RADIO FREQUENCY EXPOSURE

Limit

According to section 4.3.1 of KDB 447498 D01 General RF Exposure Guidance v06, SAR evaluation is required if the separation distance between the user and/or bystander and the antenna and/or radiating element of the device is less than or equal to 20 cm, except when the device operates at or below the applicable output power level (adjusted for tune-up tolerance) for the specified separation distance defined in Appendix A.

Appendix A

SAR Test Exclusion Thresholds for 100 MHz – 6 GHz and ≤ 50 mm

MHz	5	10	15	20	25	mm
150	39	77	116	155	194	*SAR Test Exclusion Threshold* (mW)
300	27	55	82	110	137	
450	22	45	67	89	112	
835	16	33	49	66	82	
900	16	32	47	63	79	
1500	12	24	37	49	61	
1900	11	22	33	44	54	
2450	**10**	19	29	38	48	
3600	8	16	24	32	40	
5200	7	13	20	26	33	
5400	6	13	19	26	32	
5800	6	12	19	25	31	

MHz	30	35	40	45	50	mm
150	232	271	310	349	387	*SAR Test Exclusion Threshold* (mW)
300	164	192	219	246	274	
450	134	157	179	201	224	
835	98	115	131	148	164	
900	95	111	126	142	158	
1500	73	86	98	110	122	
1900	65	76	87	98	109	
2450	57	67	77	86	96	
3600	47	55	63	71	79	
5200	39	46	53	59	66	
5400	39	45	52	58	65	
5800	37	44	50	56	62	

This report shall not be reproduced except in full, without the written approval of Shenzhen Tongzhou Testing Co.,Ltd

Results

SRD:

RF Exposure at Separation distance (cm): 0.5									
Mode	Antenna	Frequency [MHz]	Conducted Power [dBm]	Manufacturing tolerance		Conducted Power including Tune Up		Calculation Value for 1g SAR	Exemption Limit for 1g SAR
				Target Power [dBm]	Tolerance ±[dB]	[dBm]	[mW]		
SRD	Ant1	2420	-2.02	-2.5	1	-1.5	0.71	0.22	3
SRD	Ant1	2445	-1.62	-2	1	-1	0.79	0.25	3
SRD	Ant1	2470	-2.8	-3.5	1	-2.5	0.56	0.18	3

5.8G:

RF Exposure at Separation distance (cm): 0.5									
Mode	Antenna	Frequency [MHz]	Conducted Power [dBm]	Manufacturing tolerance		Conducted Power including Tune Up		Calculation Value for 1g SAR	Exemption Limit for 1g SAR
				Target Power [dBm]	Tolerance ±[dB]	[dBm]	[mW]		
11A	Ant1	5745	2.69	2	1	3	2.00	0.96	3
11A	Ant1	5785	2.17	1.5	1	2.5	1.78	0.86	3
11A	Ant1	5825	1.55	1	1	2	1.58	0.77	3
11N20SISO	Ant1	5745	2.61	2	1	3	2.00	0.96	3
11N20SISO	Ant1	5785	1.96	1.5	1	2.5	1.78	0.86	3
11N20SISO	Ant1	5825	1.16	0.5	1	1.5	1.41	0.68	3

Note:

1. Calculation Value = [(max. power of channel, mW) / (min. test separation distance, mm)] ·[√f(GHz)].

Simultaneous transmission SAR test exclusion considerations(2.4G+5.8G)

[(max. power of channel, including tune-up tolerance, mW) / (min. test separation distance, mm)]·[√f(GHz)/x] W/kg, for test separation distances ≤ 50 mm; where x = 7.5 for 1-g SAR and x = 18.75 for 10-g SAR

0.20/7.5 + 1.07/7.5 = 0.17 W/kg < 0.4 W/kg

Conclusion:

The SAR evaluation is not required.