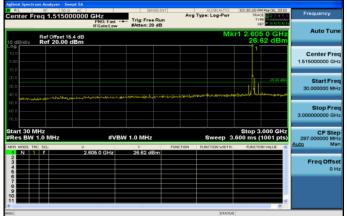


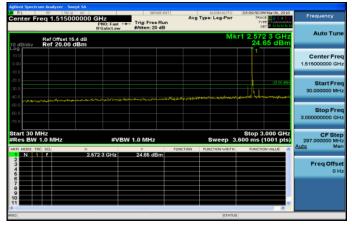
#### 30MHz~3GHz\_Band38\_15MHz\_QPSK\_1\_0\_HighCH3817 5-2612.5



3GHz~10GHz\_Band38\_15MHz\_QPSK\_1\_0\_HighCH3817 5-2612.5



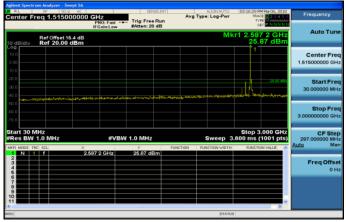
30MHz~3GHz\_Band38\_20MHz\_QPSK\_1\_0\_LowCH37850 -2580



#### 3GHz~10GHz\_Band38\_20MHz\_QPSK\_1\_0\_LowCH37850 -2580



30MHz~3GHz Band38 20MHz QPSK 1 0 MidCH38000 -2595



3GHz~10GHz\_Band38\_20MHz\_QPSK\_1\_0\_MidCH38000 -2595



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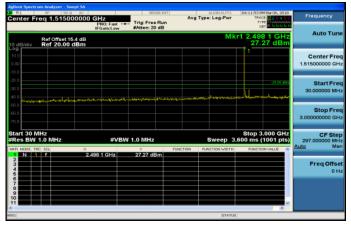
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3GHz~10GHz Band38 20MHz QPSK 1 0 HighCH3815 0-2610



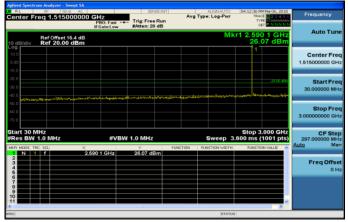
30MHz~3GHz\_Band41\_5MHz\_QPSK\_1\_0\_LowCH39675-2498.5



#### 3GHz~10GHz\_Band41\_5MHz\_QPSK\_1\_0\_LowCH39675-2498.5



30MHz~3GHz\_Band41\_5MHz\_QPSK\_1\_0\_MidCH40620-2593



3GHz~10GHz\_Band41\_5MHz\_QPSK\_1\_0\_MidCH40620-2593



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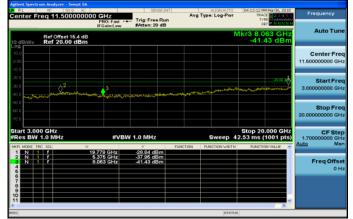
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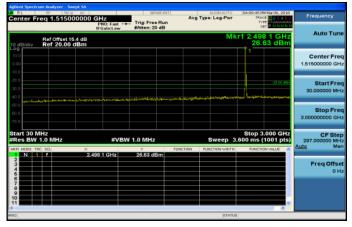
#### 30MHz~3GHz\_Band41\_5MHz\_QPSK\_1\_0\_HighCH41565-2687.5



3GHz~10GHz\_Band41\_5MHz\_QPSK\_1\_0\_HighCH41565-2687.5



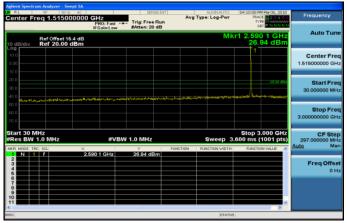
30MHz~3GHz\_Band41\_10MHz\_QPSK\_1\_0\_LowCH39700 -2501



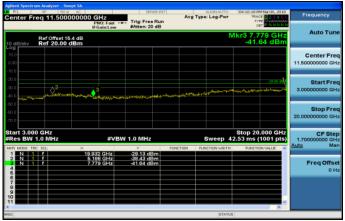
#### 3GHz~10GHz\_Band41\_10MHz\_QPSK\_1\_0\_LowCH39700 -2501



30MHz~3GHz\_Band41\_10MHz\_QPSK\_1\_0\_MidCH40620 -2593



3GHz~10GHz\_Band41\_10MHz\_QPSK\_1\_0\_MidCH40620 -2593



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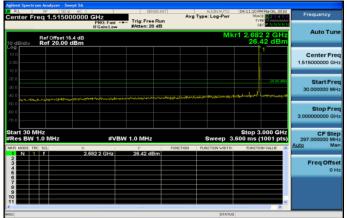
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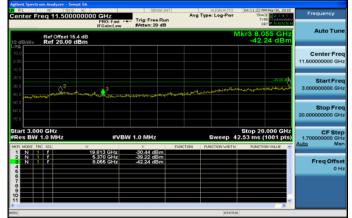
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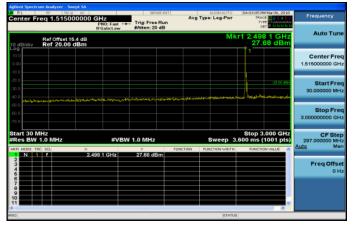
#### 30MHz~3GHz\_Band41\_10MHz\_QPSK\_1\_0\_HighCH4154 0-2685



3GHz~10GHz Band41 10MHz QPSK 1 0 HighCH4154 0-2685



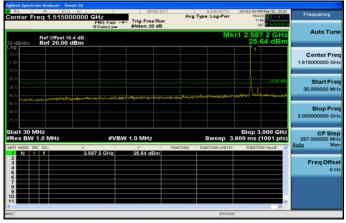
30MHz~3GHz\_Band41\_15MHz\_QPSK\_1\_0\_LowCH39725 -2503.5



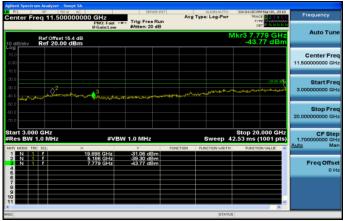
#### 3GHz~10GHz\_Band41\_15MHz\_QPSK\_1\_0\_LowCH39725 -2503.5



30MHz~3GHz Band41 15MHz QPSK 1 0 MidCH40620 -2593



3GHz~10GHz\_Band41\_15MHz\_QPSK\_1\_0\_MidCH40620 -2593



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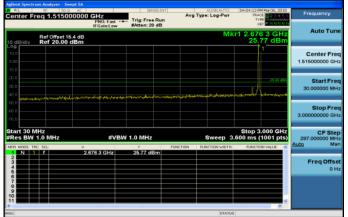
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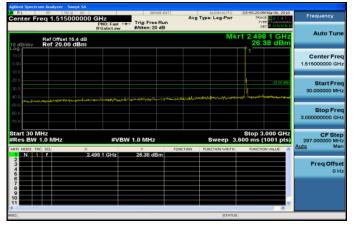
#### 30MHz~3GHz\_Band41\_15MHz\_QPSK\_1\_0\_HighCH4151 5-2682.5



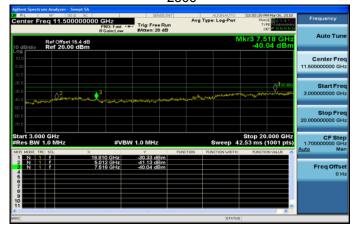
3GHz~10GHz\_Band41\_15MHz\_QPSK\_1\_0\_HighCH4151 5-2682.5



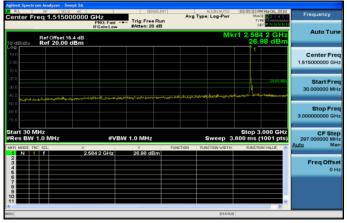
30MHz~3GHz\_Band41\_20MHz\_QPSK\_1\_0\_LowCH39750 -2506



#### 3GHz~10GHz\_Band41\_20MHz\_QPSK\_1\_0\_LowCH39750 -2506



30MHz~3GHz Band41 20MHz QPSK 1 0 MidCH40620 -2593



3GHz~10GHz\_Band41\_20MHz\_QPSK\_1\_0\_MidCH40620 -2593



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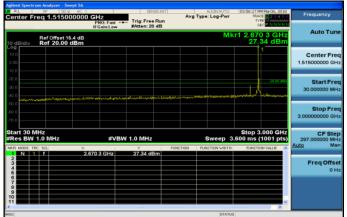
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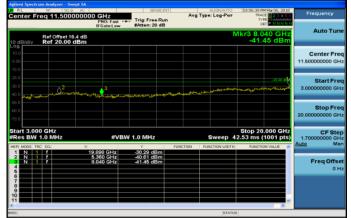
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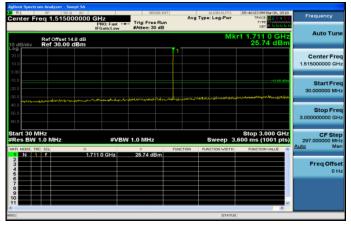
#### 30MHz~3GHz\_Band41\_20MHz\_QPSK\_1\_0\_HighCH4149 0-2680



3GHz~10GHz Band41 20MHz QPSK 1 0 HighCH4149 0-2680



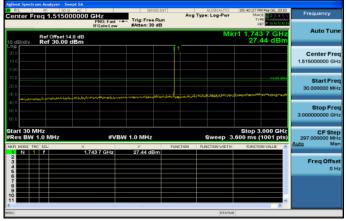
30MHz~3GHz\_Band66\_1\_4MHz\_QPSK\_1\_0\_LowCH1319 79-1710.7



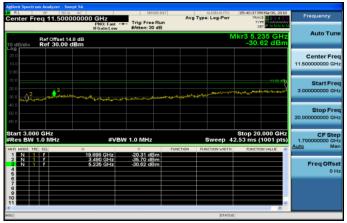
#### 3GHz~10GHz\_Band66\_1\_4MHz\_QPSK\_1\_0\_LowCH1319 79-1710.7



30MHz~3GHz\_Band66\_1\_4MHz\_QPSK\_1\_0\_MidCH1323 22-1745



3GHz~10GHz\_Band66\_1\_4MHz\_QPSK\_1\_0\_MidCH1323 22-1745



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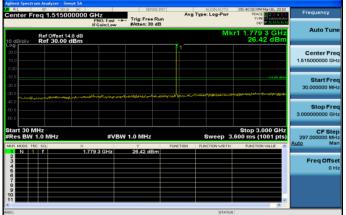
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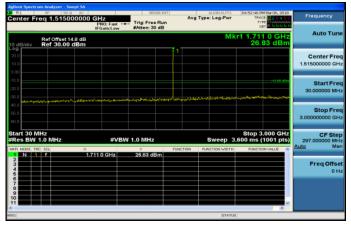
#### 30MHz~3GHz\_Band66\_1\_4MHz\_QPSK\_1\_0\_HighCH132 665-1779.3



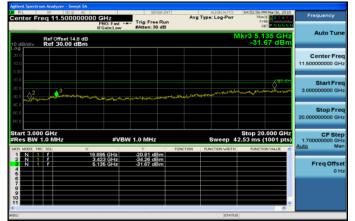
3GHz~10GHz Band66 1 4MHz QPSK 1 0 HighCH132 665-1779.3



30MHz~3GHz\_Band66\_3MHz\_QPSK\_1\_0\_LowCH131987 -1711.5



3GHz~10GHz\_Band66\_3MHz\_QPSK\_1\_0\_LowCH131987 -1711.5



30MHz~3GHz Band66 3MHz QPSK 1 0 MidCH132322 -1745



3GHz~10GHz\_Band66\_3MHz\_QPSK\_1\_0\_MidCH132322 -1745



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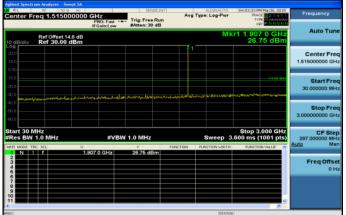
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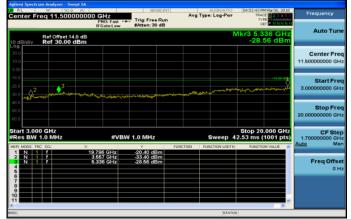
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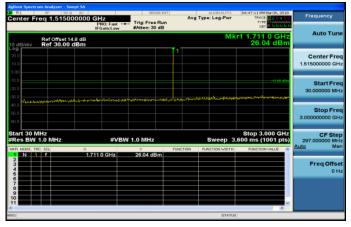
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3GHz~10GHz Band66 3MHz QPSK 1 0 HighCH13265 7-1778.5



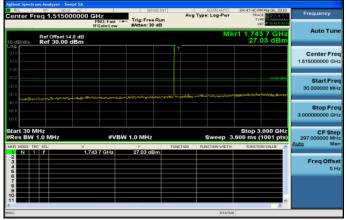
30MHz~3GHz\_Band66\_5MHz\_QPSK\_1\_0\_LowCH131997 -1712.5



#### 3GHz~10GHz\_Band66\_5MHz\_QPSK\_1\_0\_LowCH131997 -1712.5



30MHz~3GHz Band66 5MHz QPSK 1 0 MidCH132322 -1745



3GHz~10GHz\_Band66\_5MHz\_QPSK\_1\_0\_MidCH132322 -1745



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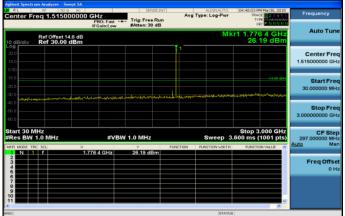
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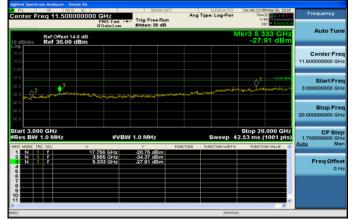
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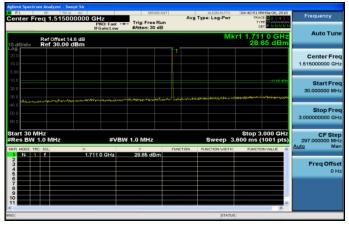
#### 30MHz~3GHz\_Band66\_5MHz\_QPSK\_1\_0\_HighCH13264 7-1777.5



3GHz~10GHz Band66 5MHz QPSK 1 0 HighCH13264 7-1777.5



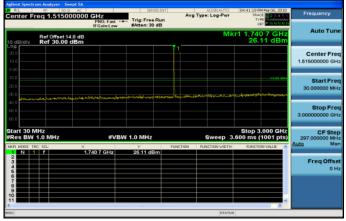
30MHz~3GHz\_Band66\_10MHz\_QPSK\_1\_0\_LowCH13202 2-1715



#### 3GHz~10GHz\_Band66\_10MHz\_QPSK\_1\_0\_LowCH13202 2-1715



30MHz~3GHz Band66 10MHz QPSK 1 0 MidCH13232 2-1745



3GHz~10GHz\_Band66\_10MHz\_QPSK\_1\_0\_MidCH13232 2-1745



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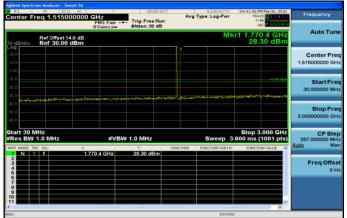
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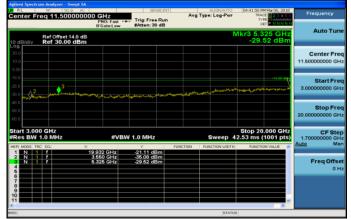
台灣檢驗科技股份有限公司



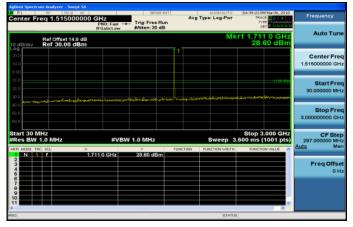
#### 30MHz~3GHz\_Band66\_10MHz\_QPSK\_1\_0\_HighCH1326 22-1775



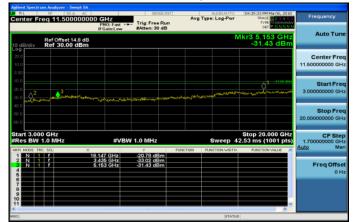
3GHz~10GHz Band66 10MHz QPSK 1 0 HighCH1326 22-1775



30MHz~3GHz\_Band66\_15MHz\_QPSK\_1\_0\_LowCH13204 7-1717.5



#### 3GHz~10GHz\_Band66\_15MHz\_QPSK\_1\_0\_LowCH13204 7-1717.5



30MHz~3GHz Band66 15MHz QPSK 1 0 MidCH13232 2-1745



3GHz~10GHz\_Band66\_15MHz\_QPSK\_1\_0\_MidCH13232 2-1745



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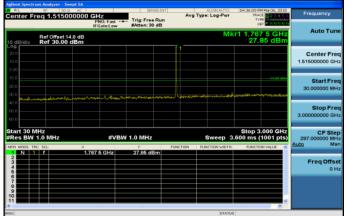
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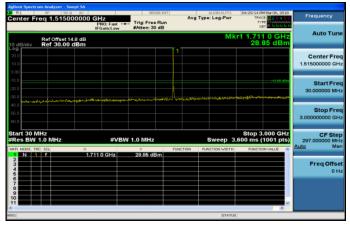
#### 30MHz~3GHz\_Band66\_15MHz\_QPSK\_1\_0\_HighCH1325 97-1772.5



3GHz~10GHz\_Band66\_15MHz\_QPSK\_1\_0\_HighCH1325 97-1772.5



30MHz~3GHz\_Band66\_20MHz\_QPSK\_1\_0\_LowCH13207 2-1720



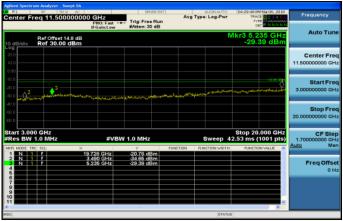
3GHz~10GHz\_Band66\_20MHz\_QPSK\_1\_0\_LowCH13207 2-1720



30MHz~3GHz Band66 20MHz QPSK 1 0 MidCH13232 2-1745



3GHz~10GHz\_Band66\_20MHz\_QPSK\_1\_0\_MidCH13232 2-1745



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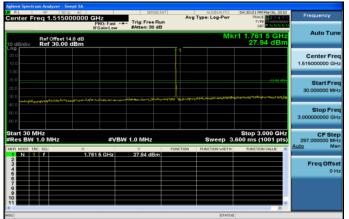
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#### 30MHz~3GHz\_Band66\_20MHz\_QPSK\_1\_0\_HighCH1325 72-1770



3GHz~10GHz\_Band66\_20MHz\_QPSK\_1\_0\_HighCH1325 72-1770

enter Freq 11.500000	000 GHz PN0: Fast	SENSE:INT Trig: Free Run #Atten: 30 dB	Avg	Type: Log-Pwr	D4:30:11 PM Mar 06, 2018 TRACE 2 2 3 4 5 TYPE	Frequency
Ref Offset 14.8 d 0 dB/div Ref 30.00 dBr	IFGain:Low B	satten: 30 dB		N	lkr3 5.310 GHz -30.42 dBm	Auto Tune
• 9 20.0 10.0						Center Free 11.500000000 GH
0.0	مىرىمى بىلى بىلى بىلى بىلى بىلى بىلى بىلى ب	بالمصباحظين بساول عزوما وتعاص	and and a second	والمركزة والمركز والمركز والمركز		Start Fre 3.000000000 GH
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tart 3.000 GHz Res BW 1.0 MHz	#VBW	1.0 MHz		Sweep 4:	Stop 20.000 GHz 2.53 ms (1001 pts)	1.70000000 GH
NI NODE TRC SCL	× 19.779 GHz	20.99 dBm	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	Auto Ma
2 N 1 F 3 N 1 F 4	3.640 GHz 6.310 GHz	-34.84 dBm -30.42 dBm				Freq Offse 0 H
6 7 8 9						
1					~	
a				STATUS		

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# 10. FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT

# 10.1. Standard Applicable

According to FCC §2.1053,

FCC §22.917(a), §24.238(a), §27.53 (h), the magnitude of each spurious and harmonic emission that can be detected when the equipment is operated under the conditions specified in the instruction manual and/ or alignment procedure, shall not be less than 43 + 10 log (mean output power in watts) dBc below the mean power output outside a license's frequency block (-13dBm).

### §27.53 (c)

(2) On any frequency outside the 776–788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB (-13dBm)

(4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than 65 + 10 log (P) dB in a 6.25 kHz band segment, for mobile and portable stations;

§27.53 (f) For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

FCC §27.53(g) For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

### FCC §27.53(c) (5)

Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

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FCC §27.53(h) (3)

Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

### FCC §27.53(m) (4) (6)

For mobile digital stations, the attenuation factor shall be not less than  $40 + 10 \log (P) dB$  on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed; for mobile digital stations, in the 1 megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed, except when the 1 megahertz band is 2495-2496 MHz, in which case a resolution bandwidth of at least one percent may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 megahertz or 1 percent of emission bandwidth, as specified; or 1 megahertz or 2 percent for mobile digital stations, except in the band 2495-2496 MHz). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. With respect to television operations, measurements must be made of the separate visual and aural operating powers at sufficiently frequent intervals to ensure compliance with the rules.

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# Table 2 — Unwanted Emissions for Mobile, Portable and Low-Power Fixed Subscriber Equipment

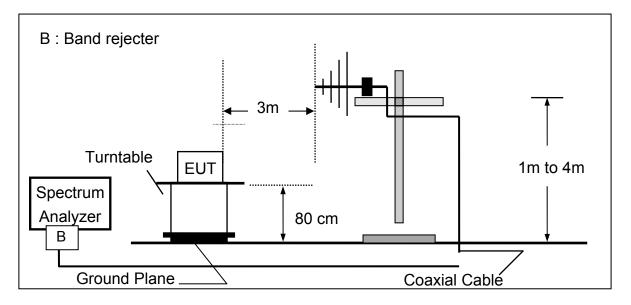
Frequency (MHz)	Attenuation (dB)
<2200	$43 + 10 \log_{10}(p)$
2200 - 2288	$70 + 10 \log_{10}(p)$
2288 - 2292	$67 + 10 \log_{10}(p)$
2292 - 2296	$61 + 10 \log_{10}(p)$
2296 - 2300	$55 + 10 \log_{10}(p)$
2300 - 2305	$43 + 10 \log_{10}(p)$
2305 - 2320	$43 + 10 \log_{10}(p)^{Note}$
2320 - 2324	$55 + 10 \log_{10}(p)$
2324 - 2328	$61 + 10 \log_{10}(p)$
2328 - 2337	$67 + 10 \log_{10}(p)$
2337 - 2341	$61 + 10 \log_{10}(p)$
2341 - 2345	$55 + 10 \log_{10}(p)$
2345 - 2360	$43 + 10 \log_{10}(p)^{Note}$
2360 - 2365	$43 + 10 \log_{10}(p)$
2365 - 2395	$70 + 10 \log_{10}(p)$
>2395	$43 + 10 \log_{10}(p)$

Note: Measured at the edges of the highest and lowest frequency range(s) in which the equipment is designed to operate. See Section 1.2 for the permitted frequency ranges for various equipment types.

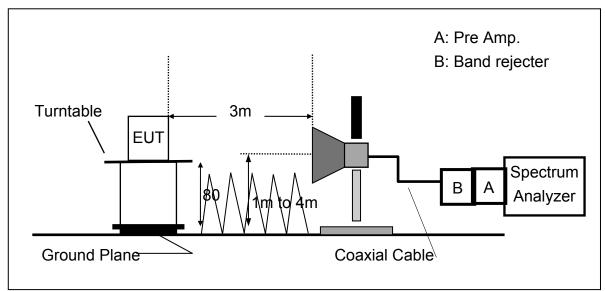


# 10.2. EUT Setup

Radiated Emission Test Set-Up, Frequency Below 1000MHz



# Radiated Emission Test Set-UP Frequency Over 1 GHz





## **10.3. Measurement Procedure:**

The EUT was placed on a non-conductive; the measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

The frequency range up to tenth harmonic was investigated for each of three fundamental frequencies (low, middle and high channels). Once spurious emission was identified, the power of the emission was determined using the substitution method.

The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency.

ERP (dBm) = SG Level(dBm) + Antenna Gain(dBd) + Cable Loss(dB)

EIRP (dBm) = SG Level(dBm) + Antenna Gain(dBi) + Cable Loss(dB)

"F" : denotes Fundamental Frequency. ; "H" : denotes Harmonic Frequency. Note : "E" : denotes Band Edge Frequency.; "S" : denotes Spurious Frequency. "---": denotes Noise Floor.

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# 10.4. Measurement Equipment Used:

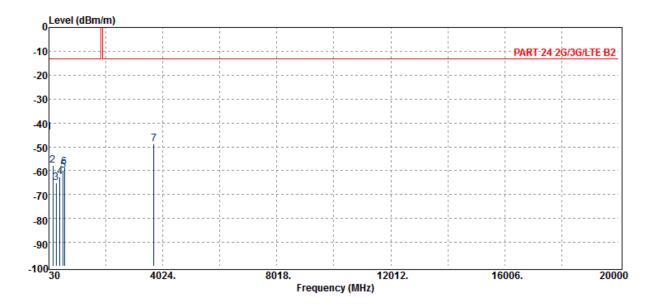
ERP, EIRP MEASUREMENT EQUIPMENT List 966 Chamber								
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.			
Bi-log Antenna	SCHWAZBECK	VULB9168	378	2017/12/29	2018/12/28			
Bi-log Antenna	SCHWAZBECK	VULB9168	300	2017/12/20	2018/12/19			
Horn Antenna	Schwarzbeck	BBHA9120D	309	2018/01/04	2019/1/3			
Horn Antenna	Schwarzbeck	BBHA9120D	1441	2017/08/04	2018/8/3			
Spectrum Analyzer	Agilent	E4446A	MY51100003	2017/05/10	2018/5/9			
EMI Test Receiver	R&S	ESCI7	100760	2017/06/06	2018/6/5			
Network Analyze	Anritsu	MS4644A	1216312	2017/05/25	2018/5/24			
Radio Communi- cation Analyer	Anritsu	MT8820C	6201465317	01/15/2018	01/14/2019			
Pre-Amplifier	HP	8449B	3008A00578	2018/01/02	2019/1/1			
Pre-Amplifier	HP	8447D	2944A07676	2018/01/02	2019/1/1			
Attenuator	Mini-Circuit	BW-S10W2+		2018/01/02	2019/1/1			
Filter 800-1000	Micro-Tronics	EWT	M1	2018/01/02	2019/1/1			
1GHz High Pass Filter	Micro-Tronics	HPM50108	32	2018/01/02	2019/1/1			
Low Loss Cable	Huber Suhner	966_RX	9	2018/01/02	2019/1/1			
Low Loss Cable	Huber Suhner	966 TX	1	2018/01/02	2019/1/1			
Bi-log Antenna	SCHWAZBECK	VULB9168	378	2017/12/29	2018/12/28			
Bi-log Antenna	SCHWAZBECK	VULB9168	300	2017/12/20	2018/12/19			
Horn Antenna	Schwarzbeck	BBHA9120D	309	2018/01/04	2019/1/3			
Horn Antenna	Schwarzbeck	BBHA9120D	1441	2017/08/04	2018/8/3			
Spectrum Analyzer	Agilent	E4446A	MY51100003	2017/05/10	2018/5/9			
EMI Test Receiver	R&S	ESCI7	100760	2017/06/06	2018/6/5			
Network Analyze	Anritsu	MS4644A	1216312	2017/05/25	2018/5/24			
Radio Communi- cation Analyer	Anritsu	MT8820C	6201465317	01/15/2018	01/14/2019			
Pre-Amplifier	HP	8449B	3008A00578	2018/01/02	2019/1/1			
Pre-Amplifier	HP	8447D	2944A07676	2018/01/02	2019/1/1			
Attenuator	Mini-Circuit	BW-S10W2+		2018/01/02	2019/1/1			
Filter 800-1000	Micro-Tronics	EWT	M1	2018/01/02	2019/1/1			



# 10.5. Measurement Result:

## **Radiated Spurious Emission Measurement Result: HSDPA Band 2 Mode**

Operation Band	:HSDPA B2	Temp./Humi.	:22 deg_C / 62 RH
Fundamental Frequen	:1852.4 MHz	Engineer	:Tin
Operation Mode	:Tx CH LOW		
EUT Pol.	:E2 Plane	Measurement Antenr Pol.	a:VERTICAL



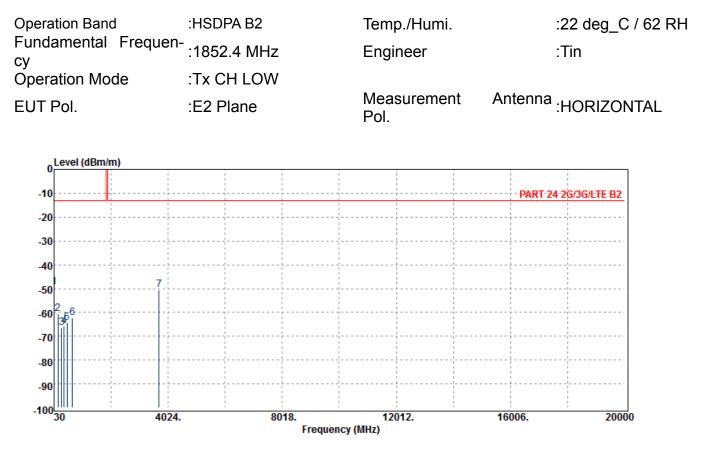
Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
32.91	S	-44.11	-29.67	-13.84	-0.60	-13.00	-31.11
168.71	S	-57.89	-55.87	-0.70	-1.33	-13.00	-44.89
285.11	S	-65.16	-66.82	3.42	-1.76	-13.00	-52.16
418.00	S	-62.58	-64.12	3.65	-2.11	-13.00	-49.58
532.46	S	-59.94	-61.68	4.01	-2.27	-13.00	-46.94
571.26	S	-58.36	-59.49	3.79	-2.65	-13.00	-45.36
3704.80	Н	-48.77	-54.43	12.57	-6.90	-13.00	-35.77

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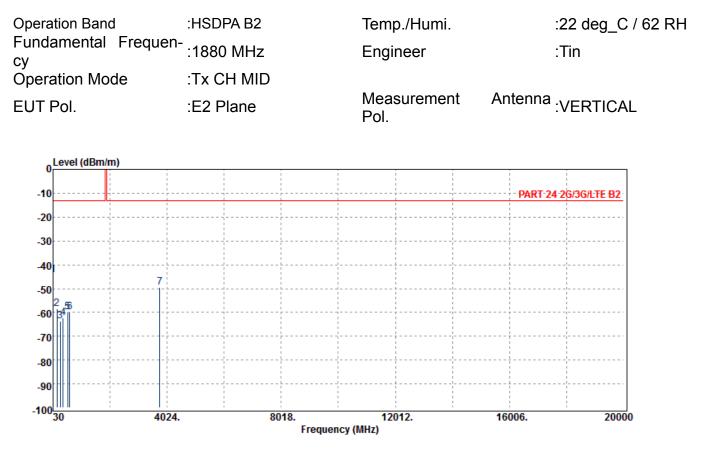
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-49.53	-34.37	-14.58	-0.58	-13.00	-36.53
170.65	S	-60.72	-58.87	-0.51	-1.33	-13.00	-47.72
296.75	S	-66.53	-68.27	3.55	-1.81	-13.00	-53.53
381.14	S	-65.91	-67.65	3.77	-2.02	-13.00	-52.91
481.05	S	-64.49	-66.39	3.86	-1.96	-13.00	-51.49
670.20	S	-62.21	-63.66	3.77	-2.31	-13.00	-49.21
3704.80	Н	-50.55	-56.21	12.57	-6.90	-13.00	-37.55



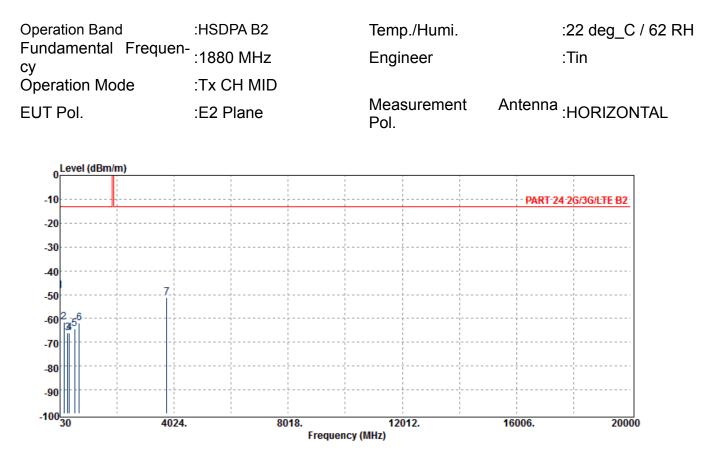
Report No.: ER/2018/20021 Page 328 of 491



Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-44.31	-29.64	-14.08	-0.59	-13.00	-31.31
172.59	S	-58.37	-56.83	-0.20	-1.34	-13.00	-45.37
285.11	S	-63.54	-65.20	3.42	-1.76	-13.00	-50.54
381.14	S	-62.31	-64.06	3.77	-2.02	-13.00	-49.31
542.16	S	-60.00	-62.13	3.99	-1.87	-13.00	-47.00
614.91	S	-59.76	-60.91	3.63	-2.47	-13.00	-46.76
3760.00	Н	-49.40	-55.13	12.61	-6.89	-13.00	-36.40



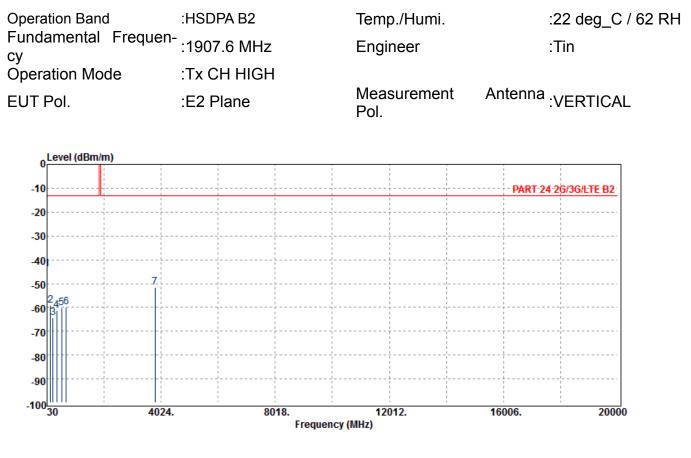
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-48.30	-33.14	-14.58	-0.58	-13.00	-35.30
170.65	S	-61.67	-59.82	-0.51	-1.33	-13.00	-48.67
299.66	S	-65.97	-67.75	3.61	-1.82	-13.00	-52.97
354.95	S	-66.21	-68.01	3.84	-2.04	-13.00	-53.21
546.04	S	-64.46	-66.64	3.99	-1.81	-13.00	-51.46
696.39	S	-61.94	-63.17	3.69	-2.46	-13.00	-48.94
3760.00	Н	-51.15	-56.88	12.61	-6.89	-13.00	-38.15



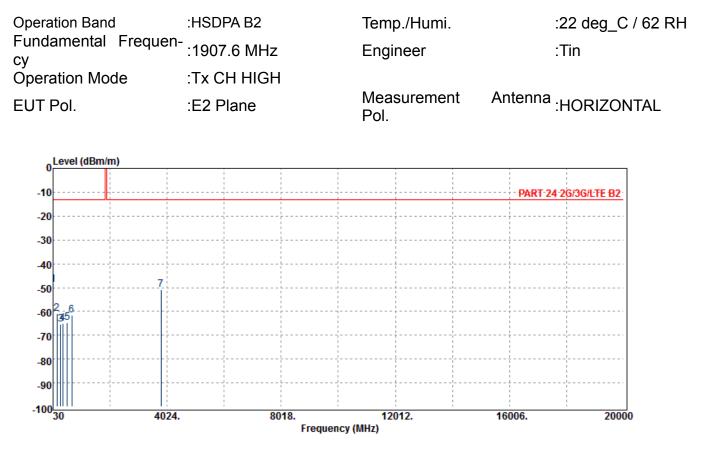
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-43.90	-29.22	-14.08	-0.59	-13.00	-30.90
153.19	S	-59.24	-56.33	-1.62	-1.30	-13.00	-46.24
241.46	S	-64.33	-66.14	3.49	-1.68	-13.00	-51.33
367.56	S	-61.41	-63.15	3.80	-2.06	-13.00	-48.41
544.10	S	-60.35	-62.55	3.99	-1.79	-13.00	-47.35
696.39	S	-59.81	-61.04	3.69	-2.46	-13.00	-46.81
3815.20	Н	-51.71	-57.36	12.66	-7.00	-13.00	-38.71



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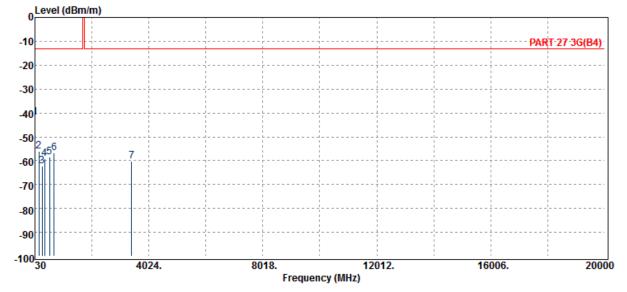


Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-48.89	-33.73	-14.58	-0.58	-13.00	-35.89
172.59	S	-60.78	-59.24	-0.20	-1.34	-13.00	-47.78
299.66	S	-65.40	-67.19	3.61	-1.82	-13.00	-52.40
371.44	S	-65.19	-66.93	3.79	-2.05	-13.00	-52.19
532.46	S	-64.67	-66.41	4.01	-2.27	-13.00	-51.67
692.51	S	-61.60	-62.54	3.70	-2.76	-13.00	-48.60
3815.20	Н	-51.04	-56.69	12.66	-7.00	-13.00	-38.04



### **Radiated Spurious Emission Measurement Result: HSUPA Band 4 Mode**

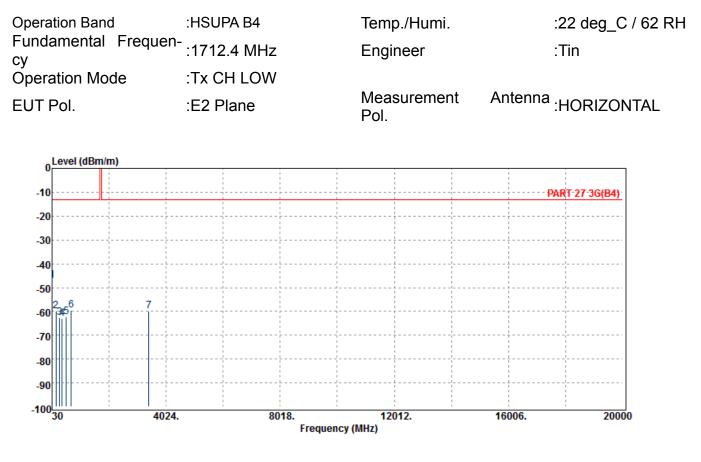
Operation Band	:HSUPA B4	Temp./Humi.	:22 deg_C / 62 RH
Fundamental Frequency	:1712.4 MHz	Engineer	:Tin
Operation Mode	:Tx CH LOW		
EUT Pol.	:E2 Plane	Measurement Anter Pol.	INA :VERTICAL



Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
32.91	S	-42.02	-27.57	-13.84	-0.60	-13.00	-29.02
167.74	S	-55.89	-53.81	-0.76	-1.32	-13.00	-42.89
285.11	S	-62.22	-63.88	3.42	-1.76	-13.00	-49.22
364.65	S	-59.26	-61.00	3.81	-2.07	-13.00	-46.26
547.01	S	-58.43	-60.55	3.98	-1.86	-13.00	-45.43
696.39	S	-56.73	-57.96	3.69	-2.46	-13.00	-43.73
3424.80	Н	-60.21	-65.89	12.23	-6.54	-13.00	-47.21



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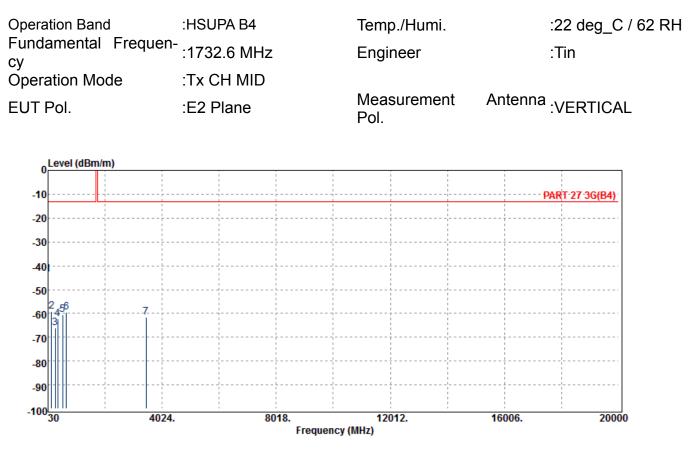


Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-47.03	-31.87	-14.58	-0.58	-13.00	-34.03
168.71	S	-59.74	-57.72	-0.70	-1.33	-13.00	-46.74
299.66	S	-62.70	-64.48	3.61	-1.82	-13.00	-49.70
385.02	S	-63.14	-64.89	3.75	-2.01	-13.00	-50.14
529.55	S	-62.42	-64.04	4.01	-2.39	-13.00	-49.42
697.36	S	-59.36	-60.66	3.68	-2.38	-13.00	-46.36
3424.80	Н	-59.93	-65.62	12.23	-6.54	-13.00	-46.93

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>www.sgs.com/terms and conditions.htm</u> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>www.sgs.com/terms</u> edocument.thm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law

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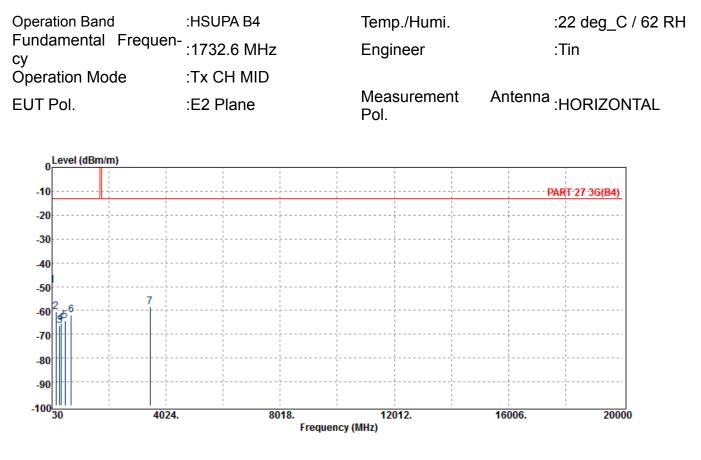




Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-43.53	-28.85	-14.08	-0.59	-13.00	-30.53
151.25	S	-59.03	-56.01	-1.73	-1.29	-13.00	-46.03
280.26	S	-66.01	-67.68	3.42	-1.75	-13.00	-53.01
374.35	S	-62.33	-64.08	3.78	-2.04	-13.00	-49.33
536.34	S	-60.40	-62.29	4.00	-2.11	-13.00	-47.40
672.14	S	-59.52	-60.84	3.76	-2.45	-13.00	-46.52
3465.20	Н	-61.56	-67.32	12.32	-6.56	-13.00	-48.56



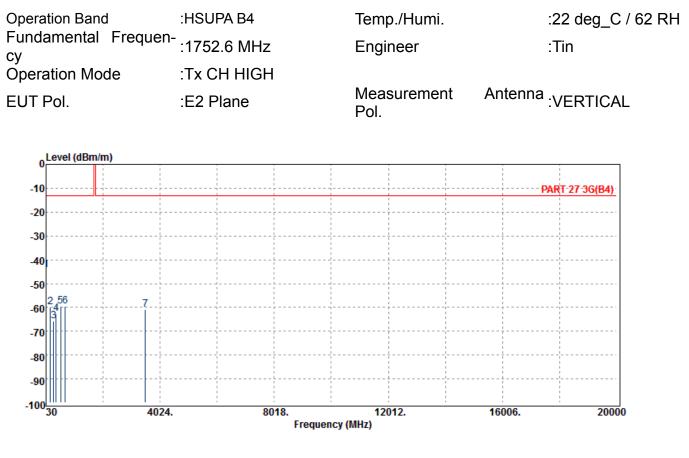
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-49.51	-34.84	-14.08	-0.59	-13.00	-36.51
170.65	S	-60.53	-58.68	-0.51	-1.33	-13.00	-47.53
294.81	S	-66.47	-68.18	3.52	-1.80	-13.00	-53.47
335.55	S	-65.29	-67.13	3.79	-1.95	-13.00	-52.29
487.84	S	-64.49	-66.53	3.93	-1.89	-13.00	-51.49
697.36	S	-62.04	-63.34	3.68	-2.38	-13.00	-49.04
3465.20	Н	-58.34	-64.10	12.32	-6.56	-13.00	-45.34



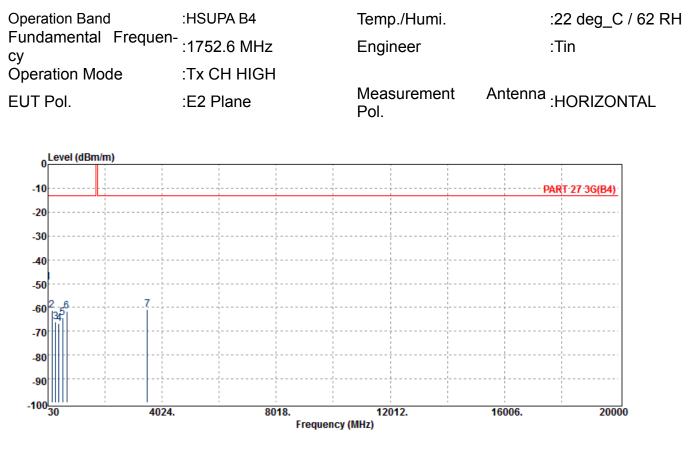
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-44.13	-29.46	-14.08	-0.59	-13.00	-31.13
178.41	S	-59.77	-59.12	0.73	-1.37	-13.00	-46.77
299.66	S	-65.76	-67.54	3.61	-1.82	-13.00	-52.76
386.96	S	-62.49	-64.21	3.75	-2.02	-13.00	-49.49
536.34	S	-59.54	-61.43	4.00	-2.11	-13.00	-46.54
696.39	S	-59.53	-60.75	3.69	-2.46	-13.00	-46.53
3505.20	Н	-60.82	-66.57	12.40	-6.66	-13.00	-47.82



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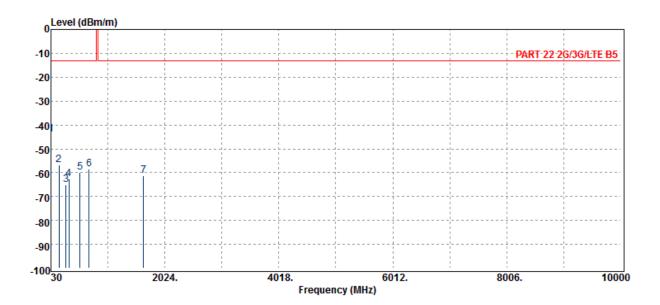


Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-49.46	-34.30	-14.58	-0.58	-13.00	-36.46
170.65	S	-61.33	-59.48	-0.51	-1.33	-13.00	-48.33
296.75	S	-65.95	-67.70	3.55	-1.81	-13.00	-52.95
411.21	S	-66.69	-68.24	3.67	-2.13	-13.00	-53.69
548.95	S	-64.31	-66.32	3.98	-1.97	-13.00	-51.31
691.54	S	-61.48	-62.35	3.70	-2.83	-13.00	-48.48
3505.20	Н	-61.00	-66.74	12.40	-6.66	-13.00	-48.00



### **Radiated Spurious Emission Measurement Result: HSUPA Band 5 Mode**

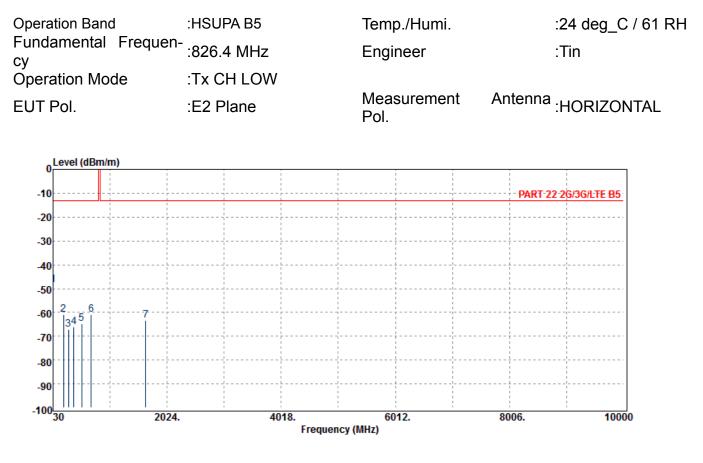
Operation Band	:HSUPA B5	Temp./Humi.	:24 deg_C / 61 RH
Fundamental Frequency	:826.4 MHz	Engineer	:Tin
Operation Mode	:Tx CH LOW		
EUT Pol.	:E2 Plane	Measurement Antenna Pol.	a :VERTICAL



Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-43.99	-29.31	-14.08	-0.59	-13.00	-30.99
168.71	S	-56.88	-54.86	-0.70	-1.33	-13.00	-43.88
296.75	S	-65.17	-66.92	3.55	-1.81	-13.00	-52.17
347.19	S	-62.47	-64.29	3.84	-2.02	-13.00	-49.47
536.34	S	-59.92	-61.82	4.00	-2.11	-13.00	-46.92
694.45	S	-58.63	-59.71	3.69	-2.61	-13.00	-45.63
1652.80	Н	-61.38	-64.01	6.99	-4.36	-13.00	-48.38



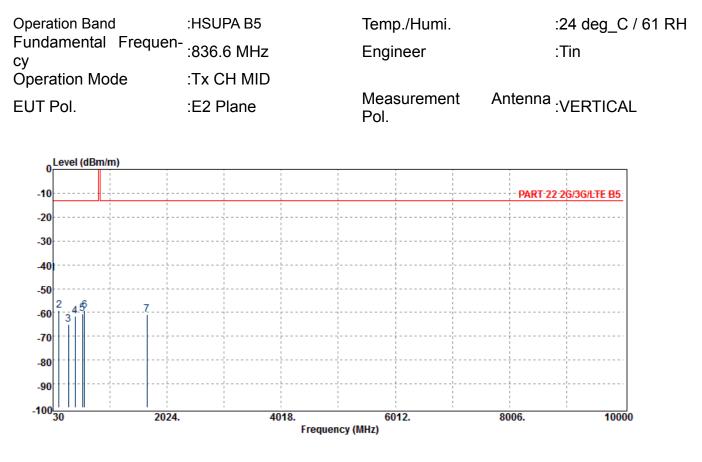
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-48.61	-33.93	-14.08	-0.59	-13.00	-35.61
216.24	S	-60.80	-62.71	3.47	-1.56	-13.00	-47.80
299.66	S	-66.98	-68.76	3.61	-1.82	-13.00	-53.98
395.69	S	-65.93	-67.57	3.73	-2.08	-13.00	-52.93
531.49	S	-64.65	-66.34	4.01	-2.31	-13.00	-51.65
699.30	S	-60.92	-62.36	3.68	-2.24	-13.00	-47.92
1652.80	Н	-63.37	-66.00	6.99	-4.36	-13.00	-50.37



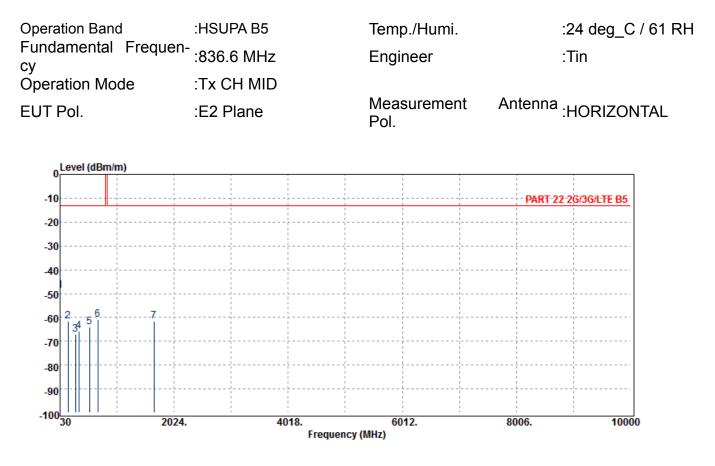
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-43.49	-28.82	-14.08	-0.59	-13.00	-30.49
136.70	S	-59.28	-55.84	-2.19	-1.24	-13.00	-46.28
298.69	S	-65.16	-66.93	3.59	-1.82	-13.00	-52.16
415.09	S	-61.61	-63.15	3.66	-2.12	-13.00	-48.61
544.10	S	-60.57	-62.77	3.99	-1.79	-13.00	-47.57
582.90	S	-59.28	-60.66	3.68	-2.30	-13.00	-46.28
1673.20	Н	-60.99	-63.66	7.06	-4.39	-13.00	-47.99



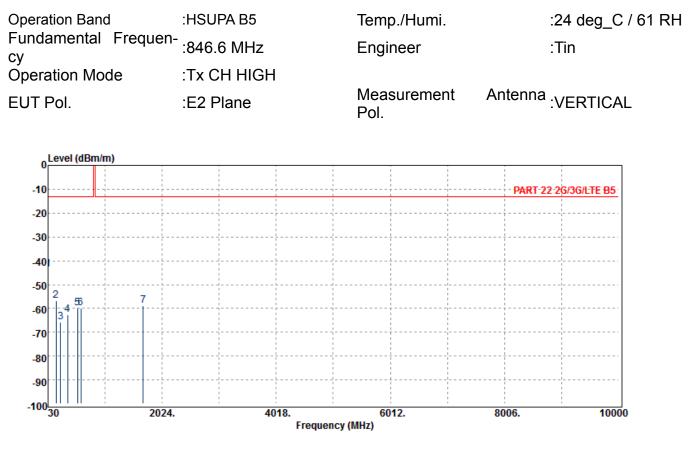
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-48.93	-33.77	-14.58	-0.58	-13.00	-35.93
172.59	S	-61.54	-60.00	-0.20	-1.34	-13.00	-48.54
299.66	S	-67.21	-69.00	3.61	-1.82	-13.00	-54.21
359.80	S	-65.58	-67.35	3.83	-2.06	-13.00	-52.58
546.04	S	-64.14	-66.32	3.99	-1.81	-13.00	-51.14
692.51	S	-60.77	-61.71	3.70	-2.76	-13.00	-47.77
1673.20	Н	-61.56	-64.22	7.06	-4.39	-13.00	-48.56



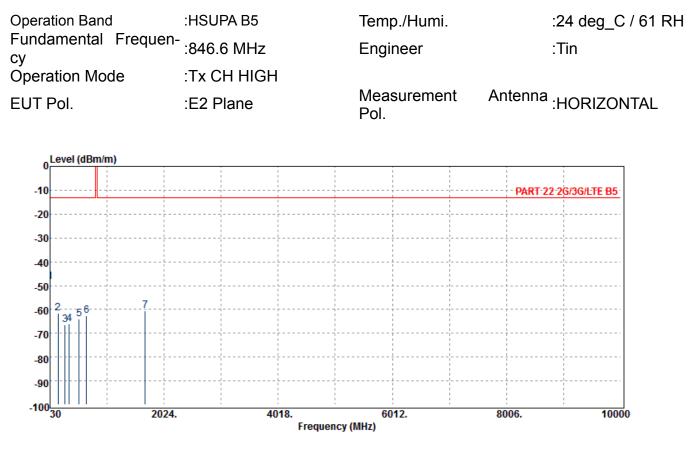
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-43.73	-29.06	-14.08	-0.59	-13.00	-30.73
172.59	S	-56.61	-55.07	-0.20	-1.34	-13.00	-43.61
251.16	S	-65.66	-67.51	3.55	-1.70	-13.00	-52.66
374.35	S	-62.67	-64.42	3.78	-2.04	-13.00	-49.67
547.01	S	-59.94	-62.06	3.98	-1.86	-13.00	-46.94
605.21	S	-59.85	-61.27	3.57	-2.15	-13.00	-46.85
1693.20	Н	-58.84	-61.54	7.12	-4.43	-13.00	-45.84



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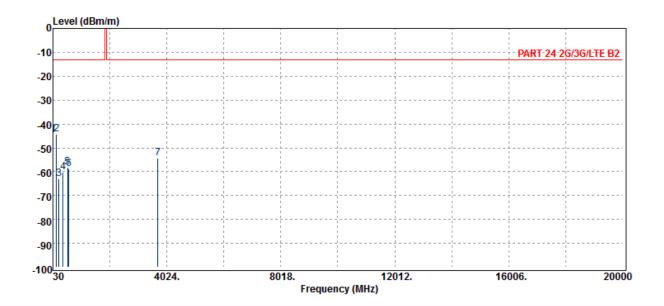


Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-48.60	-33.44	-14.58	-0.58	-13.00	-35.60
172.59	S	-61.52	-59.98	-0.20	-1.34	-13.00	-48.52
294.81	S	-66.57	-68.28	3.52	-1.80	-13.00	-53.57
364.65	S	-66.03	-67.77	3.81	-2.07	-13.00	-53.03
539.25	S	-64.04	-66.05	4.00	-1.99	-13.00	-51.04
667.29	S	-62.48	-64.15	3.78	-2.11	-13.00	-49.48
1693.20	Н	-60.39	-63.08	7.12	-4.43	-13.00	-47.39



## Radiated Spurious Emission Measurement Result: LTE-Band 2 (The Worst Case)

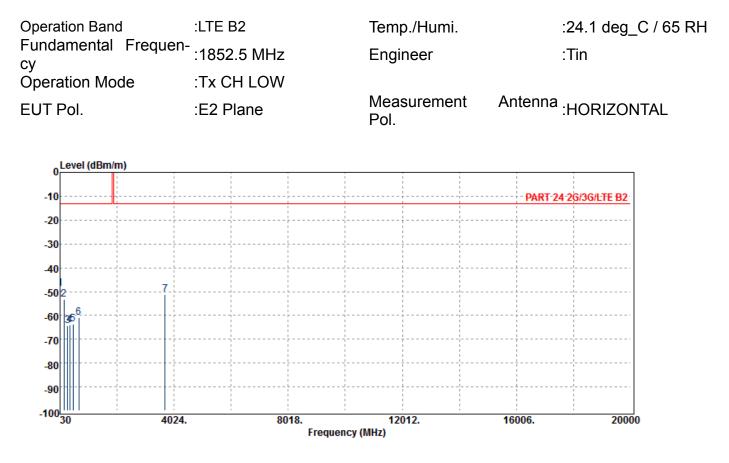
Operation Band	:LTE B2	Temp./Humi.	:24.1 deg_C / 65 RH
Fundamental Frequen	- :1852.5 MHz	Engineer	:Tin
Operation Mode	:Tx CH LOW		
EUT Pol.	:E2 Plane	Measurement A Pol.	ntenna :VERTICAL



Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-44.70	-30.03	-14.08	-0.59	-13.00	-31.70
146.40	S	-44.17	-40.91	-1.98	-1.29	-13.00	-31.17
241.46	S	-62.96	-64.77	3.49	-1.68	-13.00	-49.96
382.11	S	-60.37	-62.12	3.76	-2.02	-13.00	-47.37
541.19	S	-58.06	-60.14	3.99	-1.91	-13.00	-45.06
579.99	S	-58.75	-60.07	3.71	-2.39	-13.00	-45.75
3705.00	Н	-54.36	-60.03	12.57	-6.90	-13.00	-41.36



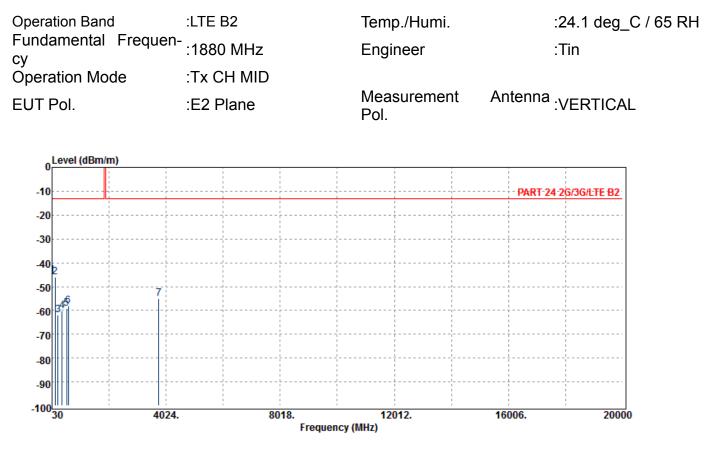
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-48.62	-33.46	-14.58	-0.58	-13.00	-35.62
170.65	S	-53.36	-51.51	-0.51	-1.33	-13.00	-40.36
299.66	S	-64.20	-65.98	3.61	-1.82	-13.00	-51.20
362.71	S	-63.92	-65.67	3.82	-2.07	-13.00	-50.92
487.84	S	-63.54	-65.58	3.93	-1.89	-13.00	-50.54
687.66	S	-61.04	-61.62	3.71	-3.13	-13.00	-48.04
3705.00	Н	-51.09	-56.75	12.57	-6.90	-13.00	-38.09



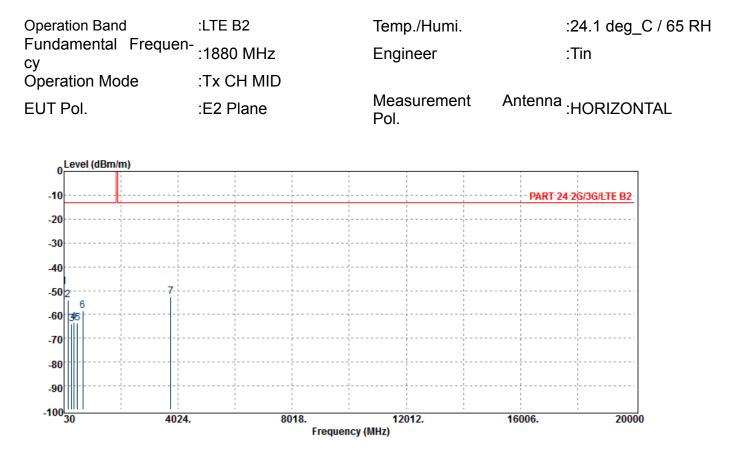
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-45.19	-30.51	-14.08	-0.59	-13.00	-32.19
134.76	S	-45.97	-42.62	-2.12	-1.23	-13.00	-32.97
241.46	S	-62.03	-63.84	3.49	-1.68	-13.00	-49.03
377.26	S	-60.22	-61.96	3.78	-2.03	-13.00	-47.22
547.01	S	-59.03	-61.16	3.98	-1.86	-13.00	-46.03
607.15	S	-58.17	-59.54	3.58	-2.21	-13.00	-45.17
3760.00	Н	-54.86	-60.59	12.61	-6.89	-13.00	-41.86



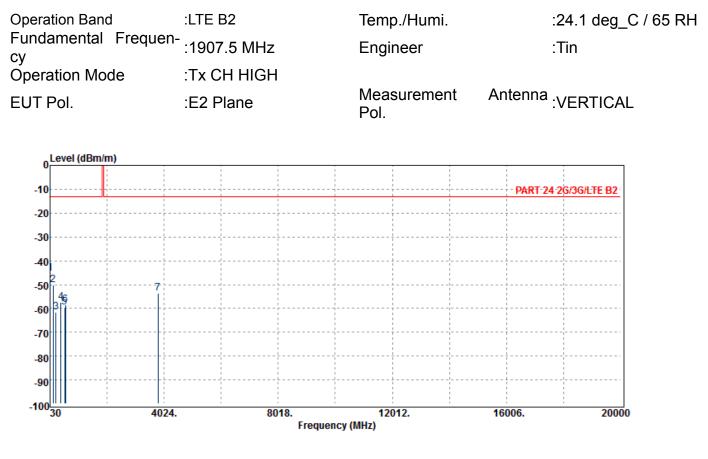
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-48.60	-33.44	-14.58	-0.58	-13.00	-35.60
168.71	S	-53.96	-51.94	-0.70	-1.33	-13.00	-40.96
299.66	S	-64.02	-65.80	3.61	-1.82	-13.00	-51.02
367.56	S	-63.25	-64.99	3.80	-2.06	-13.00	-50.25
495.60	S	-63.75	-65.67	4.01	-2.09	-13.00	-50.75
684.75	S	-58.65	-59.04	3.72	-3.32	-13.00	-45.65
3760.00	Н	-52.70	-58.43	12.61	-6.89	-13.00	-39.70



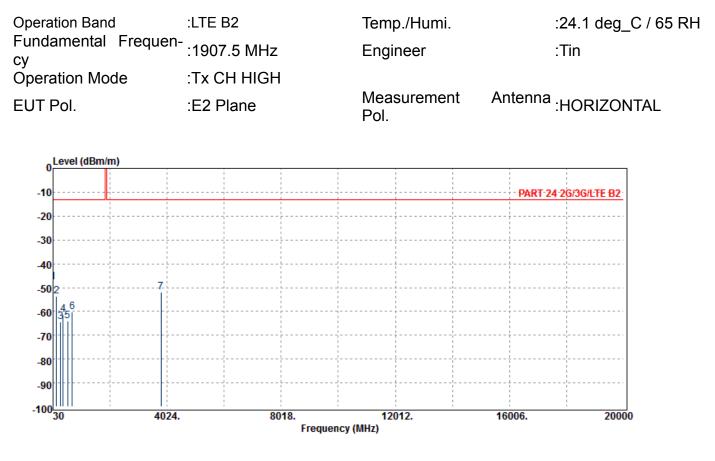
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-45.44	-30.77	-14.08	-0.59	-13.00	-32.44
133.79	S	-50.29	-46.98	-2.09	-1.23	-13.00	-37.29
241.46	S	-61.57	-63.38	3.49	-1.68	-13.00	-48.57
418.00	S	-57.58	-59.11	3.65	-2.11	-13.00	-44.58
546.04	S	-59.56	-61.74	3.99	-1.81	-13.00	-46.56
578.05	S	-58.36	-59.64	3.73	-2.45	-13.00	-45.36
3815.00	Н	-53.78	-59.43	12.66	-7.00	-13.00	-40.78



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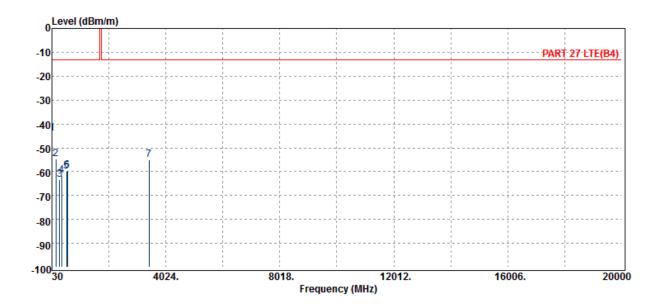


Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-47.77	-32.61	-14.58	-0.58	-13.00	-34.77
148.34	S	-53.61	-50.44	-1.89	-1.29	-13.00	-40.61
299.66	S	-64.27	-66.06	3.61	-1.82	-13.00	-51.27
379.20	S	-61.28	-63.03	3.77	-2.03	-13.00	-48.28
541.19	S	-63.96	-66.04	3.99	-1.91	-13.00	-50.96
699.30	S	-60.22	-61.66	3.68	-2.24	-13.00	-47.22
3815.00	Н	-51.87	-57.53	12.66	-7.00	-13.00	-38.87



## Radiated Spurious Emission Measurement Result: LTE-Band 4 (The Worst Case)

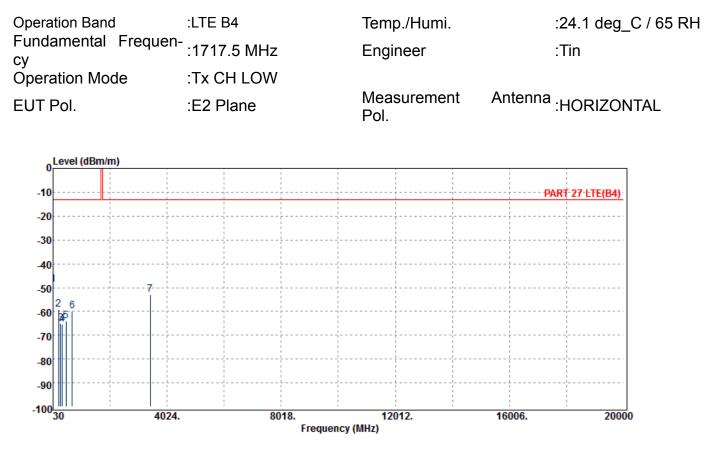
Operation Band	:LTE B4	Temp./Humi.	:24.1 deg_C / 65 RH
Fundamental Frequen	- :1717.5 MHz	Engineer	:Tin
Operation Mode	:Tx CH LOW		
EUT Pol.	:E2 Plane	Measurement A Pol.	ntenna :VERTICAL



Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
32.91	S	-43.94	-29.50	-13.84	-0.60	-13.00	-30.94
172.59	S	-54.66	-53.12	-0.20	-1.34	-13.00	-41.66
299.66	S	-63.49	-65.28	3.61	-1.82	-13.00	-50.49
366.59	S	-61.65	-63.39	3.81	-2.07	-13.00	-48.65
544.10	S	-59.75	-61.95	3.99	-1.79	-13.00	-46.75
573.20	S	-59.55	-60.73	3.77	-2.59	-13.00	-46.55
3435.00	Н	-55.17	-60.88	12.25	-6.55	-13.00	-42.17



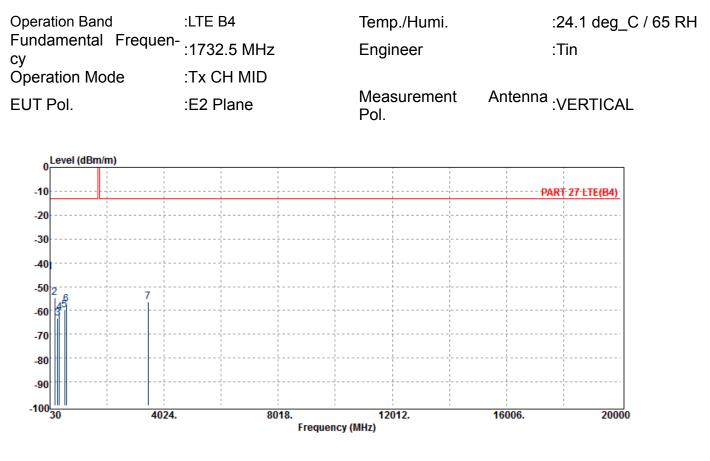
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-48.94	-33.78	-14.58	-0.58	-13.00	-35.94
219.15	S	-59.12	-60.90	3.35	-1.57	-13.00	-46.12
299.66	S	-64.89	-66.67	3.61	-1.82	-13.00	-51.89
356.89	S	-65.34	-67.13	3.83	-2.05	-13.00	-52.34
488.81	S	-63.93	-65.95	3.94	-1.91	-13.00	-50.93
697.36	S	-59.76	-61.06	3.68	-2.38	-13.00	-46.76
3435.00	Н	-52.90	-58.60	12.25	-6.55	-13.00	-39.90



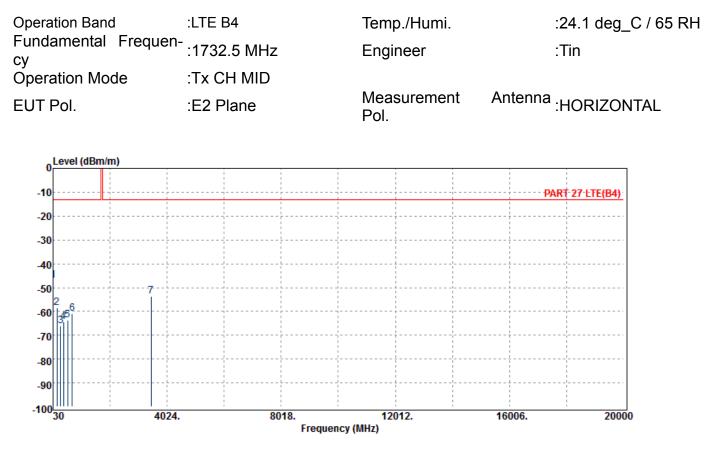
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-44.06	-29.39	-14.08	-0.59	-13.00	-31.06
191.99	S	-54.50	-55.73	2.66	-1.44	-13.00	-41.50
299.66	S	-63.19	-64.98	3.61	-1.82	-13.00	-50.19
357.86	S	-60.92	-62.70	3.83	-2.05	-13.00	-47.92
539.25	S	-59.99	-62.00	4.00	-1.99	-13.00	-46.99
604.24	S	-57.45	-58.87	3.56	-2.14	-13.00	-44.45
3465.00	Н	-56.36	-62.12	12.32	-6.56	-13.00	-43.36



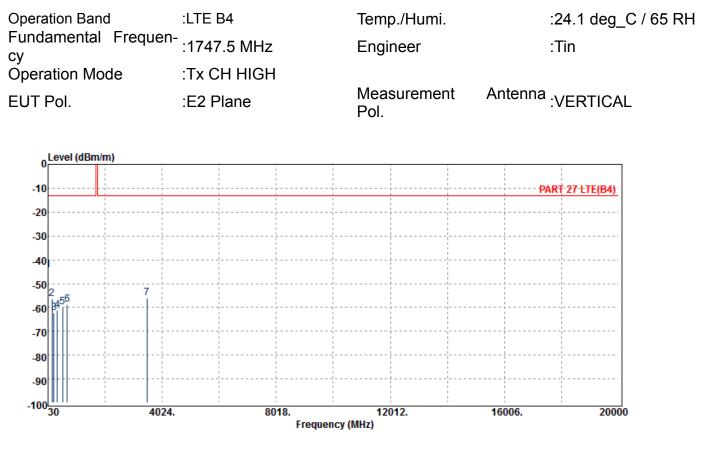
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-46.98	-31.83	-14.58	-0.58	-13.00	-33.98
172.59	S	-58.53	-56.99	-0.20	-1.34	-13.00	-45.53
299.66	S	-66.03	-67.82	3.61	-1.82	-13.00	-53.03
403.45	S	-64.43	-65.99	3.70	-2.14	-13.00	-51.43
547.01	S	-63.57	-65.69	3.98	-1.86	-13.00	-50.57
697.36	S	-60.81	-62.11	3.68	-2.38	-13.00	-47.81
3465.00	Н	-53.61	-59.38	12.32	-6.56	-13.00	-40.61



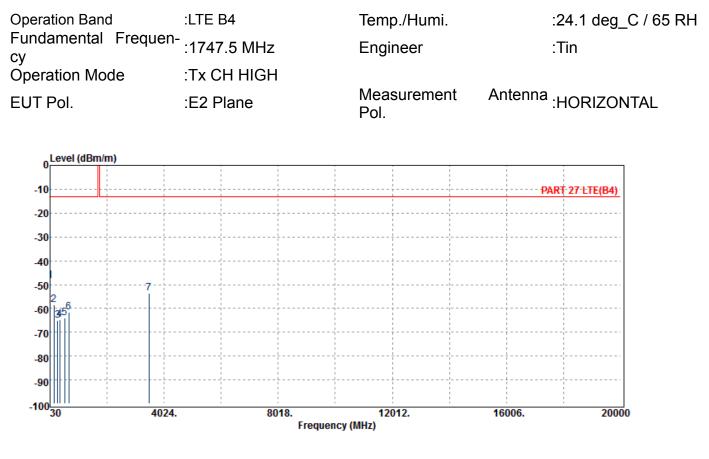
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-44.15	-29.48	-14.08	-0.59	-13.00	-31.15
168.71	S	-56.42	-54.40	-0.70	-1.33	-13.00	-43.42
241.46	S	-62.35	-64.17	3.49	-1.68	-13.00	-49.35
361.74	S	-61.15	-62.91	3.82	-2.06	-13.00	-48.15
541.19	S	-59.96	-62.04	3.99	-1.91	-13.00	-46.96
697.36	S	-58.69	-59.99	3.68	-2.38	-13.00	-45.69
3495.00	Н	-55.99	-61.77	12.39	-6.61	-13.00	-42.99



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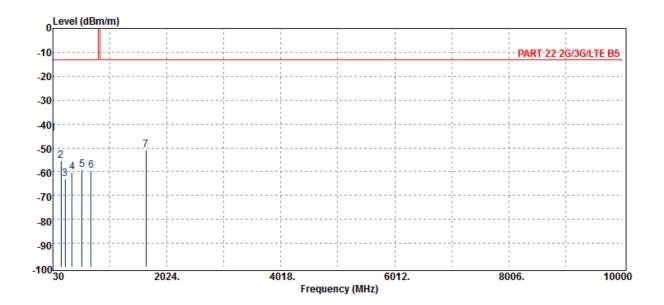


Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-48.38	-33.22	-14.58	-0.58	-13.00	-35.38
173.56	S	-58.38	-56.99	-0.04	-1.35	-13.00	-45.38
299.66	S	-65.17	-66.95	3.61	-1.82	-13.00	-52.17
367.56	S	-64.80	-66.54	3.80	-2.06	-13.00	-51.80
542.16	S	-64.01	-66.13	3.99	-1.87	-13.00	-51.01
692.51	S	-61.45	-62.39	3.70	-2.76	-13.00	-48.45
3495.00	Н	-53.57	-59.35	12.39	-6.61	-13.00	-40.57



## Radiated Spurious Emission Measurement Result: LTE-Band 5 (The Worst Case)

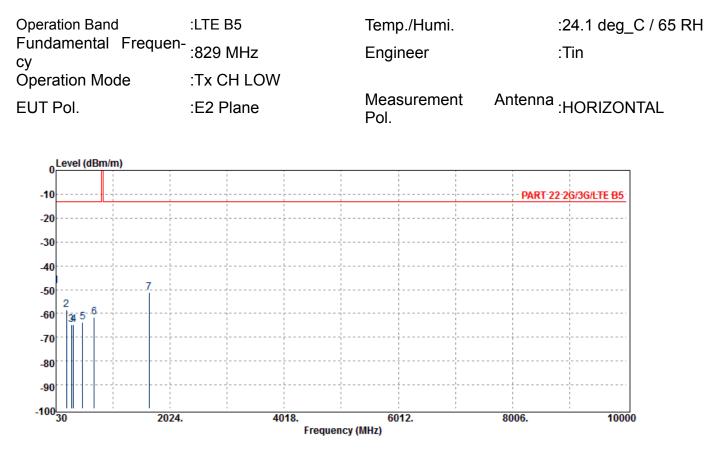
Operation Band	:LTE B5	Temp./Humi.	:24.1 deg_C / 65 RH
Fundamental Frequen	:829 MHz	Engineer	:Tin
Operation Mode	:Tx CH LOW		
EUT Pol.	:E2 Plane	Measurement Ai Pol.	<sup>ntenna</sup> :VERTICAL



Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
32.91	S	-44.10	-29.66	-13.84	-0.60	-13.00	-31.10
167.74	S	-55.45	-53.37	-0.76	-1.32	-13.00	-42.45
241.46	S	-63.12	-64.93	3.49	-1.68	-13.00	-50.12
366.59	S	-60.08	-61.82	3.81	-2.07	-13.00	-47.08
539.25	S	-59.23	-61.24	4.00	-1.99	-13.00	-46.23
694.45	S	-59.48	-60.56	3.69	-2.61	-13.00	-46.48
1658.00	Н	-51.04	-55.83	9.16	-4.37	-13.00	-38.04



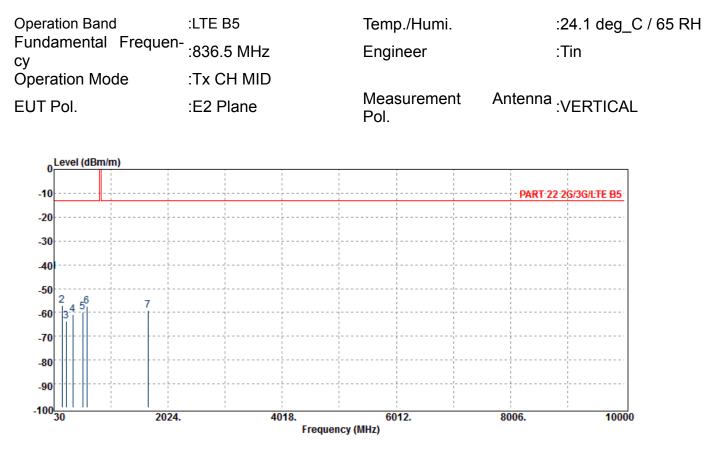
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-48.32	-33.16	-14.58	-0.58	-13.00	-35.32
217.21	S	-58.45	-60.32	3.43	-1.56	-13.00	-45.45
299.66	S	-64.62	-66.40	3.61	-1.82	-13.00	-51.62
335.55	S	-64.64	-66.48	3.79	-1.95	-13.00	-51.64
492.69	S	-63.78	-65.75	3.98	-2.01	-13.00	-50.78
699.30	S	-61.53	-62.97	3.68	-2.24	-13.00	-48.53
1658.00	Н	-51.37	-56.16	9.16	-4.37	-13.00	-38.37



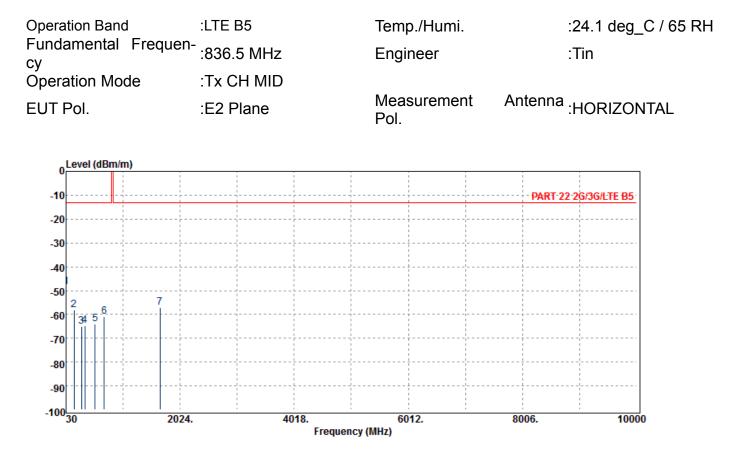
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-42.80	-28.12	-14.08	-0.59	-13.00	-29.80
173.56	S	-57.21	-55.82	-0.04	-1.35	-13.00	-44.21
241.46	S	-63.82	-65.63	3.49	-1.68	-13.00	-50.82
354.95	S	-60.77	-62.57	3.84	-2.04	-13.00	-47.77
534.40	S	-59.80	-61.61	4.00	-2.19	-13.00	-46.80
605.21	S	-57.57	-59.00	3.57	-2.15	-13.00	-44.57
1673.00	Н	-59.24	-64.06	9.21	-4.39	-13.00	-46.24



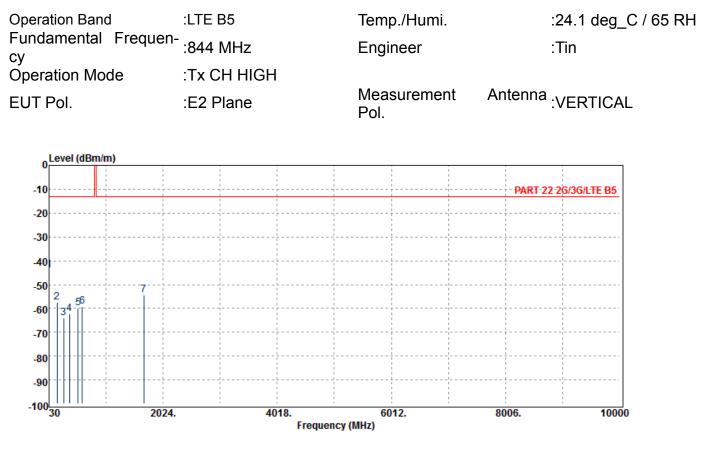
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-48.57	-33.41	-14.58	-0.58	-13.00	-35.57
170.65	S	-57.98	-56.13	-0.51	-1.33	-13.00	-44.98
299.66	S	-64.96	-66.74	3.61	-1.82	-13.00	-51.96
359.80	S	-64.76	-66.53	3.83	-2.06	-13.00	-51.76
542.16	S	-63.91	-66.03	3.99	-1.87	-13.00	-50.91
697.36	S	-60.74	-62.04	3.68	-2.38	-13.00	-47.74
1673.00	Н	-57.12	-61.94	9.21	-4.39	-13.00	-44.12



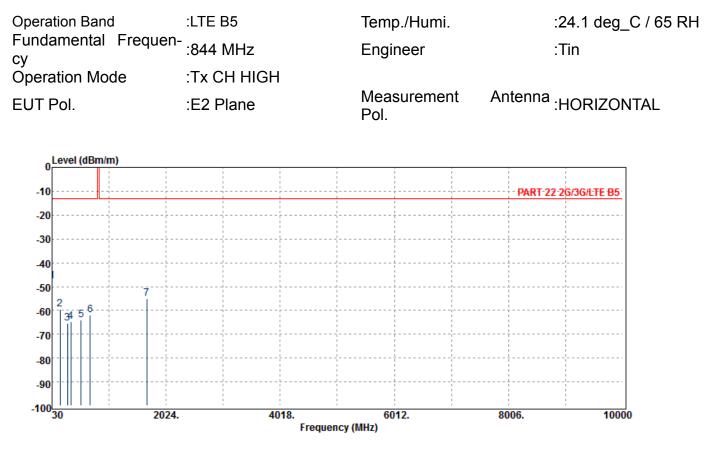
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-43.83	-29.16	-14.08	-0.59	-13.00	-30.83
170.65	S	-57.60	-55.75	-0.51	-1.33	-13.00	-44.60
287.05	S	-64.05	-65.70	3.42	-1.77	-13.00	-51.05
388.90	S	-62.34	-64.05	3.74	-2.04	-13.00	-49.34
541.19	S	-59.87	-61.95	3.99	-1.91	-13.00	-46.87
612.00	S	-59.27	-60.51	3.61	-2.38	-13.00	-46.27
1688.00	Н	-54.39	-57.07	7.11	-4.42	-13.00	-41.39



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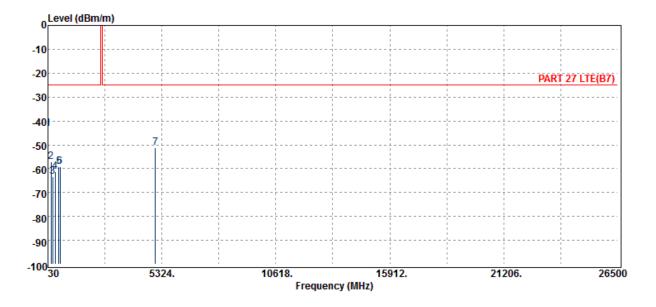


Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-47.67	-32.51	-14.58	-0.58	-13.00	-34.67
172.59	S	-59.39	-57.85	-0.20	-1.34	-13.00	-46.39
298.69	S	-65.26	-67.03	3.59	-1.82	-13.00	-52.26
359.80	S	-64.82	-66.59	3.83	-2.06	-13.00	-51.82
541.19	S	-64.14	-66.23	3.99	-1.91	-13.00	-51.14
700.27	S	-61.86	-63.38	3.67	-2.16	-13.00	-48.86
1688.00	Н	-55.16	-57.85	7.11	-4.42	-13.00	-42.16



### Radiated Spurious Emission Measurement Result: LTE-Band 7 (The Worst Case)

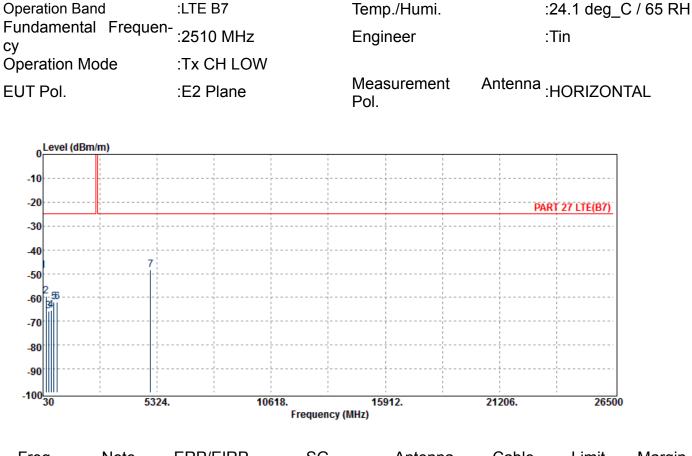
Operation Band	:LTE B7	Temp./Humi.	:24.1 deg_C / 65 RH
Fundamental Frequen- cv	:2510 MHz	Engineer	:Tin
Operation Mode	:Tx CH LOW		
EUT Pol.	:E2 Plane	Measurement Ant Pol.	enna :VERTICAL



Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-43.34	-28.67	-14.08	-0.59	-25.00	-18.34
175.50	S	-57.04	-55.95	0.27	-1.36	-25.00	-32.04
243.40	S	-63.22	-65.03	3.50	-1.68	-25.00	-38.22
366.59	S	-61.12	-62.86	3.81	-2.07	-25.00	-36.12
544.10	S	-59.11	-61.31	3.99	-1.79	-25.00	-34.11
600.36	S	-59.20	-60.58	3.54	-2.16	-25.00	-34.20
5020.00	Н	-51.27	-55.78	12.53	-8.01	-25.00	-26.27



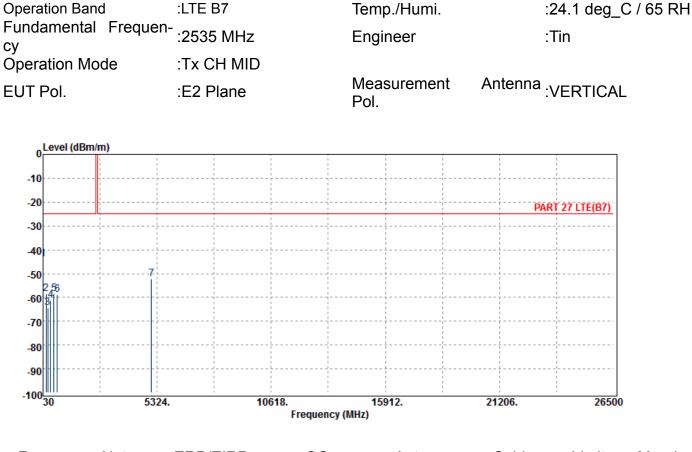
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	⊢req.	Note	ERP/EIRP	SG	Antenna	Cable	Limit	Margin	
				Output Level	Gain	Loss			
	MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB	
-									-
	31.94	S	-48.79	-34.11	-14.08	-0.59	-25.00	-23.79	
	173.56	S	-59.44	-58.05	-0.04	-1.35	-25.00	-34.44	
	296.75	S	-65.64	-67.38	3.55	-1.81	-25.00	-40.64	
	398.60	S	-65.31	-66.93	3.72	-2.10	-25.00	-40.31	
	542.16	S	-62.03	-64.16	3.99	-1.87	-25.00	-37.03	
	689.60	S	-61.91	-62.64	3.71	-2.98	-25.00	-36.91	
	5020.00	Н	-48.37	-52.88	12.53	-8.01	-25.00	-23.37	



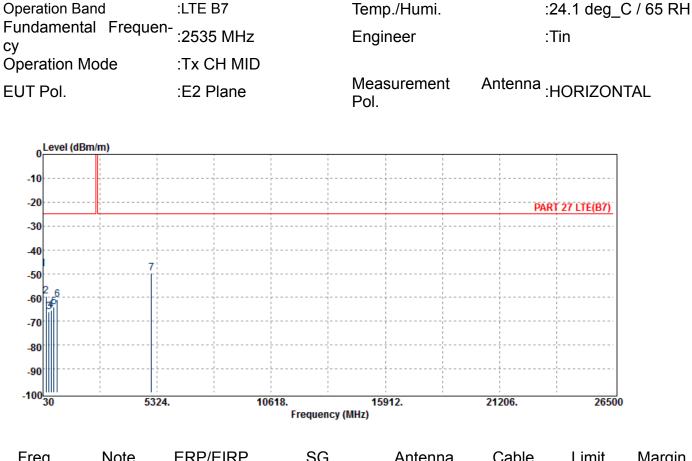
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Freq.	Note	ERP/EIRP	SG	Antenna	Cable	Limit	Margin
			Output Level	Gain	Loss		-
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-43.91	-29.24	-14.08	-0.59	-25.00	-18.91
173.56	S	-58.38	-56.99	-0.04	-1.35	-25.00	-33.38
241.46	S	-64.36	-66.17	3.49	-1.68	-25.00	-39.36
390.84	S	-61.17	-62.86	3.74	-2.05	-25.00	-36.17
537.31	S	-58.63	-60.56	4.00	-2.07	-25.00	-33.63
699.30	S	-58.83	-60.27	3.68	-2.24	-25.00	-33.83
5064.00	Н	-52.33	-56.81	12.58	-8.10	-25.00	-27.33



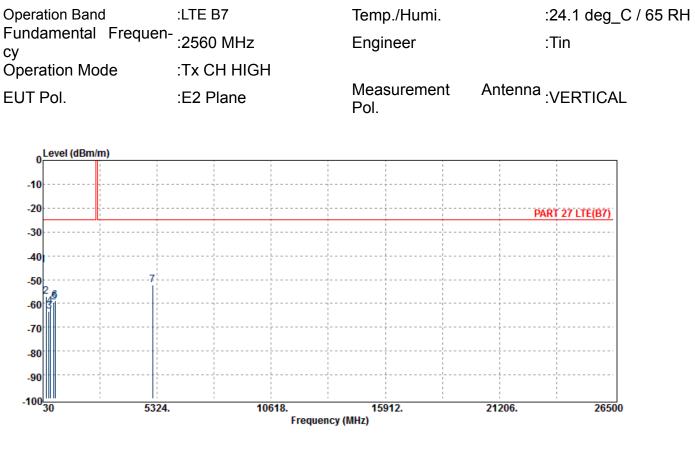
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	Freq.	Note	ERP/EIRP	SG	Antenna	Cable	Limit	Margin	
				Output Level	Gain	Loss			
	MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB	
-									-
	30.00	S	-48.02	-32.86	-14.58	-0.58	-25.00	-23.02	
	173.56	S	-59.44	-58.05	-0.04	-1.35	-25.00	-34.44	
	299.66	S	-66.19	-67.98	3.61	-1.82	-25.00	-41.19	
	410.24	S	-65.42	-66.96	3.68	-2.13	-25.00	-40.42	
	536.34	S	-64.07	-65.96	4.00	-2.11	-25.00	-39.07	
	699.30	S	-60.90	-62.34	3.68	-2.24	-25.00	-35.90	
	5064.00	Н	-49.77	-54.25	12.58	-8.10	-25.00	-24.77	



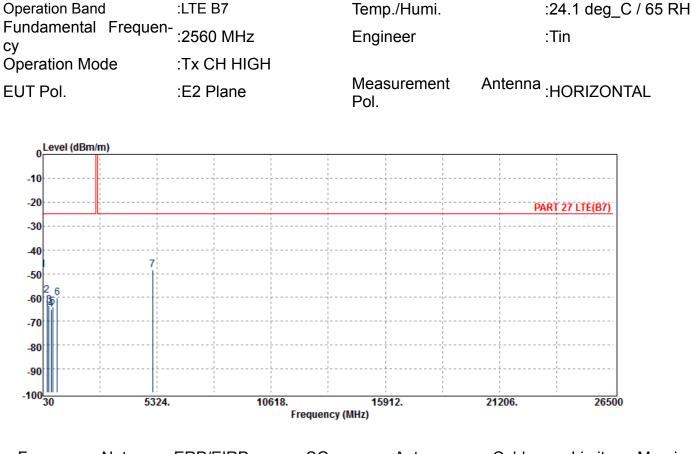
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Freq.	Note	ERP/EIRP	SG	Antenna	Cable	Limit	Margin
			Output Level	Gain	Loss		
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
32.91	S	-43.85	-29.41	-13.84	-0.60	-25.00	-18.85
170.65	S	-57.21	-55.36	-0.51	-1.33	-25.00	-32.21
299.66	S	-63.45	-65.24	3.61	-1.82	-25.00	-38.45
356.89	S	-61.36	-63.15	3.83	-2.05	-25.00	-36.36
542.16	S	-59.57	-61.69	3.99	-1.87	-25.00	-34.57
590.66	S	-58.91	-60.32	3.62	-2.21	-25.00	-33.91
5120.00	Н	-52.40	-56.95	12.65	-8.10	-25.00	-27.40



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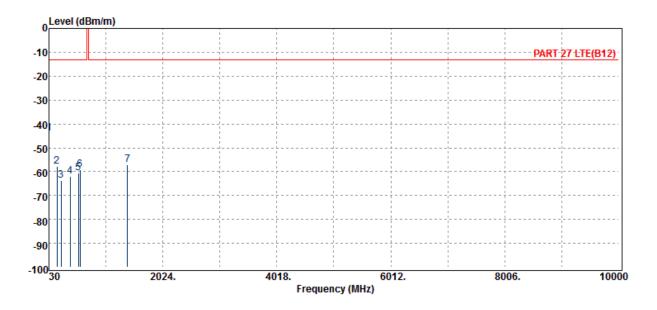


Freq.	Note	ERP/EIRP	SG	Antenna	Cable	Limit	Margin
-			Output Level	Gain	Loss		_
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-48.31	-33.15	-14.58	-0.58	-25.00	-23.31
212.36	S	-59.31	-61.39	3.62	-1.54	-25.00	-34.31
299.66	S	-63.47	-65.25	3.61	-1.82	-25.00	-38.47
396.66	S	-65.19	-66.82	3.72	-2.09	-25.00	-40.19
483.96	S	-63.92	-65.95	3.89	-1.85	-25.00	-38.92
689.60	S	-60.22	-60.94	3.71	-2.98	-25.00	-35.22
5120.00	Н	-48.42	-52.96	12.65	-8.10	-25.00	-23.42



#### Radiated Spurious Emission Measurement Result: LTE-Band 12 (The Worst Case)

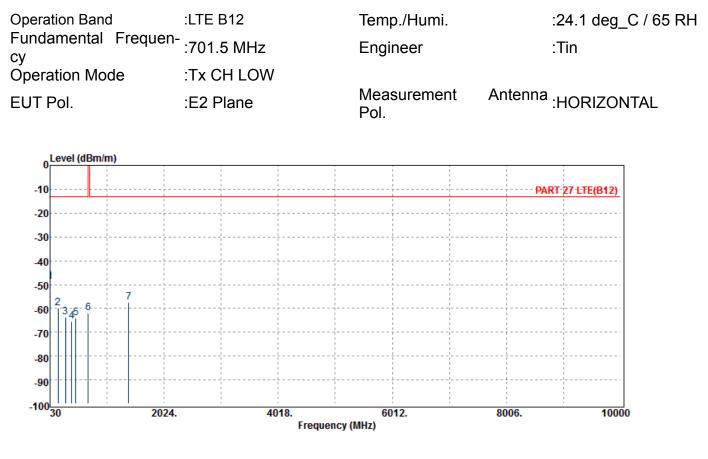
	:LTE B12	Temp./Humi.	:24.1 deg_C / 65 RH
Fundamental Frequen-	:701.5 MHz	Engineer	:Tin
Operation Mode	:Tx CH LOW		
EUT Pol.	:E2 Plane	Measurement Antenn Pol.	<sup>a</sup> :VERTICAL



Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-43.82	-29.15	-14.08	-0.59	-13.00	-30.82
168.71	S	-57.86	-55.84	-0.70	-1.33	-13.00	-44.86
243.40	S	-63.73	-65.54	3.50	-1.68	-13.00	-50.73
400.54	S	-61.82	-63.41	3.71	-2.12	-13.00	-48.82
546.04	S	-60.50	-62.68	3.99	-1.81	-13.00	-47.50
571.26	S	-59.09	-60.23	3.79	-2.65	-13.00	-46.09
1403.00	Н	-57.04	-61.26	8.20	-3.99	-13.00	-44.04



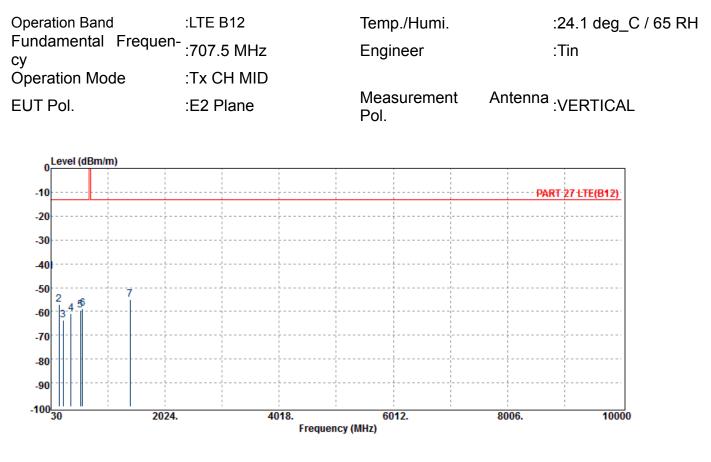
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-48.82	-33.66	-14.58	-0.58	-13.00	-35.82
173.56	S	-59.95	-58.56	-0.04	-1.35	-13.00	-46.95
299.66	S	-63.54	-65.33	3.61	-1.82	-13.00	-50.54
405.39	S	-65.55	-67.09	3.69	-2.15	-13.00	-52.55
481.05	S	-63.91	-65.81	3.86	-1.96	-13.00	-50.91
696.39	S	-61.82	-63.05	3.69	-2.46	-13.00	-48.82
1403.00	Н	-57.54	-61.76	8.20	-3.99	-13.00	-44.54



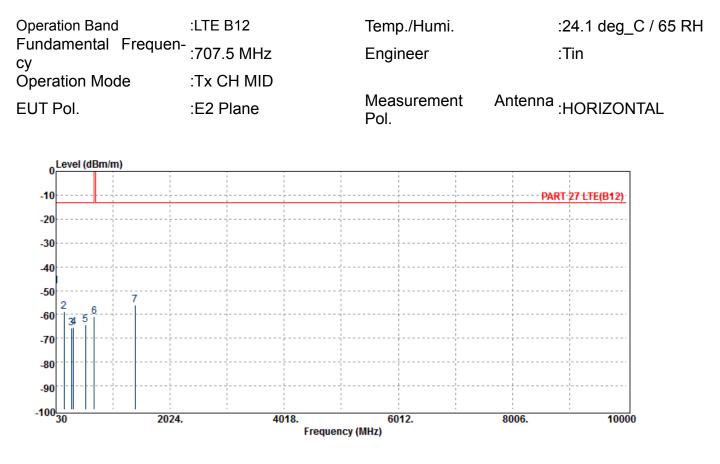
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-43.28	-28.61	-14.08	-0.59	-13.00	-30.28
172.59	S	-57.11	-55.57	-0.20	-1.34	-13.00	-44.11
241.46	S	-63.55	-65.36	3.49	-1.68	-13.00	-50.55
376.29	S	-60.92	-62.66	3.78	-2.03	-13.00	-47.92
546.04	S	-59.45	-61.62	3.99	-1.81	-13.00	-46.45
579.99	S	-58.82	-60.14	3.71	-2.39	-13.00	-45.82
1415.00	Н	-54.97	-59.22	8.25	-4.01	-13.00	-41.97



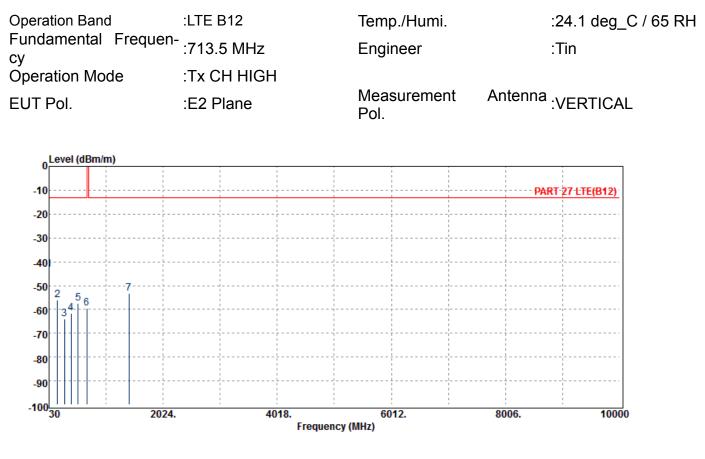
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-48.10	-32.94	-14.58	-0.58	-13.00	-35.10
173.56	S	-58.90	-57.51	-0.04	-1.35	-13.00	-45.90
298.69	S	-65.64	-67.41	3.59	-1.82	-13.00	-52.64
335.55	S	-65.45	-67.29	3.79	-1.95	-13.00	-52.45
547.01	S	-64.52	-66.64	3.98	-1.86	-13.00	-51.52
700.27	S	-60.85	-62.37	3.67	-2.16	34.77	-95.62
1415.00	Н	-56.08	-60.33	8.25	-4.01	-13.00	-43.08



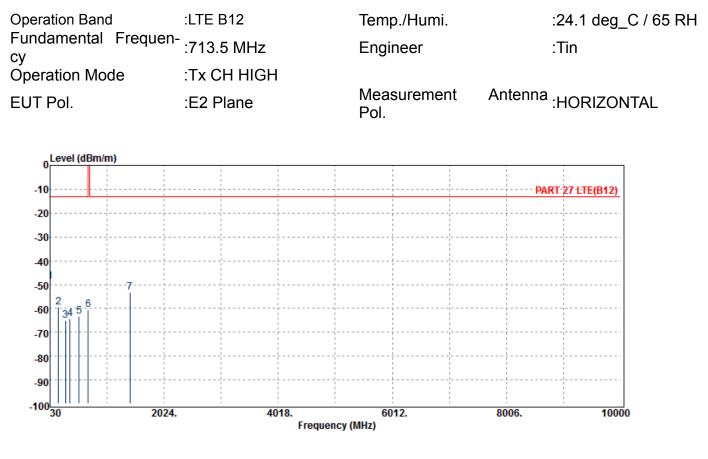
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-43.42	-28.75	-14.08	-0.59	-13.00	-30.42
175.50	S	-56.12	-55.04	0.27	-1.36	-13.00	-43.12
299.66	S	-64.12	-65.90	3.61	-1.82	-13.00	-51.12
413.15	S	-61.48	-63.02	3.67	-2.13	-13.00	-48.48
541.19	S	-57.58	-59.66	3.99	-1.91	-13.00	-44.58
686.69	S	-59.49	-59.99	3.72	-3.21	-13.00	-46.49
1427.00	Н	-53.24	-57.51	8.30	-4.03	-13.00	-40.24



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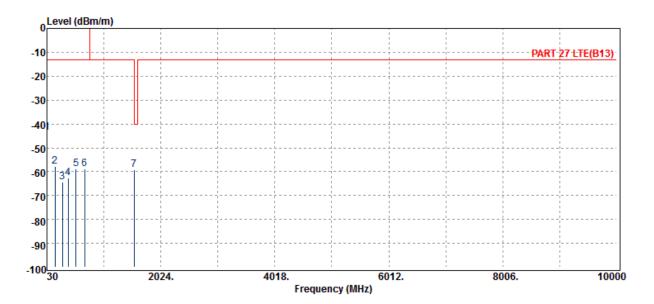


Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-48.85	-33.69	-14.58	-0.58	-13.00	-35.85
175.50	S	-59.50	-58.42	0.27	-1.36	-13.00	-46.50
298.69	S	-65.19	-66.96	3.59	-1.82	-13.00	-52.19
376.29	S	-64.45	-66.20	3.78	-2.03	-13.00	-51.45
536.34	S	-63.23	-65.12	4.00	-2.11	-13.00	-50.23
697.36	S	-60.54	-61.84	3.68	-2.38	-13.00	-47.54
1427.00	Н	-53.36	-57.64	8.30	-4.03	-13.00	-40.36



# Radiated Spurious Emission Measurement Result: LTE-Band 13 (The Worst Case)

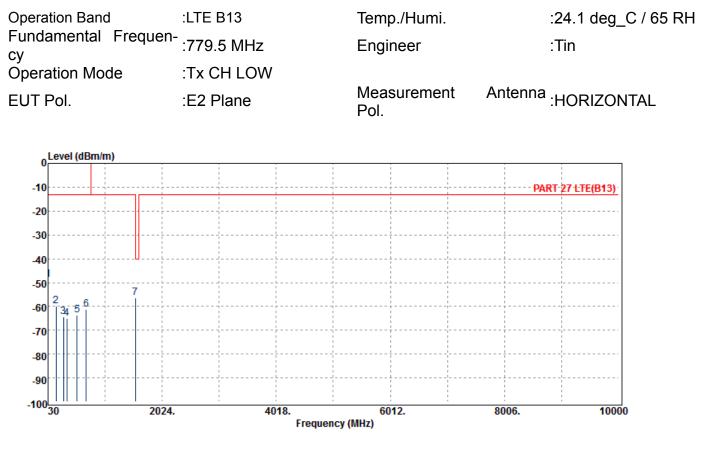
Operation Band	:LTE B13	Temp./Humi.	:24.1 deg_C / 65 RH
Fundamental Frequen	- :779.5 MHz	Engineer	:Tin
Operation Mode	:Tx CH LOW		
EUT Pol.	:E2 Plane	Measurement An Pol.	tenna :VERTICAL



Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-43.46	-28.79	-14.08	-0.59	-13.00	-30.46
168.71	S	-57.90	-55.88	-0.70	-1.33	-13.00	-44.90
298.69	S	-64.35	-66.13	3.59	-1.82	-13.00	-51.35
398.60	S	-62.63	-64.24	3.72	-2.10	-13.00	-49.63
539.25	S	-58.88	-60.89	4.00	-1.99	-13.00	-45.88
689.60	S	-58.98	-59.70	3.71	-2.98	-13.00	-45.98
1559.00	Н	-59.31	-61.72	6.66	-4.25	-40.00	-19.31



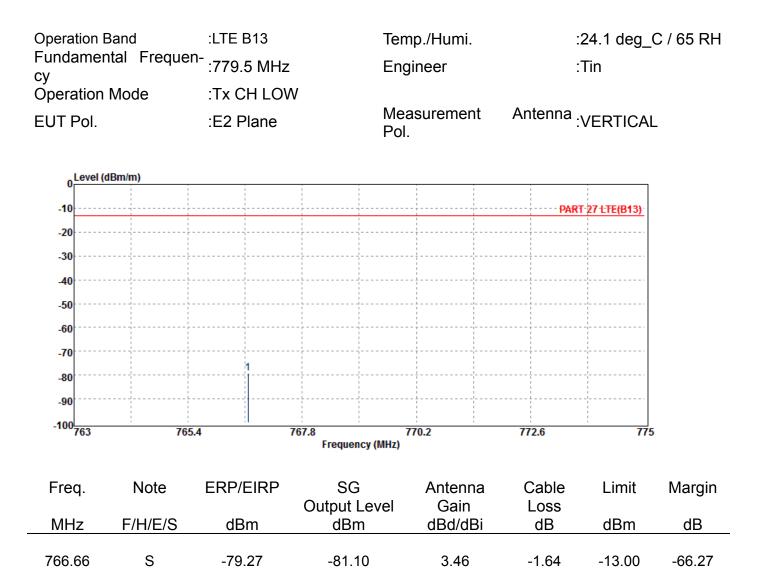
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-48.72	-33.56	-14.58	-0.58	-13.00	-35.72
172.59	S	-59.91	-58.38	-0.20	-1.34	-13.00	-46.91
299.66	S	-64.48	-66.27	3.61	-1.82	-13.00	-51.48
357.86	S	-65.11	-66.89	3.83	-2.05	-13.00	-52.11
541.19	S	-63.71	-65.80	3.99	-1.91	-13.00	-50.71
699.30	S	-61.08	-62.52	3.68	-2.24	-13.00	-48.08
1559.00	Н	-56.43	-58.84	6.66	-4.25	-40.00	-16.43



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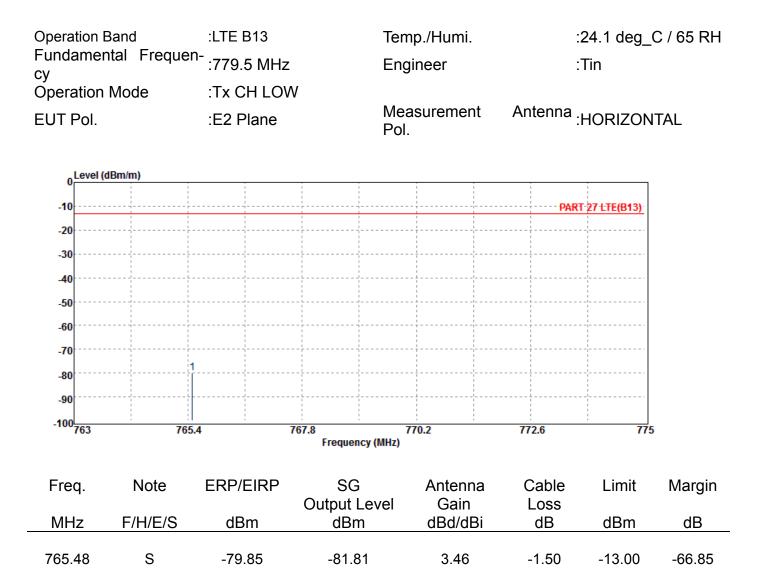


Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>www.sgs.com/terms and conditions.htm</u> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>www.sgs.com/terms e-document.htm</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or

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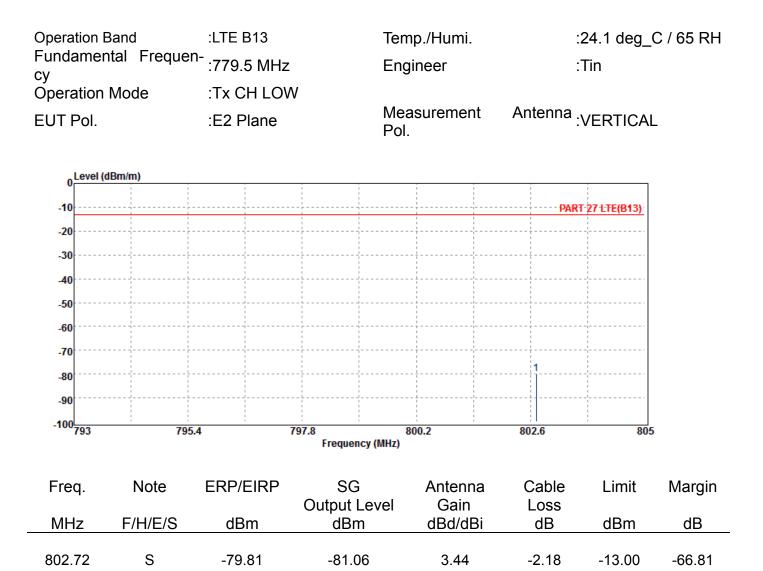


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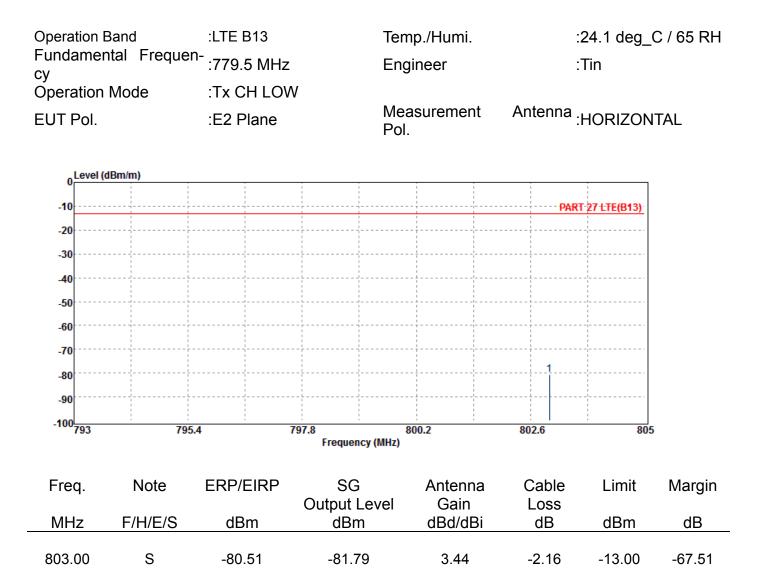


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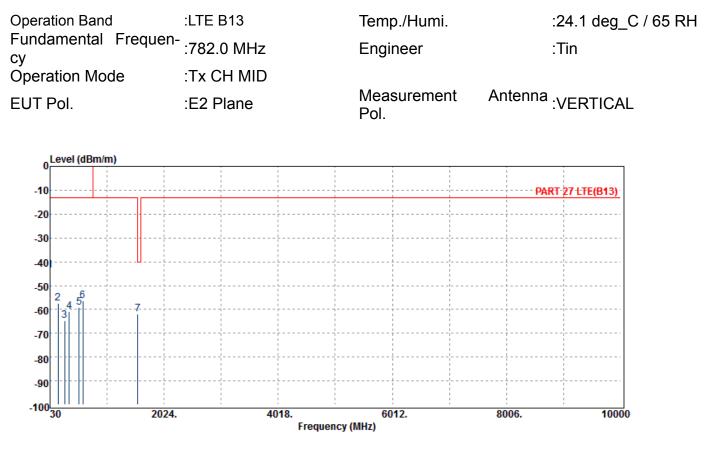


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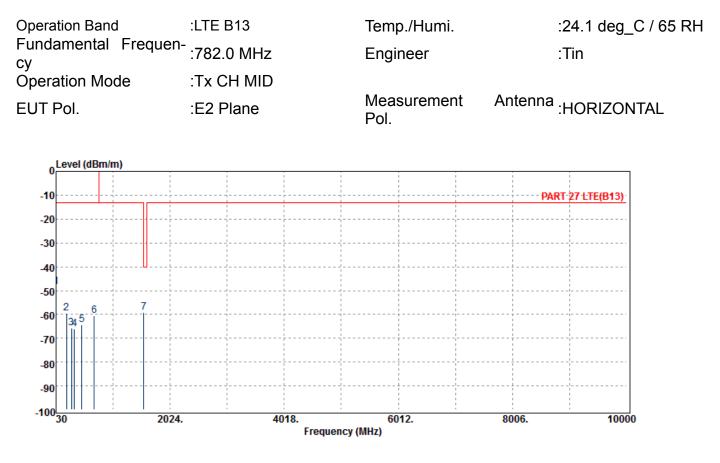
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-43.54	-28.87	-14.08	-0.59	-13.00	-30.54
167.74	S	-57.33	-55.25	-0.76	-1.32	-13.00	-44.33
287.05	S	-64.72	-66.37	3.42	-1.77	-13.00	-51.72
367.56	S	-60.95	-62.69	3.80	-2.06	-13.00	-47.95
536.34	S	-59.27	-61.17	4.00	-2.11	-13.00	-46.27
605.21	S	-56.46	-57.88	3.57	-2.15	-13.00	-43.46
1564.00	Н	-61.83	-64.25	6.68	-4.26	-40.00	-21.83



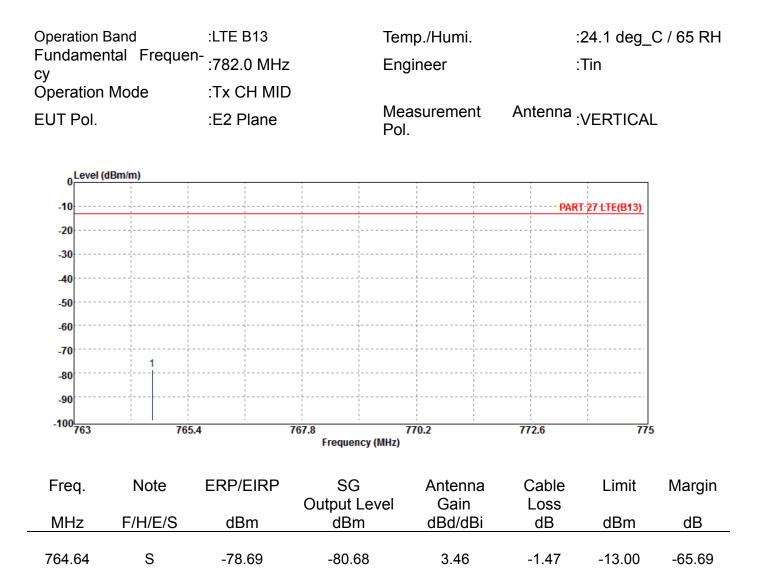
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-48.43	-33.27	-14.58	-0.58	-13.00	-35.43
214.30	S	-59.57	-61.57	3.55	-1.55	-13.00	-46.57
299.66	S	-65.61	-67.39	3.61	-1.82	-13.00	-52.61
352.04	S	-66.08	-67.90	3.85	-2.03	-13.00	-53.08
483.96	S	-64.31	-66.34	3.89	-1.85	-13.00	-51.31
697.36	S	-60.69	-61.99	3.68	-2.38	-13.00	-47.69
1564.00	Н	-59.04	-61.47	6.68	-4.26	-40.00	-19.04

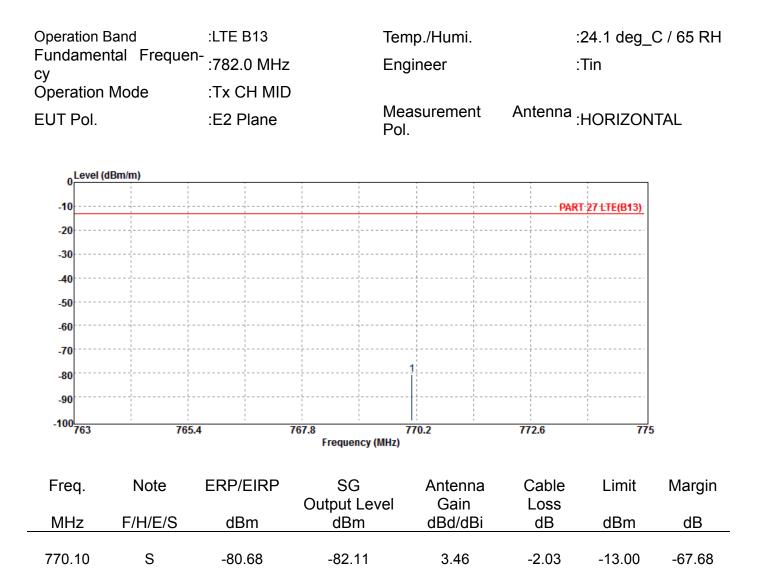


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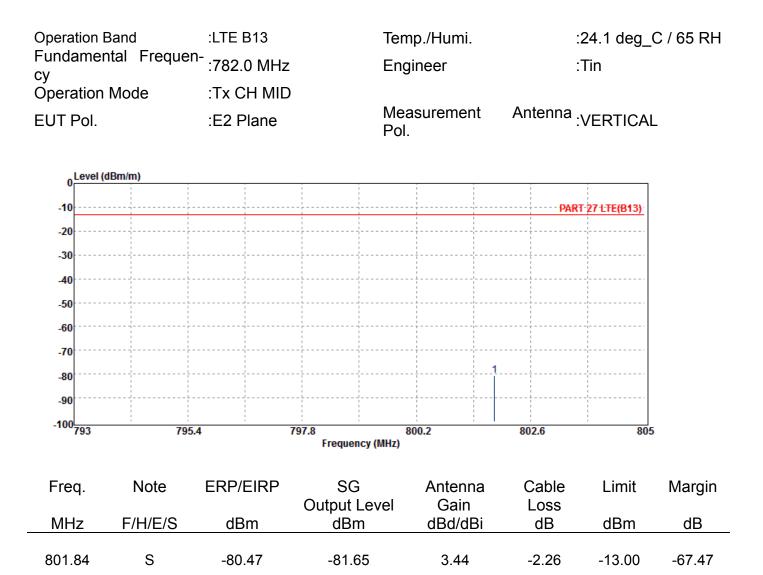


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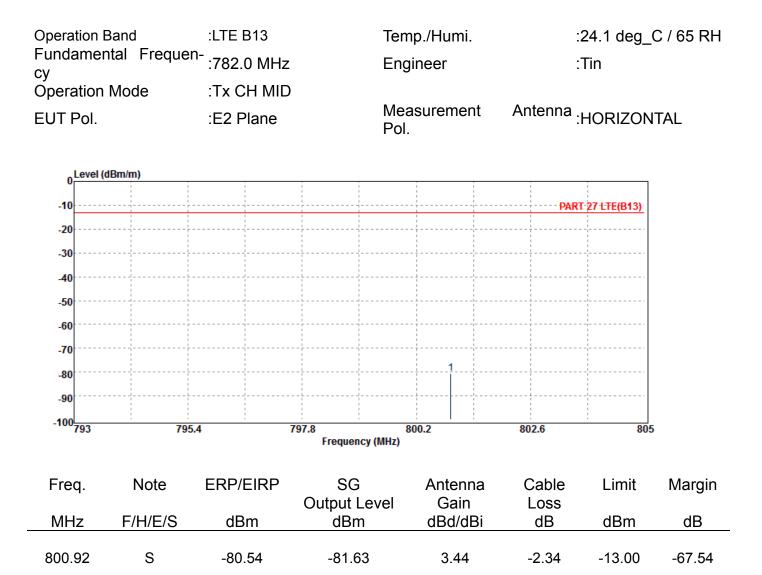


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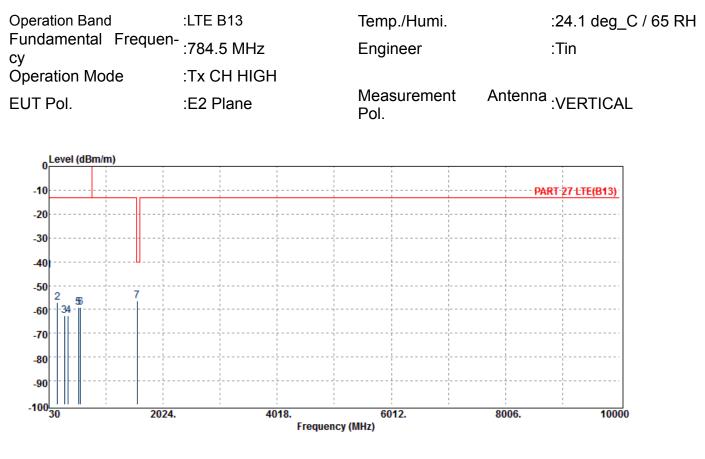


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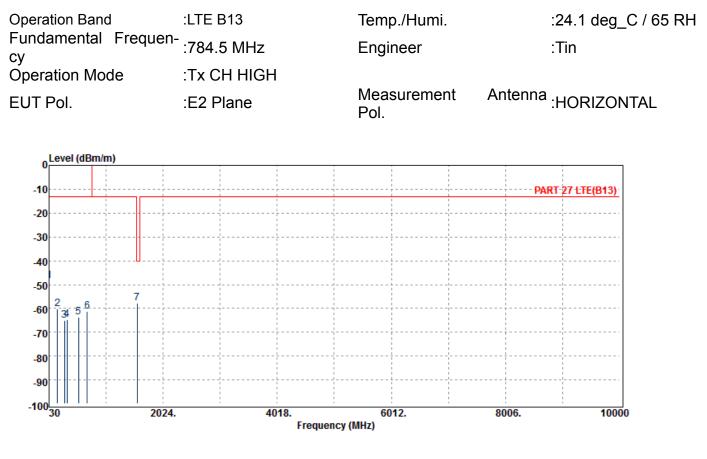
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-43.77	-29.09	-14.08	-0.59	-13.00	-30.77
175.50	S	-57.10	-56.01	0.27	-1.36	-13.00	-44.10
299.66	S	-62.54	-64.32	3.61	-1.82	-13.00	-49.54
362.71	S	-62.54	-64.29	3.82	-2.07	-13.00	-49.54
547.01	S	-59.01	-61.13	3.98	-1.86	-13.00	-46.01
580.96	S	-59.16	-60.50	3.70	-2.36	-13.00	-46.16
1569.00	Н	-56.42	-58.85	6.70	-4.27	-40.00	-16.42



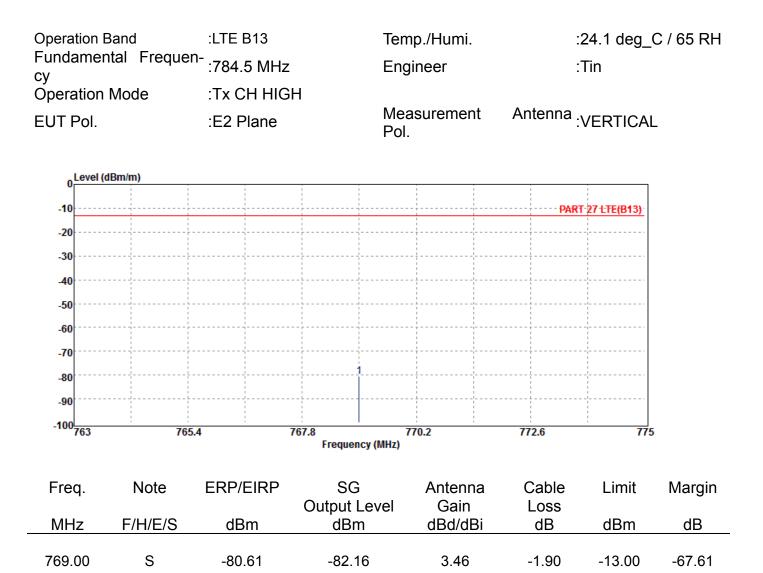
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-48.34	-33.18	-14.58	-0.58	-13.00	-35.34
177.44	S	-60.11	-59.32	0.58	-1.37	-13.00	-47.11
299.66	S	-65.12	-66.90	3.61	-1.82	-13.00	-52.12
347.19	S	-64.74	-66.56	3.84	-2.02	-13.00	-51.74
548.95	S	-63.80	-65.81	3.98	-1.97	-13.00	-50.80
696.39	S	-61.13	-62.36	3.69	-2.46	-13.00	-48.13
1569.00	Н	-57.64	-60.07	6.70	-4.27	-40.00	-17.64

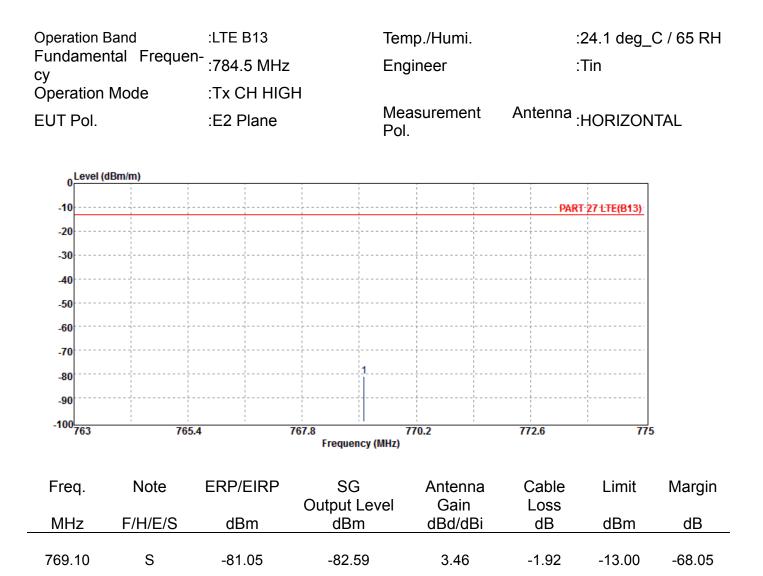


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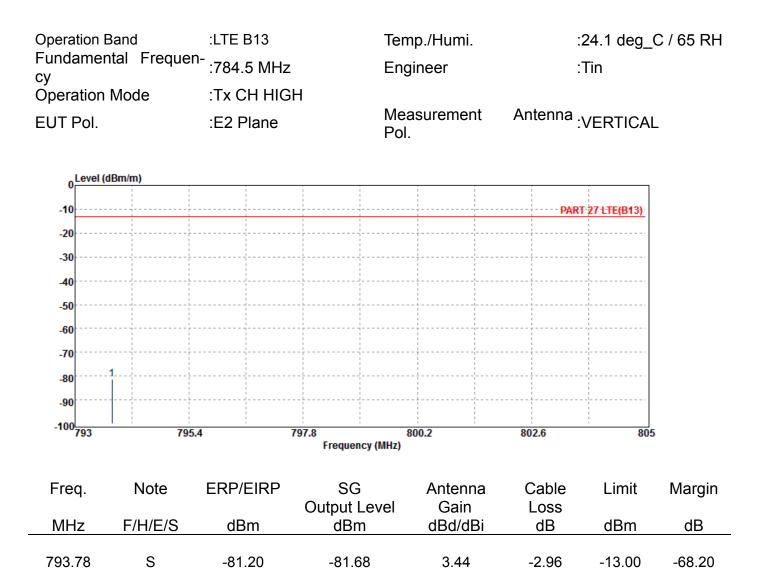


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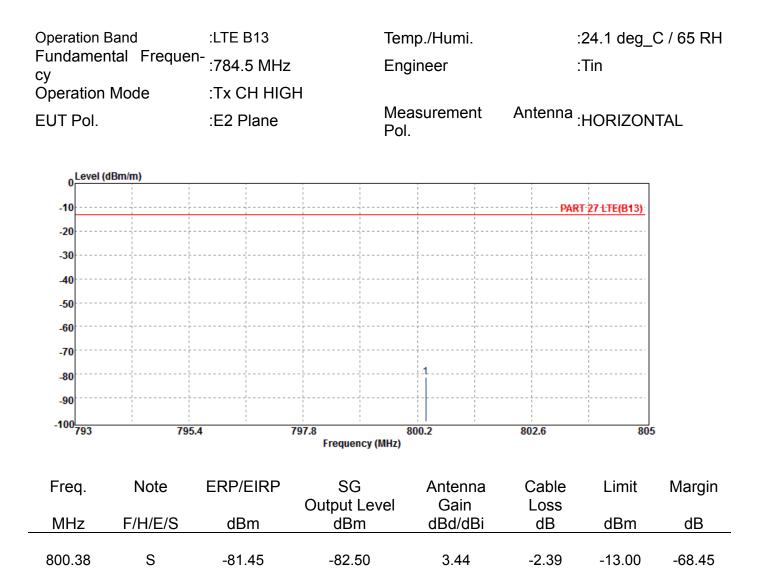


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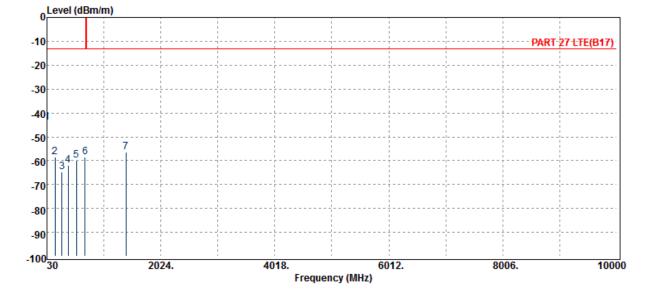
Radiated Spurious Emission Measurement Result: LTE-Band 17 (The Worst Case)							
	:LTE B17	Temp./Humi.	:24.1 deg_C / 65 RH				
Fundamental Frequen-	:706.5 MHz	Engineer	:Tin				
Operation Mode	TX CH LOW						

operation Mode EUT Pol.

CHLOW :E2 Plane

Measurement Pol.

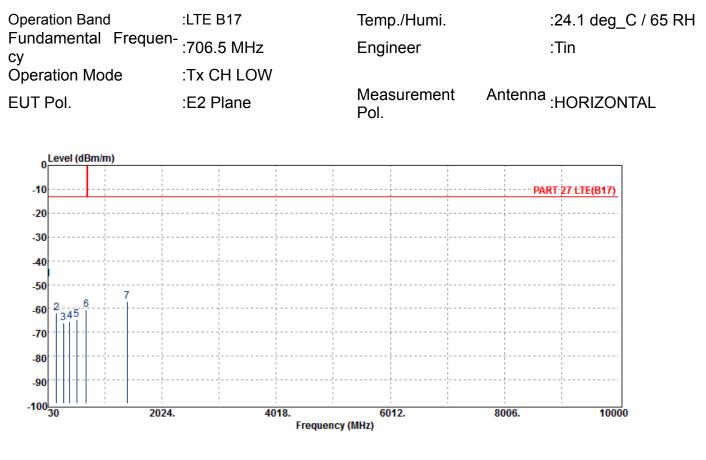
Antenna :VERTICAL



Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-44.00	-29.32	-14.08	-0.59	-13.00	-31.00
168.71	S	-58.31	-56.29	-0.70	-1.33	-13.00	-45.31
296.75	S	-64.71	-66.45	3.55	-1.81	-13.00	-51.71
401.51	S	-61.88	-63.46	3.71	-2.13	-13.00	-48.88
548.95	S	-59.95	-61.96	3.98	-1.97	-13.00	-46.95
699.30	S	-58.65	-60.09	3.68	-2.24	-13.00	-45.65
1413.00	Н	-56.36	-60.61	8.25	-4.00	-13.00	-43.36



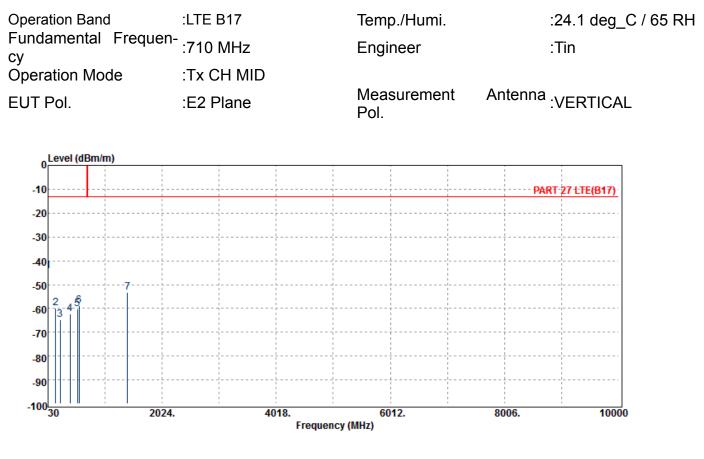
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
	1/11/2/0	dDill	dDin	aba/abi	üD	GDIII	
30.00	S	-47.87	-32.71	-14.58	-0.58	-13.00	-34.87
175.50	S	-61.77	-60.68	0.27	-1.36	-13.00	-48.77
299.66	S	-66.08	-67.86	3.61	-1.82	-13.00	-53.08
406.36	S	-65.57	-67.11	3.69	-2.15	-13.00	-52.57
534.40	S	-64.58	-66.39	4.00	-2.19	-13.00	-51.58
696.39	S	-60.54	-61.77	3.69	-2.46	-13.00	-47.54
1413.00	Н	-57.01	-61.26	8.25	-4.00	-13.00	-44.01



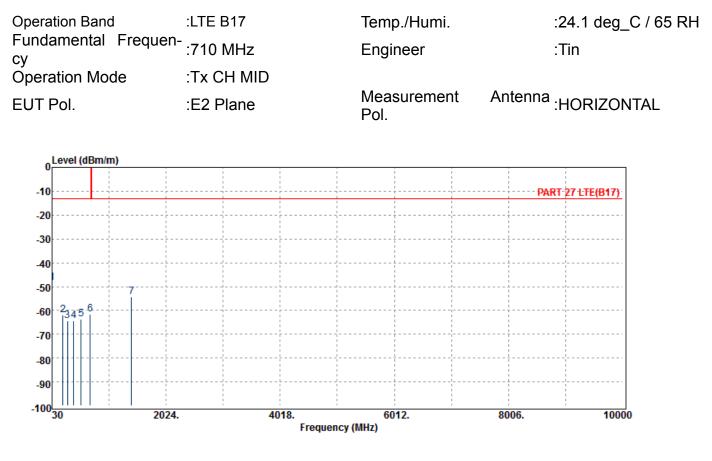
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-44.20	-29.04	-14.58	-0.58	-13.00	-31.20
165.80	S	-59.79	-57.60	-0.88	-1.31	-13.00	-46.79
241.46	S	-64.67	-66.49	3.49	-1.68	-13.00	-51.67
416.06	S	-62.22	-63.75	3.66	-2.12	-13.00	-49.22
544.10	S	-60.06	-62.26	3.99	-1.79	-13.00	-47.06
578.05	S	-58.66	-59.94	3.73	-2.45	-13.00	-45.66
1420.00	Н	-53.45	-57.71	8.28	-4.01	-13.00	-40.45



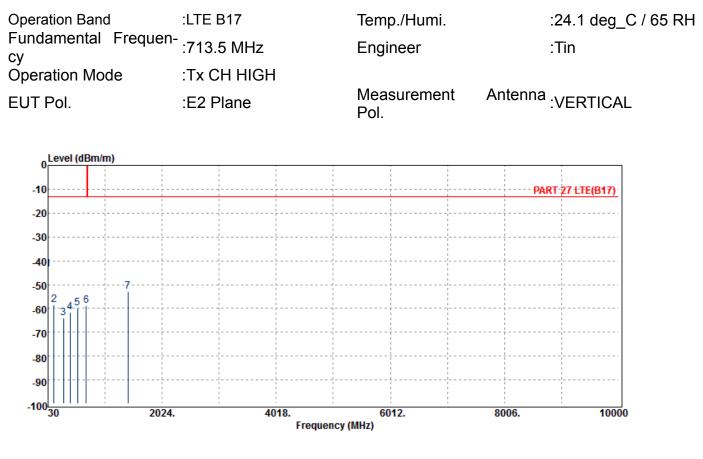
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
		10.01					
30.00	S	-48.61	-33.45	-14.58	-0.58	-13.00	-35.61
219.15	S	-61.82	-63.60	3.35	-1.57	-13.00	-48.82
299.66	S	-64.53	-66.31	3.61	-1.82	-13.00	-51.53
408.30	S	-64.36	-65.90	3.68	-2.14	-13.00	-51.36
542.16	S	-63.84	-65.96	3.99	-1.87	-13.00	-50.84
694.45	S	-61.58	-62.66	3.69	-2.61	-13.00	-48.58
1420.00	Н	-54.17	-58.43	8.28	-4.01	-13.00	-41.17



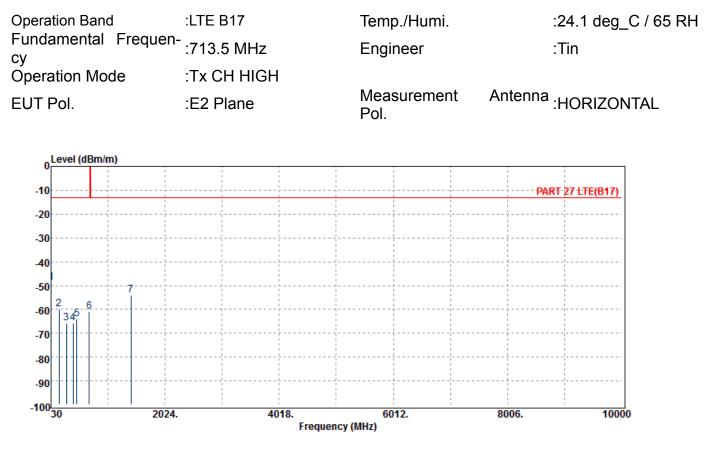
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-43.47	-28.80	-14.08	-0.59	-13.00	-30.47
134.76	S	-58.34	-54.98	-2.12	-1.23	-13.00	-45.34
298.69	S	-63.99	-65.77	3.59	-1.82	-13.00	-50.99
413.15	S	-61.56	-63.10	3.67	-2.13	-13.00	-48.56
546.04	S	-59.87	-62.05	3.99	-1.81	-13.00	-46.87
697.36	S	-58.87	-60.16	3.68	-2.38	-13.00	-45.87
1427.00	Н	-52.92	-57.20	8.30	-4.03	-13.00	-39.92



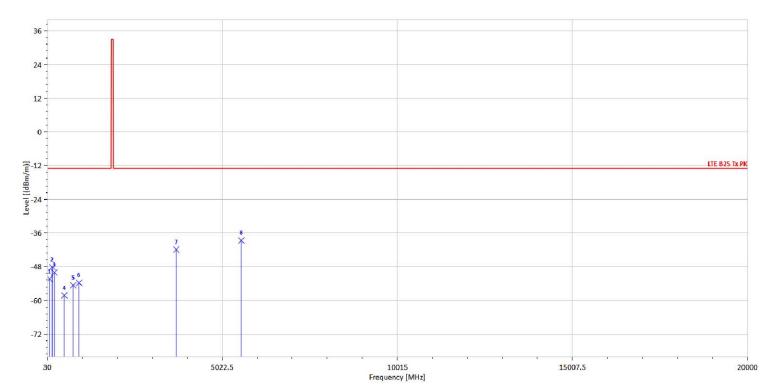
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable	Limit	Margin
					Loss		
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-48.90	-34.22	-14.08	-0.59	-13.00	-35.90
170.65	S	-59.86	-58.01	-0.51	-1.33	-13.00	-46.86
298.69	S	-65.87	-67.64	3.59	-1.82	-13.00	-52.87
415.09	S	-65.70	-67.23	3.66	-2.12	-13.00	-52.70
478.14	S	-64.02	-65.78	3.83	-2.08	-13.00	-51.02
696.39	S	-60.93	-62.15	3.69	-2.46	-13.00	-47.93
1427.00	Н	-54.15	-58.42	8.30	-4.03	-13.00	-41.15



Operation Mode :	LTEB25 10M QPSK 1.0	Test Date :	2017/11/17
Fundamental Frequency :	1855 MHz	Temp. / Humi. :	22.7deg_C/57RH
Operation Band :	Tx CH Low	Test Engineer :	Enzo
EUT Pol. :	E2	Measurement Antenna Pol. :	Vertical

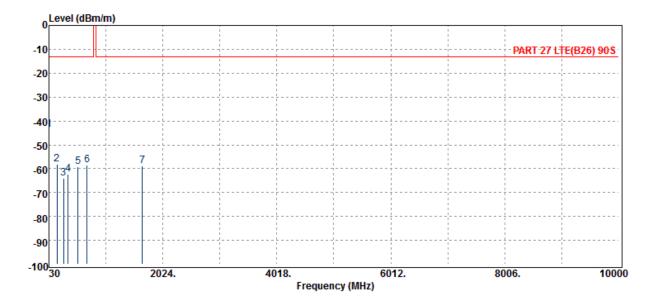


Freq.	Note	ERP/EIRP	SG Output	Antenna	Cable	Limit	Margin
			Level	Gain	Loss	@3m	
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm/m	dB
97.90	S	-52.36	-49.95	-1.04	-1.36	-13	-39.36
175.50	S	-48.16	-51.22	4.92	-1.86	-13	-35.16
235.64	S	-50.07	-53.71	5.80	-2.17	-13	-37.07
515.97	S	-58.24	-61.44	6.50	-3.29	-13	-45.24
770.11	S	-54.64	-58.36	7.74	-4.01	-13	-41.64
936.95	S	-53.77	-57.23	7.95	-4.49	-13	-40.77
3710.00	Н	-41.93	-45.45	12.43	-8.91	-13	-28.93
5565.00	Н	-38.68	-41.35	13.01	-10.34	-13	-25.68



## Radiated Spurious Emission Measurement Result: LTE-Band 26 (The Worst Case)

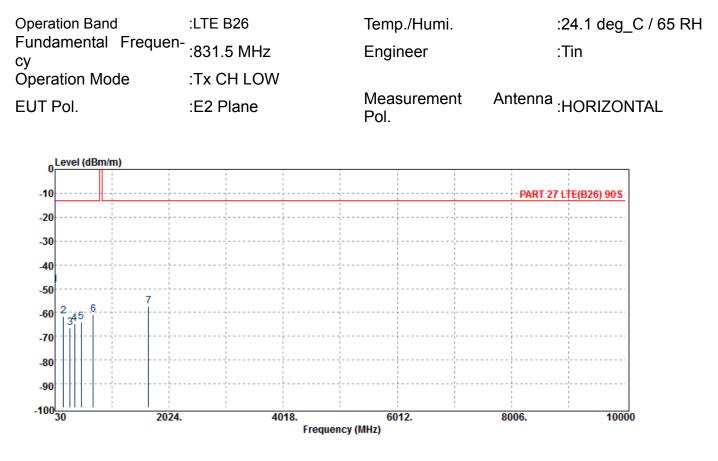
Operation Band	:LTE B26	Temp./Humi.	:24.1 deg_C / 65 RH
Fundamental Frequency	:831.5 MHz	Engineer	:Tin
Operation Mode	:Tx CH LOW		
EUT Pol.	:E2 Plane	Measurement Ante Pol.	<sup>enna</sup> :VERTICAL



Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-43.51	-28.84	-14.08	-0.59	-13.00	-30.51
170.65	S	-58.02	-56.17	-0.51	-1.33	-13.00	-45.02
287.05	S	-63.93	-65.58	3.42	-1.77	-13.00	-50.93
366.59	S	-62.26	-64.00	3.81	-2.07	-13.00	-49.26
537.31	S	-59.30	-61.23	4.00	-2.07	-13.00	-46.30
694.45	S	-58.35	-59.43	3.69	-2.61	-13.00	-45.35
1663.00	Н	-58.65	-61.30	7.02	-4.38	-13.00	-45.65



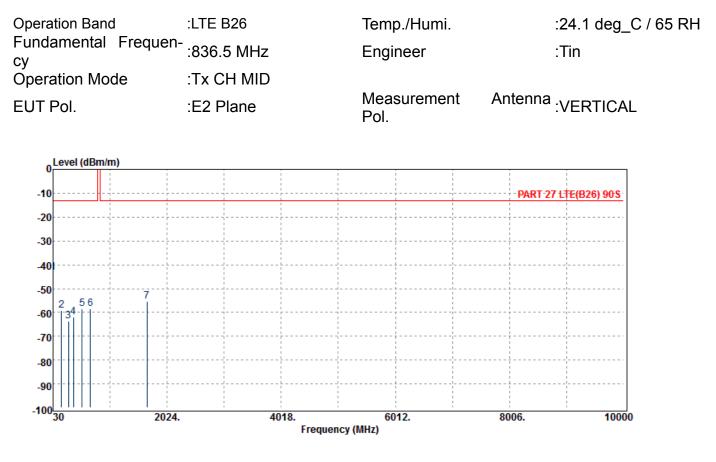
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-48.47	-33.31	-14.58	-0.58	-13.00	-35.47
175.50	S	-61.42	-60.33	0.27	-1.36	-13.00	-48.42
296.75	S	-66.44	-68.18	3.55	-1.81	-13.00	-53.44
372.41	S	-64.84	-66.58	3.79	-2.05	-13.00	-51.84
487.84	S	-64.05	-66.10	3.93	-1.89	-13.00	-51.05
694.45	S	-60.76	-61.84	3.69	-2.61	-13.00	-47.76
1663.00	Н	-57.58	-60.23	7.02	-4.38	-13.00	-44.58



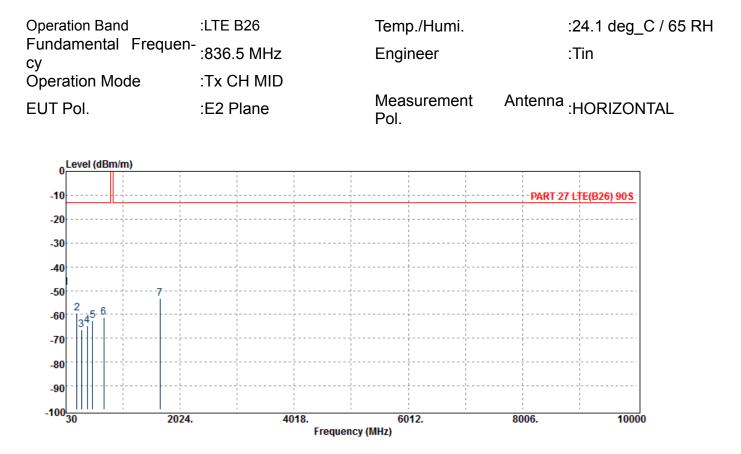
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-43.13	-28.45	-14.08	-0.59	-13.00	-30.13
177.44	S	-59.09	-58.30	0.58	-1.37	-13.00	-46.09
298.69	S	-63.68	-65.45	3.59	-1.82	-13.00	-50.68
386.96	S	-61.79	-63.52	3.75	-2.02	-13.00	-48.79
542.16	S	-58.53	-60.66	3.99	-1.87	-13.00	-45.53
684.75	S	-58.33	-58.73	3.72	-3.32	-13.00	-45.33
1673.00	Н	-55.37	-58.04	7.06	-4.39	-13.00	-42.37



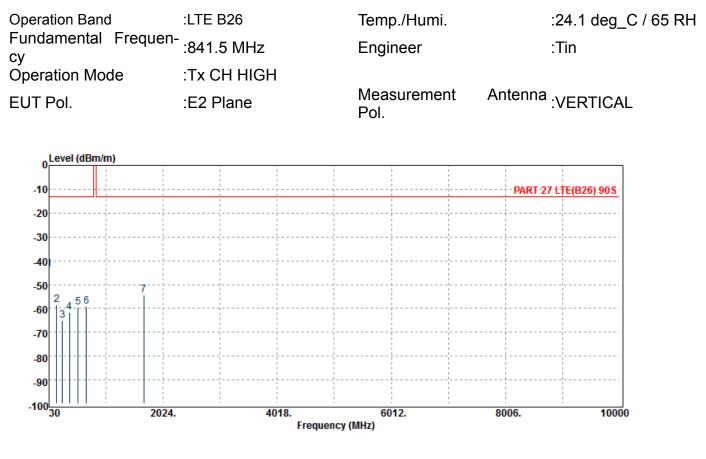
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-48.94	-34.27	-14.08	-0.59	-13.00	-35.94
219.15	S	-59.67	-61.46	3.35	-1.57	-13.00	-46.67
299.66	S	-66.39	-68.18	3.61	-1.82	-13.00	-53.39
403.45	S	-64.85	-66.41	3.70	-2.14	-13.00	-51.85
493.66	S	-62.72	-64.67	3.99	-2.04	-13.00	-49.72
692.51	S	-61.30	-62.24	3.70	-2.76	-13.00	-48.30
1673.00	Н	-53.38	-56.04	7.06	-4.39	-13.00	-40.38



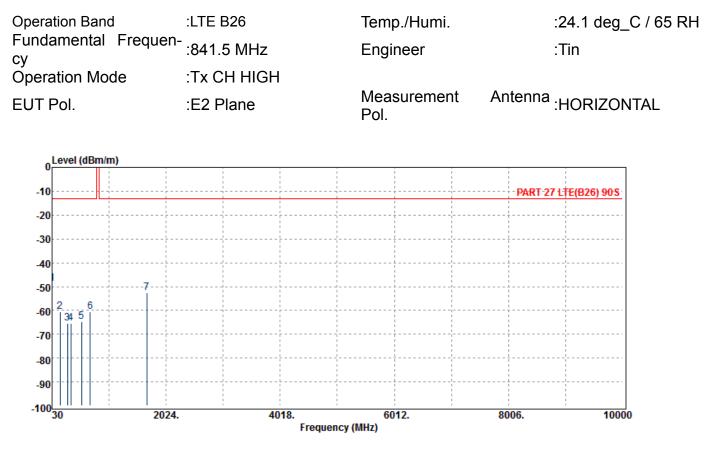
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-43.76	-29.08	-14.08	-0.59	-13.00	-30.76
165.80	S	-58.58	-56.40	-0.88	-1.31	-13.00	-45.58
265.71	S	-65.19	-67.06	3.57	-1.71	-13.00	-52.19
385.99	S	-61.54	-63.28	3.75	-2.01	-13.00	-48.54
542.16	S	-59.48	-61.60	3.99	-1.87	-13.00	-46.48
679.90	S	-59.09	-59.83	3.74	-2.99	-13.00	-46.09
1683.00	Н	-54.15	-56.83	7.09	-4.41	-13.00	-41.15



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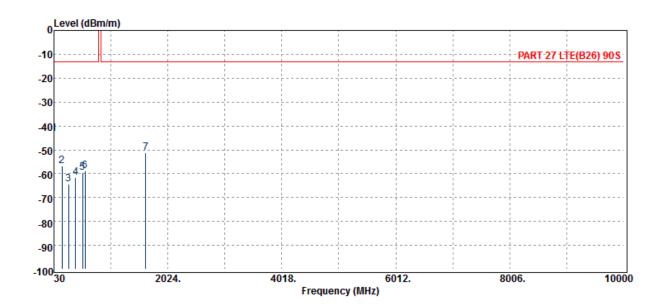


Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-48.72	-33.56	-14.58	-0.58	-13.00	-35.72
170.65	S	-60.59	-58.74	-0.51	-1.33	-13.00	-47.59
299.66	S	-65.26	-67.04	3.61	-1.82	-13.00	-52.26
359.80	S	-65.39	-67.16	3.83	-2.06	-13.00	-52.39
547.01	S	-64.62	-66.74	3.98	-1.86	-13.00	-51.62
696.39	S	-60.54	-61.77	3.69	-2.46	-13.00	-47.54
1683.00	Н	-52.59	-55.27	7.09	-4.41	-13.00	-39.59



## Radiated Spurious Emission Measurement Result: LTE-Band 26 for Part 90S (The Worst

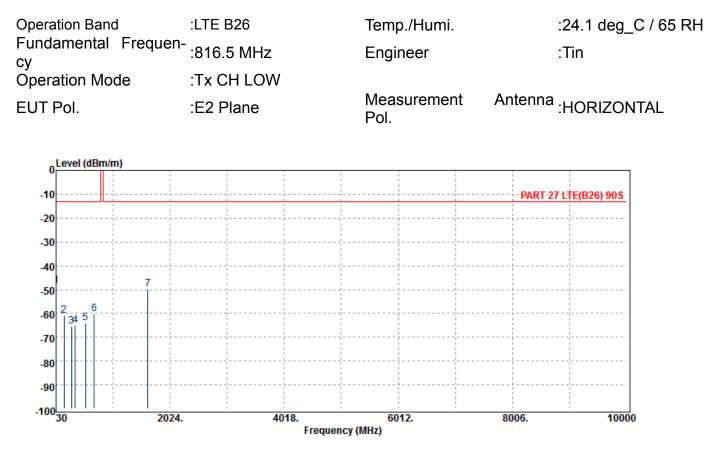
Case)			
Operation Band	:LTE B26	Temp./Humi.	:24.1 deg_C / 65 RH
Fundamental Frequen- cy	:816.5 MHz	Engineer	:Tin
Operation Mode	:Tx CH LOW		
EUT Pol.	:E2 Plane	Measurement Ar Pol.	itenna :VERTICAL



Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-43.24	-28.57	-14.08	-0.59	-13.00	-30.24
172.59	S	-56.59	-55.05	-0.20	-1.34	-13.00	-43.59
285.11	S	-64.47	-66.13	3.42	-1.76	-13.00	-51.47
411.21	S	-61.66	-63.20	3.67	-2.13	-13.00	-48.66
531.49	S	-59.55	-61.25	4.01	-2.31	-13.00	-46.55
573.20	S	-58.86	-60.04	3.77	-2.59	-13.00	-45.86
1633.00	Н	-51.04	-53.64	6.92	-4.33	-13.00	-38.04



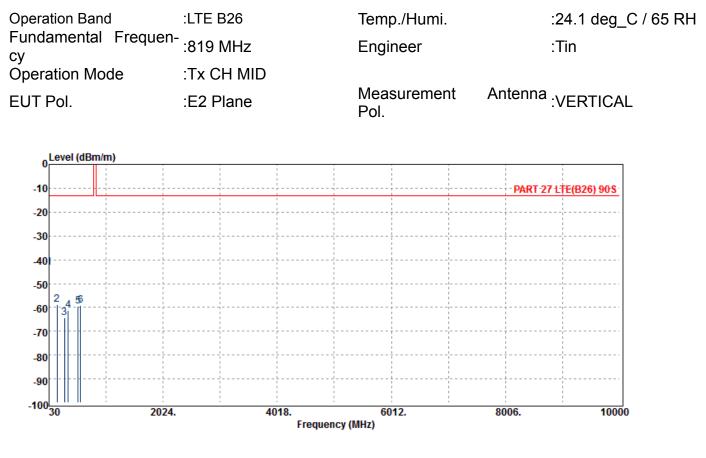
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-48.50	-33.34	-14.58	-0.58	-13.00	-35.50
172.59	S	-60.74	-59.20	-0.20	-1.34	-13.00	-47.74
299.66	S	-65.49	-67.28	3.61	-1.82	-13.00	-52.49
367.56	S	-65.17	-66.90	3.80	-2.06	-13.00	-52.17
548.95	S	-64.14	-66.15	3.98	-1.97	-13.00	-51.14
699.30	S	-60.08	-61.53	3.68	-2.24	-13.00	-47.08
1633.00	Н	-49.66	-52.25	6.92	-4.33	-13.00	-36.66



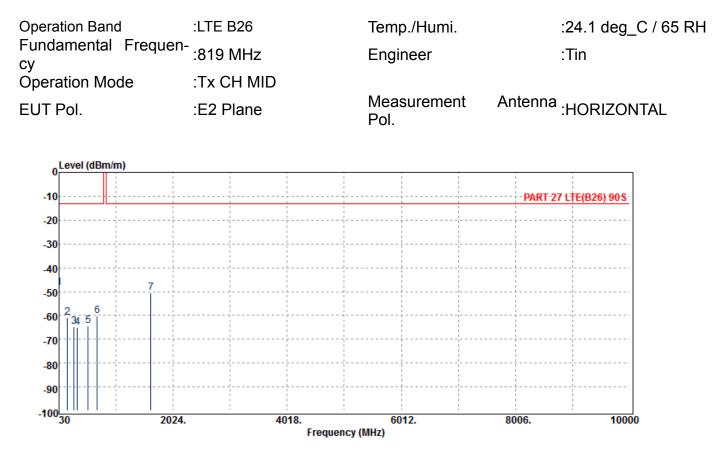
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-43.18	-28.02	-14.58	-0.58	-13.00	-30.18
168.71	S	-58.72	-56.70	-0.70	-1.33	-13.00	-45.72
299.66	S	-64.42	-66.20	3.61	-1.82	-13.00	-51.42
364.65	S	-61.39	-63.13	3.81	-2.07	-13.00	-48.39
537.31	S	-59.47	-61.40	4.00	-2.07	-13.00	-46.47
579.99	S	-59.28	-60.60	3.71	-2.39	-13.00	-46.28
1638.00	Н	-494.71	-497.32	6.94	-4.34	-13.00	-481.71



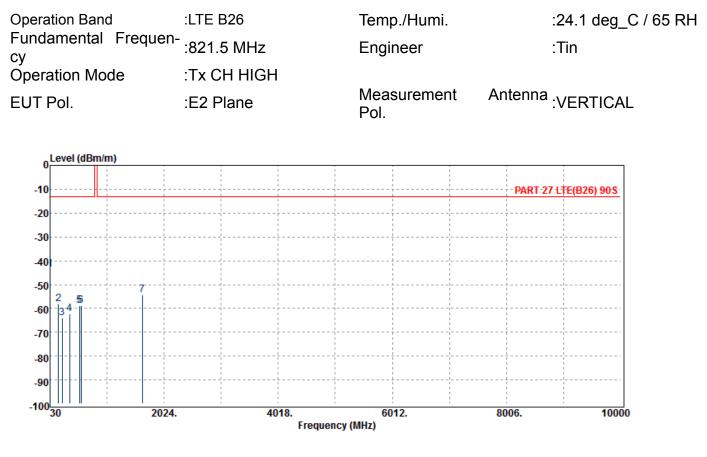
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-48.55	-33.39	-14.58	-0.58	-13.00	-35.55
177.44	S	-61.07	-60.28	0.58	-1.37	-13.00	-48.07
296.75	S	-64.73	-66.47	3.55	-1.81	-13.00	-51.73
353.01	S	-65.19	-67.00	3.85	-2.03	-13.00	-52.19
537.31	S	-64.19	-66.13	4.00	-2.07	-13.00	-51.19
699.30	S	-60.36	-61.80	3.68	-2.24	-13.00	-47.36
1638.00	Н	-50.38	-52.98	6.94	-4.34	-13.00	-37.38



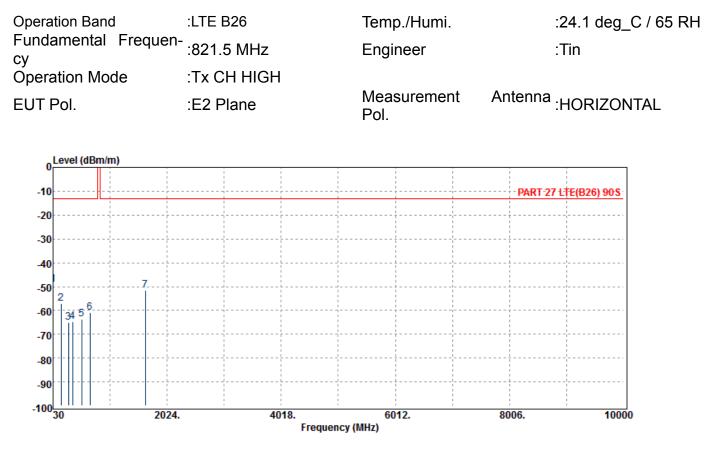
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-43.48	-28.80	-14.08	-0.59	-13.00	-30.48
175.50	S	-58.20	-57.12	0.27	-1.36	-13.00	-45.20
241.46	S	-63.86	-65.67	3.49	-1.68	-13.00	-50.86
371.44	S	-62.20	-63.95	3.79	-2.05	-13.00	-49.20
544.10	S	-58.94	-61.14	3.99	-1.79	-13.00	-45.94
578.05	S	-58.77	-60.04	3.73	-2.45	-13.00	-45.77
1643.00	Н	-54.42	-57.04	6.96	-4.34	-13.00	-41.42



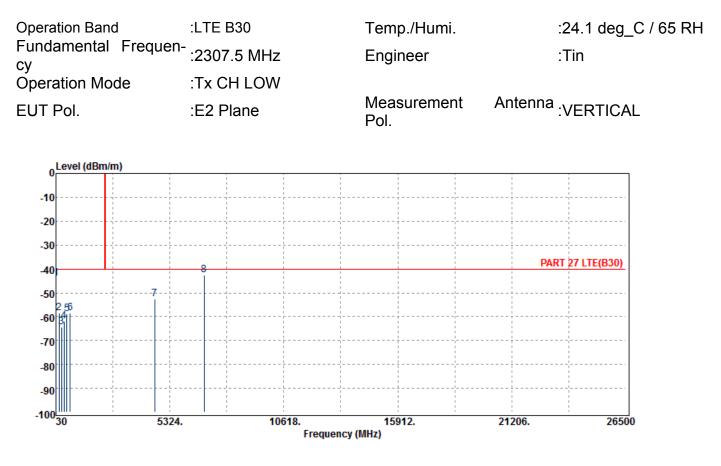
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-49.03	-33.87	-14.58	-0.58	-13.00	-36.03
168.71	S	-57.25	-55.23	-0.70	-1.33	-13.00	-44.25
299.66	S	-64.97	-66.75	3.61	-1.82	-13.00	-51.97
371.44	S	-64.71	-66.45	3.79	-2.05	-13.00	-51.71
531.49	S	-63.58	-65.27	4.01	-2.31	-13.00	-50.58
673.11	S	-60.84	-62.08	3.76	-2.52	-13.00	-47.84
1643.00	Н	-51.54	-54.15	6.96	-4.34	-13.00	-38.54



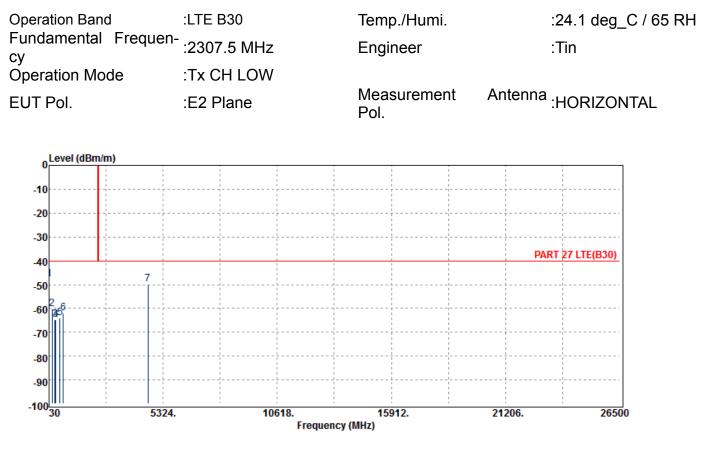
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-43.93	-29.25	-14.08	-0.59	-40.00	-3.93
165.80	S	-58.53	-56.34	-0.88	-1.31	-40.00	-18.53
296.75	S	-64.35	-66.09	3.55	-1.81	-40.00	-24.35
411.21	S	-62.06	-63.60	3.67	-2.13	-40.00	-22.06
539.25	S	-58.96	-60.97	4.00	-1.99	-40.00	-18.96
692.51	S	-58.49	-59.43	3.70	-2.76	-40.00	-18.49
4615.00	Н	-52.67	-57.60	12.65	-7.72	-40.00	-12.67
6922.50	Н	-42.67	-44.18	11.12	-9.60	-40.00	-2.67



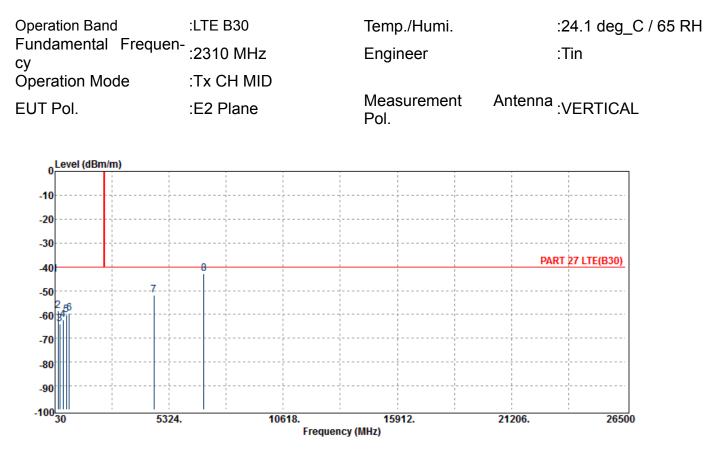
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-47.89	-32.73	-14.58	-0.58	-40.00	-7.89
170.65	S	-60.32	-58.48	-0.51	-1.33	-40.00	-20.32
299.66	S	-64.64	-66.42	3.61	-1.82	-40.00	-24.64
343.31	S	-64.68	-66.51	3.82	-2.00	-40.00	-24.68
546.04	S	-64.00	-66.18	3.99	-1.81	-40.00	-24.00
686.69	S	-61.96	-62.47	3.72	-3.21	-40.00	-21.96
4615.00	Н	-49.75	-54.68	12.65	-7.72	-40.00	-9.75



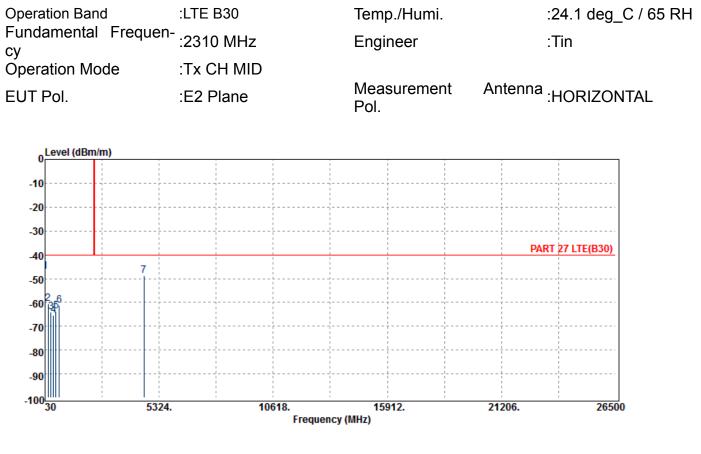
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-43.29	-28.61	-14.08	-0.59	-40.00	-3.29
167.74	S	-58.56	-56.49	-0.76	-1.32	-40.00	-18.56
241.46	S	-64.09	-65.91	3.49	-1.68	-40.00	-24.09
411.21	S	-62.19	-63.73	3.67	-2.13	-40.00	-22.19
549.92	S	-60.13	-62.09	3.98	-2.02	-40.00	-20.13
687.66	S	-59.43	-60.01	3.71	-3.13	-40.00	-19.43
4620.00	Н	-51.95	-56.88	12.65	-7.72	-40.00	-11.95
6930.00	Н	-42.74	-44.20	11.11	-9.65	-40.00	-2.74



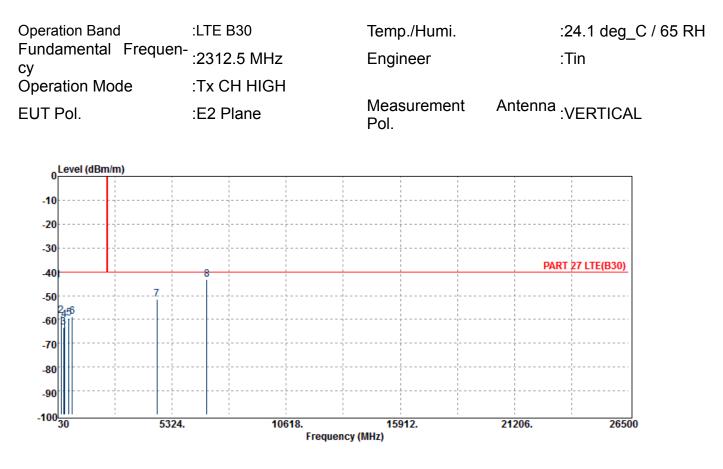
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-47.10	-31.94	-14.58	-0.58	-40.00	-7.10
177.44	S	-60.61	-59.82	0.58	-1.37	-40.00	-20.61
298.69	S	-63.86	-65.63	3.59	-1.82	-40.00	-23.86
413.15	S	-65.52	-67.06	3.67	-2.13	-40.00	-25.52
536.34	S	-63.53	-65.42	4.00	-2.11	-40.00	-23.53
696.39	S	-61.17	-62.40	3.69	-2.46	-40.00	-21.17
4620.00	Н	-48.75	-53.68	12.65	-7.72	-40.00	-8.75



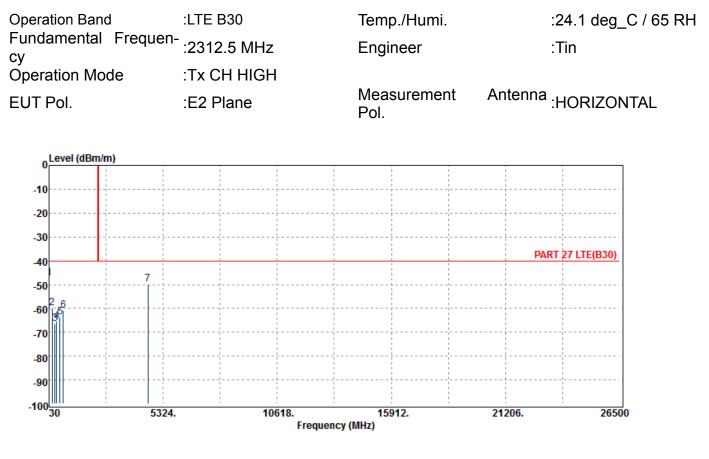
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-43.76	-29.09	-14.08	-0.59	-40.00	-3.76
173.56	S	-58.37	-56.98	-0.04	-1.35	-40.00	-18.37
294.81	S	-63.29	-65.01	3.52	-1.80	-40.00	-23.29
332.64	S	-60.30	-62.15	3.78	-1.93	-40.00	-20.30
542.16	S	-59.53	-61.65	3.99	-1.87	-40.00	-19.53
684.75	S	-58.93	-59.33	3.72	-3.32	-40.00	-18.93
4625.00	Н	-51.54	-56.47	12.65	-7.72	-40.00	-11.54
6937.50	Н	-43.13	-44.59	11.10	-9.64	-40.00	-3.13



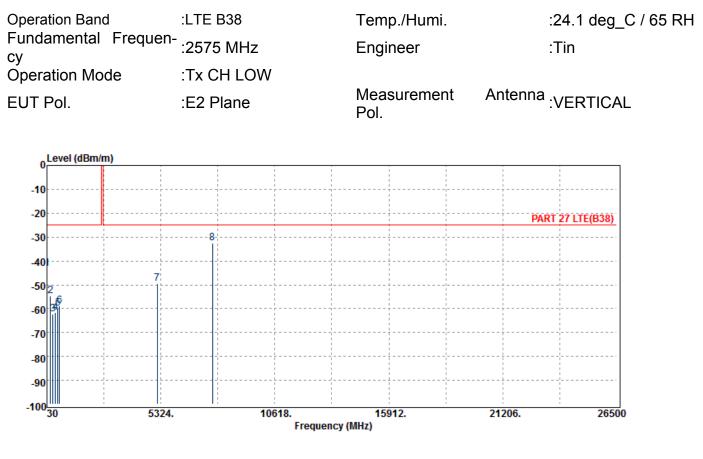
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-47.24	-32.08	-14.58	-0.58	-40.00	-7.24
170.65	S	-60.02	-58.18	-0.51	-1.33	-40.00	-20.02
299.66	S	-66.56	-68.35	3.61	-1.82	-40.00	-26.56
390.84	S	-65.39	-67.08	3.74	-2.05	-40.00	-25.39
542.16	S	-63.79	-65.91	3.99	-1.87	-40.00	-23.79
696.39	S	-60.81	-62.04	3.69	-2.46	-40.00	-20.81
4625.00	Н	-49.82	-54.74	12.65	-7.72	-40.00	-9.82



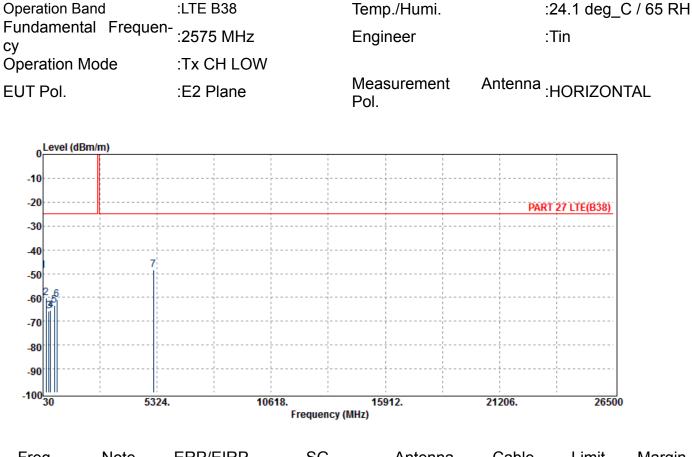
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
	_						
31.94	S	-43.33	-28.66	-14.08	-0.59	-25.00	-18.33
192.96	S	-54.83	-56.10	2.71	-1.44	-25.00	-29.83
298.69	S	-62.36	-64.13	3.59	-1.82	-25.00	-37.36
419.94	S	-61.71	-63.24	3.64	-2.11	-25.00	-36.71
531.49	S	-59.91	-61.61	4.01	-2.31	-25.00	-34.91
605.21	S	-58.75	-60.17	3.57	-2.15	-25.00	-33.75
5150.00	Н	-49.61	-54.18	12.69	-8.12	-25.00	-24.61
7725.00	Н	-32.51	-32.96	10.66	-10.21	-25.00	-7.51



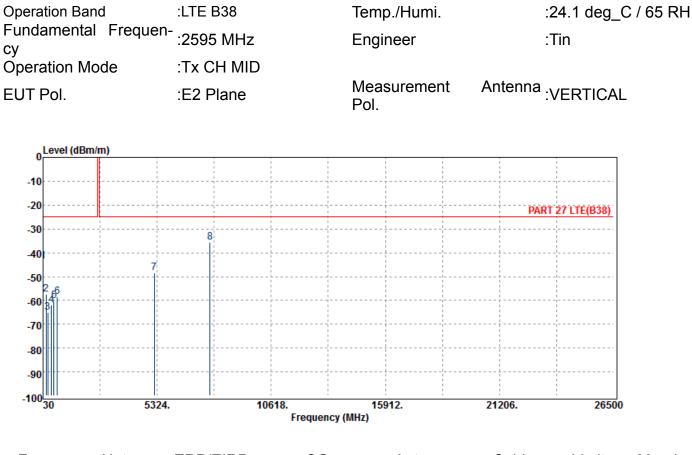
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	Freq.	Note	ERP/EIRP	SG	Antenna	Cable	Limit	Margin	
				Output Level	Gain	Loss			
	MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB	
-									-
	30.00	S	-48.77	-33.61	-14.58	-0.58	-25.00	-23.77	
	168.71	S	-60.35	-58.33	-0.70	-1.33	-25.00	-35.35	
	299.66	S	-65.57	-67.36	3.61	-1.82	-25.00	-40.57	
	381.14	S	-65.25	-67.00	3.77	-2.02	-25.00	-40.25	
	548.95	S	-63.16	-65.17	3.98	-1.97	-25.00	-38.16	
	679.90	S	-60.83	-61.58	3.74	-2.99	-25.00	-35.83	
	5150.00	Н	-48.42	-52.98	12.69	-8.12	-25.00	-23.42	



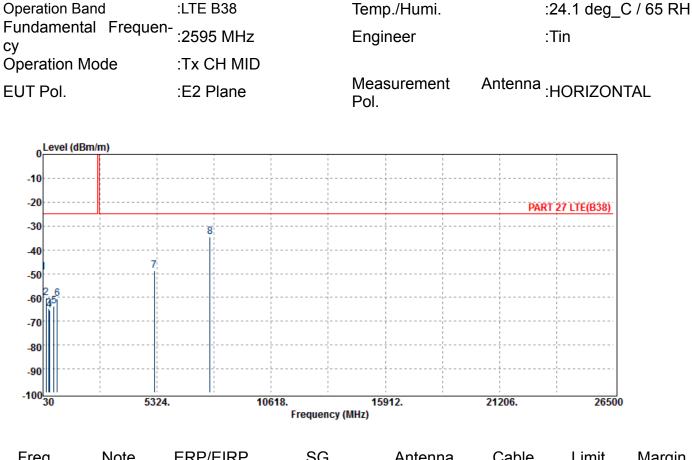
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Freq.	Note	ERP/EIRP	SG	Antenna	Cable	Limit	Margin
-			Output Level	Gain	Loss		-
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-43.43	-28.75	-14.08	-0.59	-25.00	-18.43
168.71	S	-57.54	-55.52	-0.70	-1.33	-25.00	-32.54
243.40	S	-65.06	-66.88	3.50	-1.68	-25.00	-40.06
419.94	S	-61.95	-63.48	3.64	-2.11	-25.00	-36.95
546.04	S	-60.17	-62.34	3.99	-1.81	-25.00	-35.17
694.45	S	-58.63	-59.71	3.69	-2.61	-25.00	-33.63
5190.00	Н	-48.62	-53.16	12.73	-8.19	-25.00	-23.62
7785.00	Н	-35.47	-35.79	10.63	-10.30	-25.00	-10.47



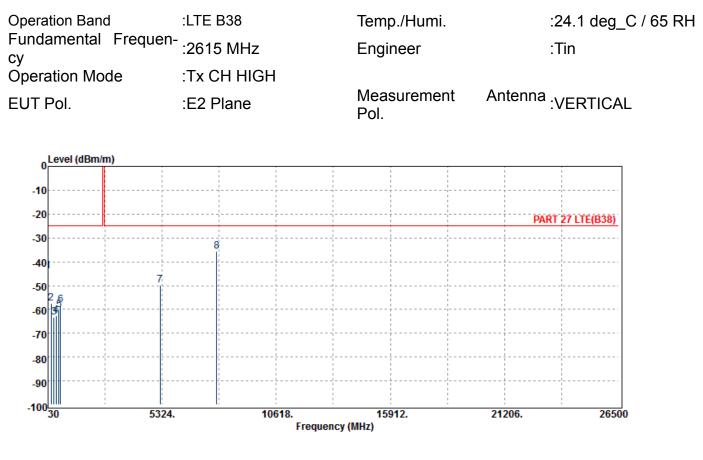
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Freq.	Note	ERP/EIRP	SG	Antenna	Cable	Limit	Margin	
			Output Level	Gain	Loss			
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB	
								-
31.94	S	-49.39	-34.72	-14.08	-0.59	-25.00	-24.39	
168.71	S	-60.28	-58.25	-0.70	-1.33	-25.00	-35.28	
298.69	S	-64.70	-66.47	3.59	-1.82	-25.00	-39.70	
332.64	S	-65.57	-67.41	3.78	-1.93	-25.00	-40.57	
547.01	S	-63.76	-65.88	3.98	-1.86	-25.00	-38.76	
692.51	S	-60.68	-61.62	3.70	-2.76	-25.00	-35.68	
5190.00	Н	-48.64	-53.18	12.73	-8.19	-25.00	-23.64	
7785.00	Н	-34.66	-34.98	10.63	-10.30	-25.00	-9.66	



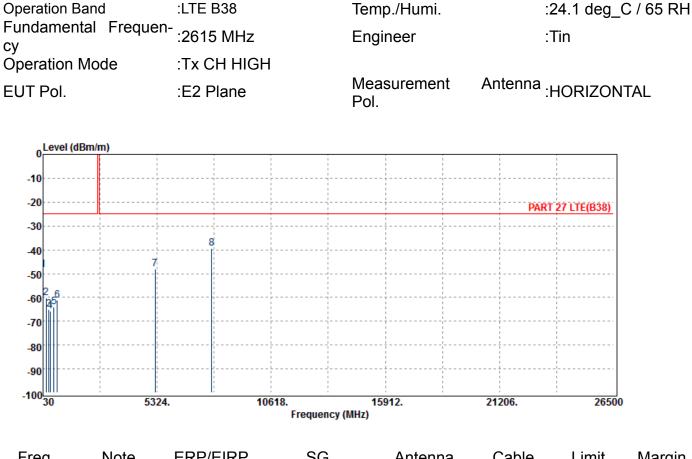
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-43.80	-29.12	-14.08	-0.59	-25.00	-18.80
170.65	S	-57.45	-55.60	-0.51	-1.33	-25.00	-32.45
299.66	S	-63.33	-65.12	3.61	-1.82	-25.00	-38.33
400.54	S	-62.51	-64.11	3.71	-2.12	-25.00	-37.51
537.31	S	-60.20	-62.14	4.00	-2.07	-25.00	-35.20
605.21	S	-58.21	-59.63	3.57	-2.15	-25.00	-33.21
5230.00	Н	-49.95	-54.52	12.78	-8.22	-25.00	-24.95
7845.00	Н	-35.66	-36.00	10.59	-10.25	-25.00	-10.66



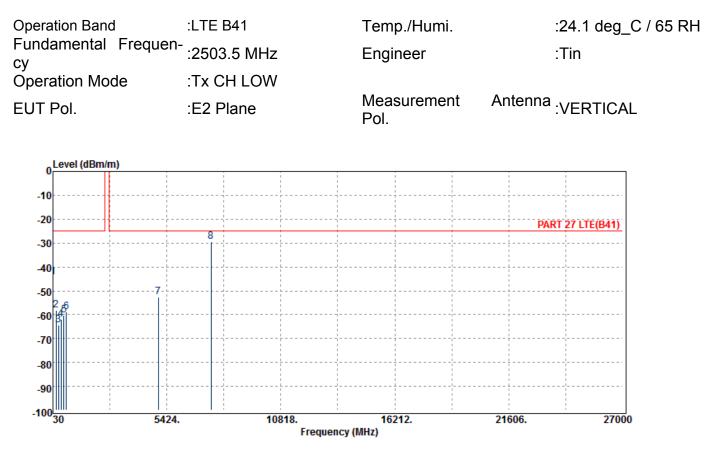
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	Freq.	Note	ERP/EIRP	SG	Antenna	Cable	Limit	Margin	
				Output Level	Gain	Loss			
_	MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB	_
-									-
	30.00	S	-48.52	-33.37	-14.58	-0.58	-25.00	-23.52	
	172.59	S	-60.15	-58.61	-0.20	-1.34	-25.00	-35.15	
	299.66	S	-64.98	-66.76	3.61	-1.82	-25.00	-39.98	
	371.44	S	-65.74	-67.48	3.79	-2.05	-25.00	-40.74	
	539.25	S	-63.95	-65.96	4.00	-1.99	-25.00	-38.95	
	686.69	S	-61.28	-61.79	3.72	-3.21	-25.00	-36.28	
	5230.00	Н	-48.18	-52.74	12.78	-8.22	-25.00	-23.18	
	7845.00	Н	-39.30	-39.64	10.59	-10.25	-25.00	-14.30	



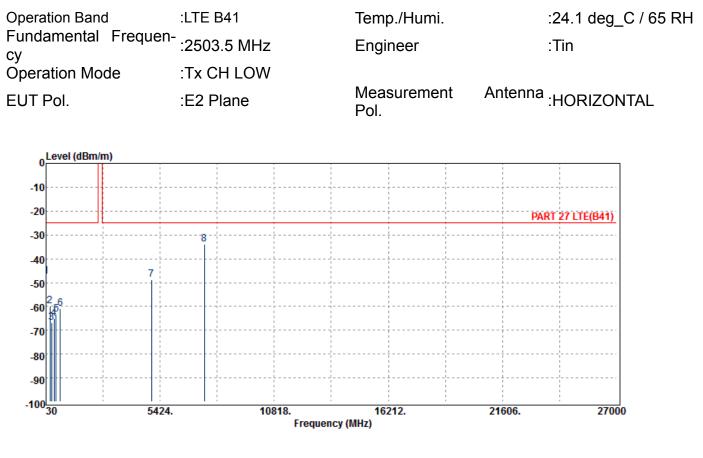
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-44.13	-29.45	-14.08	-0.59	-25.00	-19.13
170.65	S	-58.12	-56.27	-0.51	-1.33	-25.00	-33.12
299.66	S	-64.41	-66.19	3.61	-1.82	-25.00	-39.41
410.24	S	-61.83	-63.38	3.68	-2.13	-25.00	-36.83
539.25	S	-60.12	-62.12	4.00	-1.99	-25.00	-35.12
672.14	S	-58.84	-60.15	3.76	-2.45	-25.00	-33.84
5007.00	Н	-52.53	-57.07	12.51	-7.98	-25.00	-27.53
7510.50	Н	-29.31	-30.11	10.79	-9.99	-25.00	-4.31



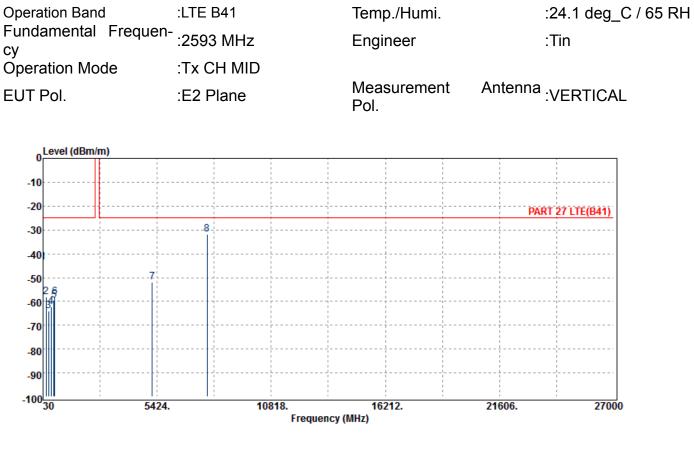
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
	_						
30.00	S	-47.41	-32.25	-14.58	-0.58	-25.00	-22.41
212.36	S	-59.73	-61.82	3.62	-1.54	-25.00	-34.73
299.66	S	-66.91	-68.69	3.61	-1.82	-25.00	-41.91
401.51	S	-65.19	-66.77	3.71	-2.13	-25.00	-40.19
500.45	S	-63.23	-65.08	4.05	-2.21	-25.00	-38.23
697.36	S	-60.92	-62.22	3.68	-2.38	-25.00	-35.92
5007.00	Н	-48.65	-53.18	12.51	-7.98	-25.00	-23.65
7510.50	Н	-33.92	-34.73	10.79	-9.99	-25.00	-8.92



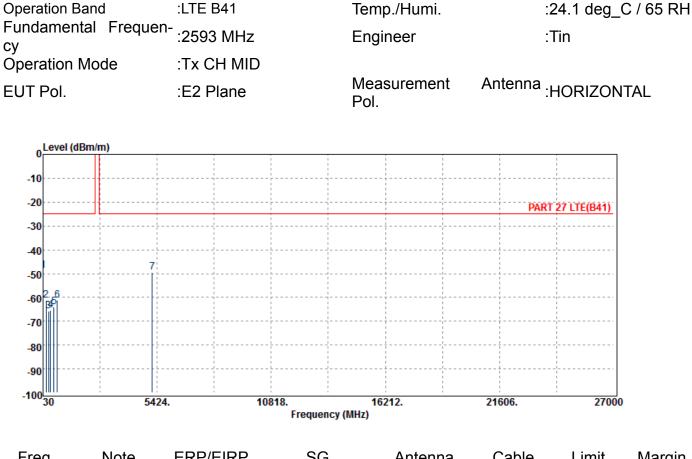
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Freq.	Note	ERP/EIRP	SG	Antenna	Cable	Limit	Margin
			Output Level	Gain	Loss		
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-43.71	-29.04	-14.08	-0.59	-25.00	-18.71
173.56	S	-58.13	-56.74	-0.04	-1.35	-25.00	-33.13
299.66	S	-63.98	-65.76	3.61	-1.82	-25.00	-38.98
415.09	S	-62.32	-63.86	3.66	-2.12	-25.00	-37.32
546.04	S	-59.64	-61.82	3.99	-1.81	-25.00	-34.64
584.84	S	-58.28	-59.70	3.67	-2.25	-25.00	-33.28
5186.00	Н	-52.00	-56.55	12.73	-8.18	-25.00	-27.00
7779.00	Н	-31.84	-32.16	10.63	-10.31	-25.00	-6.84



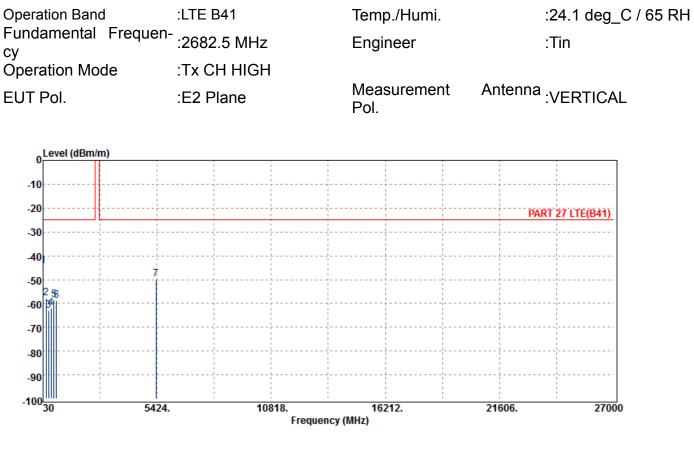
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Note	ERP/EIRP	SG	Antenna	Cable	Limit	Margin
		Output Level	Gain	Loss		
F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
S	-48.65	-33.98	-14.08	-0.59	-25.00	-23.65
S	-61.25	-59.71	-0.20	-1.34	-25.00	-36.25
S	-65.64	-67.43	3.61	-1.82	-25.00	-40.64
S	-65.46	-67.10	3.73	-2.08	-25.00	-40.46
S	-64.00	-66.20	3.99	-1.79	-25.00	-39.00
S	-61.08	-62.38	3.68	-2.38	-25.00	-36.08
Н	-49.33	-53.89	12.73	-8.18	-25.00	-24.33
	F/H/E/S S S S S S S	F/H/E/S dBm   S -48.65   S -61.25   S -65.64   S -65.46   S -64.00   S -61.08	F/H/E/SdBmOutput Level dBmS-48.65-33.98S-61.25-59.71S-65.64-67.43S-65.46-67.10S-64.00-66.20S-61.08-62.38	F/H/E/SdBmOutput Level dBmGain dBd/dBiS-48.65-33.98-14.08S-61.25-59.71-0.20S-65.64-67.433.61S-65.46-67.103.73S-64.00-66.203.99S-61.08-62.383.68	F/H/E/SdBmOutput Level dBmGain dBd/dBiLoss dBS-48.65-33.98-14.08-0.59S-61.25-59.71-0.20-1.34S-65.64-67.433.61-1.82S-65.46-67.103.73-2.08S-64.00-66.203.99-1.79S-61.08-62.383.68-2.38	F/H/E/SdBmOutput Level dBmGain dBd/dBiLoss dBS-48.65-33.98-14.08-0.59-25.00S-61.25-59.71-0.20-1.34-25.00S-65.64-67.433.61-1.82-25.00S-65.46-67.103.73-2.08-25.00S-64.00-66.203.99-1.79-25.00S-61.08-62.383.68-2.38-25.00



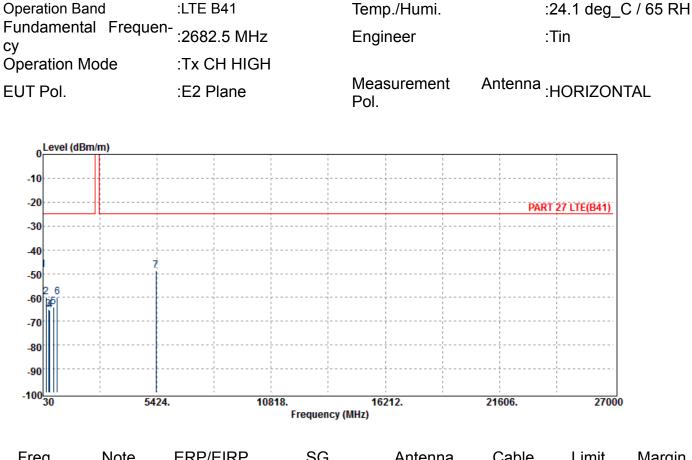
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Freq.	Note	ERP/EIRP	SG	Antenna	Cable	Limit	Margin
			Output Level	Gain	Loss		
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-44.38	-29.70	-14.08	-0.59	-25.00	-19.38
170.65	S	-57.78	-55.93	-0.51	-1.33	-25.00	-32.78
298.69	S	-62.98	-64.75	3.59	-1.82	-25.00	-37.98
403.45	S	-62.07	-63.64	3.70	-2.14	-25.00	-37.07
547.01	S	-58.61	-60.73	3.98	-1.86	-25.00	-33.61
657.59	S	-58.69	-60.39	3.81	-2.11	-25.00	-33.69
5365.00	Н	-49.92	-54.49	12.94	-8.37	-25.00	-24.92



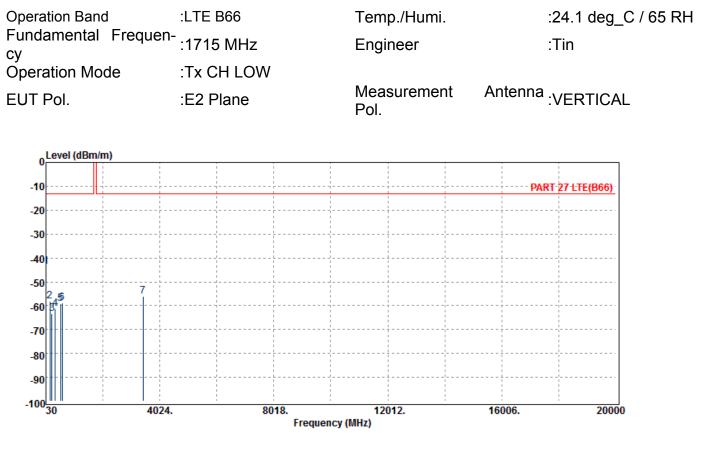
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	Freq.	Note	ERP/EIRP	SG	Antenna	Cable	Limit	Margin	
				Output Level	Gain	Loss			
	MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB	
-									-
	30.00	S	-48.58	-33.42	-14.58	-0.58	-25.00	-23.58	
	173.56	S	-59.96	-58.57	-0.04	-1.35	-25.00	-34.96	
	298.69	S	-65.07	-66.84	3.59	-1.82	-25.00	-40.07	
	361.74	S	-65.24	-67.00	3.82	-2.06	-25.00	-40.24	
	537.31	S	-64.07	-66.00	4.00	-2.07	-25.00	-39.07	
	696.39	S	-59.96	-61.19	3.69	-2.46	-25.00	-34.96	
	5365.00	Н	-48.84	-53.41	12.94	-8.37	-25.00	-23.84	



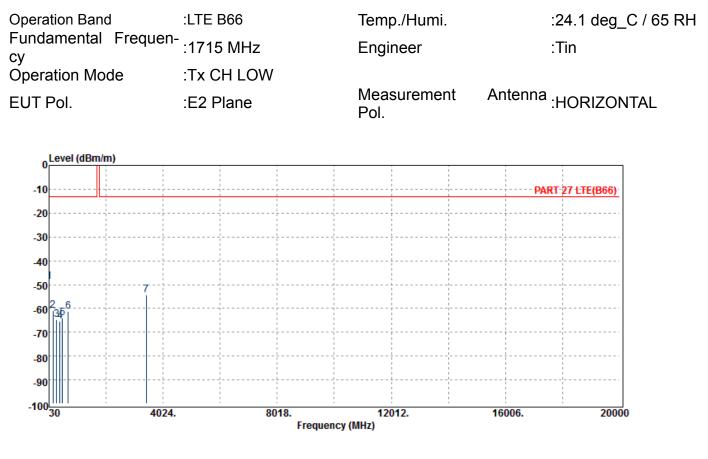
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Freq.	Note	ERP/EIRP	SG	Antenna	Cable	Limit	Margin
			Output Level	Gain	Loss		
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-43.69	-29.02	-14.08	-0.59	-13.00	-30.69
168.71	S	-58.10	-56.08	-0.70	-1.33	-13.00	-45.10
241.46	S	-63.29	-65.10	3.49	-1.68	-13.00	-50.29
357.86	S	-61.08	-62.86	3.83	-2.05	-13.00	-48.08
541.19	S	-59.21	-61.30	3.99	-1.91	-13.00	-46.21
604.24	S	-58.80	-60.22	3.56	-2.14	-13.00	-45.80
3430.00	Н	-56.11	-61.81	12.24	-6.54	-13.00	-43.11



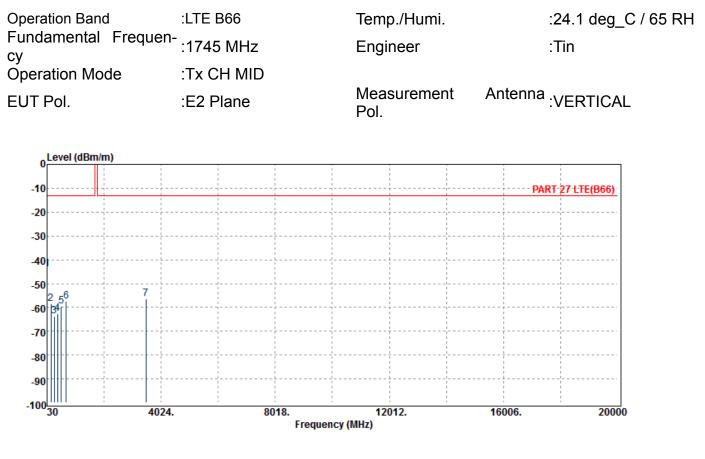
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Freq.	Note	ERP/EIRP	SG Output Lawal	Antenna	Cable	Limit	Margin
			Output Level	Gain	Loss		
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-48.86	-33.70	-14.58	-0.58	-13.00	-35.86
168.71	S	-61.00	-58.98	-0.70	-1.33	-13.00	-48.00
299.66	S	-64.68	-66.46	3.61	-1.82	-13.00	-51.68
413.15	S	-65.50	-67.04	3.67	-2.13	-13.00	-52.50
497.54	S	-64.11	-66.00	4.03	-2.13	-13.00	-51.11
697.36	S	-61.15	-62.45	3.68	-2.38	-13.00	-48.15
3430.00	Н	-54.29	-59.98	12.24	-6.54	-13.00	-41.29



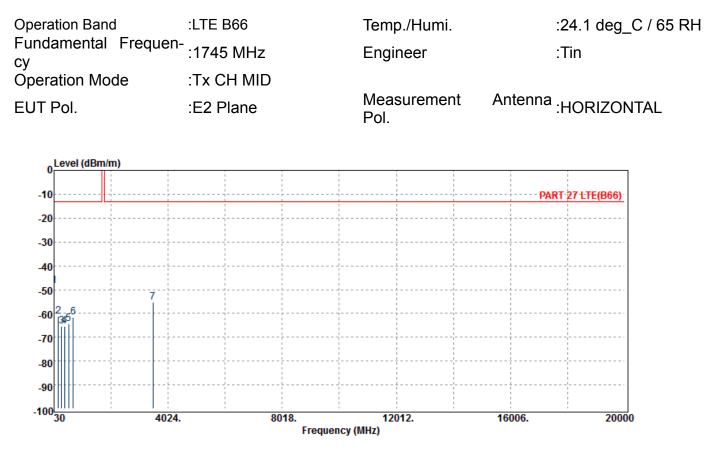
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Freq.	Note	ERP/EIRP	SG	Antenna	Cable	Limit	Margin
	_		Output Level	Gain	Loss		
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
31.94	S	-44.02	-29.35	-14.08	-0.59	-13.00	-31.02
167.74	S	-58.41	-56.34	-0.76	-1.32	-13.00	-45.41
285.11	S	-63.63	-65.29	3.42	-1.76	-13.00	-50.63
398.60	S	-62.49	-64.10	3.72	-2.10	-13.00	-49.49
531.49	S	-59.60	-61.30	4.01	-2.31	-13.00	-46.60
699.30	S	-57.35	-58.79	3.68	-2.24	-13.00	-44.35
3490.00	Н	-56.29	-62.09	12.38	-6.58	-13.00	-43.29



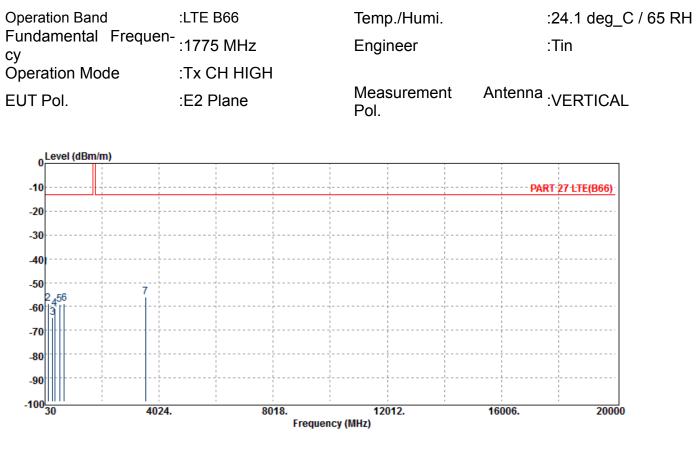
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-48.51	-33.35	-14.58	-0.58	-13.00	-35.51
177.44	S	-61.19	-60.40	0.58	-1.37	-13.00	-48.19
299.66	S	-65.42	-67.21	3.61	-1.82	-13.00	-52.42
405.39	S	-65.38	-66.93	3.69	-2.15	-13.00	-52.38
544.10	S	-64.51	-66.71	3.99	-1.79	-13.00	-51.51
700.27	S	-61.47	-62.99	3.67	-2.16	-13.00	-48.47
3490.00	Н	-55.22	-61.02	12.38	-6.58	-13.00	-42.22



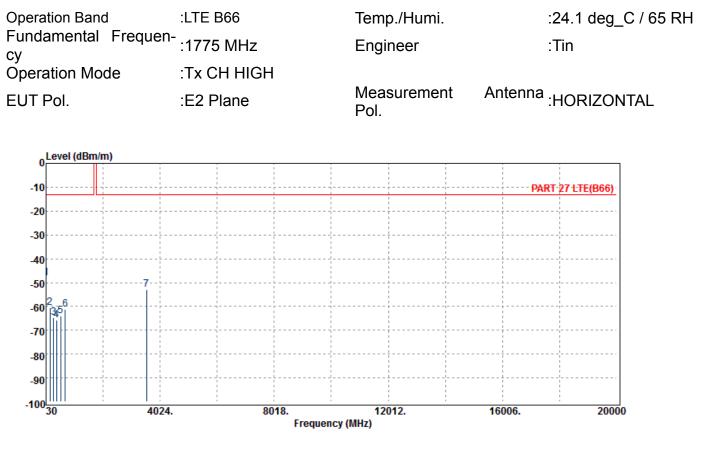
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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
32.91	S	-43.62	-29.18	-13.84	-0.60	-13.00	-30.62
134.76	S	-58.91	-55.56	-2.12	-1.23	-13.00	-45.91
296.75	S	-64.73	-66.47	3.55	-1.81	-13.00	-51.73
374.35	S	-60.89	-62.63	3.78	-2.04	-13.00	-47.89
539.25	S	-59.13	-61.14	4.00	-1.99	-13.00	-46.13
699.30	S	-58.82	-60.26	3.68	-2.24	-13.00	-45.82
3550.00	Н	-55.89	-61.59	12.44	-6.75	-13.00	-42.89



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Freq.	Note	ERP/EIRP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	F/H/E/S	dBm	dBm	dBd/dBi	dB	dBm	dB
30.00	S	-48.18	-33.02	-14.58	-0.58	-13.00	-35.18
172.59	S	-60.67	-59.13	-0.20	-1.34	-13.00	-47.67
299.66	S	-64.83	-66.61	3.61	-1.82	-13.00	-51.83
405.39	S	-65.71	-67.26	3.69	-2.15	-13.00	-52.71
542.16	S	-63.95	-66.08	3.99	-1.87	-13.00	-50.95
700.27	S	-61.34	-62.85	3.67	-2.16	-13.00	-48.34
3550.00	Н	-53.09	-58.78	12.44	-6.75	-13.00	-40.09



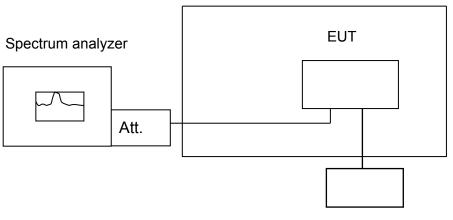
#### 11. FREQUENCY STABILITY MEASUREMENT

# 11.1. Standard Applicabl

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

# 11.2. Test Set-up

**Temperature Chamber** 



Variable DC Power Supply

Note: Measurement setup for testing on Antenna connector



# 11.3. Measurement Procedure

The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.

Set chamber temperature to 25 . Use a variable AC power supply / DC power source to

power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specify extreme voltage variation (+/- 15%) and endpoint as declared by the manufacturer, record the maximum frequency change.

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

Weif S date was stated the results and the state of the other of the state of the Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law



# 11.4. Measurement Equipment Used

Conduc	Conducted Emission (measured at antenna port) Test Site								
EQUIPMENT	MFR	MODEL	SERIAL	LAST	CAL DUE.				
TYPE		NUMBER	NUMBER	CAL.					
EXA Spectrum Ana- lyzer	Agilent	N9010A	MY5420071 6	2017/10/16	2018/10/15				
Radio Communica- tion Analyer	Anritsu	MT8820C	6201465317	2018/01/17	2019/01/16				
Attenuator	Mini-Circuit	BW-S10W2 +	2	2018/01/02	2019/1/1				
Splitter	RF-LAMBAD	RFLT2W1G 18G	11-JSPF412 -018	2018/01/02	2019/1/1				
Coaxial Cables	N/A	WK CE Ca- ble	N/A	2018/01/02	2019/1/1				
EXA Spectrum Ana- lyzer	Agilent	N9010A	MY5420071 6	2017/10/16	2018/10/15				
Radio Communica- tion Analyer	Anritsu	MT8820C	6201465317	2018/01/17	2019/01/16				
Attenuator	Mini-Circuit	BW-S10W2 +	2	2018/01/02	2019/1/1				



## 11.5. Measurement Result

WCDMA II Mid Channel 1880 MHz								
	Lin	nit: +/- 2.5 ppm						
Vdc	Vdc Temp. ( )		Delta (Hz)	Limit (Hz)				
FREQUENCY ERROR vs. VOLTAGE								
17.7	20	1879.999992	-7.99999998	4700				
15.4	20	1880.000001	1.000000111	4700				
12.3	20	1879.999995	-5.000000101	4700				
12 (End point)	20	1880.000005	5.000000101	4700				
FREQUENCY ERROR vs. Temp.								
15.4	50	1880.000009	9.00000091	4700				
15.4	40	1879.999994	-5.999999985	4700				
15.4	30	1879.999997	-3.000000106	4700				
15.4	20	1880.000004	3.99999999	4700				
15.4	10	1880.00001	9.999999975	4700				
15.4	0	1879.999992	-7.99999998	4700				
15.4	-10	1879.999998	-1.999999995	4700				
15.4	-20	1880.000007	7.00000096	4700				
15.4	-30	1879.999994	-5.999999985	4700				



	WCDMA I	V Mid Channel	1732.6	MHz			
	Lim	it: +/- 2.5 ppm					
Vdc	Temp. ( )	Freq. (MHz)	Delta (Hz)	Limit (Hz)			
	FREQUENCY	' ERROR vs. V	OLTAGE				
17.7	20	1732.599994	-5.999999985	4331			
15.4	20	1732.600008	7.99999998	4331			
12.3	20	1732.600007	7.00000096	4331			
12 (End point)	20	1732.600007	7.00000096	4331			
	FREQUEN	CY ERROR vs.	Temp.				
15.4	50	1732.599994	-5.999999985	4331			
15.4	40	1732.599996	-3.99999999	4331			
15.4	30	1732.600009	9.00000091	4331			
15.4	20	1732.600009	9.00000091	4331			
15.4	10	1732.599999	-0.999999884	4331			
15.4	0	1732.599992	-7.99999998	4331			
15.4	-10	1732.600006	5.999999985	4331			
15.4	-20	1732.600009	9.00000091	4331			
15.4	-30	1732.599991	-8.999999864	4331			
WCDMA V Mid Channel 836.6 MHz							
		nit: +/- 2.5 ppm					
Vdc	Temp.()	Freq. (MHz)	Delta (Hz)	Limit (Hz)			
		/ ERROR vs. VC					
17.7	20	836.6	0	2091			
15.4	20	836.599994	-5.999999985	2091			
12.3	20	836.599999	-0.999999997	2091			
12 (End point)	20	836.600005	4.999999987	2091			
		CY ERROR vs.		0.001			
15.4	50	836.599999	-0.999999997	2091			
15.4	40	836.599997	-2.9999999992	2091			
15.4	30	836.600003	2.999999992	2091			
15.4	20	836.600007	6.999999982	2091			
15.4	10	836.599998	-1.9999999995	2091			
15.4	0	836.599996	-3.99999999	2091			
15.4	-10	836.599997	-2.9999999992	2091			
1 16 /	-20	836.600007	6.999999982	2091			
15.4 15.4	-30	836.59999	-9.999999975	2091			



Reference Freq.:	Reference Freq.:		1880	MHz 20M QPSK CH 18900				
Power Supply Vdc	Temp.()	Freq. (MHz)	Delta (Hz)	Limit = +/- 2.5 ppm (Hz)				
		Freq. ERROR vs	s. Voltage					
17.7	25	1880.000009	9.0000009	4700				
15.4	25	1880.000008	7.99999998	4700				
12.3	25	1880.000001	1.00000011	4700				
12 (End Point)	25	1879.999997	-3.0000001	4700				
Freq. ERROR vs. Temp.								
15.4	-30	1880.000001	1.00000011	4700				
15.4	-20	1880.000010	9.99999997	4700				
15.4	-10	1879.999998	-2	4700				
15.4	0	1879.999999	-1.0000001	4700				
15.4	10	1880.000004	3.99999999	4700				
15.4	20	1880.000002	1.99999999	4700				
15.4	30	1880.000000	0	4700				
15.4	40	1879.999990	-10	4700				
15.4	50	1880.000002	1.99999999	4700				

Reference Freq.:		B4 Mid annel	1732.5	MHz 20M QPSK CH 20175				
Power Supply Vdc	Temp.()	Freq. (MHz)	Delta (Hz)	Limit = +/- 2.5 ppm (Hz)				
		Freq. ERROR vs.	VOLTAGE					
17.7	25	1732.499993	-7.0000001	4331				
15.4	25	1732.499997	-3.0000001	4331				
12.3	25	1732.499997	-3.0000001	4331				
12 (End Point)	25	1732.500004	3.999999999	4331				
Freq. ERROR vs. Temp.								
15.4	-30	1732.499999	-1.0000001	4331				
15.4	-20	1732.499993	-7.0000001	4331				
15.4	-10	1732.500008	7.99999998	4331				
15.4	0	1732.499992	-8	4331				
15.4	10	1732.500001	1.00000011	4331				
15.4	20	1732.499997	-3.0000001	4331				
15.4	30	1732.500002	1.99999999	4331				
15.4	40	1732.500004	3.99999999	4331				
15.4	50	1732.499994	-6	4331				



Reference Freq.:	LTE B5 Mid Channel		836.5	MHz 10M QPSK CH 20525
Power Supply Vdc	Temp.()	Freq. (MHz)	Delta (Hz)	Limit = +/- 2.5 ppm (Hz)
		Freq. ERROR vs	s. Voltage	
17.7	25	836.500007	6.99999998	2091
15.4	25	836.500000	0	2091
12.3	25	836.500006	5.99999998	2091
12 (End Point)	25	836.500001	1	2091
		Freq. ERROR	vs. Temp.	
15.4	-30	836.499999	-1	2091
15.4	-20	836.499991	-9	2091
15.4	-10	836.500009	8.99999998	2091
15.4	0	836.500005	4.999999999	2091
15.4	10	836.499996	-4	2091
15.4	20	836.499994	-6	2091
15.4	30	836.500004	3.999999999	2091
15.4	40	836.500009	8.99999998	2091
15.4	50	836.500002	1.999999999	2091
Reference Freq.:		B7 Mid nannel	2535	MHz 10M QPSK CH 21100
Power Supply Vdc	Temp.()	Freq. (MHz)	Delta (Hz)	Limit = +/- 2.5 ppm (Hz)
		Freq. ERROR vs		Linii – 17 <sup>-</sup> 2.5 ppin (nz)
17.7	25	2535.000009	8.99999986	6338
15.4	25	2534.999991	-8.9999999	6338
12.3	25	2535.000010	10.0000002	6338
12 (End Point)	25	2535.000003	3.00000011	6338
		Freq. ERROR	vs. Temp.	
15.4	-30	2534.999996	-4	6338
15.4	-20	2534.999995	-4.9999999	6338
15.4	-10	2534.999992	-8	6338
15.4	0	2535.000007	7.0000001	6338
15.4	10	2534.999992	-8	6338
15.4	20	2535.000006	6.0000021	6338
15.4	30	2534.999998	-2.000002	6338
15.4	40	2534.999997	-3.0000001	6338
15.4	50	2535.000007	7.0000001	6338



Reference Freq .:		312 Mid annel	707.5	MHz 10M QPSK CH 23095
Power Supply Vdc	Temp. ()	Freq. (MHz)	Delta (Hz)	Limit = +/- 2.5 ppm (Hz)
rower Supply vuc	ieiiip. ( )	Freq. ERROR vs		$LIIIIII = +7 \cdot 2.5 \text{ ppin}(12)$
17.7	25	707.500003	2.999999999	1769
15.4	25	707.500009	8.99999998	1769
12.3	25	707.499991	-9	1769
12.3	25	707.477771		1707
(End Point)	25	707.500004	3.99999999	1769
		Freq. ERROR	vs. Temp.	
15.4	-30	707.499990	-10	1769
15.4	-20	707.499995	-5	1769
15.4	-10	707.500006	5.99999998	1769
15.4	0	707.499994	-6	1769
15.4	10	707.500002	1.99999999	1769
15.4	20	707.499994	-6	1769
15.4	30	707.500001	1	1769
15.4	40	707.499991	-9	1769
15.4	50	707.500009	8.99999998	1769
	LTE B13 Mid Channel			
Reference Freq.:			782	MHz 10M QPSK CH 23230
Power Supply Vdc	Temp.()	Freq. (MHz)	Delta (Hz)	Limit = +/- 2.5 ppm (Hz)
	•	Freq. ERROR vs	s. Voltage	
17.7	25	781.999993	-7	1955
15.4	25	782.000010	9.99999997	1955
12.3	25	782.000005	4.99999999	1955
12	25	782.000001	1	1955
(End Point)	20	782.000001	I	1955
		Freq. ERROR	vs. Temp.	
15.4	-30	782.000010	9.99999997	1955
15.4	-20	782.000010	9.99999997	1955
15.4	-10	781.999995	-5	1955
15.4	0	782.000004	3.99999999	1955
15.4	10	782.000009	8.99999998	1955
15.4	20	781.999994	-6	1955
15.4	30	782.000007	6.99999998	1955
15.4	40	782.000007	6.99999998	1955
15.4	50	782.000009	8.99999998	1955



Reference Freq.:	LTE B17 Mid Channel		710	MHz 10M QPSK CH 23790
Power Supply Vdc	Temp.()	Freq. (MHz)	Delta (Hz)	Limit = +/- 2.5 ppm (Hz)
		Freq. ERROR v	s. Voltage	
17.7	25	710.000008	7.99999998	1775
15.4	25	710.000002	1.99999999	1775
12.3	25	709.999990	-10	1775
12 (End Point)	25	710.000000	0	1775
		Freq. ERROR	vs. Temp.	
15.4	-30	709.999998	-2	1775
15.4	-20	709.999998	-2	1775
15.4	-10	709.999999	-1	1775
15.4	0	710.000002	1.99999999	1775
15.4	10	709.999996	-4	1775
15.4	20	709.999994	-6	1775
15.4	30	709.999993	-7	1775
15.4	40	710.000003	2.99999999	1775
15.4	50	710.000002	1.99999999	1775
Reference Freq .:		B26 Mid annel	831.5	MHz 15M QPSK CH 26865
Power Supply Vdc	Temp.()	Freq. (MHz)	Delta (Hz)	Limit = +/- 2.5 ppm (Hz)
11.5		Freq. ERROR v		
17.7	25	831.500005	4.99999999	2091
15.4	25	831.499998	-2	2091
12.3	25	831.500003	2.99999999	2091
12 (End Point)	25	831.500002	1.999999999	2091
		Freq. ERROR	vs. Temp.	
15.4	-30	831.499999	-1	2091
15.4	-20	831.500001	1	2091
15.4	-10	831.499999	-1	2091
15.4	0	831.500003	2.99999999	2091
15.4	10	831.499993	-7	2091
15.4	20	831.499994	-6	2091
15.4	30	831.500004	3.99999999	2091
15.4	40	831.499998	-2	2091
15.4	50	831.500009	8.99999998	2091



Reference Freq.:		LTE B26 Mid nannel	819	MHz 10M QPSK CH 26740
Power Supply Vdc	Temp.()	Freq. (MHz)	Delta (Hz)	Limit = +/- 2.5 ppm (Hz)
	Freq. ERR	or vs. Voltage	(LTE B26 for	Part 90S)
17.7	25	819.000002	1.99999999	2048
15.4	25	818.999990	-10	2048
12.3	25	819.000003	2.99999999	2048
12 (End Point)	25	819.000003	2.999999999	2048
		Freq. ERROR	vs. Temp.	
15.4	-30	819.000002	1.99999999	2048
15.4	-20	818.999991	-9	2048
15.4	-10	819.000005	4.999999999	2048
15.4	0	819.000001	1	2048
15.4	10	819.000009	8.99999998	2048
15.4	20	818.999995	-5	2048
15.4	30	818.999990	-10	2048
15.4	40	818.999997	-3	2048
15.4	50	819.000001	1	2048
Reference Freq.:		330 Mid annel	2310	MHz 10M QPSK CH 27710
Power Supply Vdc	Temp.()	Freq. (MHz)	Delta (Hz)	Limit = +/- 2.5 ppm (Hz)
		Freq. ERROR vs		
17.7	25	2309.999992	-8	6488
15.4	25	2310.000002	2.00000022	6488
12.3	25	2309.999992	-8	6488
12 (End Point)	25	2310.000001	0.99999988	6488
		Freq. ERROR	vs. Temp.	
15.4	-30	2309.999992	-8	6488
15.4	-20	2309.999991	-8.9999999	6488
15.4	-10	2309.999996	-4	6488
15.4	0	2310.000001	0.99999988	6488
15.4	10	2309.999999	-0.9999999	6488
15.4	20	2309.999997	-3.0000001	6488
15.4	30	2310.000004	3.99999999	6488
15.4	40	2309.999992	-8	6488
15.4	50	2310.000004	3.999999999	6488



Reference Freq.:		B38 Mid annel	2595	MHz 10M QPSK CH 38000
Power Supply Vdc	Temp.()	Freq. (MHz)	Delta (Hz)	Limit = +/- 2.5 ppm (Hz)
		Freq. ERROR vs.	VOLTAGE	
17.7	25	2594.999998	-2.0000002	6488
15.4	25	2595.000003	3.00000011	6488
12.3	25	2594.999993	-7.0000001	6488
12 (End Point)	25	2595.000004	3.999999999	6488
		Freq. ERROR \	/s. Temp.	
15.4	-30	2594.999993	-7.0000001	6488
15.4	-20	2595.000009	8.99999986	6488
15.4	-10	2594.999996	-4	6488
15.4	0	2594.999995	-4.9999999	6488
15.4	10	2595.000000	0	6488
15.4	20	2595.000007	7.0000001	6488
15.4	30	2595.000001	0.99999988	6488
15.4	40	2595.000000	0	6488
15.4	50	2595.000010	10.000002	6488

Reference Freq.:	LTE B41 Mid Channel		2593	MHz 10M QPSK CH 40620					
Power Supply Vdc	Temp.()	Freq. (MHz)	Delta (Hz)	Limit = +/- 2.5 ppm (Hz)					
	Freq. ERROR vs. VOLTAGE								
17.7	25	2592.999994	-6.0000002	6488					
15.4	25	2593.000003	3.00000011	6488					
12.3	25	2593.000007	7.0000001	6488					
12 (End Point)	25	2593.000002	2.00000022	6488					
		Freq. ERROR	vs. Temp.						
15.4	-30	2592.999997	-3.0000001	6488					
15.4	-20	2593.000001	0.99999988	6488					
15.4	-10	2593.000001	0.99999988	6488					
15.4	0	2593.000005	4.99999987	6488					
15.4	10	2593.000004	3.99999999	6488					
15.4	20	2592.999992	-8	6488					
15.4	30	2592.999995	-4.9999999	6488					
15.4	40	2593.000006	6.0000021	6488					
15.4	50	2593.000001	0.99999988	6488					



Reference Freq.:		B66 Mid annel	1745	MHz 10M QPSK CH 132322
Power Supply Vdc	Temp.()	Freq. (MHz)	Delta (Hz)	Limit = +/- 2.5 ppm (Hz)
		Freq. ERROR vs	s. Voltage	
17.7	25	1744.999993	-7.0000001	6488
15.4	25	1745.000004	3.99999999	6488
12.3	25	1745.000008	7.99999998	6488
12 (End Point)	25	1745.000005	5.0000001	6488
		Freq. ERROR	vs. Temp.	
15.4	-30	1745.000008	7.99999998	6488
15.4	-20	1745.000001	1.00000011	6488
15.4	-10	1745.000002	1.99999999	6488
15.4	0	1744.999997	-3.0000001	6488
15.4	10	1744.999990	-10	6488
15.4	20	1745.000006	5.99999998	6488
15.4	30	1745.000010	9.99999997	6488
15.4	40	1744.999997	-3.0000001	6488
15.4	50	1745.000010	9.99999997	6488

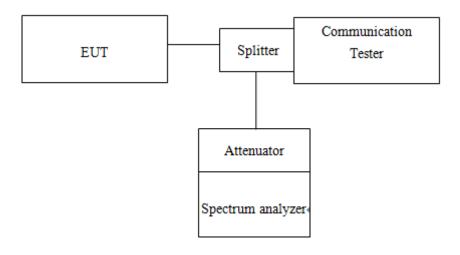


#### 12. PEAK TO AVERAGE RATIO

# 12.1. Standard Applicable

The peak-to-average ratio (PAR) of the transmission may not exceed 13dB.

# 12.2. Test SET-UP



#### 12.3. **Measurement Procedure**

- 1. KDB 971168 D01 is employed as the following procedure is proper adjusted accordingly:
- 2. Set resolution/measurement bandwidth  $\geq$  signal's occupied bandwidth; & internal =1ms
- Set the number of counts to a value that stabilizes the measured CCDF curve.

Conducted Emission (measured at antenna port) Test Site								
EQUIPMENT	MFR	MODEL	SERIAL	LAST	CAL DUE.			
TYPE		NUMBER	NUMBER	CAL.				
Spectrum Analyzer	KEYSIGHT	N9010A	MY51440113	06/20/2017	06/19/2018			
<b>Communication Tester</b>	Anritsu	MT8820C	6201107337	05/25/2017	05/24/2018			
Coaxial Cable 30cm	WOKEN	00100A1F1A 195C	RF01	12/12/2016	12/11/2017			
Temperature Chamber	TERCHY	MHK-120LK	1020582	06/13/2017	06/12/2018			
DC Block	PASTERNACK	PE8210	RF29	12/12/2016	12/11/2017			
Splitter	RF-LAMBAD	RFLT2W1G1 8G	RF35	12/12/2016	12/11/2017			
Attenuator	WOKEN	218FS-10	RF23	12/12/2016	12/11/2017			
DC Power Supply	Agilent	E3640A	MY53140006	05/02/2017	05/01/2018			
Communication Tester	Anritsu	MT8820C	6201107337	05/25/2017	05/24/2018			

#### 12.4. **Measurement Equipment Used**

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



#### 12.5. **Measurement Result**

## **Tabular Results:**

Erog		Peak-to-Average Ratio (dB)				
Freq. (MHz)	СН	WCDMA	HSDPA	HSUPA		
(IVITIZ)		П	=	I		
1852.4	9262	3.55	3.55	3.56		
1880	9400	3.53	3.54	3.55		
1907.6	9538	3.51	3.49	3.49		

Erog		Peak-to-Average Ratio (dB)				
Freq. (MHz)	СН	WCDMA	HSDPA	HSUPA		
(IVIFIZ)		IV	IV	IV		
1712.4	1312	3.49	3.43	3.45		
1732.6	1413	3.46	3.48	3.47		
1752.6	1513	3.44	3.46	3.44		

Freq.		Peak-to-Average Ratio (dB				
(MHz)	CH	WCDMA	HSDPA	HSUPA		
(11112)		V	V	V		
826.4	4132	3.07	3.07	3.09		
836.6	4183	3.26	3.25	3.26		
846.6	4233	3.08	3.06	3.07		



	LTE BAND 2								
Char	Channel bandwidth: 1.4MHz			Channel bandwidth: 3MHz					
Freq.	СН	PAPR	(dB)	Freq.	СН	PAPR	(dB)		
(MHz)	СП	16QAM	Limit	(MHz)	СП	16QAM	Limit		
1850.7	18607	6.94	13	1851.5	18615	6.99	13		
1880.0	18900	6.77	13	1880.0	18900	6.79	13		
1909.3	19193	6.64	13	1908.5	19185	6.56	13		
			LTE B	AND 2					
Cha	nnel band	dwidth: 5Ml	Ηz	Cha	nnel band	width: 10M	IHz		
Freq.	СН	PAPR	(dB)	Freq.	СН	PAPR (dB)			
(MHz)	on	16QAM	Limit	(MHz)	on	16QAM	Limit		
1852.5	18625	6.75	13	1855.0	18650	6.74	13		
1880.0	18900	6.80	13	1880.0	18900	6.66	13		
1907.5	19175	6.54	13	1905.0	19150	6.54	13		
			LTE B	AND 2					
Cha	nnel band	width: 15M	Hz	Cha	nnel band	width: 20M	IHz		
Freq.	СН	PAPR	(dB)	Freq.	СН	PAPR	(dB)		
(MHz)		16QAM	Limit	(MHz)	GI	16QAM	Limit		
1857.5	18675	6.42	13	1860.0	18700	6.81	13		
1880.0	18900	6.36	13	1880.0	18900	6.73	13		
1902.5	19125	6.28	13	1900.0	19100	6.72	13		



	LTE BAND 4										
Chan	nel band	width: 1.4	ЛНz	Cha	nnel ban	dwidth: 3M	Hz				
Freq.	СН	PAPR	(dB)	Freq.	СН	PAPR	(dB)				
(MHz)	СП	16QAM	Limit	(MHz)	СП	16QAM	Limit				
1710.7	19957	6.85	13	1711.5	19965	6.70	13				
1732.5	20175	6.98	13	1732.5	20175	6.62	13				
1754.3	20393	6.71	13	1753.5	20385	6.59	13				
LTE BAND 4											
Cha	nnel ban	dwidth: 5M	Hz	Char	nnel band	dwidth: 10N	1Hz				
Freq.	СН	PAPR	(dB)	Freq.	СН	PAPR (dB)					
(MHz)	CIT	16QAM	Limit	(MHz)	Сп	16QAM	Limit				
1712.5	19957	6.64	13	1715.0	20000	6.41	13				
1732.5	20175	6.51	13	1732.5	20175	6.56	13				
1752.5	20375	6.51	13	1750.0	20350	6.41	13				
			LTE B	AND 4							
Char	nnel banc	lwidth: 15N	1Hz	Char	nnel band	lwidth: 20N	1Hz				
Freq.	СН	PAPR	(dB)	Freq.	СН	PAPR	(dB)				
(MHz)		16QAM	Limit	(MHz)		16QAM	Limit				
1717.5	20025	6.21	13	1720.0	20050	6.66	13				
1732.5	20175	6.37	13	1732.5	20175	6.73	13				
1747.5	20325	6.26	13	1745.0	20300	6.65	13				

	LTE BAND 5											
Char	nnel band	width: 1.4N	IHz	Channel bandwidth: 3MHz								
Freq.	СН	PAPR (dB)		Freq.	СН	PAPR	(dB)					
(MHz)	СП	16QAM	Limit	(MHz)	СП	16QAM	Limit					
824.7	20407	5.14	13	825.5	20415	5.71	13					
836.5	20525	6.65	13	836.5	20525	6.49	13					
848.3	20643	6.08	13	847.5	20635	6.20	13					
			LTE B	AND 5								
Cha	nnel band	lwidth: 5MI	Ηz	Cha	nnel band	width: 10M	Hz					
Freq.	СН	PAPR	(dB)	Freq.	СН	PAPR	(dB)					
(MHz)		16QAM	Limit	(MHz)	CIT	16QAM	Limit					
826.5	20425	5.57	13	829.0	20450	5.95	13					
836.5	20525	6.43	13	836.5	20525	6.47	13					
846.5	20625	5.80	13	844.0	20600	5.82	13					



	LTE BAND 7											
Cha	Channel bandwidth: 5MHz				Channel bandwidth: 10MHz							
Freq.	СН	PAPR (dB)		Freq.	СН	PAPR	(dB)					
(MHz)	СП	16QAM	Limit	(MHz)	СП	16QAM	Limit					
2502.5	20775	5.88	13	2505.0	20800	5.99	13					
2535.0	21100	6.05	13	2535.0	21100	6.15	13					
2567.5	21375	6.00	13	2565.0	21350	5.98	13					
			LTE B	AND 7								
Char	nnel band	dwidth: 15N	1Hz	Char	nnel band	dwidth: 20N	1Hz					
Freq.	СН	PAPR	(dB)	Freq.	СН	PAPR	(dB)					
(MHz)	СП	16QAM	Limit	(MHz)	СП	16QAM	Limit					
2507.5	20825	6.07	13	2510	20850	6.68	13					
2535.0	21100	6.05	13	2535	21100	6.56	13					
2562.5	21375	6.06	13	2560	21350	6.67	13					

			LTE B	AND 12				
Char	nnel band	width: 1.4N	IHz	Channel bandwidth: 3MHz				
Freq.	СН	PAPR (dB)		Freq.	СН	PAPR	(dB)	
(MHz)	СП	16QAM	Limit	(MHz)	СП	16QAM	Limit	
699.7	23017	5.99	13	700.5	23025	6.30	13	
707.5	23095	6.35	13	707.5	23095	6.45	13	
715.3	23173	6.54	13	714.5	23165	6.45	13	
			LTE B	and 12				
Cha	nnel band	lwidth: 5MI	Ηz	Cha	nnel band	width: 10M	Hz	
Freq.	СН	PAPR	(dB)	Freq.	СН	PAPR	(dB)	
(MHz)		16QAM	Limit	(MHz)		16QAM Li		
701.5	23035	6.24	13	704.0	23060	6.21	13	
707.5	23095	6.35	13	707.5	23095	6.43	13	
713.5	23155	6.32	13	711.0	23130	6.23	13	

	LTE BAND 13										
Cha	nnel ban	dwidth: 5M	Hz	Channel bandwidth: 10MHz							
Freq.	СН	PAPR	(dB)	Freq.	СН	PAPR (dB)					
(MHz)	СП	16QAM	Limit	(MHz)	СП	16QAM	Limit				
779.5	23205	6.47	13								
782.0	23230	6.19	13	782.0	23230	6.18	13				
784.5	23255	6.16	13								



	LTE BAND 17										
Cha	nnel ban	dwidth: 5M	Hz	Channel bandwidth: 10MHz							
Freq.	СН	PAPR	(dB)	Freq.	СН	PAPR	(dB)				
(MHz)	СП	16QAM	Limit	(MHz)	СП	16QAM	Limit				
706.5	23755	6.33	13	709	23780	6.46	13				
710	23790	6.31	13	710	23790	6.52	13				
713.5	23825	6.43	13	711	23780	6.42	13				

			LTE B	AND 26			
Char	nnel band	width: 1.4N	IHz	Cha	nnel band	dwidth: 3MI	Hz
Freq.	СН	PAPR	(dB)	Freq.	СН	PAPR	(dB)
(MHz)	CIT	16QAM	Limit	(MHz)		16QAM	Limit
814.7	26697	5.09	13	815.5	26705	5.65	13
831.5	26865	6.53	13	831.5	26865	6.59	13
848.3	27033	6.08	13	847.5	27025	6.14	13
			LTE B	and 26			
Channel bandwidth: 5MHz				Channel bandwidth: 10MHz			
Freq.	СН	PAPR	(dB)	Freq.	СН	PAPR (dB)	
(MHz)	GI	16QAM	Limit	(MHz)	СП	16QAM	Limit
816.5	26715	5.57	13	820.0	26750	6.08	13
831.5	26865	6.38	13	831.5	26865	6.45	13
846.5	27015	5.71	13	844.0	26990	5.70	13
			LTE B	and 26			
Cha	nnel band	width: 15M	Hz				
Freq.	СН	PAPR					
(MHz)		16QAM	Limit				
822.5	26775	6.22	13				
831.5	26865	6.40	13				
841.5	26965	6.28	13				



		LTE	BAND 20	5 for part	90S		
Chan	nel band	lwidth: 1.4N	ЛНz	Cha	nnel ban	dwidth: 3M	Hz
Freq.	СН	PAPR (dB)		Freq.	СН	PAPR	(dB)
(MHz)	СП	16QAM	Limit	(MHz)	СП	16QAM	Limit
814.7	26697	6.11	13	815.5	26705	6.25	13
819.0	26740	6.09	13	819	26740	6.30	13
823.3	26783	5.39	13	822.5	26775	5.95	13
		LTE	BAND 20	5 for part 9	90S		
Cha	nnel ban	dwidth: 5M	Hz	Char	nnel band	dwidth: 10N	1Hz
Freq.	СН	PAPR	(dB)	Freq.	СН	PAPR	(dB)
(MHz)	СП	16QAM	Limit	(MHz)	СП	16QAM	Limit
816.5	26715	6.21	13				
819.0	26740	6.20	13	819.0	26740	6.19	13
821.5	26765	6.06	13				

	LTE BAND 30									
Cha	nnel band	dwidth: 5MI	Ηz	Channel bandwidth: 10MHz						
Freq.	СН	Peak-to-A	k-to-Average Freq. CH Pea				verage			
(MHz)	СП	6.65	Limit	(MHz)	СП	6.65	Limit			
2307.5	27685	6.21	13							
2310.0	27710	6.24	13	2310.0	27710	6.04	13			
2312.5	27735	6.00	13							

	LTE BAND 38											
Cha	nnel band	lwidth: 5MI	Ηz	Channel bandwidth: 10MHz								
Freq.	СН	PAPR	(dB)	Freq.	СН	PAPR	(dB)					
(MHz)		16QAM	Limit	(MHz)		16QAM	Limit					
2572.5	37775	7.73	13	2575	37800	8.08	13					
2595.0	38000	7.48	13	2595	38000	8.52	13					
2617.5	38225	7.79	13	2615	38200	8.34	13					
			LTE B	and 38								
Cha	nnel band	width: 15M	Hz	Cha	nnel band	width: 20M	Hz					
Freq.	СН	PAPR	(dB)	Freq.	СН	PAPR	(dB)					
(MHz)		16QAM	Limit	(MHz)		16QAM	Limit					
2577.5	37825	7.29	13	2580.0	37850	10.47	13					
2595.0	38000	9.59	13	2595.0	38000	11.68	13					
2612.5	38175	8.02	13	2610.0	38150	9.73	13					



	LTE BAND 41												
Cha	nnel ban	dwidth: 5M	Hz	Channel bandwidth: 10MHz									
Freq.	CH PAPR (		(dB)	Freq.	СН	PAPR	(dB)						
(MHz)	СП	16QAM	Limit	(MHz)	СП	16QAM	Limit						
2498.5	39675	7.26	13	2501.0	39700	8.27	13						
2593.0	40620	7.09	13	2593.0	40620	8.08	13						
2687.5	41565	9.06	13	2685.0	41540	6.97	13						
			LTE B	AND 41									
Char	nnel band	dwidth: 15N	1Hz	Char	nnel band	dwidth: 20N	1Hz						
Freq.	СН	PAPR	(dB)	Freq.	СН	PAPR	(dB)						
(MHz)	CIT	16QAM	Limit	(MHz)	CIT	16QAM	Limit						
2503.5	39725	8.40	13	2506.0	39750	8.06	13						
2593.0	40620	8.50	13	2593.0	40620	8.03	13						
2682.5	41515	7.34	13	2680.0	41490	9.91	13						

	LTE BAND 66										
Char	nnel band	width: 1.4N	IHz	Cha	nnel band	dwidth: 3MI	Ηz				
Freq.	СН	Peak-to-A	verage	Freq.	СН	Peak-to-A	verage				
(MHz)	СП	16QAM	Limit	(MHz)	СП	16QAM	Limit				
1710.7	131979	6.85	13	1711.5	131987	6.72	13				
1745.0	132322	6.63	13	1745.0	132322	6.75	13				
1779.3	132665	6.61	13	1778.5	132657	6.58	13				

LTE BAND 66												
Channel bandwidth: 5MHz				Channel bandwidth: 10MHz								
Freq. (MHz)	СН	Peak-to-Average		Freq.	СН	Peak-to-Average						
		16QAM	Limit	(MHz)	СП	16QAM	Limit					
1712.5	131997	6.58	13	1715.0	132022	6.48	13					
1745.0	132322	6.63	13	1745.0	132322	6.60	13					
1777.5	132647	6.60	13	1775.0	132622	6.41	13					

LTE BAND 66												
Channel bandwidth: 15MHz				Channel bandwidth: 20MHz								
Freq. (MHz)	СН	Peak-to-Average		Freq.	СН	Peak-to-Average						
		16QAM	Limit	(MHz)	Сп	16QAM	Limit					
1717.5	132047	6.29	13	1720.0	132072	6.68	13					
1745.0	132322	6.27	13	1745.0	132322	6.68	13					
1772.5	132597	6.22	13	1770.0	132572	6.81	13					



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## **Measurement Results:**

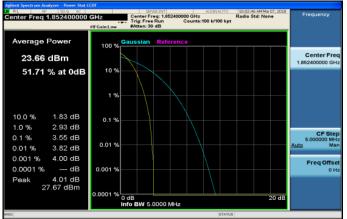
Please refer to next page for test plots.

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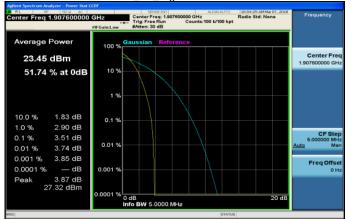
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## WCDMA B2 MidCH9400-1880



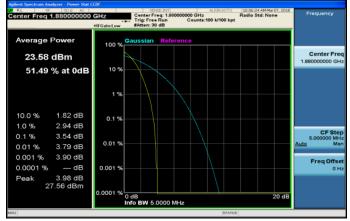
## WCDMA\_B2\_HighCH9538-1907.6



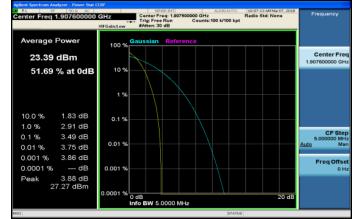
### HSDPA\_B2\_LowCH9262-1852.4



## HSDPA B2 MidCH9400-1880



### HSDPA\_B2\_HighCH9538-1907.6



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