

MDE_DANLA_1703_MPEa
FCC ID 2AD9I-DCM970
ISED:20087-DCM970
Model:Datalogger DCM970

Maximum Permissible Exposure

as specified in Table 1B of 47 CFR 1.1310 – Limits for Maximum Permissible Exposure (MPE), Limits for General Population/Uncontrolled Exposure

Frequency range (MHz)	Power density (mW/cm ²)
300 – 1,500	f/1500
1,500 – 100,000	1.0

Limits specified per RSS-102, Issue 5.

Frequency range (MHz)	Power density (W/m ²)	Power density (mW/cm ²)
300 – 6000	$0.02619 f^{0.6834}$	$mW/cm^2 = W/m^2 * 0.1$

Equation OET bulletin 65, page 18, edition 97-01:

$$S = \frac{PG}{4\pi R^2} = \frac{EIRP}{4\pi R^2}$$

S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the centre of radiation of the antenna (20cm)

Cellular Mode (Output power values based on tune-up information)

Antenna gain (dBi)	Mode	Duty Cycle	Frequency (MHz)	Maximum Conducted output power (dBm)	Maximum Conducted output power (mW)	Equivalent conducted output power (mW)	IC MPE Limit (mW/cm ²)	FCC MPE Limit (mW/cm ²)	Separation distance (cm)	Power Density (mW/cm ²)
2.50	FDD 2	100%	1852.4	24	251.19	251.19	0.45	1.0000	20	0.088865
-0.10	FDD 4	100%	1710.7	24	251.19	251.19	0.42	1.0000	20	0.0488349
1.30	FDD 5	100%	826.4	24.5	281.84	281.84	0.26	0.5509	20	0.0756363
2.50	eFDD 2	100%	1850.7	24	251.19	251.19	0.45	1.0000	20	0.088865
-0.10	eFDD 4	100%	1710.7	24	251.19	251.19	0.42	1.0000	20	0.0488349
1.30	eFDD 5	100%	824.7	24.5	281.84	281.84	0.26	0.5498	20	0.0756363
2.40	eFDD12	100%	711.0	24.5	281.84	281.84	0.23	0.4740	20	0.0974385

WLAN Mode

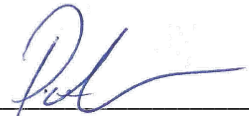
Operational Bands	Frequency (MHz)	Antenna Gain (dBi)	G	Output Power - conducted- (dBm)	P	IC Limit (mW/cm ²)	FCC Limit (mW/cm ²)	Power Density value (mW/cm ²)
			Antenna Gain -numeric- (mW/cm ²)		Output Power - conducted- (mW)			
2412-2462MHz WLAN-G (20 MHz)	2442	2.2	1.6596	15.40	34.67	0.5412	1.00	0.0114
2412-2462MHz WLAN-N (20 MHz)	2442	2.2	1.6596	15.30	33.88	0.5412	1.00	0.0112
2412-2462MHz WLAN-B (20 MHz)	2442	2.2	1.6596	22.40	173.78	0.5412	1.00	0.0574

Distance to Antenna (R) in cm:	20
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Operational Bands	Margin to FCC Limit (mW/cm ²)	Margin to IC Limit (mW/cm ²)	Minimum Distance to be ensured cm (FCC)	Minimum Distance to be ensured cm (IC)
2412-2462MHz WLAN-G (20 MHz)	0.9886	0.5297	2.1399	2.9089
2412-2462MHz WLAN-N (20 MHz)	0.9888	0.5300	2.1154	2.8756
2412-2462MHz WLAN-B (20 MHz)	0.9426	0.4838	4.7907	6.5123

Note. The calculation was made under the consideration of the duty cycle effect (100%).

Yours sincerely



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