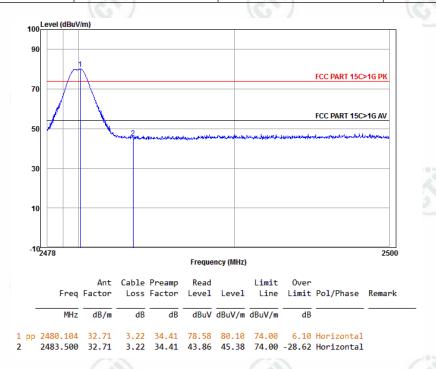
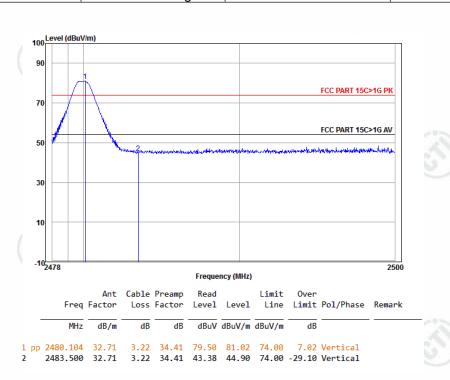


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Worse case mode:	GFSK(1-DH5)	200		
Frequency: 2483.5MHz	Test channel:	Polarization: Horizontal	Remark: Peak	



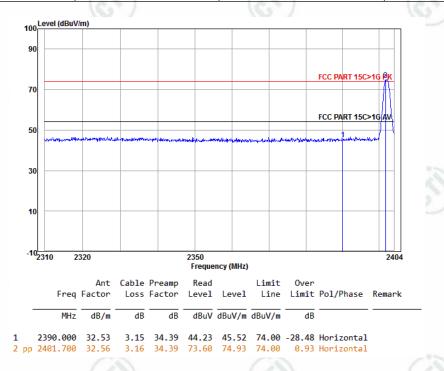
Worse case mode:	GFSK(1-DH5)	(67)	(67)	
Frequency: 2483.5MHz	Test channel: Highest	Polarization: Vertical	Remark: Peak	



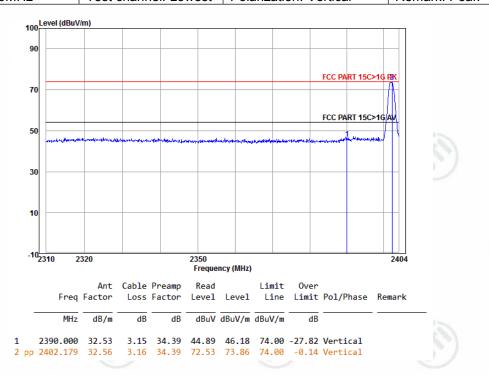


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Worse case mode:	π/4DQPSK(2-DH5)	250	200	
Frequency: 2390.0MHz	Test channel: Lowest	Polarization: Horizontal	Remark: Peak	



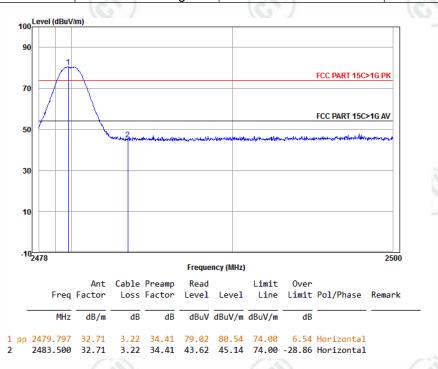
Worse case mode:	π/4DQPSK(2-DH5)	(6)	(6,	
Frequency: 2390.0MHz	Test channel: Lowest	Polarization: Vertical	Remark: Peak	



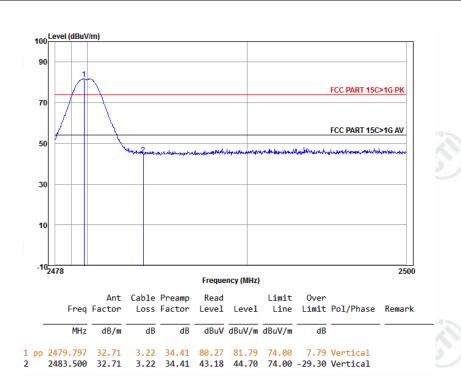


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Worse case mode:	π/4DQPSK(2-DH5)	200		
Frequency: 2483.5MHz	Test channel: Highest	Polarization: Horizontal	Remark: Peak	



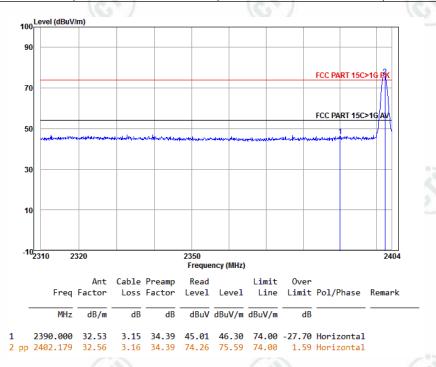
Worse case mode:	π/4DQPSK(2-DH5)	(6)	
Frequency: 2483.5MHz	Test channel: Highest	Polarization: Vertical	Remark: Peak



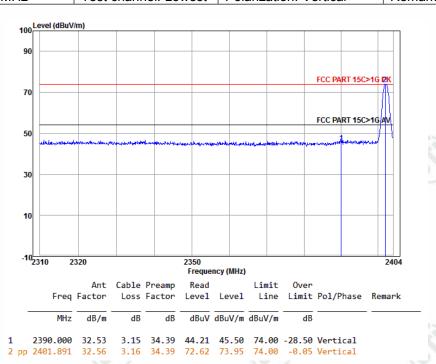


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Worse case mode:	8DPSK(3-DH5)		200	
Frequency: 2390.0MHz	Test channel: Lowest	Polarization: Horizontal	Remark: Peak	



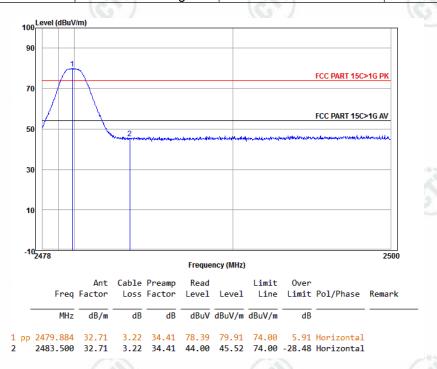
Worse case mode:	8DPSK(3-DH5)	(G ⁽)	(67)	
Frequency: 2390.0MHz	Test channel: Lowest	Polarization: Vertical	Remark: Peak	



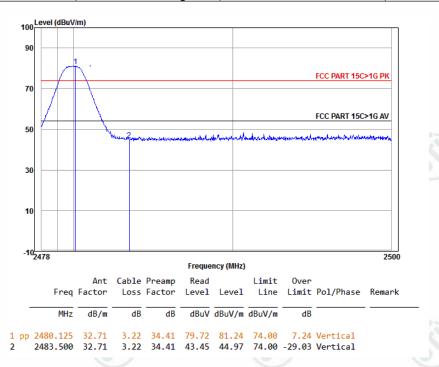


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Worse case mode:	8DPSK(3-DH5)	200	200	
Frequency: 2483.5MHz	Test channel: Highest	Polarization: Horizontal	Remark: Peak	



Worse case mode:	8DPSK(3-DH5)		(0,)	
Frequency: 2483.5MHz	Test channel: Highest	Polarization: Vertical	Remark: Peak	



Note:

- 1) Through Pre-scan transmitter mode with all kind of modulation and all kind of data type, find the 1-DH5 of data type is the worse case of GFSK modulation type, the 2-DH5 of data type is the worse case of $\pi/4DQPSK$ modulation type, the 3-DH5 of data type is the worse case of 8DPSK modulation type in charge + transmitter mode.
- 2) As shown in this section, the field strength limits are based on average limits. However, the peak field







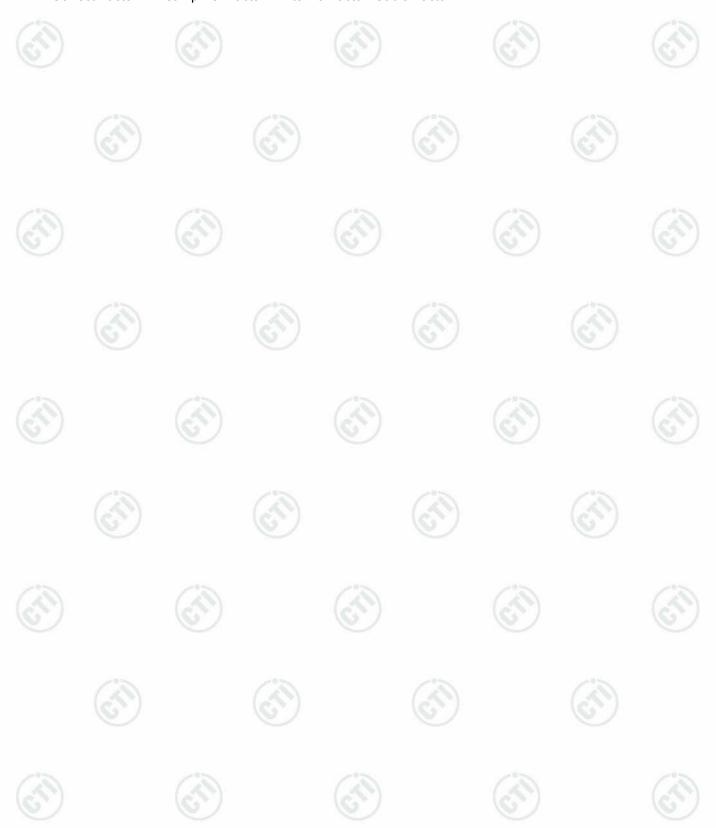
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strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. So, only the peak values are measured.

3) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading - Correct Factor

Correct Factor = Preamplifier Factor - Antenna Factor - Cable Factor





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Appendix L): Radiated Spurious Emissions

Bassiyar Catum	(25)	(3)	49		
Receiver Setup:	Frequency	Detector	RBW	VBW	Remark
	0.009MHz-0.090MHz	Peak	10kHz	30kHz	Peak
	0.009MHz-0.090MHz	Average	10kHz	30kHz	Average
	0.090MHz-0.110MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
	0.110MHz-0.490MHz	Peak	10kHz	30kHz	Peak
	0.110MHz-0.490MHz	Average	10kHz	30kHz	Average
	0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
	30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak
	A14011	Peak	1MHz	3MHz	Peak
	Above 1GHz	Peak	1MHz	10Hz	Average

Test Procedure:

Below 1GHz test procedure as below:

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, whichwas mounted on the top of a variable-height antenna tower.
- c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Above 1GHz test procedure as below:

- g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 meter to 1.5 meter(Above 18GHz the distance is 1 meter and table is 1.5 meter).
- h. Test the EUT in the lowest channel ,the middle channel ,the Highest channel
- i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case.
- . Repeat above procedures until all frequencies measured was complete.

Limit:	Frequency	Field strength (microvolt/meter)	Limit (dBµV/m)	Remark	Measurement distance (m)
	0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
	0.490MHz-1.705MHz	24000/F(kHz)	- /	- OS	30
	1.705MHz-30MHz	30	- ((T)	30
	30MHz-88MHz	100	40.0	Quasi-peak	3
	88MHz-216MHz	150	43.5	Quasi-peak	3
	216MHz-960MHz	200	46.0	Quasi-peak	3
	960MHz-1GHz	500	54.0	Quasi-peak	3
	Above 1GHz	500	54.0	Average	3

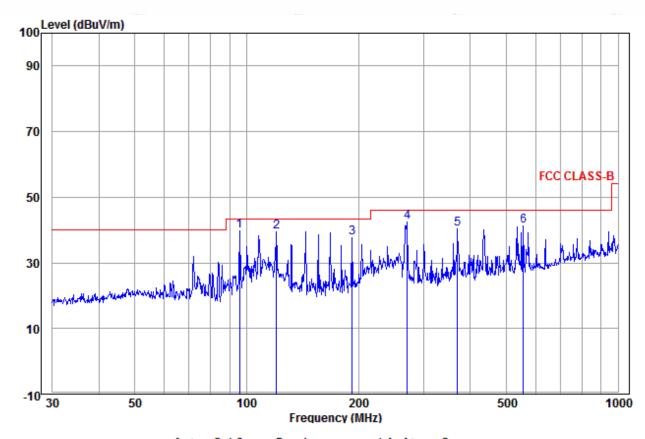
Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.



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Radiated Spurious Emissions test Data: Radiated Emission below 1GHz

30MHz~1GHz (QP)	0.	0	0
Test mode:	Transmitting	Horizontal	



		Ant	Cable	Read		Limit	0ver		
	Freq	Factor	Loss	Level	Level	Line	Limit	Pol/Phase	Remark
-	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	95.762	12.38	1.58	25.76	39.72	43.50	-3.78	Horizontal	
2	120.277	11.61	1.57	26.14	39.32	43.50	-4.18	Horizontal	
3	192.419	11.34	2.13	24.11	37.58	43.50	-5.92	Horizontal	
4 pp	270.375	12.87	2.36	27.11	42.34	46.00	-3.66	Horizontal	
5	369.405	15.41	2.75	22.12	40.28	46.00	-5.72	Horizontal	
6	556.774	18.63	3.25	19.31	41.19	46.00	-4.81	Horizontal	













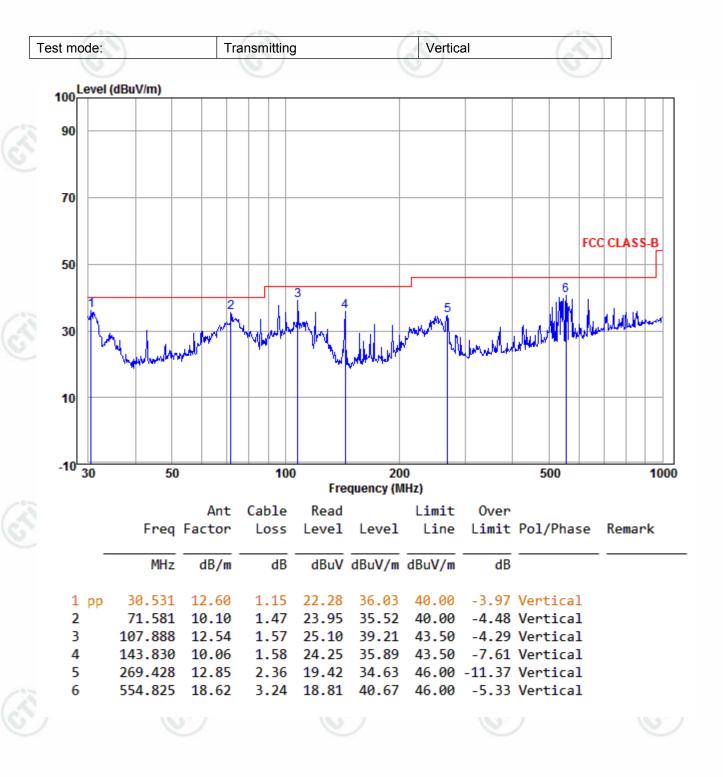








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Transmitter Emission above 1GHz

Worse case	mode:	GFSK(1-DI	1 5)	Test char	nnel:	Lowest	Remark: Po	eak	
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBµV)	Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Result	Antenna Polaxis
1159.096	30.13	2.37	35.01	48.29	45.78	74.00	-28.22	Pass	° H
3766.785	32.97	5.91	34.58	44.97	49.27	74.00	-24.73	Pass	(H
4804.000	34.69	6.72	34.35	42.43	49.49	74.00	-24.51	Pass	Ĥ
5986.509	35.89	5.98	34.30	42.69	50.26	74.00	-23.74	Pass	Н
7206.000	36.42	8.35	34.90	38.34	48.21	74.00	-25.79	Pass	Н
9608.000	37.88	7.67	35.08	38.55	49.02	74.00	-24.98	Pass	Н
1159.096	30.13	2.37	35.01	48.49	45.98	74.00	-28.02	Pass	V
1435.431	30.74	2.56	34.73	48.45	47.02	74.00	-26.98	Pass	V
3963.520	32.83	6.44	34.60	43.11	47.78	74.00	-26.22	Pass	V
4804.000	34.69	6.72	34.35	43.20	50.26	74.00	-23.74	Pass	V
7206.000	36.42	8.35	34.90	38.22	48.09	74.00	-25.91	Pass	V
9608.000	37.88	7.67	35.08	37.96	48.43	74.00	-25.57	Pass	V

Worse case	mode:	GFSK(1-D	H5)	Test char	nnel:	Middle	Remark: Po	eak	
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBµV)	Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Result	Antenna Polaxis
1159.096	30.13	2.37	35.01	47.30	44.79	74.00	-29.21	Pass	Н
1668.044	31.18	2.70	34.54	46.81	46.15	74.00	-27.85	Pass	Н
3893.520	32.88	6.26	34.59	44.62	49.17	74.00	-24.83	Pass	©H′
4882.000	34.85	6.74	34.33	42.51	49.77	74.00	-24.23	Pass	Н
7323.000	36.43	8.45	34.90	40.27	50.25	74.00	-23.75	Pass	Н
9764.000	38.05	7.53	35.05	40.33	50.86	74.00	-23.14	Pass	Н
1159.096	30.13	2.37	35.01	48.51	46.00	74.00	-28.00	Pass	V
1715.411	31.26	2.72	34.50	45.75	45.23	74.00	-28.77	Pass	V
4882.000	34.85	6.74	34.33	42.88	50.14	74.00	-23.86	Pass	V
6094.137	35.95	6.19	34.36	42.29	50.07	74.00	-23.93	Pass	V
7323.000	36.43	8.45	34.90	40.76	50.74	74.00	-23.26	Pass	V
9764.000	38.05	7.53	35.05	40.45	50.98	74.00	-23.02	Pass	V













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Worse case	mode:	GFSK(1-D	H5)	Test chann	nel:	Highest	Remark: Po	eak	
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBµV)	Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Result	Antenna Polaxis
1167.982	30.15	2.38	35.00	51.32	48.85	74.00	-25.15	Pass	Н
1668.044	31.18	2.70	34.54	47.34	46.68	74.00	-27.32	Pass	~ H
4421.992	33.83	6.64	34.47	44.72	50.72	74.00	-23.28	Pass	(H)
4960.000	35.02	6.75	34.31	42.91	50.37	74.00	-23.63	Pass	H
7440.000	36.45	8.55	34.90	39.93	50.03	74.00	-23.97	Pass	Н
9920.000	38.22	7.41	35.02	38.78	49.39	74.00	-24.61	Pass	Н
1159.096	30.13	2.37	35.01	48.25	45.74	74.00	-28.26	Pass	V
3342.042	33.30	4.66	34.54	45.54	48.96	74.00	-25.04	Pass	V
4960.000	35.02	6.75	34.31	42.01	49.47	74.00	-24.53	Pass	V
5850.919	35.79	6.08	34.30	42.54	50.11	74.00	-23.89	Pass	V
7440.000	36.45	8.55	34.90	40.42	50.52	74.00	-23.48	Pass	V
9920.000	38.22	7.41	35.02	38.37	48.98	74.00	-25.02	Pass	V

Worse case	mode:	π/4DQPSk	((2-DH5)	Test char	nnel:	Lowest	Remark: Po	eak	
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBµV)	Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Result	Antenna Polaxis
1446.435	30.77	2.57	34.72	49.30	47.92	74.00	-26.08	Pass	Н
3913.393	32.86	6.31	34.59	44.34	48.92	74.00	-25.08	Pass	Н
4804.000	34.69	6.72	34.35	41.55	48.61	74.00	-25.39	Pass	Н
6001.768	35.90	5.97	34.30	43.18	50.75	74.00	-23.25	Pass	₩ H
7206.000	36.42	8.35	34.90	38.97	48.84	74.00	-25.16	Pass	Н
9608.000	37.88	7.67	35.08	39.59	50.06	74.00	-23.94	Pass	Н
1159.096	30.13	2.37	35.01	47.92	45.41	74.00	-28.59	Pass	V
1642.761	31.13	2.68	34.56	45.26	44.51	74.00	-29.49	Pass	V
4804.000	34.69	6.72	34.35	42.18	49.24	74.00	-24.76	Pass	V
6235.364	36.02	6.52	34.45	41.86	49.95	74.00	-24.05	Pass	V
7206.000	36.42	8.35	34.90	39.15	49.02	74.00	-24.98	Pass	V
9608.000	37.88	7.67	35.08	38.55	49.02	74.00	-24.98	Pass	V















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Worse case	mode:	π/4DQPSk	((2-DH5)	Test char	inel:	Middle	Remark: Po	eak	
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBµV)	Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Result	Antenna Polaxis
1247.899	30.34	2.44	34.91	46.80	44.67	74.00	-29.33	Pass	Н
1698.033	31.23	2.71	34.51	47.86	47.29	74.00	-26.71	Pass	~ :H: ~
4882.000	34.85	6.74	34.33	41.82	49.08	74.00	-24.92	Pass	(H)
5850.919	35.79	6.08	34.30	43.60	51.17	74.00	-22.83	Pass	H
7323.000	36.43	8.45	34.90	39.16	49.14	74.00	-24.86	Pass	Н
9764.000	38.05	7.53	35.05	38.37	48.90	74.00	-25.10	Pass	Н
1502.732	30.88	2.60	34.67	49.15	47.96	74.00	-26.04	Pass	V
3757.208	32.97	5.88	34.58	45.08	49.35	74.00	-24.65	Pass	V
4882.000	34.85	6.74	34.33	41.74	49.00	74.00	-25.00	Pass	V
5836.044	35.78	6.09	34.30	42.18	49.75	74.00	-24.25	Pass	V
7323.000	36.43	8.45	34.90	39.61	49.59	74.00	-24.41	Pass	V
9764.000	38.05	7.53	35.05	40.19	50.72	74.00	-23.28	Pass	V

Worse case	mode:	π/4DQPSk	((2-DH5)	Test char	nnel:	Highest	Remark: Po	eak	
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBµV)	Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Result	Antenna Polaxis
1041.569	29.82	2.28	35.15	50.78	47.73	74.00	-26.27	Pass	Н
1702.361	31.24	2.72	34.51	48.35	47.80	74.00	-26.20	Pass	Н
4958.678	35.01	6.75	34.31	42.37	49.82	74.00	-24.18	Pass	Н
6645.070	36.23	7.43	34.70	41.92	50.88	74.00	-23.12	Pass	S H
7440.000	36.45	8.55	34.90	40.11	50.21	74.00	-23.79	Pass	Н
9920.000	38.22	7.41	35.02	39.89	50.50	74.00	-23.50	Pass	Н
1107.186	29.99	2.33	35.07	50.94	48.19	74.00	-25.81	Pass	V
1577.198	31.01	2.65	34.61	47.84	46.89	74.00	-27.11	Pass	V
4960.000	35.02	6.75	34.31	42.54	50.00	74.00	-24.00	Pass	V
6017.064	35.91	6.01	34.31	43.13	50.74	74.00	-23.26	Pass	V
7440.000	36.45	8.55	34.90	40.06	50.16	74.00	-23.84	Pass	V
9920.000	38.22	7.41	35.02	39.76	50.37	74.00	-23.63	Pass	V















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Worse case	mode:	8DPSK(3-[DH5)	Test chann	nel:	Lowest	Remark: Po	eak	
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBµV)	Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Result	Antenna Polaxis
1110.008	30.00	2.33	35.06	48.14	45.41	74.00	-28.59	Pass	Н
1483.727	30.84	2.59	34.69	47.17	45.91	74.00	-28.09	Pass	/° #
1651.146	31.15	2.69	34.55	48.50	47.79	74.00	-26.21	Pass	(H)
4804.000	34.69	6.72	34.35	43.01	50.07	74.00	-23.93	Pass	H
7206.000	36.42	8.35	34.90	39.32	49.19	74.00	-24.81	Pass	Н
9608.000	37.88	7.67	35.08	39.35	49.82	74.00	-24.18	Pass	Н
1159.096	30.13	2.37	35.01	48.20	45.69	74.00	-28.31	Pass	V
1468.696	30.81	2.58	34.70	47.54	46.23	74.00	-27.77	Pass	V
1634.419	31.12	2.68	34.56	47.83	47.07	74.00	-26.93	Pass	V
4804.000	34.69	6.72	34.35	41.24	48.30	74.00	-25.70	Pass	V
7206.000	36.42	8.35	34.90	38.71	48.58	74.00	-25.42	Pass	V
9608.000	37.88	7.67	35.08	40.13	50.60	74.00	-23.40	Pass	V

Worse case	mode:	8DPSK(3-[DH5)	Test chann	nel:	Middle	Remark: Po	eak	
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBµV)	Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Result	Antenna Polaxis
1251.079	30.35	2.44	34.91	47.02	44.90	74.00	-29.10	Pass	Н
1663.803	31.17	2.70	34.54	47.29	46.62	74.00	-27.38	Pass	Н
4882.000	34.85	6.74	34.33	41.48	48.74	74.00	-25.26	Pass	Н
6428.771	36.12	6.96	34.57	41.13	49.64	74.00	-24.36	Pass	₩/
7323.000	36.43	8.45	34.90	39.02	49.00	74.00	-25.00	Pass	Н
9764.000	38.05	7.53	35.05	40.10	50.63	74.00	-23.37	Pass	Н
1159.096	30.13	2.37	35.01	47.85	45.34	74.00	-28.66	Pass	V
1483.727	30.84	2.59	34.69	47.37	46.11	74.00	-27.89	Pass	V
1998.475	31.70	2.86	34.30	45.84	46.10	74.00	-27.90	Pass	V
4882.000	34.85	6.74	34.33	43.25	50.51	74.00	-23.49	Pass	V
7323.000	36.43	8.45	34.90	39.56	49.54	74.00	-24.46	Pass	V
9764.000	38.05	7.53	35.05	39.53	50.06	74.00	-23.94	Pass	V















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Worse case	mode:	8DPSK(3-E	DH5)	Test chann	nel:	Highest	Remark: Peak		
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBµV)	Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Result	Antenna Polaxis
1068.423	29.89	2.30	35.11	47.58	44.66	74.00	-29.34	Pass	Н
1668.044	31.18	2.70	34.54	47.61	46.95	74.00	-27.05	Pass	~ H
3993.903	32.80	6.52	34.60	44.69	49.41	74.00	-24.59	Pass	(H)
4960.000	35.02	6.75	34.31	42.46	49.92	74.00	-24.08	Pass	H
7440.000	36.45	8.55	34.90	40.45	50.55	74.00	-23.45	Pass	Н
9920.000	38.22	7.41	35.02	39.51	50.12	74.00	-23.88	Pass	Н
1159.096	30.13	2.37	35.01	48.55	46.04	74.00	-27.96	Pass	V
1663.803	31.17	2.70	34.54	47.06	46.39	74.00	-27.61	Pass	V
4354.967	33.68	6.62	34.49	43.99	49.80	74.00	-24.20	Pass	V
4960.000	35.02	6.75	34.31	42.85	50.31	74.00	-23.69	Pass	V
7440.000	36.45	8.55	34.90	39.79	49.89	74.00	-24.11	Pass	V
9920.000	38.22	7.41	35.02	39.18	49.79	74.00	-24.21	Pass	V

Note:

- 1) Through Pre-scan transmitter mode with all kind of modulation and all kind of data type, find the 1-DH5 of data type is the worse case of GFSK modulation type, the 2-DH5 of data type is the worse case of $\pi/4DQPSK$ modulation type, he 3-DH5 of data type is the worse case of 8DPSKmodulation type in charge + transmitter mode.
- 2) As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. H owever, the peak field strength of any emission shall not exceed the maximum permitted average limits specifie d above by more than 20 dB under any condition of modulation. So, only the peak values are measured.
- 3) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading -Correct Factor

Correct Factor = Preamplifier Factor - Antenna Factor - Cable Factor

4) Scan from 9kHz to 25GHz, the disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

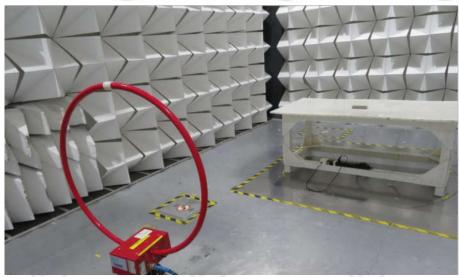




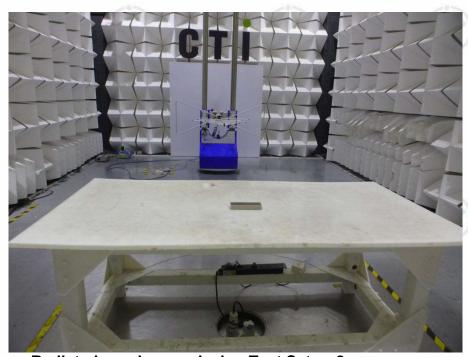
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PHOTOGRAPHS OF TEST SETUP

Test model No.: MDZ-26-DA



Radiated spurious emission Test Setup-1(Below 30MHz)



Radiated spurious emission Test Setup-2(30MHz - 1GHz)



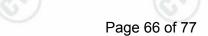














Radiated spurious emission Test Setup-3(Above 1GHz)



Conducted Emissions Test Setup









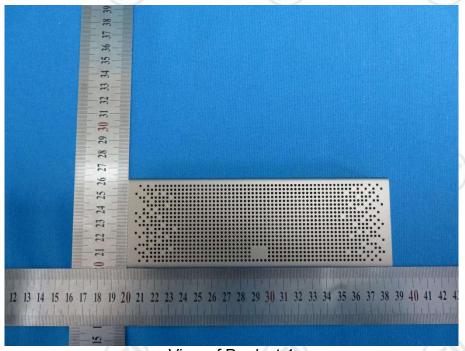






PHOTOGRAPHS OF EUT Constructional Details

Test model No.: MDZ-26-DA



View of Product-1



View of Product-2









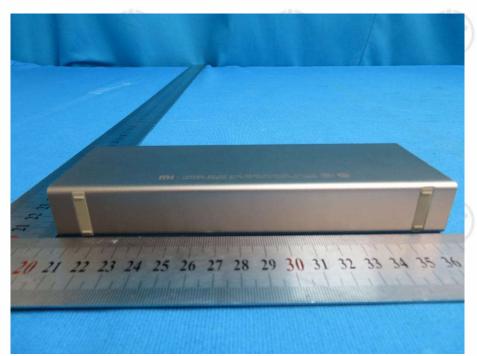








View of Product-3



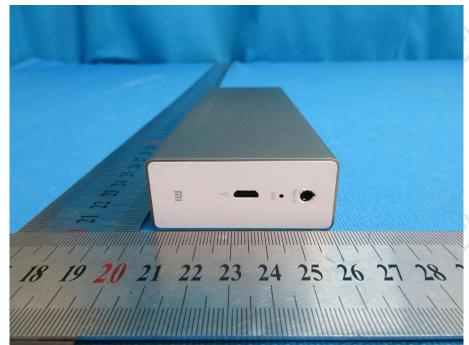
View of Product-4



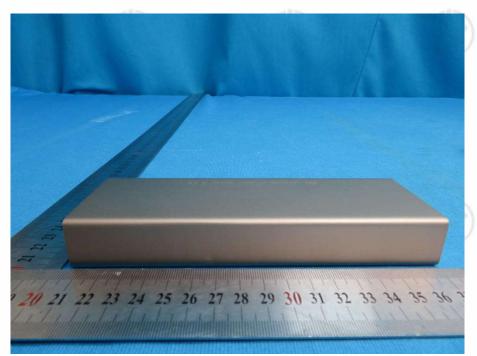












View of Product-6



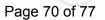














View of Product-7



View of Product-8





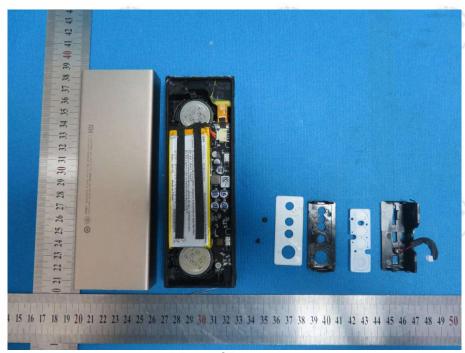












View of Product-9



View of Product-10





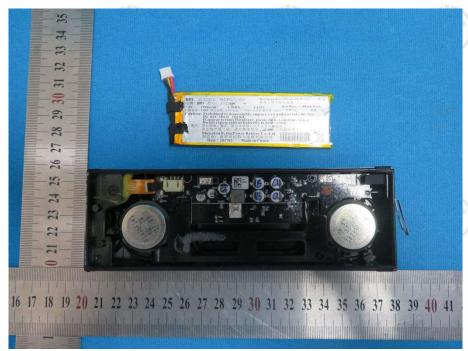








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View of Product-11



View of Product-12



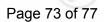


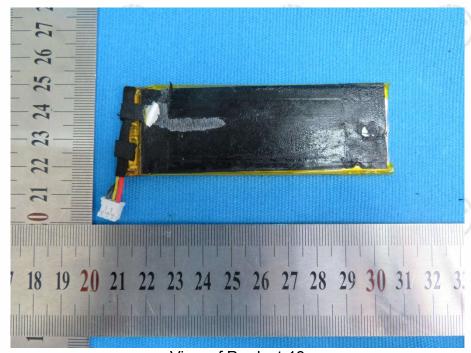












View of Product-13



View of Product-14













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View of Product-15











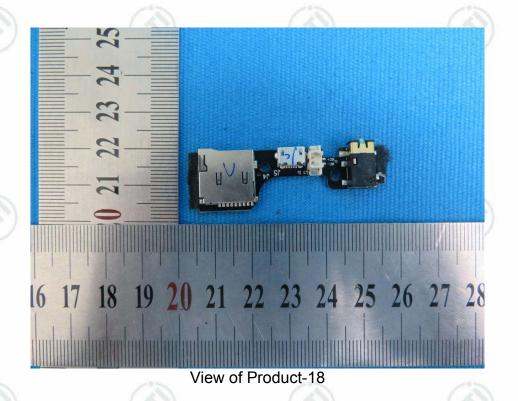




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View of Product-17







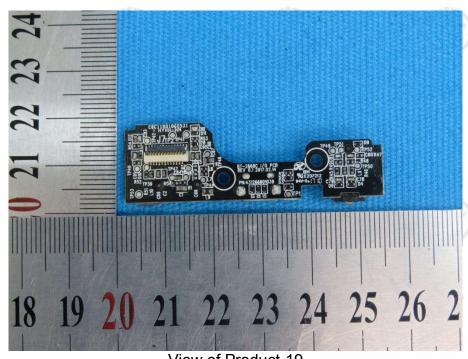




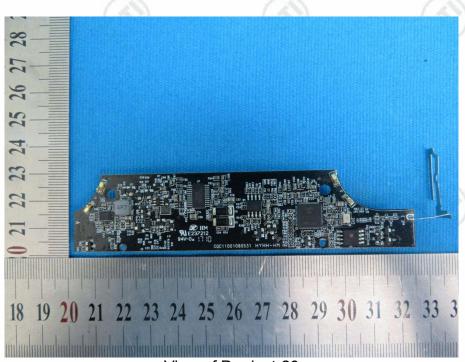








View of Product-19



View of Product-20





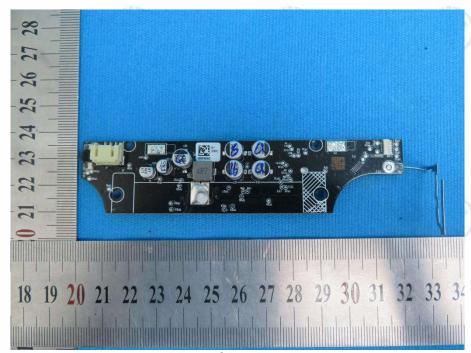








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View of Product-21



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