2572 to 2604 MHz

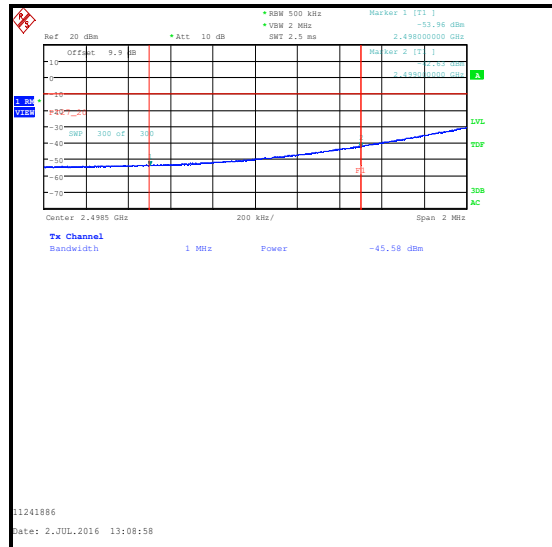
Transmitter Radiated Emissions at Band Edges \pm X MHz (continued)

Results: 20 MHz Channel Bandwidth / 2466 to 2499 MHz & 2571 to 2604 MHz / 16QAM

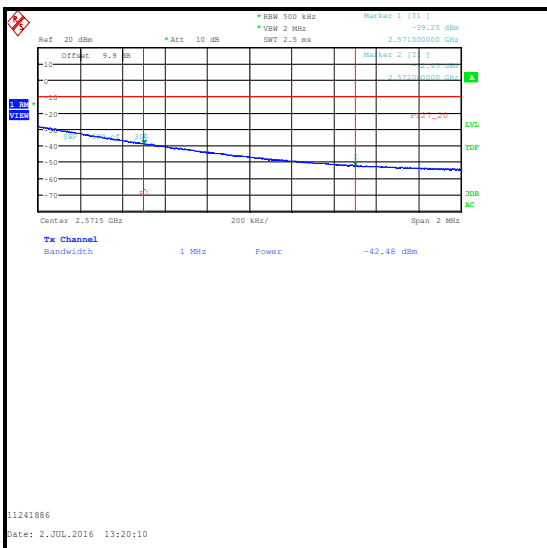
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2498	1	0	-23.9	-10.0	13.9	Complied
2498 to 2499	1	0	-45.6*	-10.0	35.6	Complied
2571 to 2572	1	99	-42.5*	-10.0	32.5	Complied
2572	1	99	-27.2	-10.0	17.2	Complied



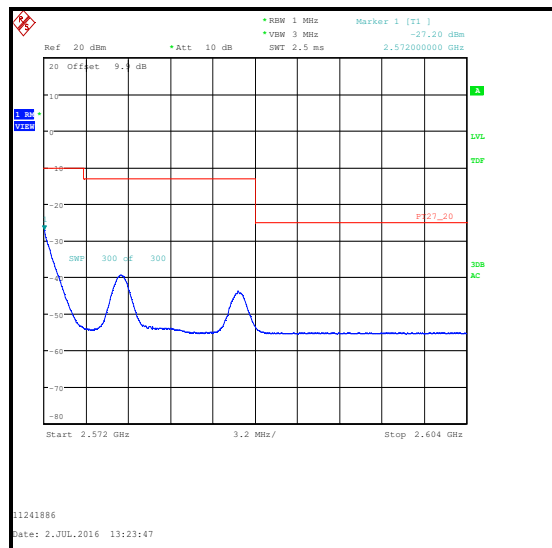
16QAM / 1 RB 0 Offset / 2466 to 2498 MHz



16QAM / 1 RB 0 Offset / 2498 to 2499 MHz / Integrated level



16QAM / 1 RB 99 Offset / 2571 to 2572 MHz / Integrated level

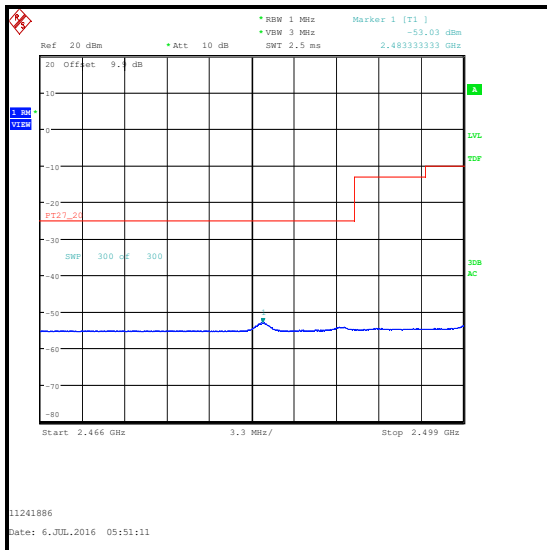


16QAM / 1 RB 99 Offset / 2572 to 2604 MHz

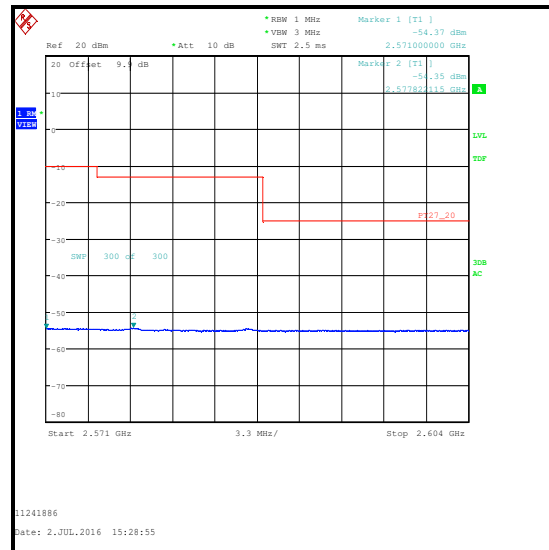
Transmitter Radiated Emissions at Band Edges ± X MHz (continued)

Results: 20 MHz Channel Bandwidth / 2466 to 2499 MHz & 2571 to 2604 MHz / 16QAM

Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2483.333	1	24	-53.0	-25.0	28.0	Complied
2571	1	0	-54.4	-10.0	44.4	Complied
2577.822	1	0	-54.3	-13.0	42.3	Complied



16QAM / 1 RB 99 Offset / 2466 to 2499 MHz



16QAM / 1 RB 0 Offset / 2571 to 2604 MHz

Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
M2003	Thermohygrometer	Testo	608-H1	45046641	22 Apr 2017	12
K0017	3m RSE Chamber	Rainford EMC	N/A	N/A	17 May 2017	12
M1995	Test Receiver	Rohde & Schwarz	ESU40	100428	21 Mar 2017	12
A2893	Pre-Amplifier	Schwarzbeck	BBV 9721	9721-021	07 Apr 2017	12
A2889	Antenna	Schwarzbeck	BBHA 9120 B	BBHA 9120 B	07 Apr 2017	12
A2916	Attenuator	AtlanTecRF	AN18W5-10	832828#1	19 May 2017	12
A032	Antenna	EMCO	3115	2874	01 Mar 2019	36
M260	Signal Generator	Rohde & Schwarz	SMP02	829076/008	09 May 2017	12
A2937	Attenuator	AtlanTecRF	AN18W5-06	208147#1	23 May 2017	12
M199	Power Meter	Rohde & Schwarz	NRVS	827023/075	11 Apr 2018	24
M1267	Power Sensor	Rohde & Schwarz	NRV-Z52	100155	15 Apr 2018	24

5.2.10. Transmitter Radiated Emissions at Band Edges \pm X MHz – UAT**Test Summary:**

Test Engineer:	Andrew Edwards	Test Dates:	01 July 2016 to 06 July 2016
Test Sample IMEI:	358640070022890		

FCC Reference:	Parts 2.1053 & 27.53(m)(4)
Test Method Used:	KDB 971168 Section 6 referencing FCC Part 27.53 & note 2 below

Environmental Conditions:

Temperature (°C):	24 to 25
Relative Humidity (%):	42 to 43

Note(s):

1. Measurements were performed with the EUT transmitting QPSK and 16QAM modulation schemes, with resource block settings stated in section 4.3.
2. Sweep time was set to auto and an RMS detector with trace averaging of 300 sweeps was used.
3. In accordance with 27.53(m)(4), the following limits were calculated:

5 MHz Channel Bandwidth		10 MHz Channel Bandwidth	
Frequency (MHz)	Limit (dBm)	Frequency (MHz)	Limit (dBm)
30 – 2494	-25	30 – 2491.013	-25
2494 – 2496	-13	2491.013 – 2496	-13
2496 – 2500	-10	2496 – 2500	-10
2570 – 2575	-10	2570 – 2575	-10
2575 – 2576	-13	2575 – 2578.987	-13
2576 – 26000	-25	2578.987 – 26000	-25

15 MHz Channel Bandwidth		20 MHz Channel Bandwidth	
Frequency (MHz)	Limit (dBm)	Frequency (MHz)	Limit (dBm)
30 – 2490.5	-25	30 – 2490.5	-25
2490.5 – 2496	-13	2490.5 – 2496	-13
2496 – 2500	-10	2496 – 2500	-10
2570 – 2575	-10	2570 – 2575	-10
2575 – 2583.432	-13	2575 – 2590.048	-13
2583.432 – 26000	-25	2587.974 – 26000	-25

4. For given channel bandwidth, the minimum value of the 99% occupied bandwidth was used to calculate the above limits. The choice of the minimum occupied bandwidth, regardless of modulation schemes, gives a worst case scenario for the applicable limit lines.
5. The plots of this section illustrate the radiated emissions at band edges, at frequencies below 2499 MHz and above 2571 MHz. Compliance in the frequency ranges 2499 – 2500 MHz and 2570 – 2571 MHz are shown in section 5.2.4 of this report.
6. In accordance with 27.53(m)(6), a narrower resolution bandwidth is allowed to be used, provided that the measured power is integrated over the full required measurement bandwidth of 1 MHz. The channel power function of the spectrum analyser was used where necessary.
7. * Integrated level (dBm)

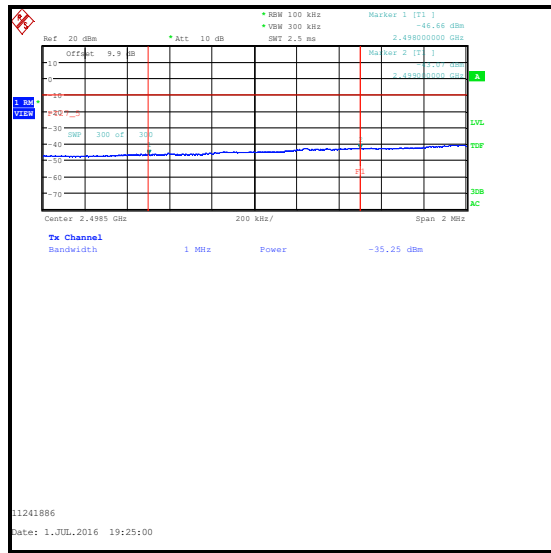
Transmitter Radiated Emissions at Band Edges ± X MHz (continued)

Results: 5 MHz Channel Bandwidth / 2490 to 2499 MHz & 2571 to 2580 MHz / QPSK

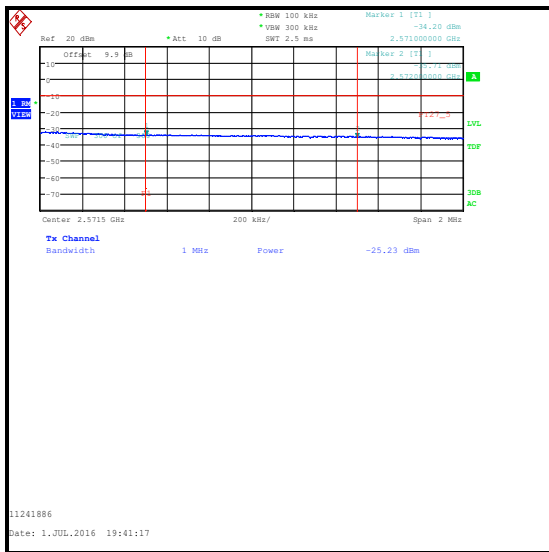
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2498	25	0	-28.2	-10.0	18.2	Complied
2498 to 2499	25	0	-35.2*	-10.0	25.2	Complied
2571 to 2572	25	0	-25.2*	-10.0	15.2	Complied
2572	25	0	-22.8	-10.0	12.8	Complied



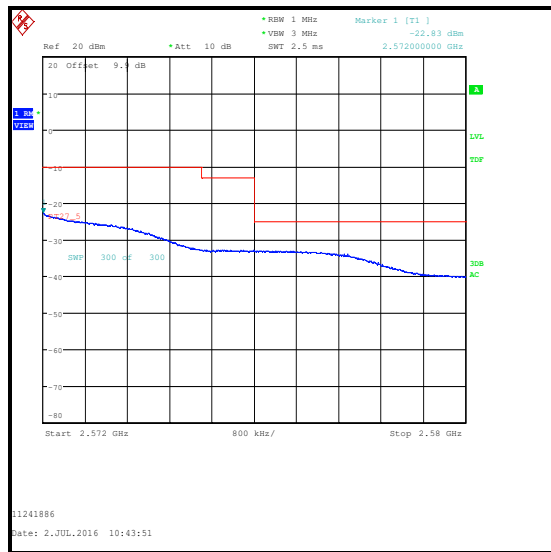
QPSK / 25 RB 0 Offset / 2490 to 2498 MHz



QPSK / 25 RB 0 Offset / 2498 to 2499 MHz / Integrated level



QPSK / 25 RB 0 Offset / 2571 to 2572 MHz / Integrated level



QPSK / 25 RB 0 Offset / 2572 to 2580 MHz

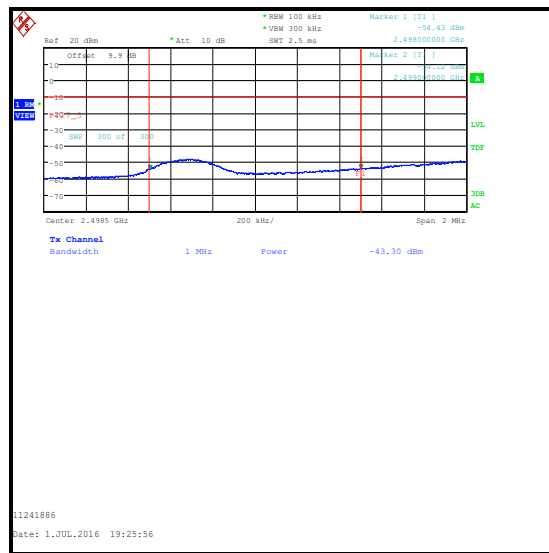
Transmitter Radiated Emissions at Band Edges \pm X MHz (continued)

Results: 5 MHz Channel Bandwidth / 2490 to 2499 MHz & 2571 to 2580 MHz / QPSK

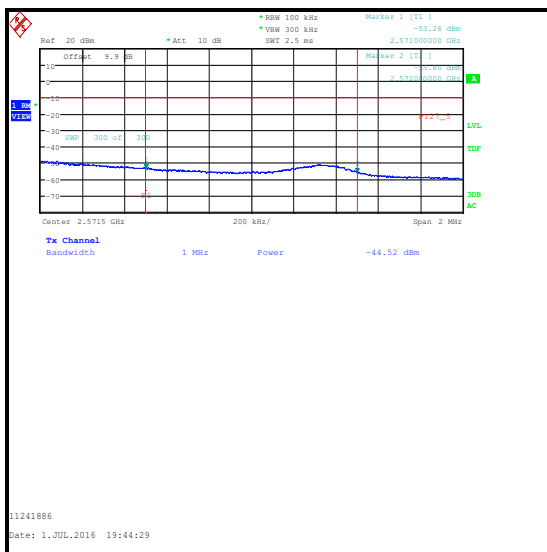
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2498	1	0	-16.4	-10.0	6.4	Complied
2498 to 2499	1	0	-43.3*	-10.0	33.3	Complied
2571 to 2572	1	24	-44.5*	-10.0	34.5	Complied
2572	1	24	-14.6	-10.0	4.6	Complied



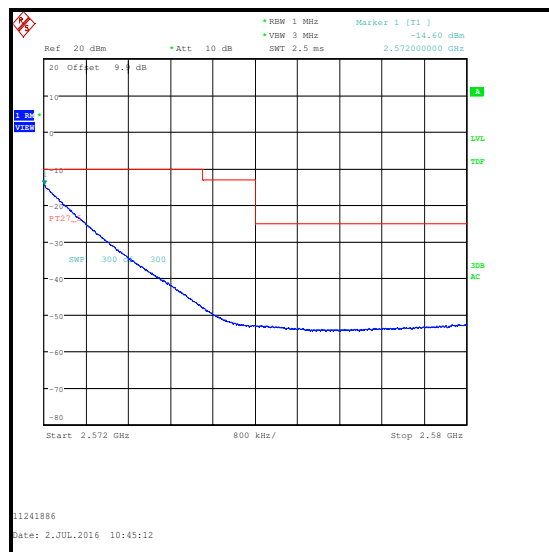
QPSK / 1 RB 0 Offset / 2490 to 2498 MHz



QPSK / 1 RB 0 Offset / 2498 to 2499 MHz / Integrated level



QPSK / 1 RB 24 Offset / 2571 to 2572 MHz / Integrated level

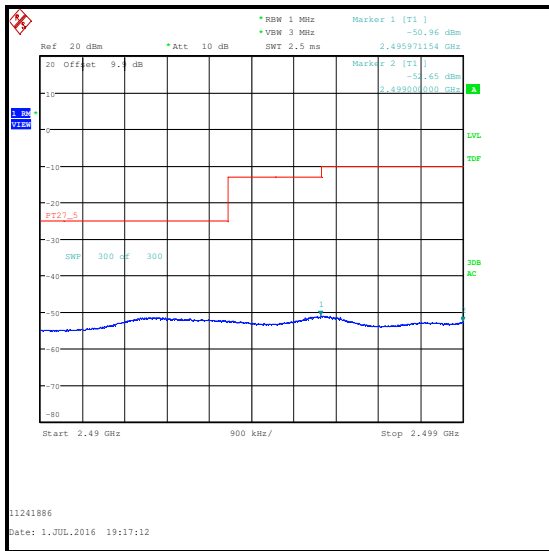


QPSK / 1 RB 24 Offset / 2572 to 2580 MHz

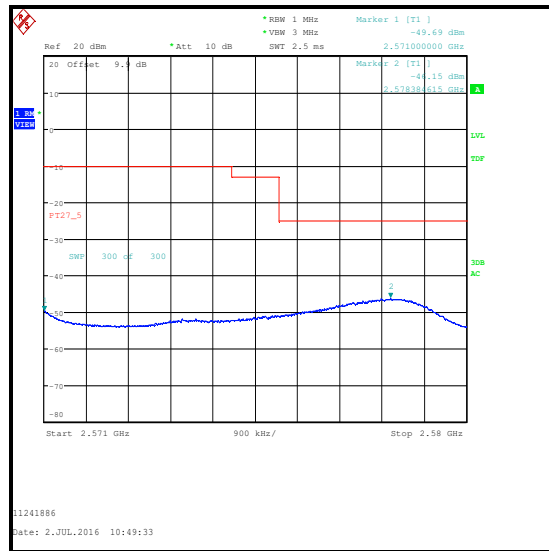
Transmitter Radiated Emissions at Band Edges ± X MHz (continued)

Results: 5 MHz Channel Bandwidth / 2490 to 2499 MHz & 2571 to 2580 MHz / QPSK

Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2495.971	1	24	-51.0	-10.0	41.0	Complied
2499	1	24	-52.6	-10.0	52.4	Complied
2571	1	0	-49.7	-10.0	39.7	Complied
2578.385	1	0	-46.1	-10.0	36.1	Complied



QPSK / 1 RB 24 Offset / 2490 to 2499 MHz

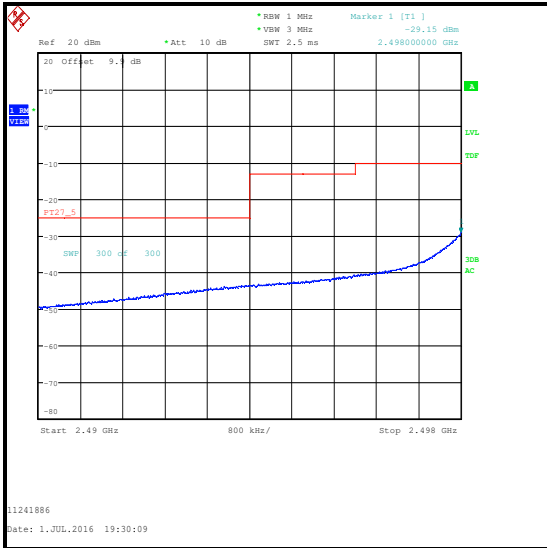


QPSK / 1 RB 0 Offset / 2571 to 2580 MHz

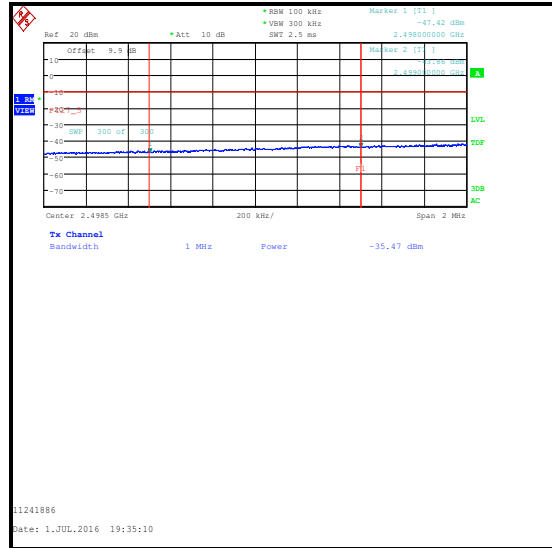
Transmitter Radiated Emissions at Band Edges ± X MHz (continued)

Results: 5 MHz Channel Bandwidth / 2490 to 2499 MHz & 2571 to 2580 MHz / 16QAM

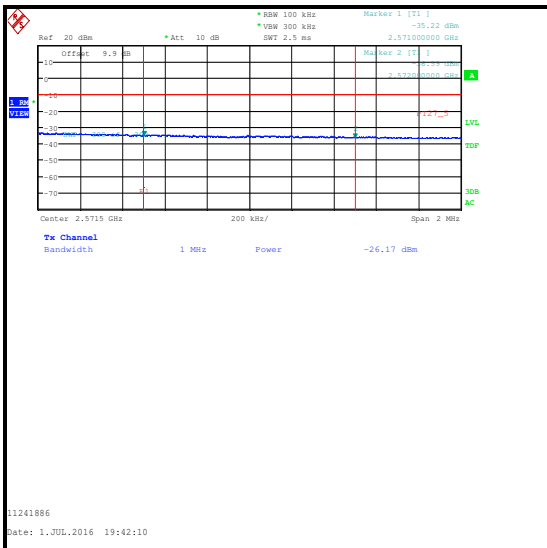
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2498	25	0	-29.1	-10.0	19.1	Complied
2498 to 2499	25	0	-35.5*	-10.0	25.5	Complied
2571 to 2572	25	0	-26.2*	-10.0	16.2	Complied
2572	25	0	-23.7	-10.0	13.7	Complied



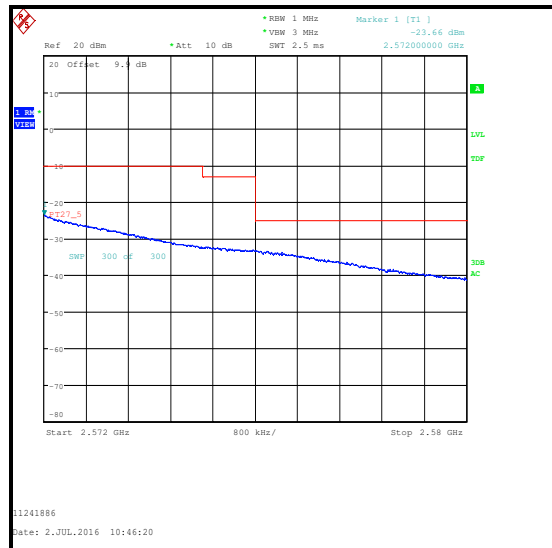
16QAM / 25 RB 0 Offset / 2490 to 2498 MHz



16QAM / 25 RB 0 Offset / 2498 to 2499 MHz / Integrated level



16QAM / 25 RB 0 Offset / 2571 to 2572 MHz / Integrated level

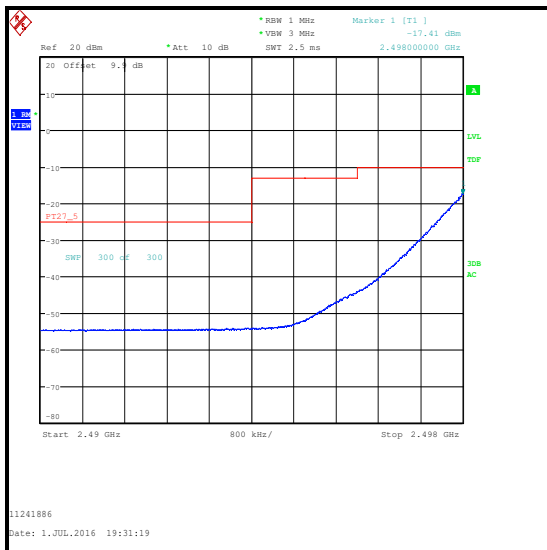


16QAM / 25 RB 0 Offset / 2572 to 2580 MHz

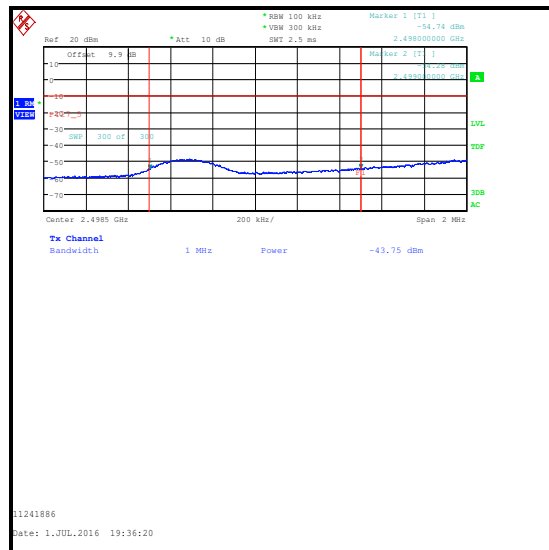
Transmitter Radiated Emissions at Band Edges \pm X MHz (continued)

Results: 5 MHz Channel Bandwidth / 2490 to 2499 MHz & 2571 to 2580 MHz / 16QAM

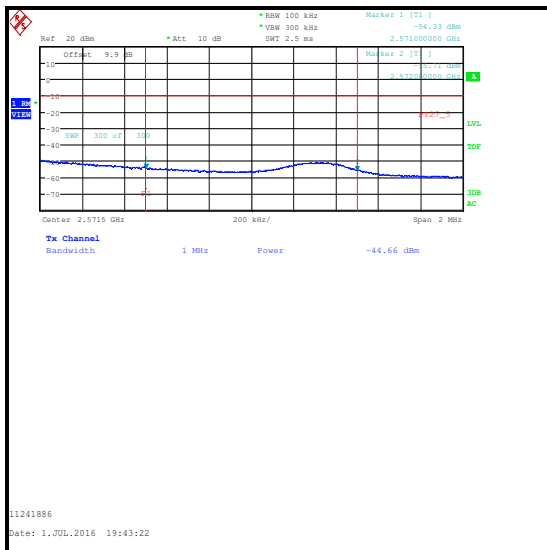
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2498	1	0	-17.4	-10.0	7.4	Complied
2498 to 2499	1	0	-43.7*	-10.0	33.7	Complied
2571 to 2572	1	24	-44.7*	-10.0	34.7	Complied
2572	1	24	-15.4	-10.0	5.4	Complied



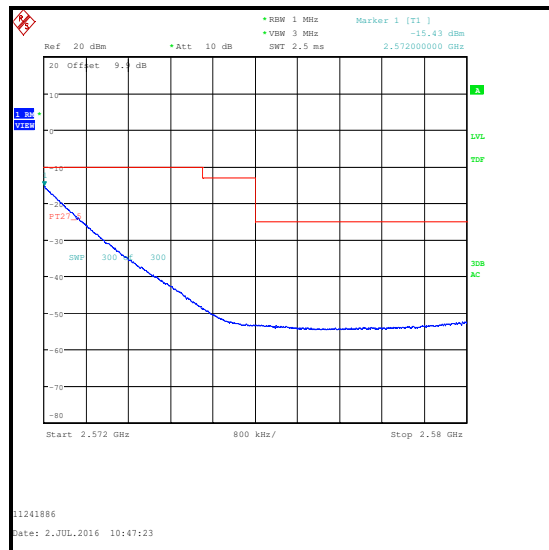
16QAM / 1 RB 0 Offset / 2490 to 2498 MHz



16QAM / 1 RB 0 Offset / 2498 to 2499 MHz / Integrated level



16QAM / 1 RB 24 Offset / 2571 to 2572 MHz / Integrated level

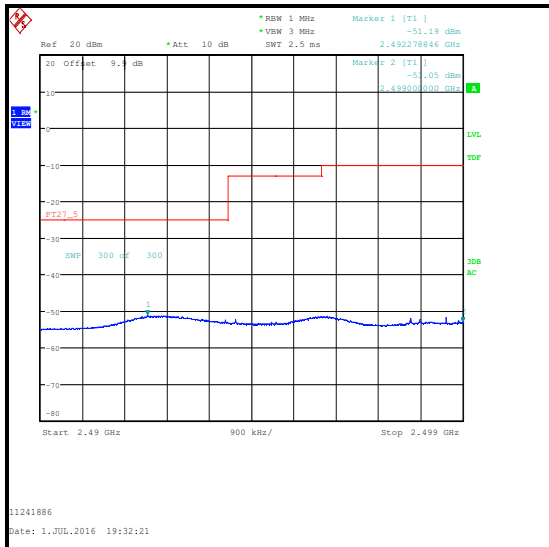


16QAM / 1 RB 24 Offset / 2572 to 2850 MHz

Transmitter Radiated Emissions at Band Edges ± X MHz (continued)

Results: 5 MHz Channel Bandwidth / 2490 to 2499 MHz & 2571 to 2580 MHz / 16QAM

Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2492.279	1	24	-51.2	-10.0	41.2	Complied
2499	1	24	-53.0	-10.0	43.0	Complied
2571	1	0	-50.3	-10.0	40.3	Complied
2578.587	1	0	-45.5	-10.0	35.5	Complied



16QAM / 1 RB 24 Offset / 2490 to 2499 MHz



16QAM / 1 RB 0 Offset / 2571 to 2580 MHz

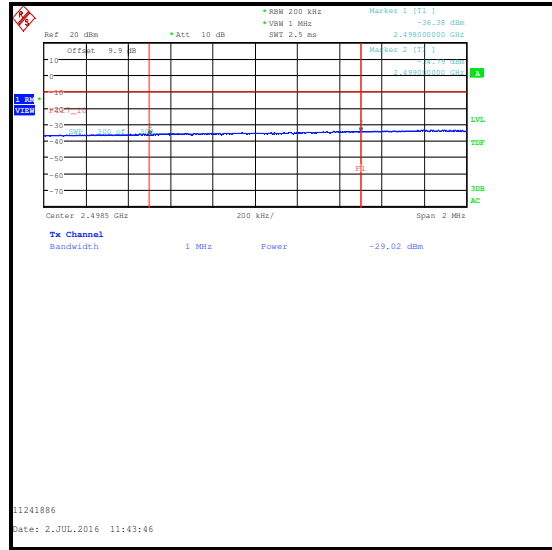
Transmitter Radiated Emissions at Band Edges ± X MHz (continued)

Results: 10 MHz Channel Bandwidth / 2483 to 2499 MHz & 2571 to 2586 MHz / QPSK

Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2498	50	0	-36.0	-10.0	26.0	Complied
2498 to 2499	50	0	-29.0*	-10.0	19.0	Complied
2571 to 2572	50	0	-23.2*	-10.0	13.2	Complied
2572	50	0	-23.2	-10.0	13.2	Complied



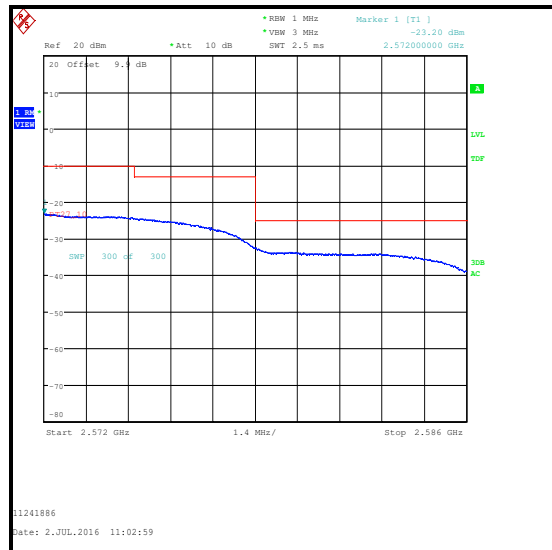
QPSK / 50 RB 0 Offset / 2483 to 2498 MHz



QPSK / 50 RB 0 Offset / 2498 to 2499 MHz / Integrated level



QPSK / 50 RB 0 Offset / 2571 to 2572 MHz / Integrated level

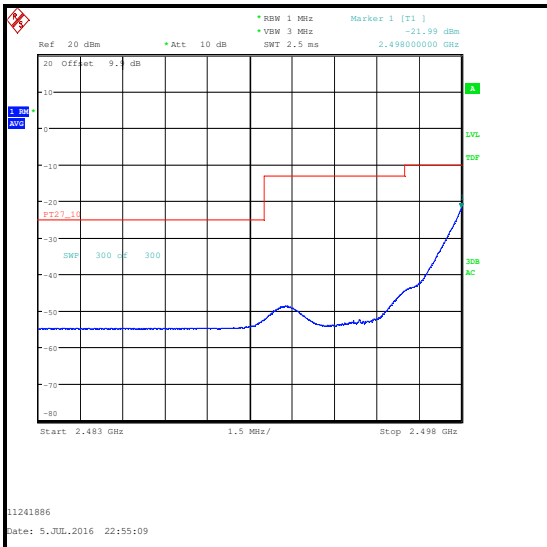


QPSK / 50 RB 0 Offset / 2572 to 2586 MHz

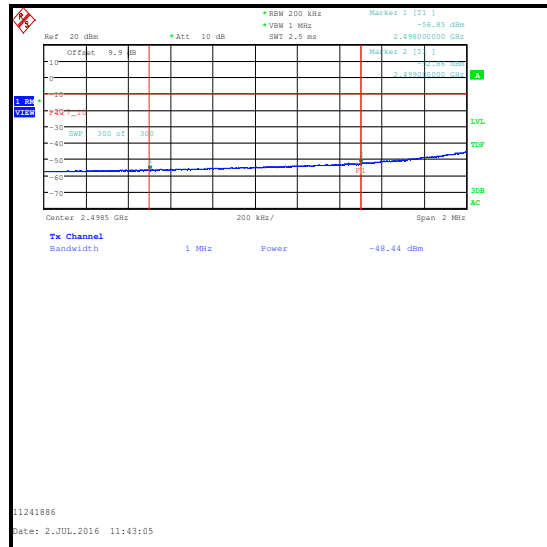
Transmitter Radiated Emissions at Band Edges \pm X MHz (continued)

Results: 10 MHz Channel Bandwidth / 2483 to 2499 MHz & 2571 to 2586 MHz / QPSK

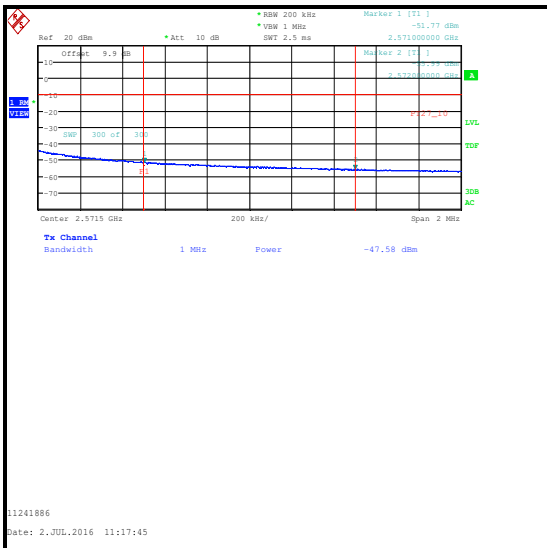
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2498	1	0	-22.0	-10.0	12.0	Complied
2498 to 2499	1	0	-48.4*	-10.0	38.4	Complied
2571 to 2572	1	49	-47.6*	-10.0	37.6	Complied
2572	1	49	-17.8	-10.0	7.8	Complied



QPSK / 1 RB 0 Offset / 2483 to 2498 MHz



QPSK / 1 RB 0 Offset / 2498 to 2499 MHz / Integrated level



QPSK / 1 RB 49 Offset / 2571 to 2572 MHz / Integrated level

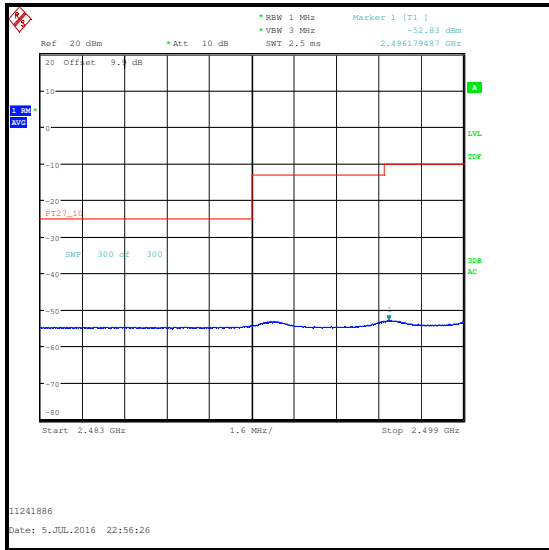


QPSK / 1 RB 49 Offset / 2572 to 2586 MHz

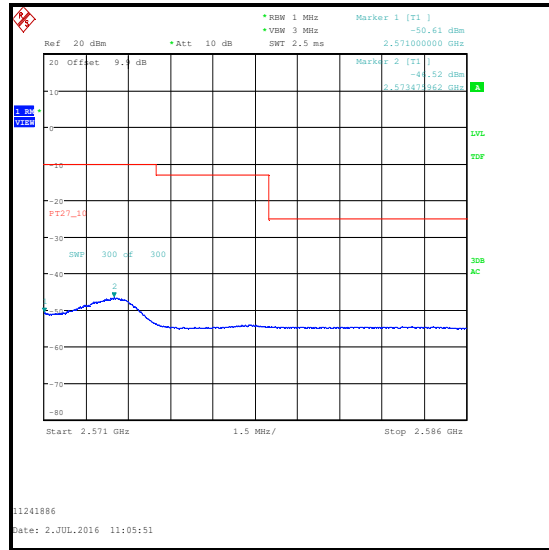
Transmitter Radiated Emissions at Band Edges ± X MHz (continued)

Results: 10 MHz Channel Bandwidth / 2483 to 2499 MHz & 2571 to 2586 MHz / QPSK

Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2496.179	1	49	-52.8	-10.0	42.8	Complied
2571	1	0	-50.6*	-10.0	40.6	Complied
2573.476	1	0	-46.5	-10.0	36.5	Complied



QPSK / 1 RB 49 Offset / 2483 to 2499 MHz



QPSK / 1 RB 0 Offset / 2571 to 2586 MHz

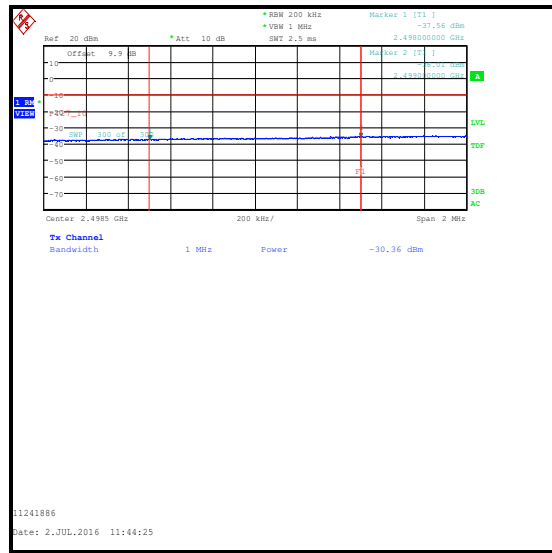
Transmitter Radiated Emissions at Band Edges ± X MHz (continued)

Results: 10 MHz Channel Bandwidth / 2483 to 2499 MHz & 2571 to 2586 MHz / 16QAM

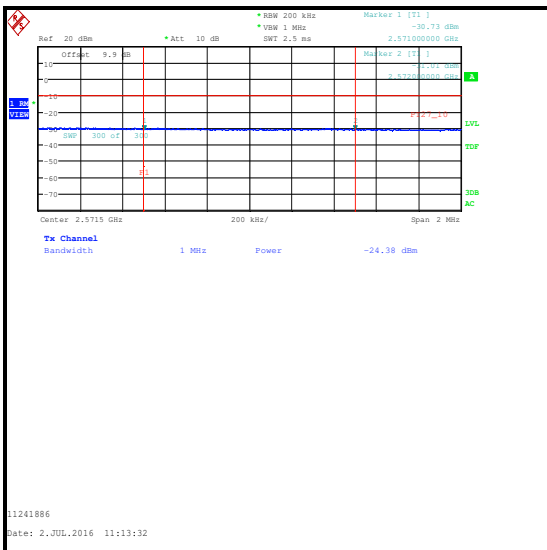
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2498	50	0	--36.5	-10.0	26.5	Complied
2498 to 2499	50	0	-30.4*	-10.0	20.4	Complied
2571 to 2572	50	0	-24.4*	-10.0	14.4	Complied
2572	50	0	-24.2	-10.0	14.2	Complied



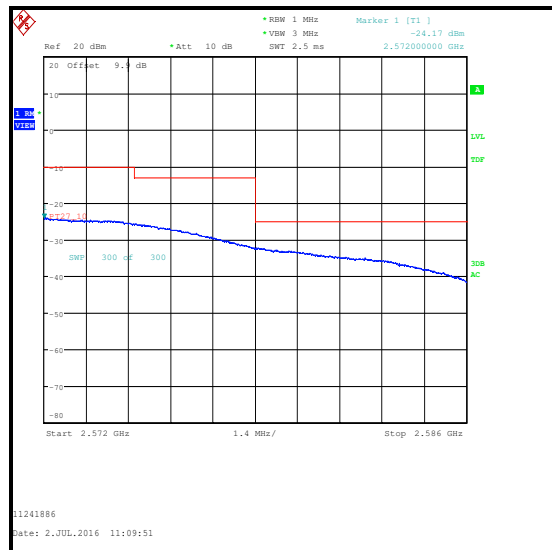
16QAM / 50 RB 0 Offset / 2483 to 2498 MHz



16QAM / 50 RB 0 Offset / 2498 to 2499 MHz / Integrated level



16QAM / 50 RB 0 Offset / 2571 to 2572 MHz / Integrated level



16QAM / 50 RB 0 Offset / 2572 to 2586 MHz

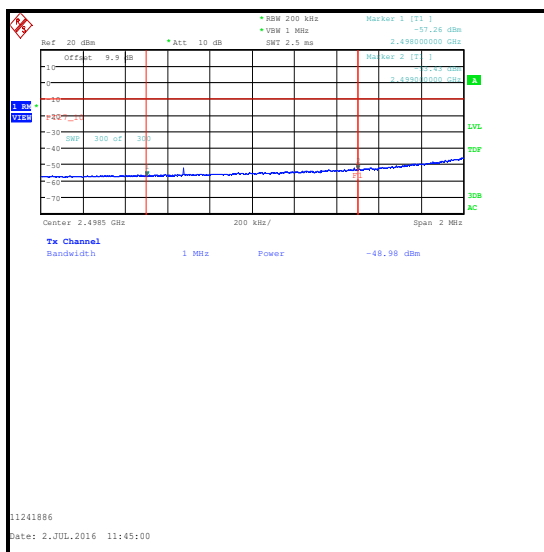
Transmitter Radiated Emissions at Band Edges ± X MHz (continued)

Results: 10 MHz Channel Bandwidth / 2483 to 2499 MHz & 2571 to 2586 MHz / 16QAM

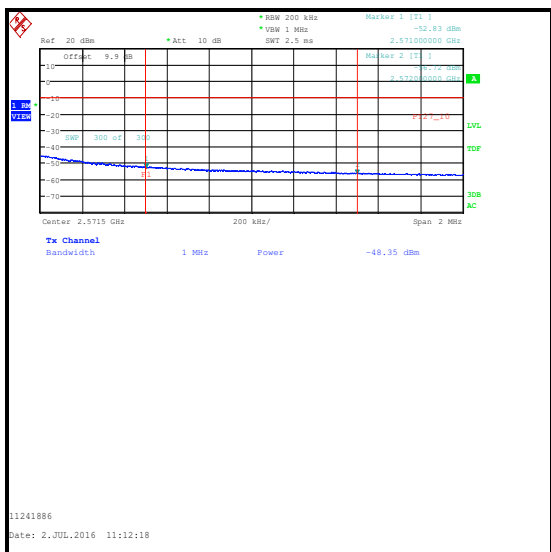
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2498	1	0	-22.8	-10.0	12.8	Complied
2498 to 2499	1	0	-49.0*	-10.0	39.0	Complied
2571 to 2572	1	49	-48.3*	-10.0	38.3	Complied
2572	1	49	-18.8	-10.0	8.8	Complied



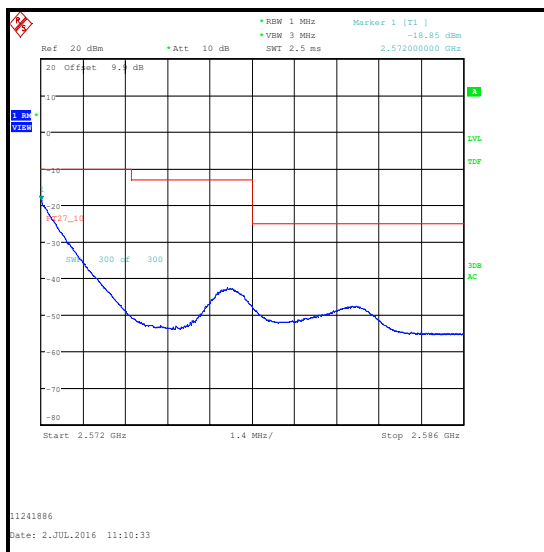
16QAM / 1 RB 0 Offset / 2483 to 2498 MHz



16QAM / 1 RB 0 Offset / 2498 to 2499 MHz / Integrated level



16QAM / 1 RB 49 Offset / 2571 to 2572 MHz / Integrated level

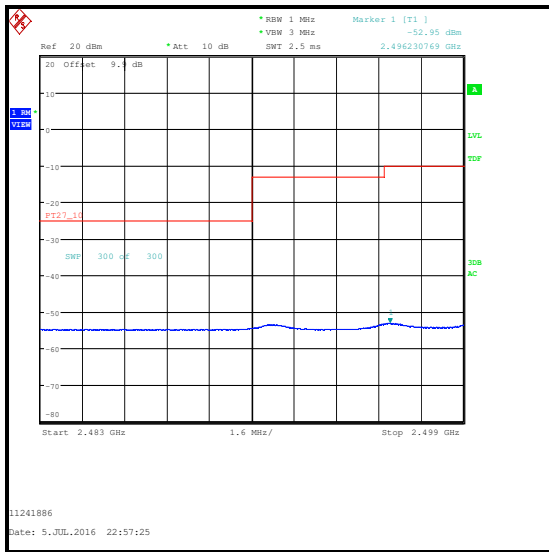


16QAM / 1 RB 49 Offset / 2572 to 2586 MHz

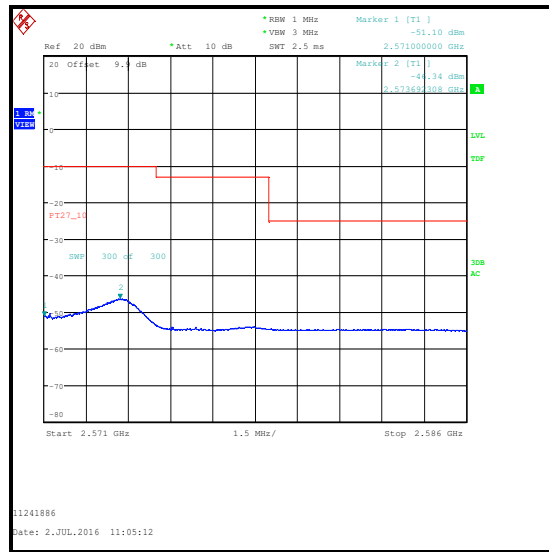
Transmitter Radiated Emissions at Band Edges \pm X MHz (continued)

Results: 10 MHz Channel Bandwidth / 2483 to 2499 MHz & 2571 to 2586 MHz / 16QAM

Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2496.846	1	49	-52.9	-10.0	42.9	Complied
2571	1	0	-51.1	-10.0	41.1	Complied
2573.692	1	0	-46.3	-10.0	36.3	Complied



16QAM / 1 RB 49 Offset / 2483 to 2499 MHz



16QAM / 1 RB 0 Offset / 2571 to 2586 MHz

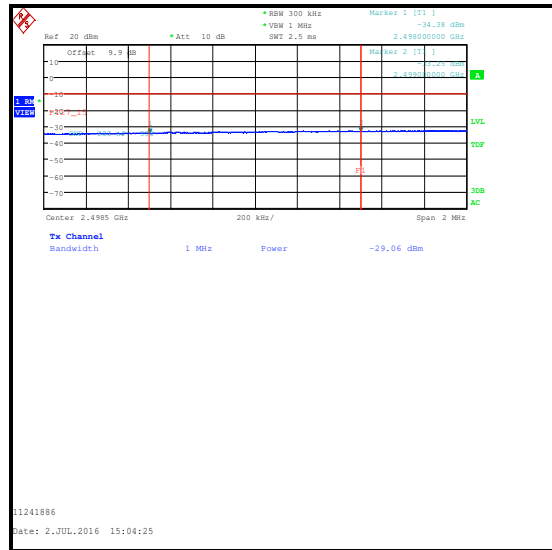
Transmitter Radiated Emissions at Band Edges ± X MHz (continued)

Results: 15 MHz Channel Bandwidth / 2475 to 2499 MHz & 2571 to 2595 MHz / QPSK

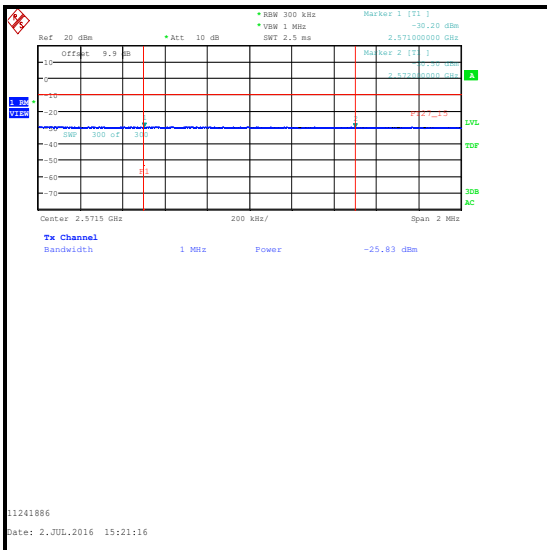
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2498	75	0	-40.8	-10.0	30.8	Complied
2498 to 2499	75	0	-29.1*	-10.0	19.1	Complied
2571 to 2572	75	0	-25.8*	-10.0	15.8	Complied
2572	75	0	-25.6	-10.0	15.6	Complied



QPSK / 75 RB 0 Offset / 2475 to 2498 MHz



QPSK / 75 RB 0 Offset / 2498 to 2499 MHz / Integrated level



QPSK / 75 RB 0 Offset / 2571 to 2572 MHz / Integrated level

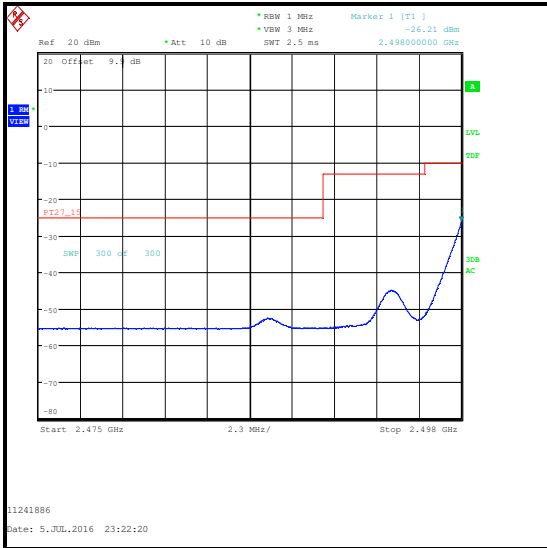


QPSK / 75 RB 0 Offset / 2572 to 2595 MHz

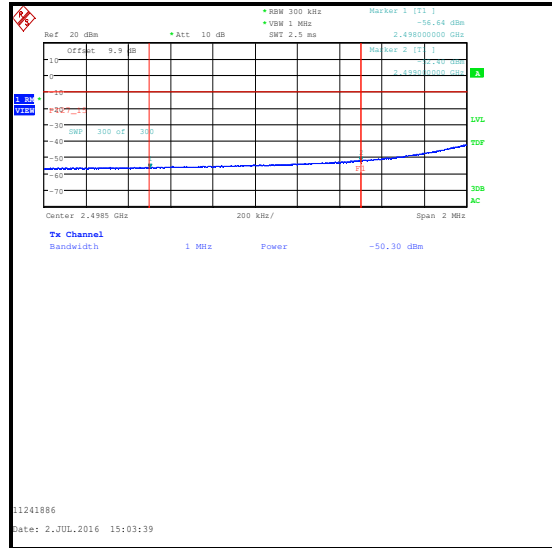
Transmitter Radiated Emissions at Band Edges ± X MHz (continued)

Results: 15 MHz Channel Bandwidth / 2475 to 2499 MHz & 2571 to 2595 MHz / QPSK

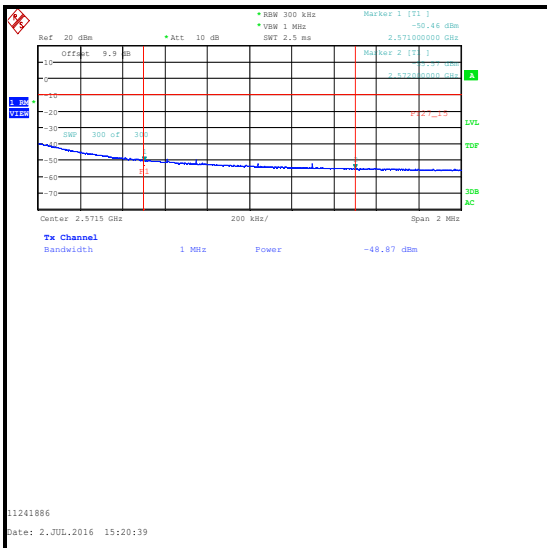
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2498	1	0	-26.2	-10.0	16.2	Complied
2498 to 2499	1	0	-50.3*	-10.0	40.3	Complied
2571 to 2572	1	74	-48.9*	-10.0	38.9	Complied
2572	1	74	-22.7	-10.0	12.7	Complied



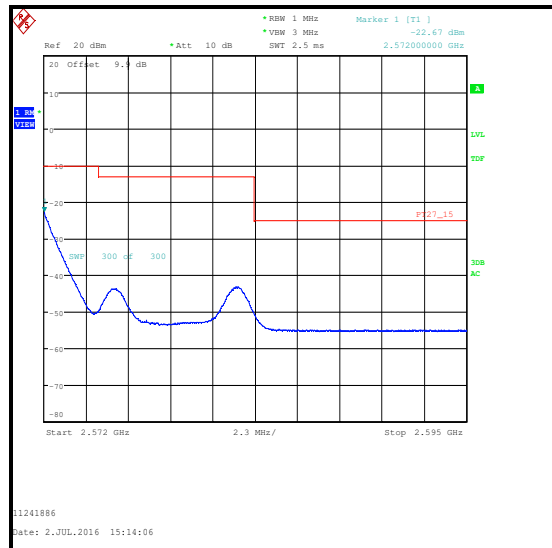
QPSK / 1 RB 0 Offset / 2475 to 2498 MHz



QPSK / 1 RB 0 Offset / 2498 to 2499 MHz / Integrated level



QPSK / 1 RB 74 Offset / 2571 to 2572 MHz / Integrated level

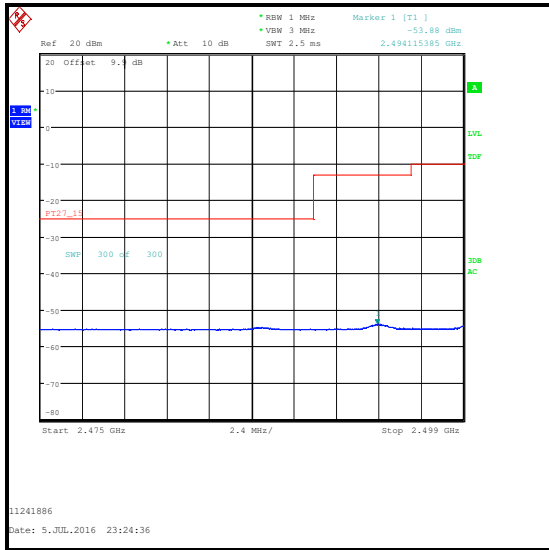


QPSK / 1 RB 74 Offset / 2572 to 2595 MHz

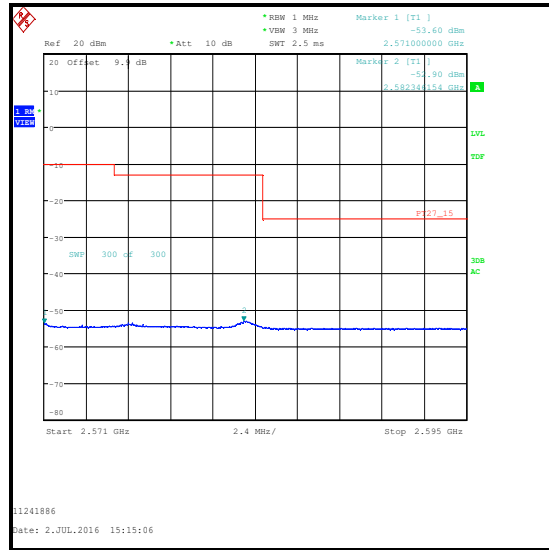
Transmitter Radiated Emissions at Band Edges \pm X MHz (continued)

Results: 15 MHz Channel Bandwidth / 2475 to 2499 MHz & 2571 to 2595 MHz / QPSK

Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2494.115	1	74	-53.9	-13.0	40.9	Complied
2571	1	0	-53.6	-10.0	43.6	Complied
2582.346	1	0	-52.9	-13.0	39.9	Complied



QPSK / 1 RB 74 Offset / 2475 to 2499 MHz

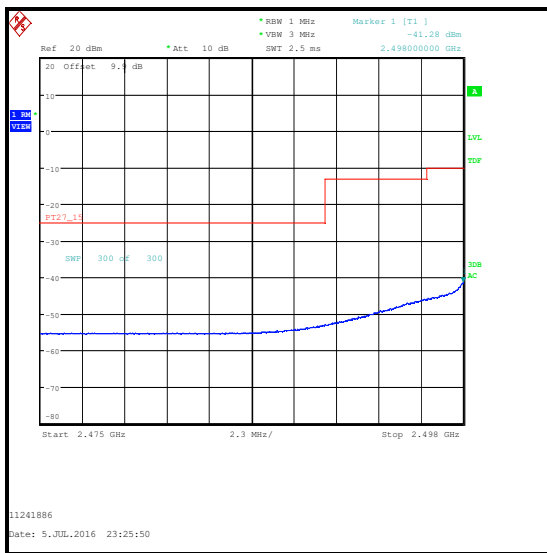


QPSK / 1 RB 0 Offset / 2571 to 2595 MHz

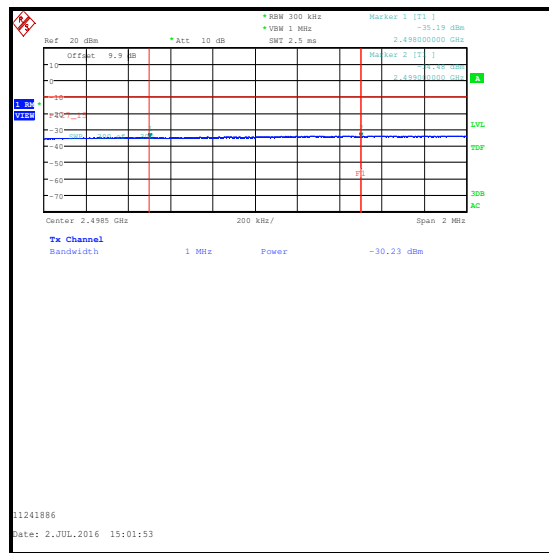
Transmitter Radiated Emissions at Band Edges \pm X MHz (continued)

Results: 15 MHz Channel Bandwidth / 2475 to 2499 MHz & 2571 to 2595MHz / 16QAM

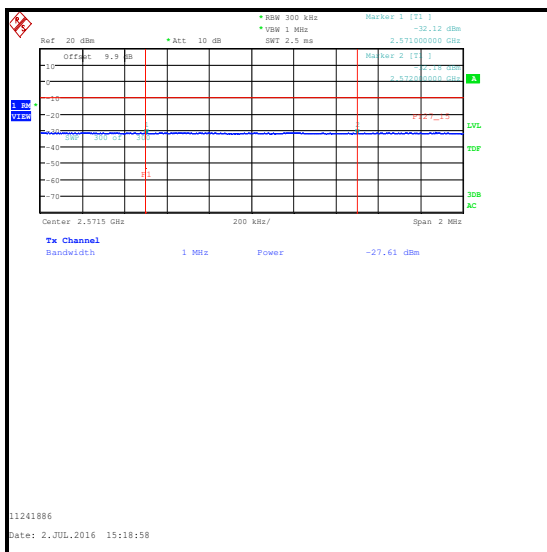
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2498	75	0	-41.3	-10.0	31.3	Complied
2498 to 2499	75	0	-30.2*	-10.0	20.2	Complied
2571 to 2572	75	0	-27.6*	-10.0	17.6	Complied
2572	75	0	-27.1	-10.0	17.1	Complied



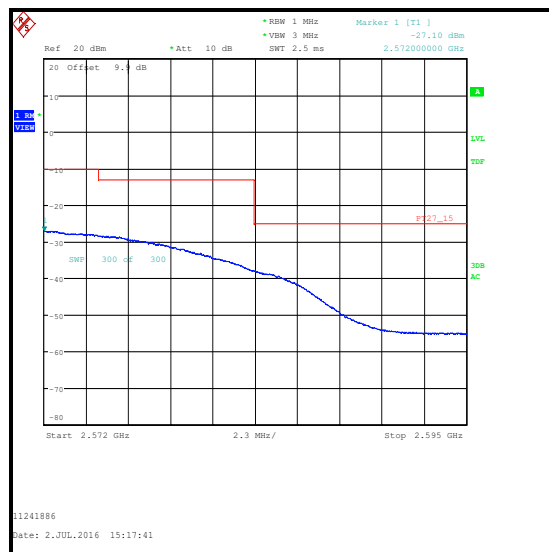
16QAM / 75 RB 0 Offset / 2475 to 2498 MHz



16QAM / 75 RB 0 Offset / 2498 to 2499 MHz / Integrated level



16QAM / 75 RB 0 Offset / 2571 to 2572 MHz / Integrated level

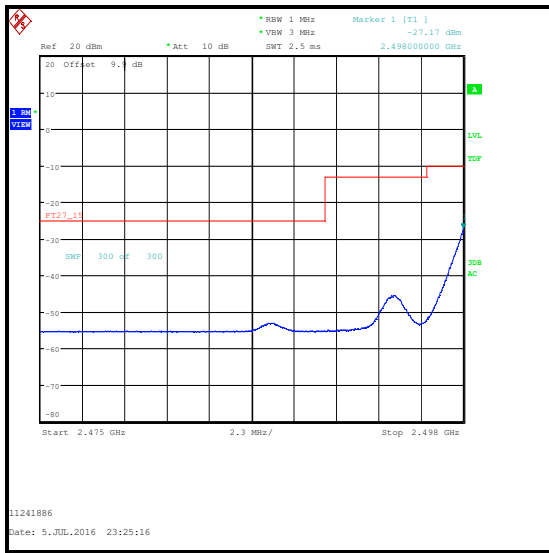


16QAM / 75 RB 0 Offset / 2572 to 2595MHz

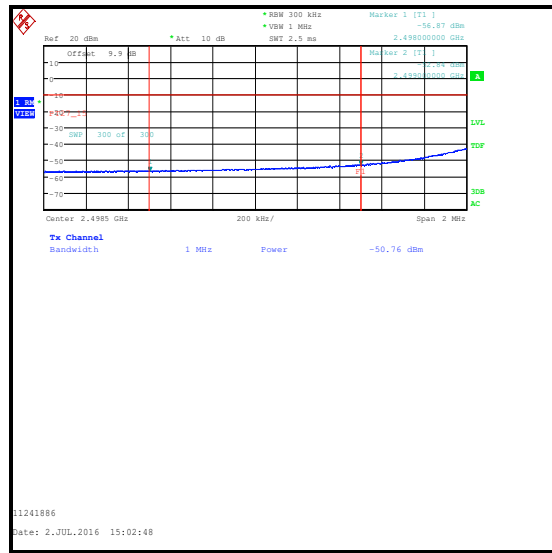
Transmitter Radiated Emissions at Band Edges ± X MHz (continued)

Results: 15 MHz Channel Bandwidth / 2475 to 2499 MHz & 2571 to 2595MHz / 16QAM

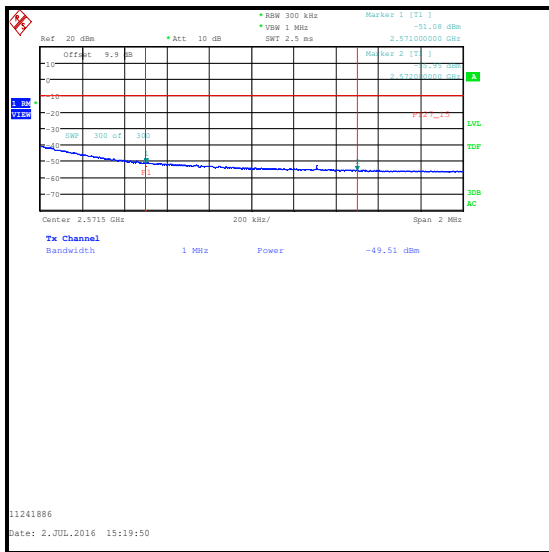
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2498	1	0	-27.2	-10.0	17.2	Complied
2498 to 2499	1	0	-50.8*	-10.0	40.8	Complied
2571 to 2572	1	74	-49.5*	-10.0	39.5	Complied
2572	1	74	-23.4	-10.0	13.4	Complied



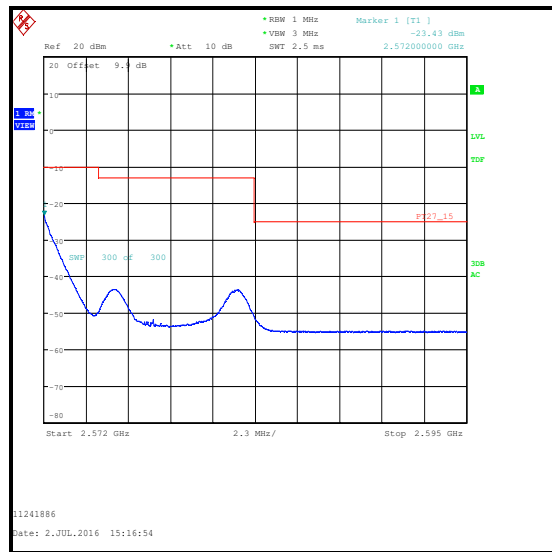
16QAM / 1 RB 0 Offset / 2475 to 2498 MHz



16QAM / 1 RB 0 Offset / 2498 to 2499 MHz / Integrated level



16QAM / 1 RB 74 Offset / 2571 to 2572 MHz / Integrated level

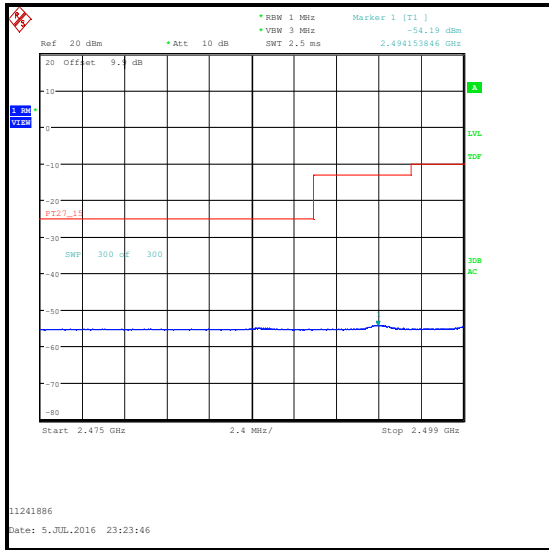


16QAM / 1 RB 74 Offset / 2572 to 2595 MHz

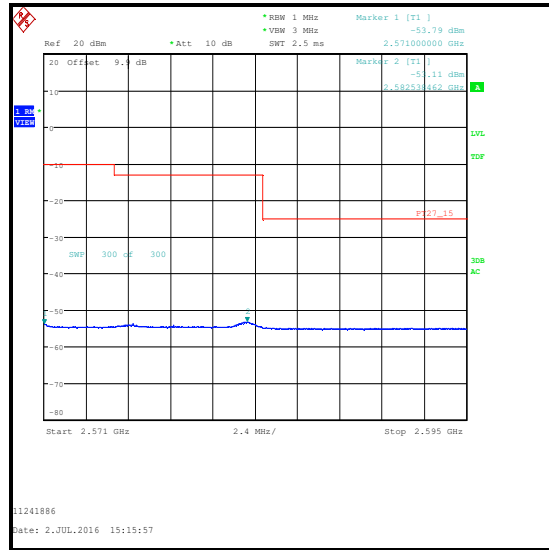
Transmitter Radiated Emissions at Band Edges \pm X MHz (continued)

Results: 15 MHz Channel Bandwidth / 2475 to 2499 MHz & 2571 to 2595 MHz / 16QAM

Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2494.154	1	74	-54.2	-13.0	41.2	Complied
2571	1	0	-53.8	-10.0	43.8	Complied
2582.538	1	0	-53.1	-13.0	40.1	Complied



16QAM / 1 RB 74 Offset / 2475 to 2499 MHz



16QAM / 1 RB 0 Offset / 2571 to 2595 MHz

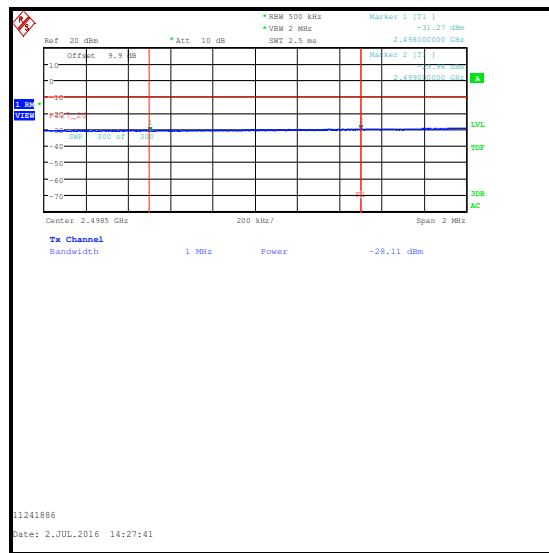
Transmitter Radiated Emissions at Band Edges ± X MHz (continued)

Results: 20 MHz Channel Bandwidth / 2466 to 2499 MHz & 2571 to 2604 MHz / QPSK

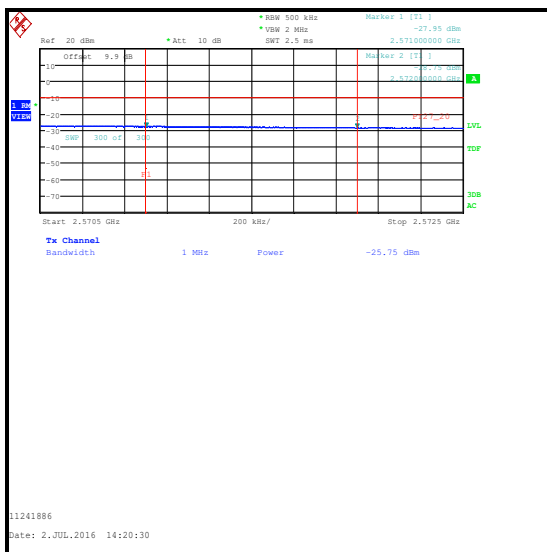
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2498	100	0	-41.6	-10.0	31.6	Complied
2498 to 2499	100	0	-28.1*	-10.0	18.1	Complied
2571 to 2572	100	0	-25.7*	-10.0	15.7	Complied
2572	100	0	-25.1	-10.0	15.1	Complied



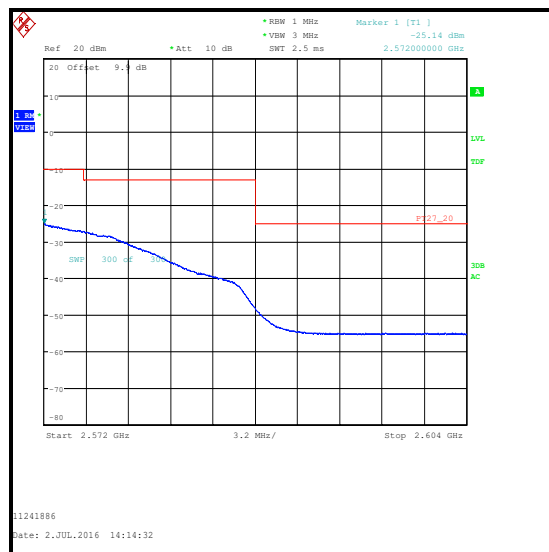
QPSK / 100 RB 0 Offset / 2466 to 2498 MHz



QPSK / 100 RB 0 Offset / 2498 to 2499 MHz / Integrated level



QPSK / 100 RB 0 Offset / 2571 to 2572 MHz / Integrated level

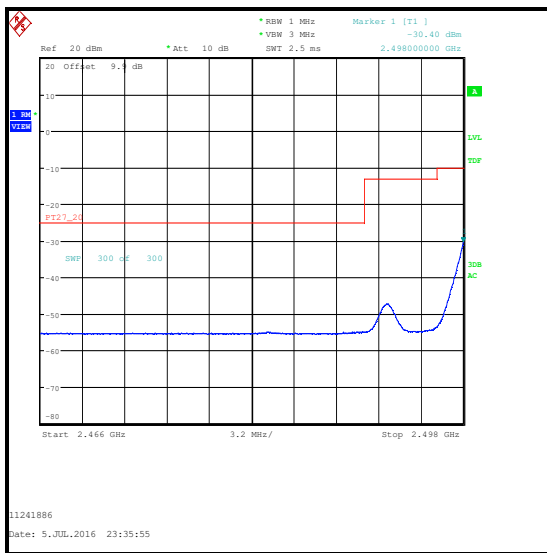


QPSK / 100 RB 0 Offset / 2572 to 2604 MHz

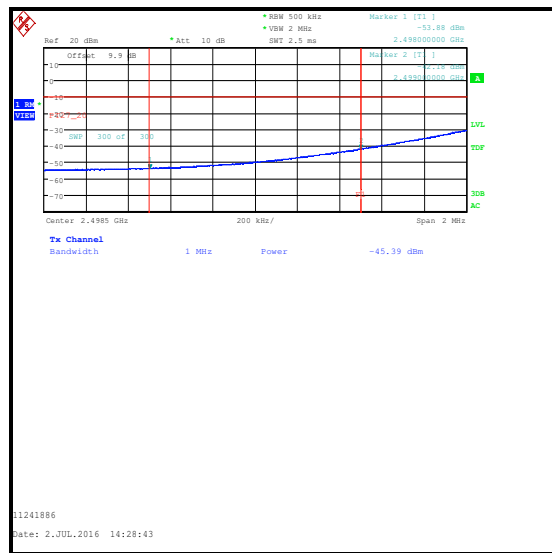
Transmitter Radiated Emissions at Band Edges ± X MHz (continued)

Results: 20 MHz Channel Bandwidth / 2466 to 2499 MHz & 2571 to 2604 MHz / QPSK

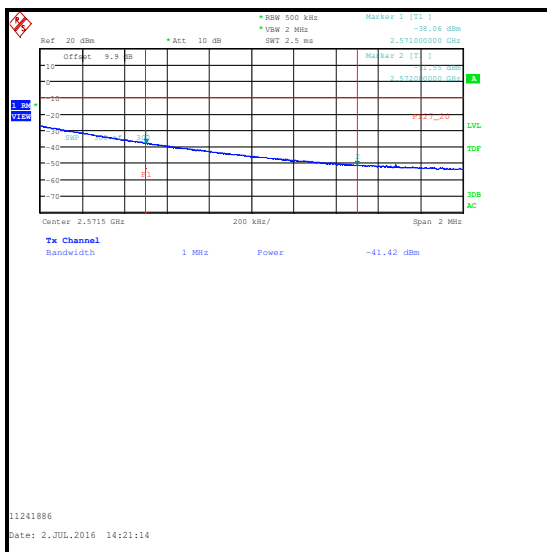
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2498	1	0	-30.4	-10.0	20.4	Complied
2498 to 2499	1	0	-45.4*	-10.0	35.4	Complied
2571 to 2572	1	99	-41.4*	-10.0	31.4	Complied
2572	1	99	-26.0	-10.0	16.0	Complied



QPSK / 1 RB 0 Offset / 2466 to 2498 MHz



QPSK / 1 RB 0 Offset / 2498 to 2499 MHz / Integrated level



QPSK / 1 RB 99 Offset / 2571 to 2572 MHz / Integrated level

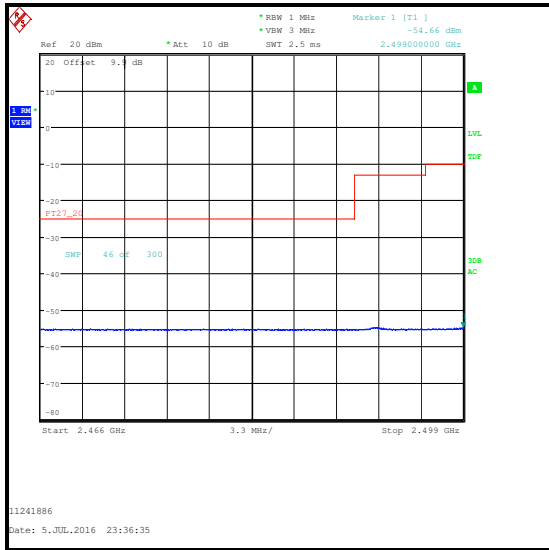


QPSK / 1 RB 99 Offset / 2572 to 2604 MHz

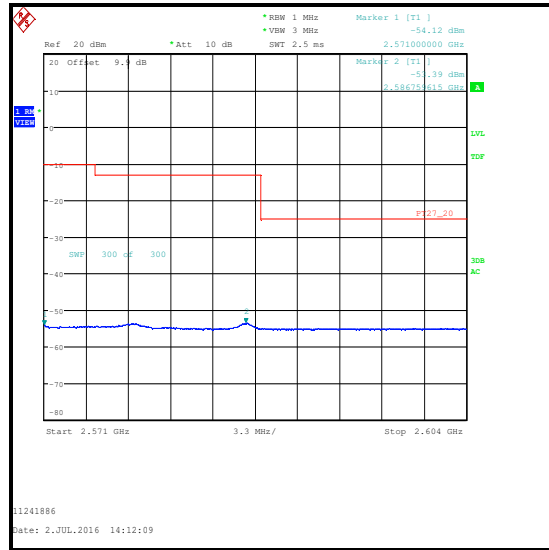
Transmitter Radiated Emissions at Band Edges ± X MHz (continued)

Results: 20 MHz Channel Bandwidth / 2466 to 2499 MHz & 2571 to 2604 MHz / QPSK

Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2499	1	99	-54.7	-10.0	44.7	Complied
2571	1	0	-54.1	-10.0	44.1	Complied
2586.760	1	0	-54.4	-13.0	31.4	Complied



QPSK / 1 RB 99 Offset / 2466 to 2499 MHz

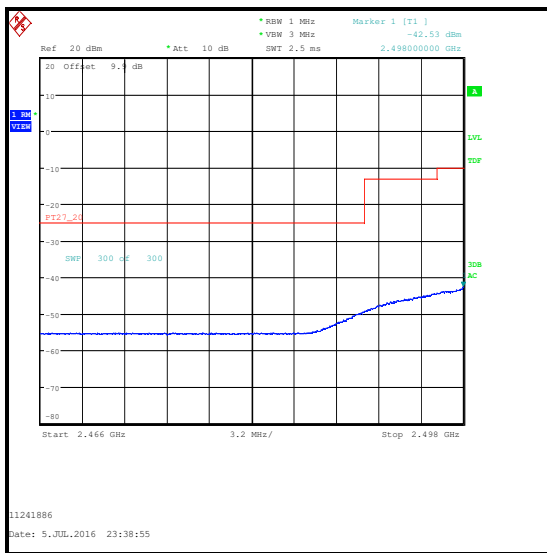


QPSK / 1 RB 0 Offset / 2571 to 2604 MHz

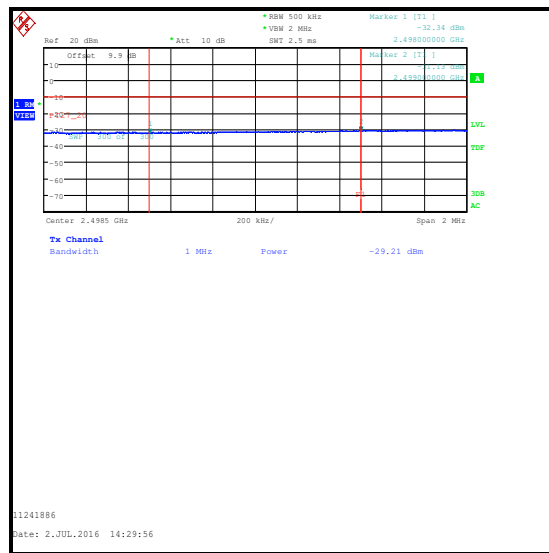
Transmitter Radiated Emissions at Band Edges \pm X MHz (continued)

Results: 20 MHz Channel Bandwidth / 2466 to 2499 MHz & 2571 to 2604 MHz / 16QAM

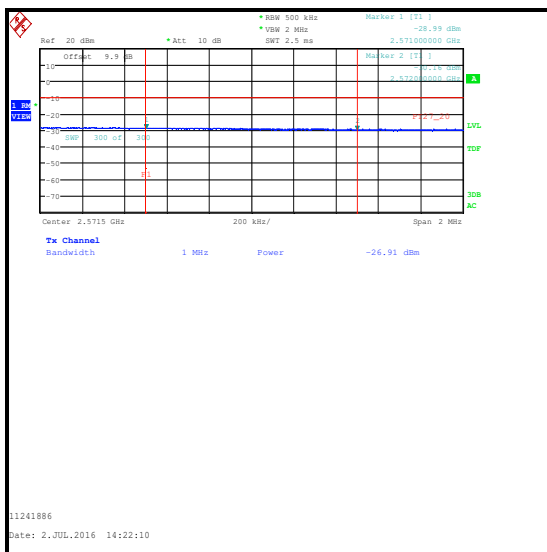
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2498	100	0	-42.5	-10.0	32.5	Complied
2498 to 2499	100	0	-29.2*	-10.0	19.2	Complied
2571 to 2572	100	0	-26.9*	-10.0	16.9	Complied
2572	100	0	-26.6	-10.0	16.6	Complied



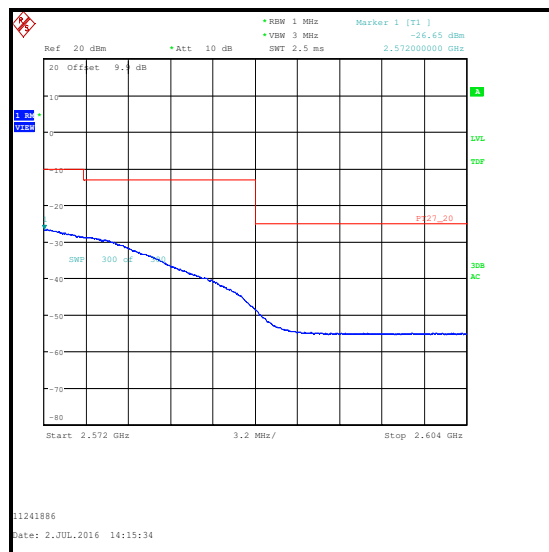
16QAM / 100 RB 0 Offset / 2466 to 2498 MHz



16QAM / 100 RB 0 Offset / 2498 to 2499 MHz / Integrated level



16QAM / 100 RB 0 Offset / 2571 to 2572 MHz / Integrated level

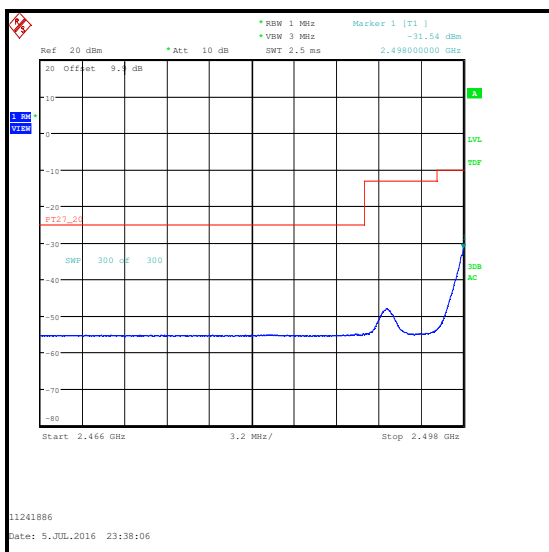


16QAM / 100 RB 0 Offset / 2572 to 2604 MHz

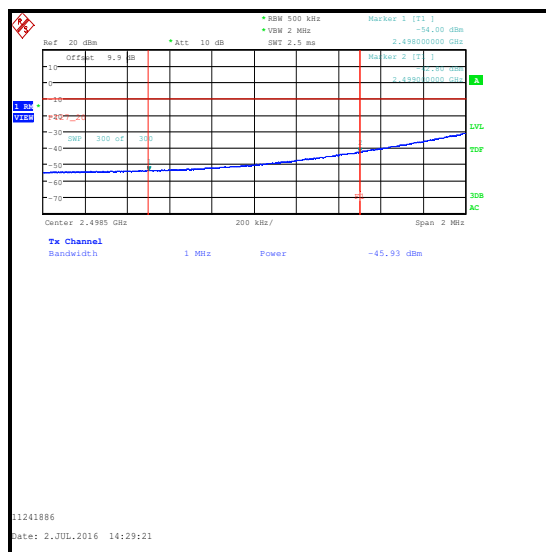
Transmitter Radiated Emissions at Band Edges ± X MHz (continued)

Results: 20 MHz Channel Bandwidth / 2466 to 2499 MHz & 2571 to 2604 MHz / 16QAM

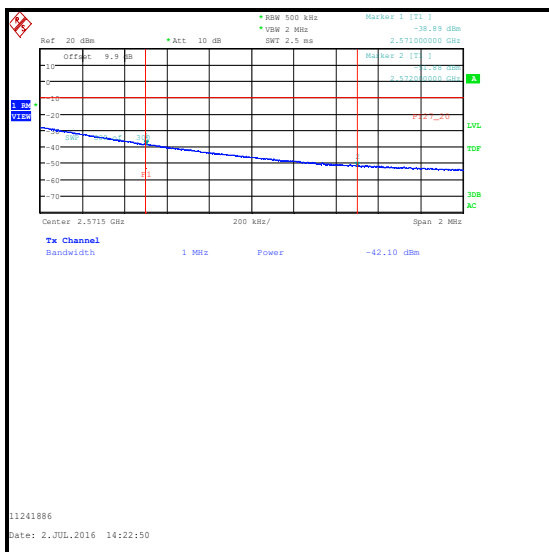
Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2498	1	0	-31.5	-10.0	21.5	Complied
2498 to 2499	1	0	-45.9*	-10.0	35.9	Complied
2571 to 2572	1	99	-42.1*	-10.0	32.9	Complied
2572	1	99	-26.8	-10.0	16.8	Complied



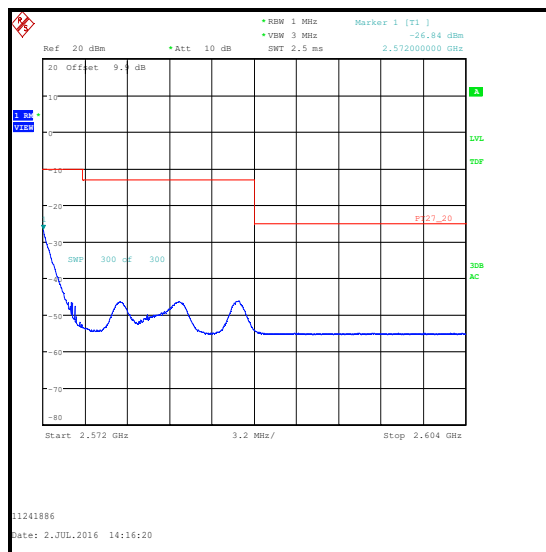
16QAM / 1 RB 0 Offset / 2466 to 2498 MHz



16QAM / 1 RB 0 Offset / 2498 to 2499 MHz / Integrated level



16QAM / 1 RB 99 Offset / 2571 to 2572 MHz / Integrated level

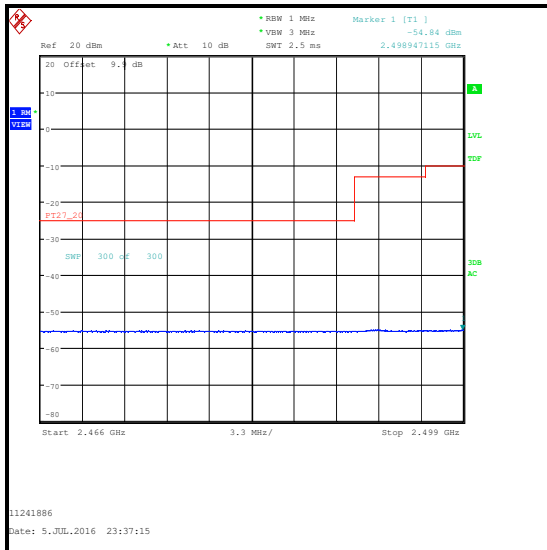


16QAM / 1 RB 99 Offset / 2572 to 2604MHz

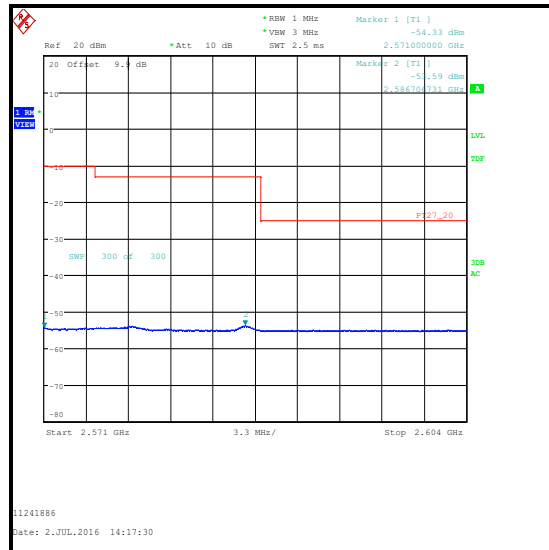
Transmitter Radiated Emissions at Band Edges ± X MHz (continued)

Results: 20 MHz Channel Bandwidth / 2466 to 2499 MHz & 2571 to 2604 MHz / 16QAM

Frequency (MHz)	Resource Block(s)	Resource Block Offset	Emission Level (dBm)	Limit (dBm)	Margin (dB)	Result
2498.947	1	24	-54.8	-10.0	44.8	Complied
2571	1	0	-54.3	-10.0	44.3	Complied
2586.707	1	0	-53.6	-13.0	40.6	Complied



16QAM / 1 RB 99 Offset / 2466 to 2499 MHz



16QAM / 1 RB 0 Offset / 2571 to 2604 MHz

Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
M2003	Thermohygrometer	Testo	608-H1	45046641	22 Apr 2017	12
K0017	3m RSE Chamber	Rainford EMC	N/A	N/A	17 May 2017	12
M1995	Test Receiver	Rohde & Schwarz	ESU40	100428	21 Mar 2017	12
A2893	Pre-Amplifier	Schwarzbeck	BBV 9721	9721-021	07 Apr 2017	12
A2889	Antenna	Schwarzbeck	BBHA 9120 B	BBHA 9120 B	07 Apr 2017	12
A2916	Attenuator	AtlanTecRF	AN18W5-10	832828#1	19 May 2017	12
A032	Antenna	EMCO	3115	2874	01 Mar 2019	36
M260	Signal Generator	Rohde & Schwarz	SMP02	829076/008	09 May 2017	12
A2937	Attenuator	AtlanTecRF	AN18W5-06	208147#1	23 May 2017	12
M199	Power Meter	Rohde & Schwarz	NRVS	827023/075	11 Apr 2018	24
M1267	Power Sensor	Rohde & Schwarz	NRV-Z52	100155	15 Apr 2018	24

5.2.11. Transmitter Frequency Stability (Temperature Variation)

Test Summary:

Test Engineer:	Stefan Ho	Test Date:	12 May 2016
Test Sample Serial Number:	C7CRG02QH6DH		

FCC Reference:	Parts 2.1055 & 27.54
Test Method Used:	KDB 971168 Section 9.0 referencing ANSI TIA-603-D-2010 Section 2.2.2 and FCC Part 2.1055

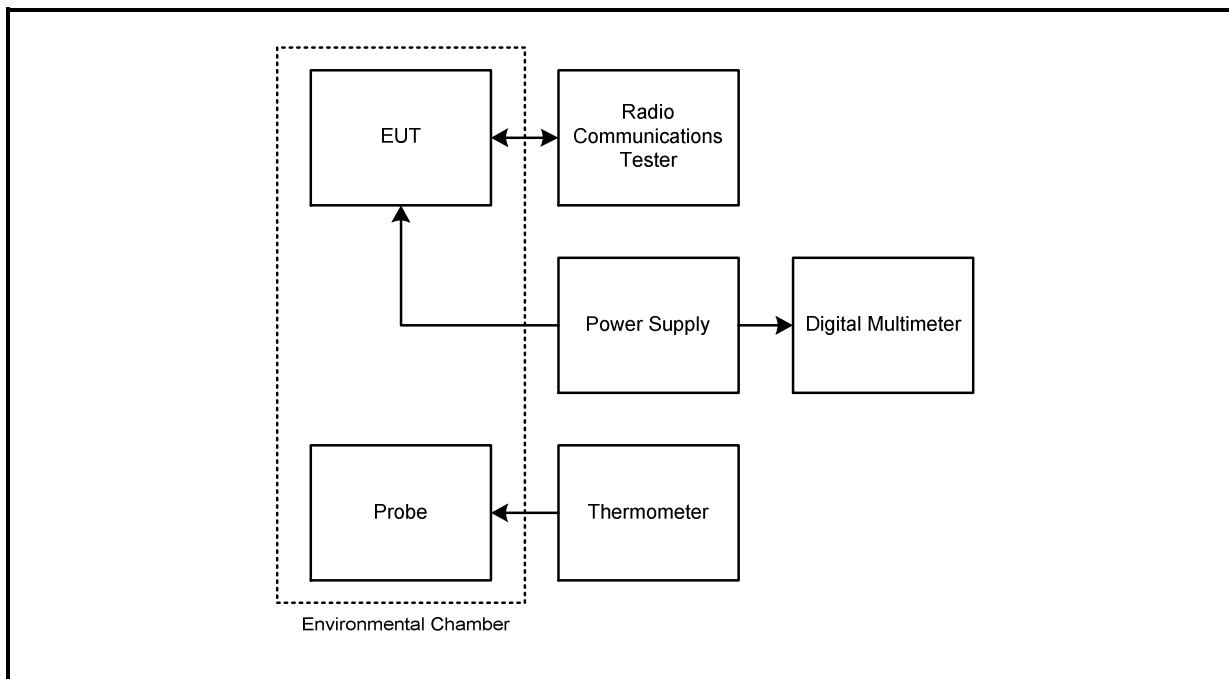
Environmental Conditions:

Temperature (°C):	25
Relative Humidity (%):	43

Note(s):

1. Flying leads were connected internally to the EUT in place of the battery. These leads extended and connected to a bench power supply at the nominal voltage of 3.8 V.
2. Frequency error was measured using a calibrated Rohde and Schwarz CMW 500 Universal Radio Communications Tester in accordance with current Rohde and Schwarz application notes. The EUT was connected by suitable RF cables to the CMW 500. A bi-directional communications link was established between the EUT and CMW 500. The frequency meter value was recorded.
3. Temperature was monitored throughout the test with a calibrated digital thermometer.

Test setup:



Transmitter Frequency Stability (Temperature Variation) (continued)**Results: Bottom Channel (2502.5 MHz)**

Temperature (°C)	Frequency Error (Hz)	Measured Frequency (MHz)	Lower Band Edge Limit (MHz)	Margin (MHz)	Result
-30	17	2502.499983	2500	2.499983	Complied
-20	12	2502.500012	2500	2.500012	Complied
-10	12	2502.500012	2500	2.500012	Complied
0	20	2502.499980	2500	2.499980	Complied
10	10	2502.500010	2500	2.500010	Complied
20	17	2502.499983	2500	2.499983	Complied
30	11	2502.500011	2500	2.500011	Complied
40	12	2502.500012	2500	2.500012	Complied
50	28	2502.500028	2500	2.500028	Complied

Results: Top Channel (2567.5 MHz)

Temperature (°C)	Frequency Error (Hz)	Measured Frequency (MHz)	Upper Band Edge Limit (MHz)	Margin (MHz)	Result
-30	10	2567.500010	2570	2.499990	Complied
-20	16	2567.499984	2570	2.500016	Complied
-10	11	2567.500011	2570	2.499989	Complied
0	12	2567.500012	2570	2.499988	Complied
10	9	2567.500009	2570	2.499991	Complied
20	12	2567.500012	2570	2.499988	Complied
30	26	2567.499974	2570	2.500026	Complied
40	12	2567.500012	2570	2.499988	Complied
50	30	2567.500030	2570	2.499970	Complied

Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
M1659	Thermohygrometer	JM Handelpunkt	30.5015.13	None stated	02 Apr 2017	12
M1869	Wideband Radio Comms Tester	Rohde & Schwarz	CMW 500	145923	05 Apr 2017	12
M1674	Environmental Chamber	Espec Corporation	SU-241	90213139	Calibrated before use	-
M1642	Thermometer	Fluke	52II	18890119	25 Apr 2017	12
S0576	DC power supply	TTI	PL330QMD	066701	Calibrated before use	-
M122	Multimeter	Fluke	77	64910017	21 Apr 2017	12

5.2.12. Transmitter Frequency Stability (Voltage Variation)**Test Summary:**

Test Engineer:	Stefan Ho	Test Date:	12 May 2016
Test Sample Serial Number:	C7CRG02QH6DH		

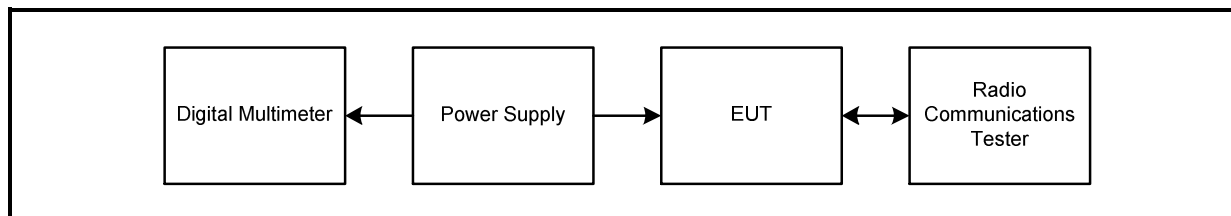
FCC Reference:	Parts 2.1055 & 27.54
Test Method Used:	KDB 971168 Section 9.0 referencing ANSI TIA-603-D-2010 Section 2.2.2 and FCC Part 2.1055

Environmental Conditions:

Temperature (°C):	25
Relative Humidity (%):	43

Note(s):

1. Flying leads were connected internally to the EUT in place of the battery. These leads extended and connected to a bench power supply.
2. Frequency error was measured using a calibrated Rohde and Schwarz CMW 500 Universal Radio Communications Tester in accordance with current Rohde and Schwarz application notes. The EUT was connected by suitable RF cables to the CMW 500. A bi-directional communications link was established between the EUT and CMW 500. The frequency meter value was recorded.
3. Voltage was monitored throughout the test with a calibrated digital voltmeter.

Test setup:

Transmitter Frequency Stability (Voltage Variation) (continued)**Results: Bottom Channel (2502.5 MHz)**

Supply Voltage (V)	Frequency Error (Hz)	Measured Frequency (MHz)	Lower Band Edge Limit (MHz)	Margin (MHz)	Result
3.4	14	2502.500014	2500	2.500014	Complied
4.2	15	2502.499985	2500	2.499985	Complied

Results: Top Channel (2567.5 MHz)

Supply Voltage (V)	Frequency Error (Hz)	Measured Frequency (MHz)	Upper Band Edge Limit (MHz)	Margin (MHz)	Result
3.4	5	2567.500005	2570	2.499995	Complied
4.2	11	2567.500011	2570	2.499989	Complied

Test Equipment Used:

Asset No.	Instrument	Manufacturer	Type No.	Serial No.	Date Calibration Due	Cal. Interval (Months)
M1659	Thermohygrometer	JM Handlungspunkt	30.5015.13	None stated	02 Apr 2017	12
M1869	Wideband Radio Comms Tester	Rohde & Schwarz	CMW 500	145923	05 Apr 2017	12
S0576	DC power supply	TTI	PL330QMD	066701	Calibrated before use	-
M122	Multimeter	Fluke	77	64910017	21 Apr 2017	12

6. Measurement Uncertainty

No measurement or test can ever be perfect and the imperfections give rise to error of measurement in the results. Consequently the result of a measurement is only an approximation to the value of the measurand (the specific quantity subject to measurement) and is only complete when accompanied by a statement of the uncertainty of the approximation.

The expression of uncertainty of a measurement result allows realistic comparison of results with reference values and limits given in specifications and standards.

The uncertainty of the result may need to be taken into account when interpreting the measurement results.

The reported expanded uncertainties below are based on a standard uncertainty multiplied by an appropriate coverage factor such that a confidence level of approximately 95% is maintained. For the purposes of this document “approximately” is interpreted as meaning “effectively” or “for most practical purposes”.

Measurement Type	Range	Confidence Level (%)	Calculated Uncertainty
Conducted Output Power	2500 to 2570 MHz	95%	±1.36 dB
Frequency Stability	2500 to 2570 MHz	95%	±23 Hz
Occupied Bandwidth	2500 to 2570 MHz	95%	±3.92 %
Radiated Spurious Emissions	30 MHz to 1 GHz	95%	±2.94 dB
Radiated Spurious Emissions	1 GHz to 26 GHz	95%	±2.94 dB

The methods used to calculate the above uncertainties are in line with those recommended within the various measurement specifications. Where measurement specifications do not include guidelines for the evaluation of measurement uncertainty the published guidance of the appropriate accreditation body is followed.

7. Report Revision History

Version Number	Revision Details		
	Page No(s)	Clause	Details
1.0	-	-	Initial Version
2.0	-	-	Updates as requested by the TCB
3.0	-	-	Updates as requested by the TCB
4.0	-	-	Updates as requested by the TCB

--- END OF REPORT ---