NAME OF TEST:
Transmitter Spurious Spurious Emissons at Antenna Terminal
RULE PART NUMBER: 2.1051,90.543(c)

MINIMUM STANDARD: 90.543(c): $43 + 10 Log_{10}(P(Watts))$
                                              For 50Watt $\Leftrightarrow$ 60dBc ; For 12.5 Watt$\Leftrightarrow$ 54 dBc

TEST RESULTS: Meets minimum standard (see plots 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 (harmonics 2-3), direct reading (harmonics 4-10)

TEST EQUIPMENT: Attenuator, BIRD Model / 150-A-MFN-30 / 30 dB / 150 Watt
                                              Notch filter and cables calibrated before test
                                              1-5W RF source model T881-10 FCC ID EOTBDP3-T881
                                               DC Power Source for T881 Exciter, Model Astron VLS35M
                                              DC power source for UUT model TaitT808-10 12.5V/25A
                                              Spectrum Analyzer, Model HP8563E
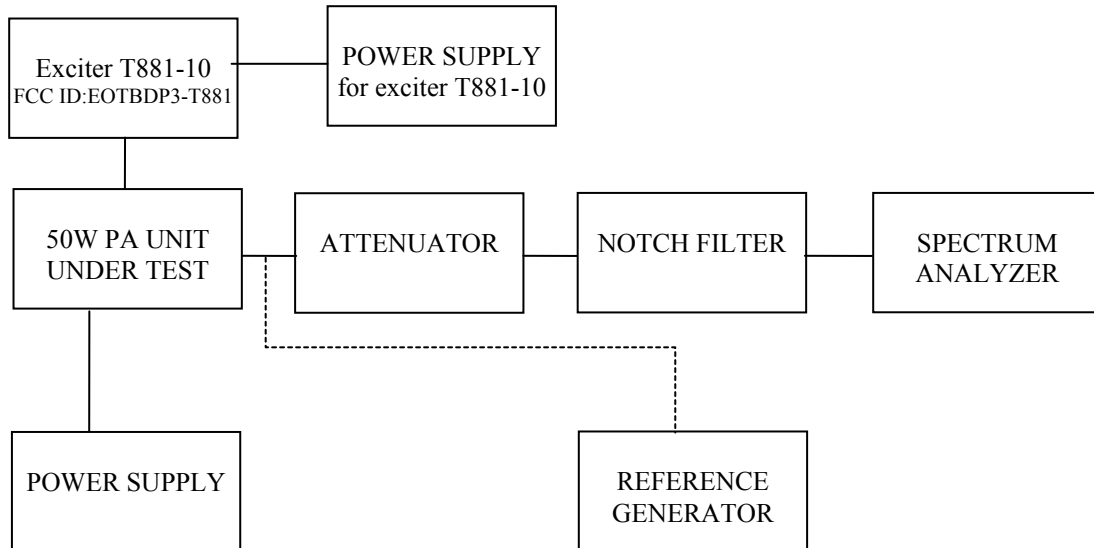   Network Analyzer (Reference Generator), Model HP8714ES

PERFORMED BY:

Date: Dec 10, 2004

Constantin Pintilei

TEST SET-UP:

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

TEST NOTES:
The UUT was the version (HS) equipped with the 35dB notch filter centered on 1518MHz on the output path. The version LP is equipped with a low-pass filter with a 3dB cut-off frequency of 850MHz and with min 30dB attenuation at the frequencies over 1550MHz, therefore its spurious response is better than the response of the current UUT.
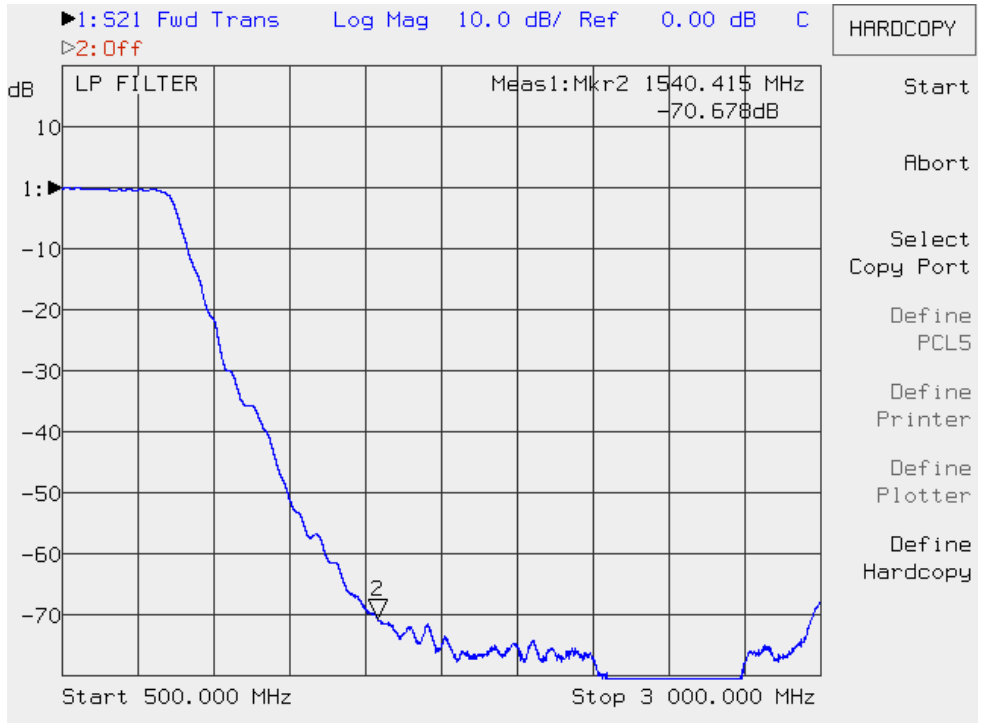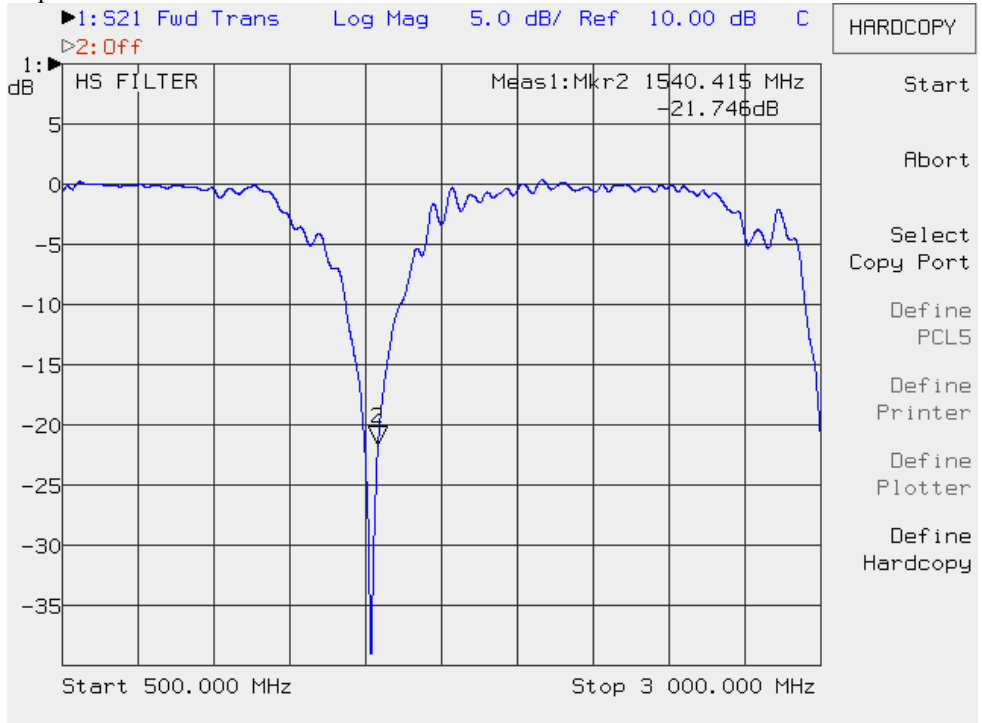
MEASUREMENT PROCEDURE:

1. The T881-10 transmitter carrier output frequency is 770.0250 MHz. at 4.8W for 50W output of the UUT or at 1.2W for 12.5W output of the UUT.

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 below 3GHz, Generator substitution was used to establish the true spurious level. For frequencies higher than 3GHz the setup losses were added to the reading to compute UUT's spurious.

4. The spectrum was scanned to the 10th harmonic.

TEST DATA

Power (W):	50 W		Min Spec:	-60dBc	-13dBm
Power (dBm):	47 dBm		Worse Spur:	-61.8dBc	
Freq (MHz):	770.025 MHz				
		Spec An		**Ref Gen dBm**	**dBc**
2	1540.050	-59.83		-26.3	-73.3
3	2310.075	-52.67		-14.8	-61.8
		Spec An	**Set-up loss**	**dBm**	**dBc**
4	3080.100	-88.17	41.4	-83.4	<-100
5	3850.125	-75.83	49.1	-78.4	<-100
6	4620.150	-84.50	43.5	-93.6	<-100
7	5390.175	-92.00	65.2	-26.8	-73.8
8	6160.200	NF	42.9	<-35	<-82
9	6930.225	NF	70.1	<-35	<-82
10	7700.250	NF	77.7	<-35	<-82

NF⇔noise floor –115dBm

Power (W):	12.5 W		Min Spec:	-54dBc	-13dBm
Power (dBm):	41 dBm		Worse Spur:	-71.5dBc	
Freq (MHz):	770.025 MHz				
		Spec An		**Ref Gen dBm**	**dBc**
2	1540.050	-70.17		-36.5	-77.5
3	2310.075	-68.67		-30.5	-71.5
		Spec An	**Set-up loss**	**dBm**	**dBc**
4	3080.100	-102.5	41.4	-61.1	-102.1
5	3850.125	-100.33	49.1	-51.2	-92.2
6	4620.150	-97.83	43.5	-54.3	-95.3
7	5390.175	-93.83	65.2	-28.6	-69.6
8	6160.200	NF	42.9	<-35	<-76
9	6930.225	NF	70.1	<-35	<-76
10	7700.250	NF	77.7	<-35	<-76

NF⇔noise floor –115dBm