

RF EXPOSURE EVALUATION

1. PRODUCT INFORMATION

Product Description	Diagnostic Tool		
Test Model MS70			
Series Model	KeyMaster 7, KeyMaster NEO, KeyMaster Elite, KeyMaster SE, KeyMaster Originals, X300Pro 7, X300Pro NEO, X300Pro Elite, X300Pro SE, X300Pro Originals, IM700, IM700 NEO, IM700 Elite, IM700 SE, IM700 Originals, IM700 Basic, IM706 IM706 NEO, IM706 Elite, IM706 SE, IM706 Originals, IM706 Basic, Odo Master NEO, Odo Master Pro, Odo Master SE, Odo Master Elite, Odo Master Originals, Odo Master 7, DC7, DC700, DC700 Pro, DC700 SE, DC700 Elite, DC700 Originals, DC700 Basic, DC706, DC706 Pro, DC706 SE, DC706 Elite, DC706 Originals, DC706 Basic, DB700, DB700 Pro, DB700 SE, DB700 Elite, DB700 Pro, DB706 Pro, DB706 SE, DB700 Elite, DB706 Originals, DB706 Basic, MS75, MS75 NEO, MS75 Pro, MS75 SE, MS75 Elite, MS75 Basic, MS75 Originals, MS70, MS70 NEO, MS70 Pro, MS70 SE, MS70 Elite, MS70 Basic, MS700 Originals, MS70, MS70 NEO, MS706 NEO, MS706 Pro, MS706 SE, MS706 Elite, MS70 Basic, MS706 Originals, iScan 700, iScan 700 NEO, iScan 700 Pro, iScan 700 SE, iScan 700, iScan 700 NEO, iScan 700 Pro, iScan 700 SE, iScan 706, iScan 706 Basic, iScan 706 Originals, MOTO 700, MOTO 700 NEO, MOTO 700 Pro, MOTO 700 SE, MOTO 700, MOTO 700 NEO, MOTO 700 Pro, MOTO 700 SE, MOTO 700, MOTO 700 NEO, MOTO 700 Pro, MOTO 706 SE, MOTO 706 Elite, MOTO 706 Basic, MOTO 706 Originals, MOTO 706 Elite, MOTO 706 NEO, MOTO 706 Pro, MOTO 706 SE, MOTO 706 Elite, MOTO 706 Basic, MOTO 706 Originals, MOTO 706 SE, MOTO 706 Elite, MOTO 706 NEO, MOTO 706 Pro, MOTO 706 SE, MOTO 706 Elite, MOTO 706 NEO, MOTO 708 SE, K75 NEO, K75 Pro, K75 SE, K75 Elite, K75 Basic, K75 Originals, K70, K70 NEO, K70 Pro, K70 SE, K70 Elite, K70 Basic, K70 Originals, MK70, MK70 NEO, MK70 Pro, MK75 Basic, MK75 Originals, MK70, MK70 NEO, MK70 Pro, MK70 SE, MK75 Elite, MK70 Basic, MK70 Originals, MK706 NEO, MK706 Pro, MK706 Originals		
FCC ID	2AJ2D-MS70		

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2. EVALUATION METHOD AND LIMIT

Human exposure to RF emissions from mobile devices (47 CFR §2.1091) may be evaluated based on the MPE limits adopted by the FCC for electric and magnetic field strength and/or power density, as appropriate, since exposures are assumed to occur at distances of 20 cm or more from persons.

LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE

Frequency	E-field Strength	Magnetic Field	Power Density	Averaging Time
Range	(E)	Strength (H)	(S)	$ E ^2$, $ H ^2$ or S
(MHz)	(V/m)	(A/m)	(mW/cm ²)	(Minutes)
0.3 1.34	614	1.63	(100)*	30
1.34 30	824/f	2.19/f	(180/f ²)*	30
30 300	27.5	0.073	0.2	30
300 1500		(6)	f/1500	30
1500 100,000	2.6	<u> </u>	1.0	30

*Note:

- 1. f= Frequency in MHz * Plane-wave Equivalent Power Density
- 2. The averaging time for General Population/Uncontrolled exposure to fixed transmitters is not applicable for mobile and portable transmitters. See 47 CFR §§2.1091 and 2.1093 on source-based time-averaging requirement for mobile and portable transmitters.

S=PG/4πR²

Where:

S=power density

P=power input to antenna

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

R=distance to the center of radiation of the antenna

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A minimum test separation distance \geq 20 cm is required between the antenna and radiating structures of the device and nearby persons to apply mobile device exposure limits. The distance must be at least 20 cm and fully supported by the operating and installation configurations of the transmitter and its antenna(s), according to the source-based time-averaged maximum power requirements of § 2.1091(d)(2). In cases where cable losses or other attenuations are applied to determine compliance, the most conservative operating configurations and exposure conditions must be evaluated.

BT Antenna Gain=0dBi (Numeric 1), π=3.14

Frequency	Output Power	Output Power	Power Density	Power Density Limit
MHz	dBm	mW	mW/cm ²	mW/cm ²
2412	2.613	1.83	0.00036	1

2.4GWIFI Antenna Gain=1.86dBi (Numeric 1.53), π=3.14

Frequency	Output Power	Output Power	Power Density	Power Density Limit
MHz	dBm	mW	mW/cm ²	mW/cm ²
2462	13.36	21.68	0.0066	1

Note:

- 1. Only the worst case recorded.
- 2. The BT and 2.4GHz WIFI band can not transmit simultaneously.

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