

MPE Calculation

Model Name : **SP139**
FCC ID : **S7A-SP139**

Device Category : **Portable device**
Separation distance : **23.6 mm**

KDB 447498 - 4.3.1 a)

For 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$$
 for 1-g SAR, and ≤ 7.5 for 10-g extremity SAR, where

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

Modulation	Frequency (MHz)	Min. Test separation distance	Measured Maximum Average power	Tune-up tolerance	Max. Power with tune-up tolerance		Standalone SAR Test exclusion thresholds for 100MHz to 6GHz at test separation distance ≤ 50 mm	Limit	Result
		(mm)	(dBm)	(dB)	(dBm)	(mW)			
GFSK	2402	23.60	7.12	± 1.00	8.12	6.49	0.4260	3.00	PASS
	2441		6.91		7.91	6.18	0.4091	3.00	PASS
	2480		6.67		7.67	5.85	0.3902	3.00	PASS
$\pi/4$ DQPSK	2402	23.60	4.86	± 1.00	5.86	3.85	0.2531	3.00	PASS
	2441		4.63		5.63	3.66	0.2420	3.00	PASS
	2480		4.34		5.34	3.42	0.2282	3.00	PASS
8DPSK	2402	23.60	5.02	± 1.00	6.02	4.00	0.2626	3.00	PASS
	2441		4.80		5.80	3.80	0.2517	3.00	PASS
	2480		4.52		5.52	3.56	0.2379	3.00	PASS
BT LE	2402	23.60	3.33	± 1.00	4.33	2.71	0.1780	3.00	PASS
	2442		3.11		4.11	2.58	0.1706	3.00	PASS
	2480		2.84		3.84	2.42	0.1616	3.00	PASS
MESH1	2410	23.60	12.06	± 1.00	13.06	20.23	1.3304	3.00	PASS
	2445		11.34		12.34	17.14	1.1356	3.00	PASS
	2475		10.35		11.35	13.65	0.9101	3.00	PASS