

NAME OF TEST:

Transmitter Spurious and Harmonic Outputs

RULE PART NUMBER: 2.1051,90.543(c),27.53(d)(3)

MINIMUM STANDARD: 27.53(d)(3); 90.543(c): $43 + 10 \log_{10}(P(\text{ Watts}))$
For 30Watt $\Leftrightarrow$ 58dBc ; For 10 Watt $\Leftrightarrow$ 53 dBc

TEST RESULTS: Meets minimum standard (see data on the following page)

TEST CONDITIONS: Standard Test Conditions, 25 C
RF voltage measured at antenna terminals

TEST PROCEDURE: TIA/EIA - 603, 2.2.13

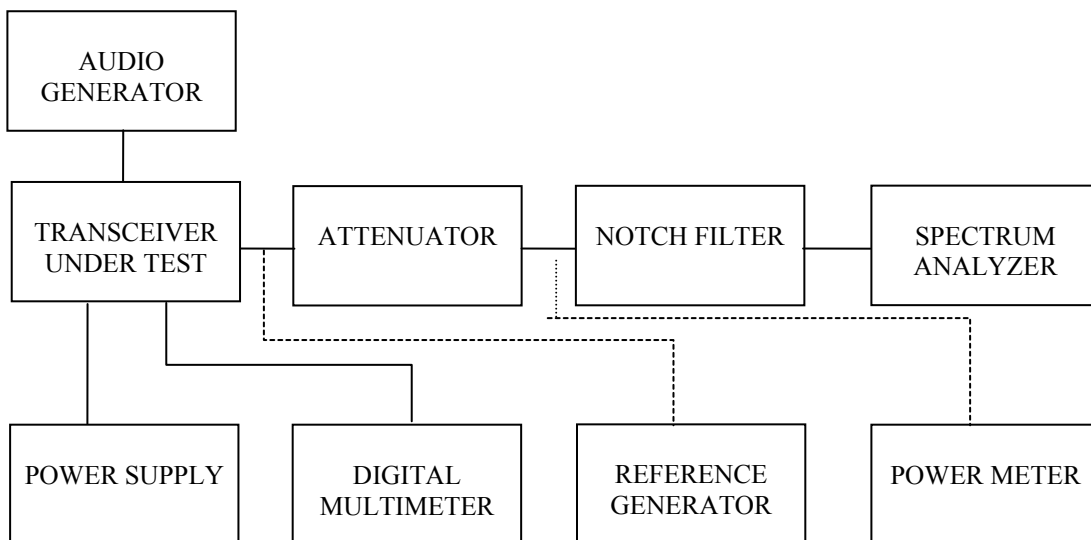
TEST EQUIPMENT: Attenuator, BIRD Model / 100-A-MFN-20 / 20 dB / 100 Watt
Attenuator, BIRD Model / 50-A-MFN-03 / 3 dB / 50 Watt
Digital Voltmeter, Fluke Model 8012A
DC Power Source, Model HP6038A
Spectrum Analyzer, Model HP8563E
Reference Generator, Model HP83732B
Power Meter, Model HP 8901B
Audio Generator, Model HP8903B

PERFORMED BY:



Allen Frederick

Date: Jan 2, 2003



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(Continued)

MEASUREMENT PROCEDURE:

1. The transmitter carrier output frequency is 800 MHz. The reference oscillator frequency is 17.5000 MHz.
2. After carrier reference was established on spectrum analyzer, the notch filter was adjusted to null the carrier F_c to extend the range of the spectrum analyzer for harmonic measurements.
3. At each spurious frequency, Generator substitution was used to establish the true spurious level.
4. The spectrum was scanned to the 10th harmonic.

TEST DATA: See following page.

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(Continued)

Power (W):	30	W	Min Spec:	57.8	dBc
Power (dBm):	44.7	dBm	Worse Spur:	-77.3	dBc
Freq (MHz):	800	MHz			
		Spec An	Loss	dBm	dBc
2	1600	-92.0	22.7	-69.3	-114.1
3	2400	-65.7	23.0	-42.7	-87.5
4	3200	-87.0	29.8	-57.2	-102.0
5	4000	-76.5	38.0	-38.5	-83.3
6	4800	-62.5	30.0	-32.5	-77.3
7	5600	-101.0	56.3	-44.7	-89.5
8	6400	-88.0	46.8	-41.2	-86.0
9	7200	-81.0	33.8	-47.2	-92.0
10	8000	-105.0	62.5	-42.5	-87.3

Power (W):	10	W	Min Spec:	53.0	dBc
Power (dBm):	40.0	dBm	Worse Spur:	-82.0	dBc
Freq (MHz):	800	MHz			
		Spec An	Loss	dBm	dBc
2	1600	-95.0	22.7	-72.3	-112.3
3	2400	-93.0	23.0	-70.0	-110.0
4	3200	-107.0	29.8	-77.2	-117.2
5	4000	-86.0	38.0	-48.0	-88.0
6	4800	-72.0	30.0	-42.0	-82.0
7	5600	-110.0	56.3	-53.7	-93.7
8	6400	-103.0	46.8	-56.2	-96.2
9	7200	-102.0	33.8	-68.2	-108.2
10	8000	-110.0	62.5	-47.5	-87.5