




FINDSTER

Closer to you

SAR Exclusion Calculation


Report

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17-03-2016

 FINDSTER <small>Closer to you</small>	SAR Exclusion Calculation			Report	
	Author:	Luis Paula	17/03/2016		
	Modified:	Gabriel Blard	15/12/2016	Version:	1.0

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SAR Exclusion Calculation

Per KDB 447498 D01, Section 4.3.1 - The 1-g and 10-g SAR test exclusion thresholds for 100MHz to 6GHz at a test separation distance $\leq 50\text{mm}$ is determined by:

$$\left[\frac{(\text{max. power of channel, including tune - up tolerance, mW})}{(\text{min. test separation distance, mm})} \right] \times \left[\sqrt{f_{(\text{GHz})}} \right]$$

≤ 3.0 for 1 - g SAR, and ≤ 7.5 for 10 - g extremity SAR

SAR Exclusion Calculation for 868MHz

Freq. (Mhz)	EUT Power (dBm)	EUT Power (mW)	Cable Loss (dB)	Ant. Gain (dBi)	Power at Ant (dBm)	EIRP ¹ (mW)	Separation Distance (mm)	SAR Exclusion Calculation	SAR Exclusion Limit
868.1	14	25.1	0	-0.8	14	20.89	9	2.16	3
868.85	14	25.1	0	-0.8	14	20.89	9	2.16	3
869.85	14	25.1	0	-0.8	14	20.89	9	2.16	3

Device complies with SAR exclusion at 9mm separation


SAR Exclusion Calculation for 915MHz

Freq. (Mhz)	EUT Power (dBm)	EUT Power (mW)	Cable Loss (dB)	Ant. Gain (dBi)	Power at Ant (dBm)	EIRP ² (mW)	Separation Distance (mm)	SAR Exclusion Calculation	SAR Exclusion Limit
915	14	100	0	0.4	14	27.54	9	2.93	3
921.5	14	100	0	0.4	14	27.54	9	2.94	3
928	14	100	0	0.4	14	27.54	9	2.95	3

Device complies with SAR exclusion at 9mm separation

¹ Calculated from theoretical values of EUT Power and Antenna gain for the 868MHz

² Calculated from theoretical values of EUT Power and Antenna gain for the 915MHz

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SAR Exclusion Calculation for 2.4GHz

Freq. (Ghz)	EUT Power (dBm)	EUT Power (mW)	Cable Loss (dB)	Ant. Gain (dBi)	Power at Ant (dBm)	EIRP (mW)	Separation Distance (mm)	SAR Exclusion Calculation	SAR Exclusion Limit
2.402	0	1	0	2.6	0	1.82	5	0.56	3
2.441	0	1	0	2.6	0	1.82	5	0.57	3
2.480	0	1	0	2.6	0	1.82	5	0.57	3

Device complies with SAR exclusion at 5mm separation.