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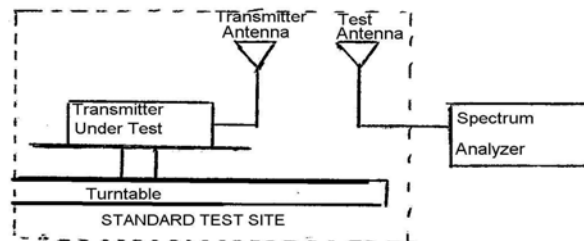
Name of Test: ERP Carrier Power (Radiated)

Specification: TIA/EIA 603A (Substitution Method)

2.2.17.1 Definition: The average radiated power of a licensed device is the equivalent power required, when delivered to a half-wave dipole or horn antenna, to produce at a distant point the same average received power as produced by the licensed device.

2.2.17.2 Method of Measurement:

a) Connect the equipment as illustrated. Place the transmitter to be tested on the turntable in the standard test site.



b) Raise and lower the test antenna from 1m to 6 m with the transmitter facing the antenna and record the highest received signal in dB as LVL.

c) Repeat step b) for seven additional readings at 45° interval positions of the turntable.

d) Replace the transmitter under test with a half-wave or horn vertically polarized antenna. The center of the antenna should be at the same location as the transmitter under test. Connect the antenna to a signal generator with a known output power and record the path loss in dB or LOSS.

e) Calculate the average radiated output power from the readings in step c) and d) by the following:

$$\text{average radiated power} = 10 \log_{10} \sum 10(\text{LVL} - \text{LOSS})/10 \text{ (dBm)}$$

Results

	400.050 MHz		415.05 MHz		429.995 MHz	
	LVL, dbm	Path Loss, db	LVL, dbm	Path Loss, db	LVL, dbm	Path Loss, db
0°	38.5	-1.4	40.4	-1.2	39.3	-1.3
45°	38.7	-1.4	40.6	-1.2	39.6	-1.3
90°	38.9	-1.4	40.4	-1.2	39.8	-1.3
135°	38.6	-1.4	40.5	-1.2	39.3	-1.3
180°	39.2	-1.4	41.3	-1.2	40.3	-1.3
225°	39.2	-1.4	41.3	-1.2	40.4	-1.3
270°	39.3	-1.4	41.4	-1.2	40.5	-1.3
315°	39.3	-1.4	41.2	-1.2	40.2	-1.3
Av. Radiated Power:		36.3 dbm	36.4 dbm	36.4 dbm	36.3 dbm	36.3 dbm