NAME OF TEST:
Transmitter Spurious and Harmonic Outputs

RULE PART NUMBER: 2.1033 c (14), 2.1041, 2.1051, 90.210 (d)(3)

MINIMUM STANDARD: For 27 Watt:
$50+10Log_{10}(27\ Watts) = 64.3$ dBc
or 70 dBc whichever is the lesser attenuation.
For 10 Watt:
$50+10Log_{10}(5\ Watts) = 60$ dBc
or 70 dBc whichever is the lesser attenuation.

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

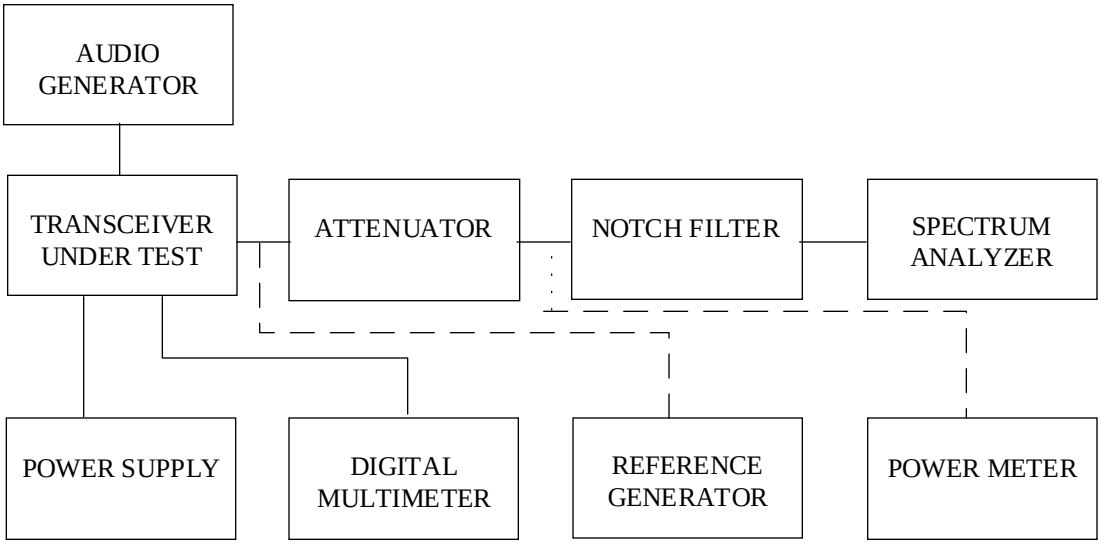
TEST EQUIPMENT: Attenuator, BIRD Model / 100-A-MFN-20 / 20 dB / 100 Watt
Attenuator, BIRD Model / 50-A-MFN-03 / 3 dB / 50 Watt
Digital Voltmeter, Fluke Model 8012A
DC Power Source, Model HP6552A
Spectrum Analyzer, Model HP8563E
Reference Generator, Model HP83732B
Power Meter, Model HP 8901B
Audio Generator, Model HP8903B

PERFORMED BY:

Allen Frederick

Date:07/02/02

Allen Frederick



NAME OF TEST: Transmitter Spurious and Harmonic Outputs
(Continued)

MEASUREMENT PROCEDURE:

1. The transmitter carrier output frequency is 899 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 Fc 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.

NAME OF TEST: Transmitter Spurious and Harmonic Outputs (Continued)

Tuned Freq	899	MHz	**Minimum Spec**	64.3	dBc
Power (W)	27	Watts	**Worse Case**	76.3	dBc
Power (dBm)	44.3	dBm			

Relation to Fo	Freq (MHz)	Path Loss (dB)	Spurious Level (dBm)	Substitution Generator (dBm)	Spurious Level (dBc)
2	1798	31	-66.7	-35.7	80.0
3	2697	31	-65.7	-34.7	79.0
4	3596	35	-77	-42	86.3
5	4495	35	-72.5	-37.5	81.8
6	5394	59	-100	-41	85.3
7	6293	53	-100	-47	91.3
8	7192	68	-100	-32	76.3
9	8091	67	-118	-51	95.3
10	8990	80	-118	-38	82.3

Tuned Freq	899	MHz	**Minimum Spec**	60.0	dBc
Power (W)	10	Watts	**Worse Case**	72.0	dBc
Power (dBm)	40.0	dBm			

Relation to Fo	Freq (MHz)	Path Loss (dB)	Spurious Level (dBm)	Substitution Generator (dBm)	Spurious Level (dBc)
2	1798	31	-72	-41	81.0
3	2697	31	-74	-43	83.0
4	3596	35	-95	-60	100.0
5	4495	35	-75	-40	80.0
6	5394	59	-100	-41	81.0
7	6293	53	-100	-47	87.0
8	7192	68	-100	-32	72.0
9	8091	67	-118	-51	91.0
10	8990	80	-118	-38	78.0