

Summary of Testing, Conducted Spurious Emissions at Low and Mid Power Levels, 5/6/02

Results: Passed, Low (25 dBm) and Mid (35 dBm) power settings with Low, Mid, and High transmit frequencies.
See test report for high power test data.

EUT:

M-803 Vehicular Tactical (VTAC) Unit

Model: MAMROS16

Subassembly:	Serial Numbers:
VRM	A40071000064
VRB	A4007000038F
RF Combiner	A4009010005A
Control Head	A4000A100074

Support Equipment			
Description	Manufacturer	Model Number	Serial Number
Laptop Computer Compaq Armada	Compaq	7800 6300/T/8000/V/M/1	7919CB630126
Fan	Electrix	N619	N/L
DC Power Supply	Hewlett Packard	6652A	910-510

Cables					
Quantity	Type	Length (m)	Shielding	Ferrite	Connector Type
2	Serial Cable	4	No	No	Metal w/360
1	Microphone Cable	1	No	No	Plastic
4	DC Power Cable	4	No	No	Plastic
1	AC Power Cable	2	No	No	Plastic

Test Equipment

Description	Manufacturer	Model Number	Serial Number	Cal Due Date
Cable, SMA – SMA <18 GHz	Sucoflex	104PE	CBLSHF103	4/01/03
Spectrum Analyzer	Agilent	E7405A	US40240205	11/02/02
30 dB Attenuator	Weinschel Corporation	47-30-34	BD4327	8/24/02

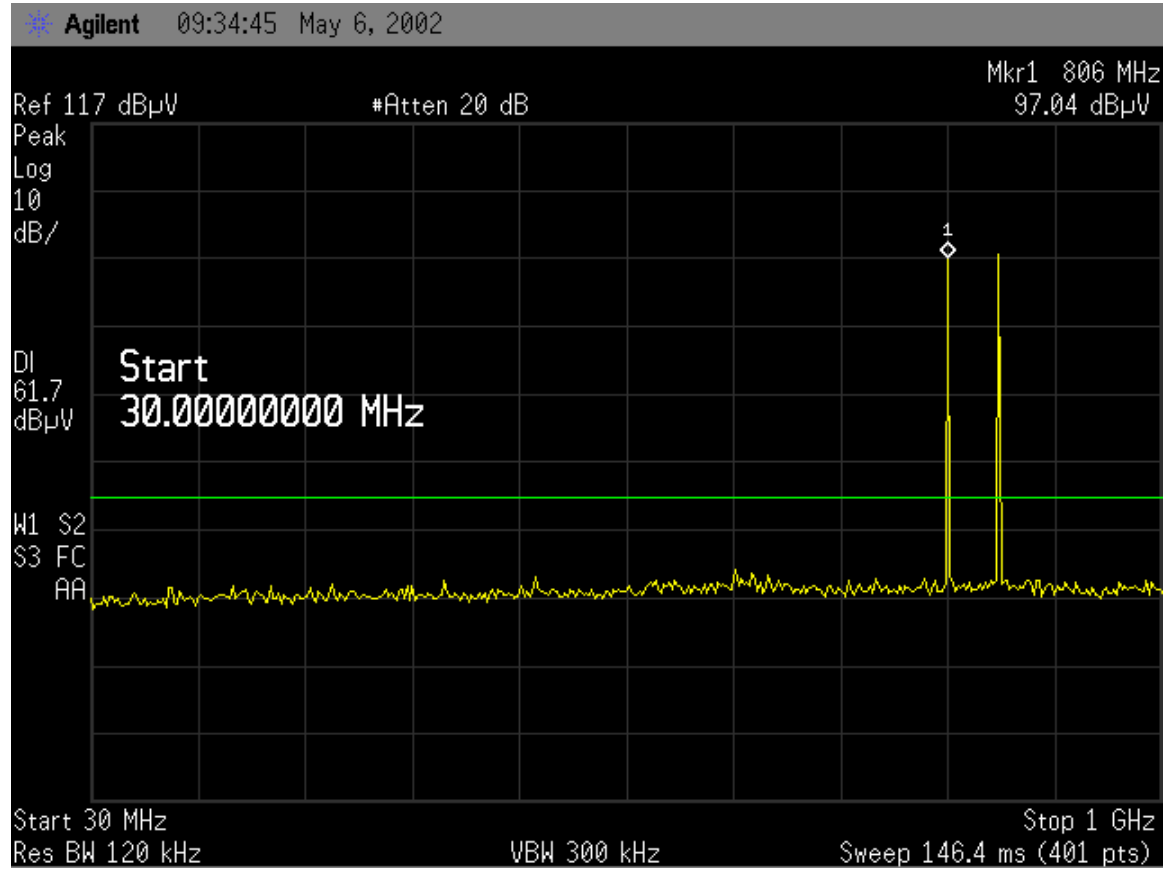
Procedure:

The antenna was disconnected from the transmitter and a spectrum analyzer was connected to the transmitter RF output through sufficient attenuation to prevent overloading of the analyzer. The resolution bandwidth of the spectrum analyzer was set up to 300 Hz in the 100 kHz span around the transmit frequency, and the spectrum of the transmitting signal was recorded. The resolution bandwidth of the spectrum analyzer was set at 100 kHz below 1 GHz. Above 1 GHz the bandwidth was set to 1 MHz. Sufficient scans were taken to show the out-of-band emissions, if any, up to 10th harmonic. Low Power is the lowest power the device will be programmed to operate at, 25 dBm, and mid power was selected to be 35 dBm.

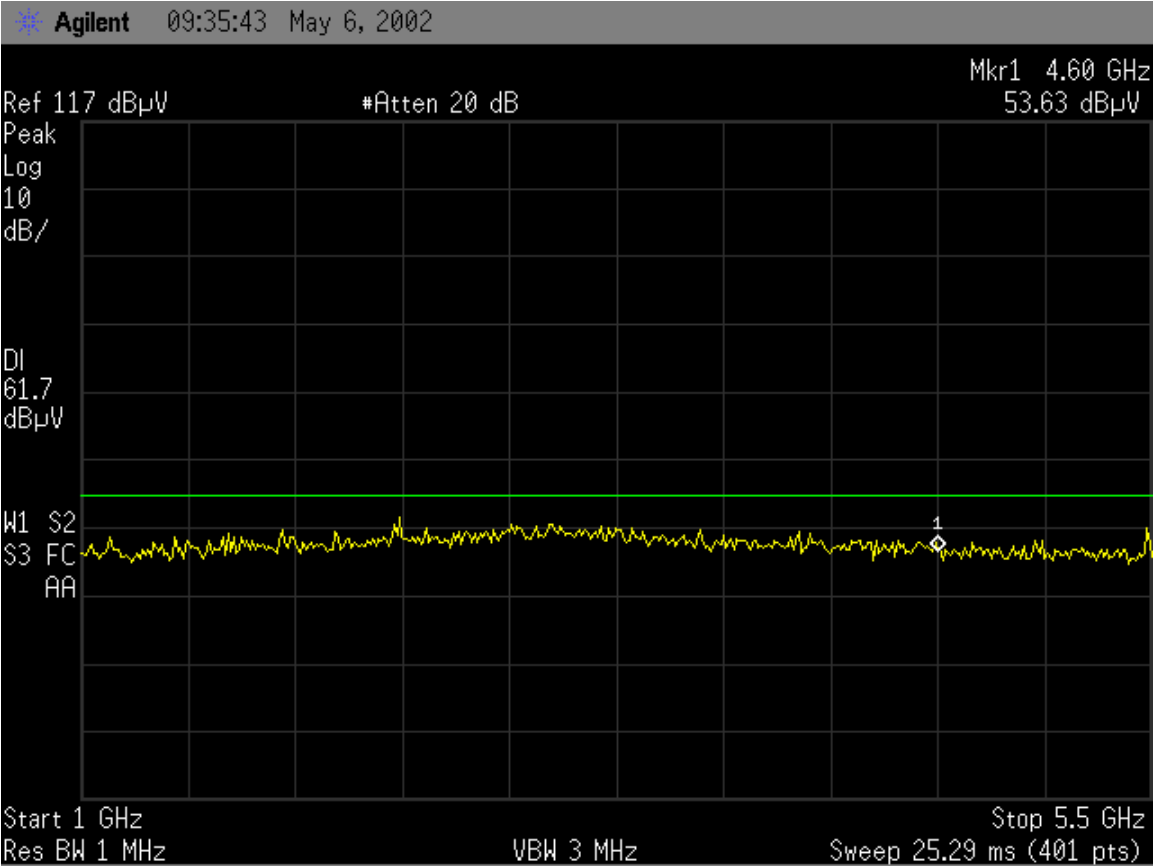
Requirement:

The power of emissions must be attenuated below the power of the unmodulated carrier (P) on any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth at least $(43 + 10 \log P)$ dB, which is -13 dBm or 94 dBuV. The transmit waveforms must meet the emissions masks G and H as outlined in 90.210. 30 dB of attenuation was used with 2.3 dB loss in the cable, so a display line was placed at 61.7 to reflect the limit beyond 250% of the authorized bandwidth.

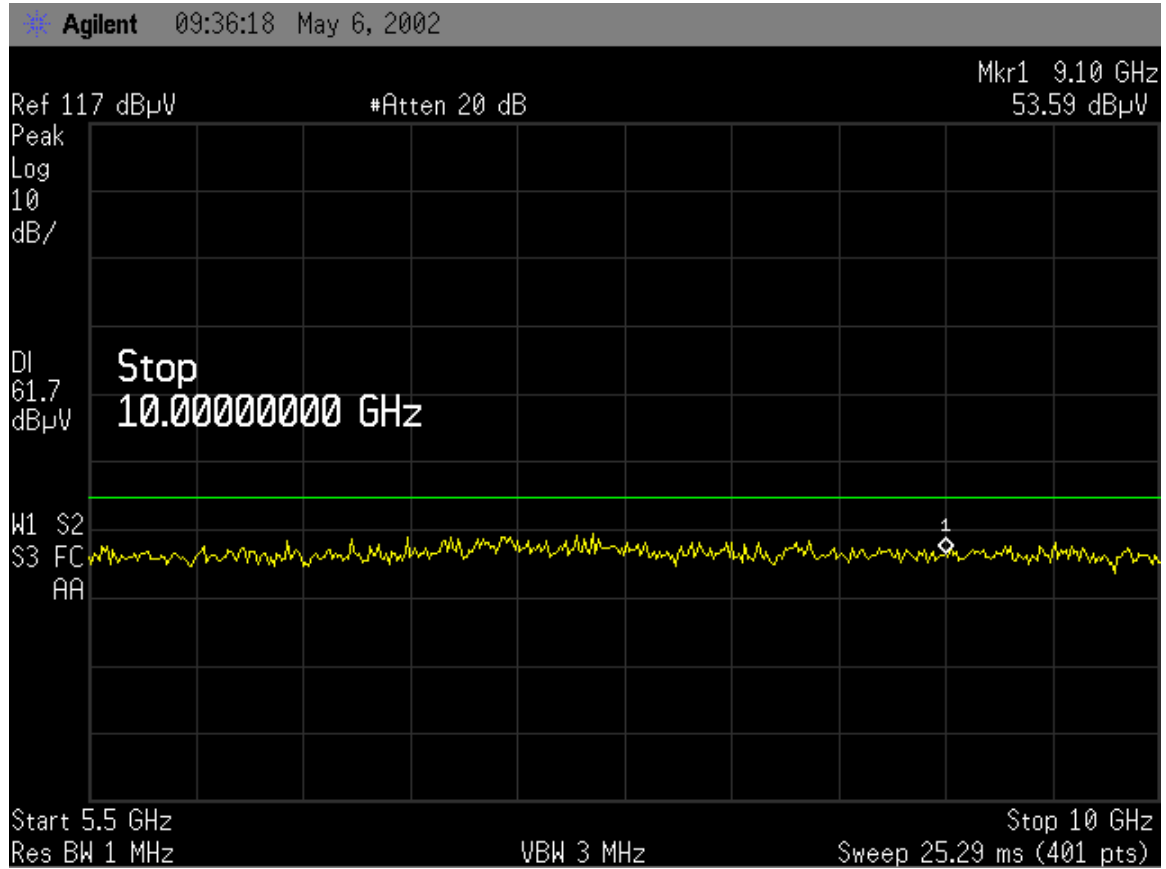
Low Power Low Transmit Channel 30 MHz – 1 GHz



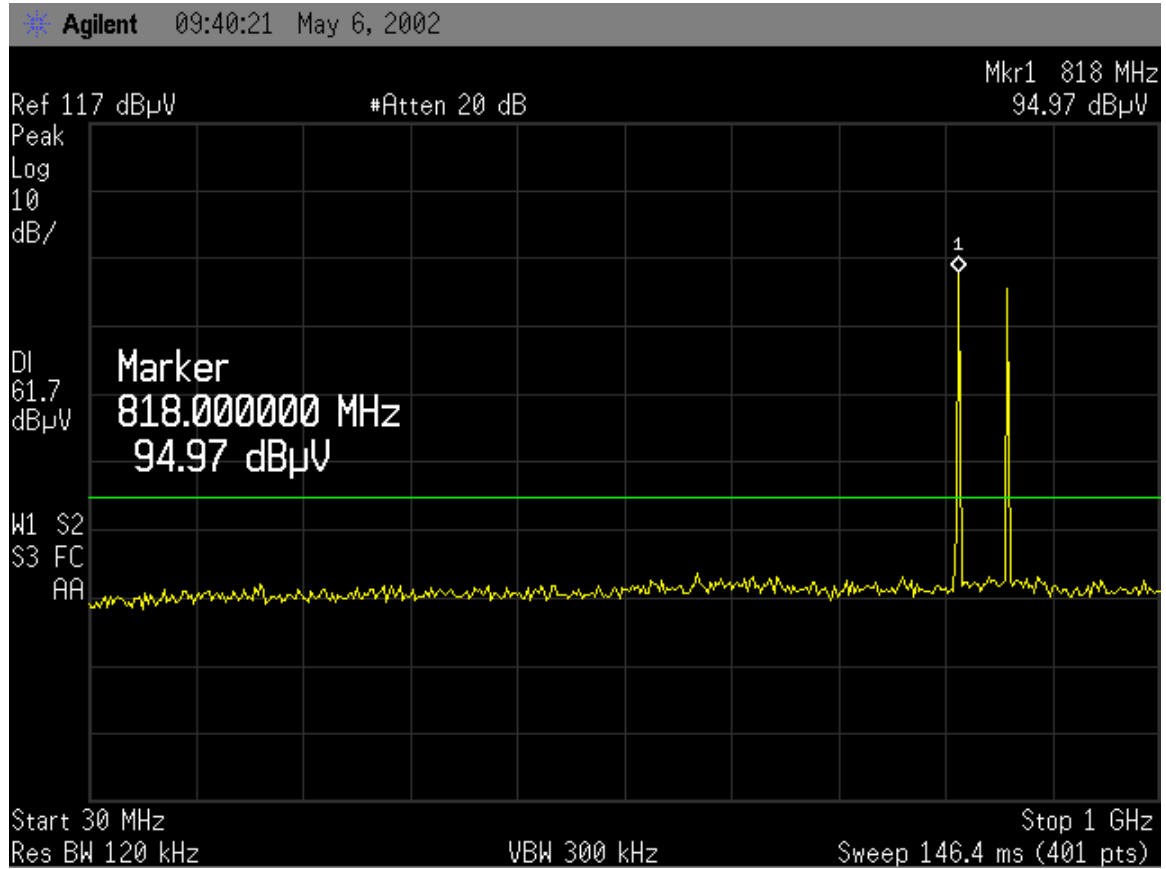
Low Power Low Transmit Channel 1 GHz – 5.5 GHz



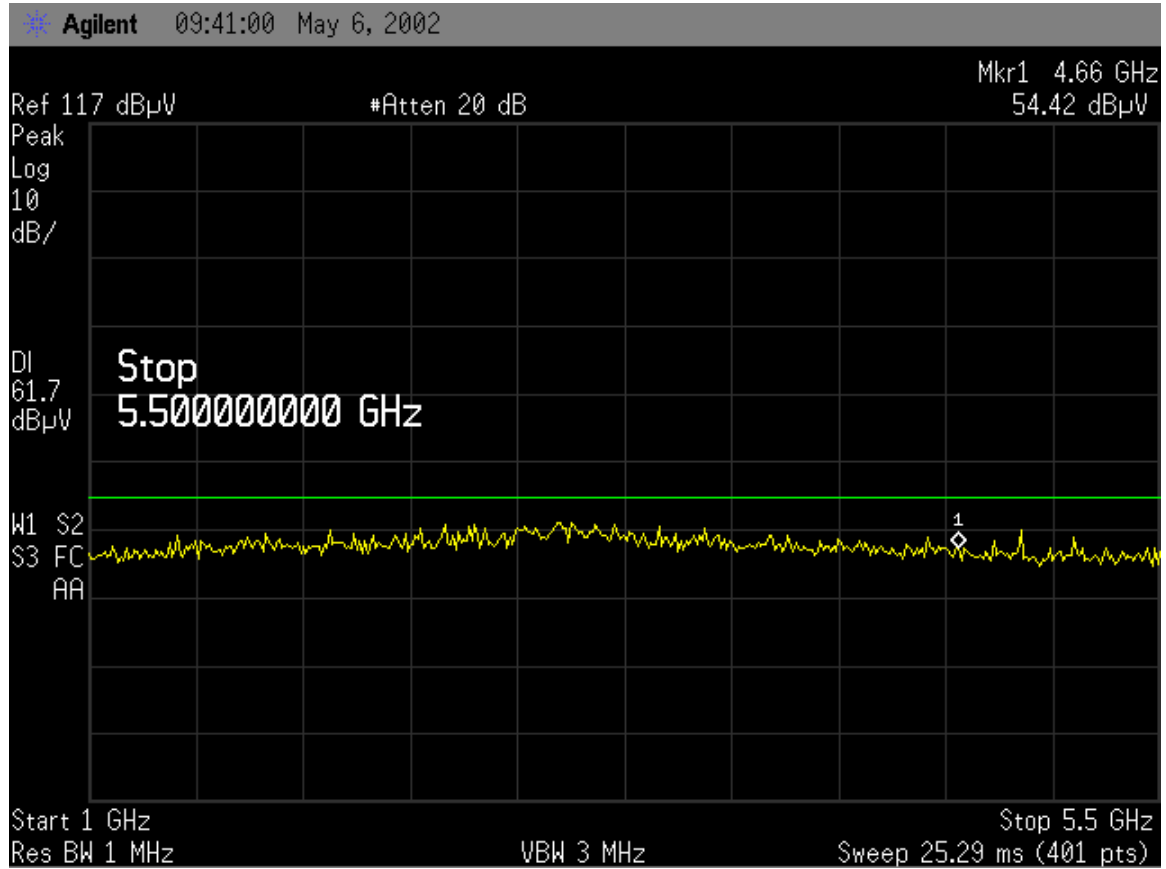
Low Power Low Transmit Channel 5.5 GHz – 10 GHz



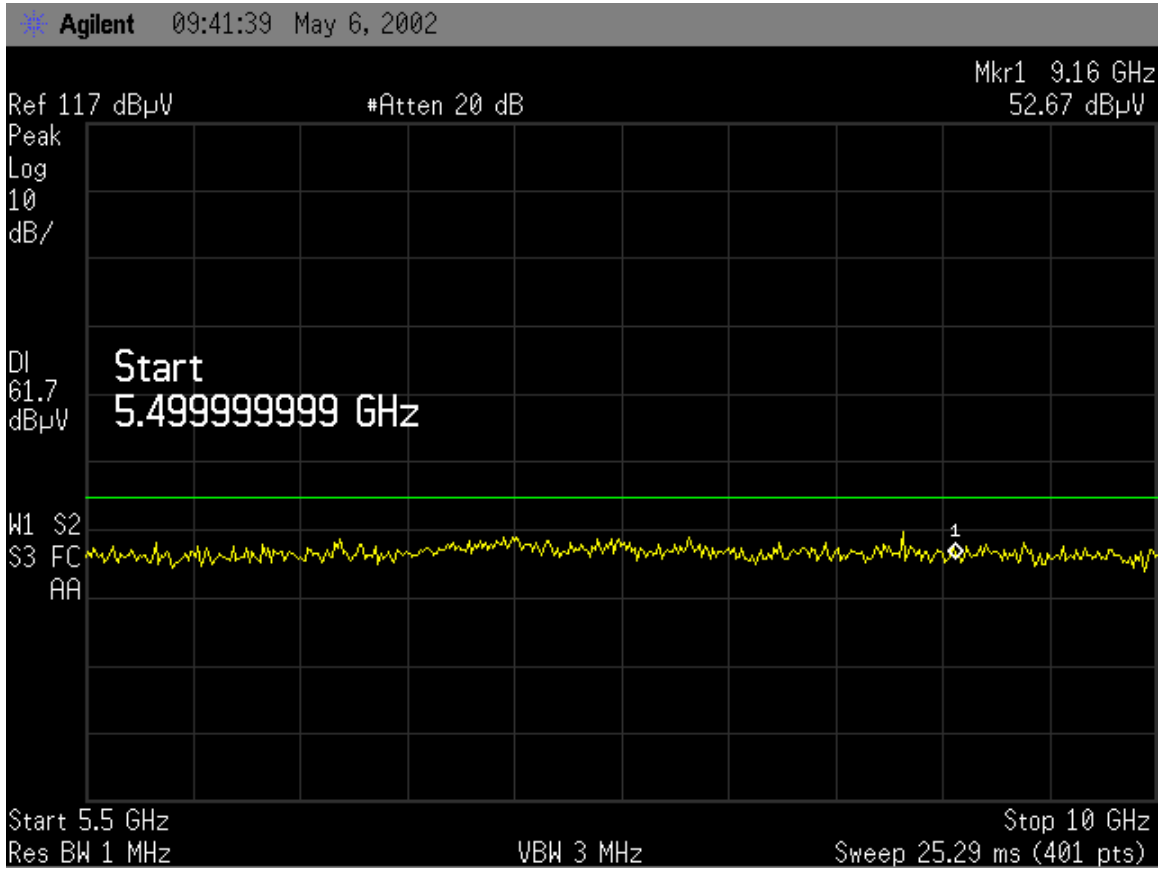
Low Power Mid Transmit Channel 30 MHz – 1 GHz



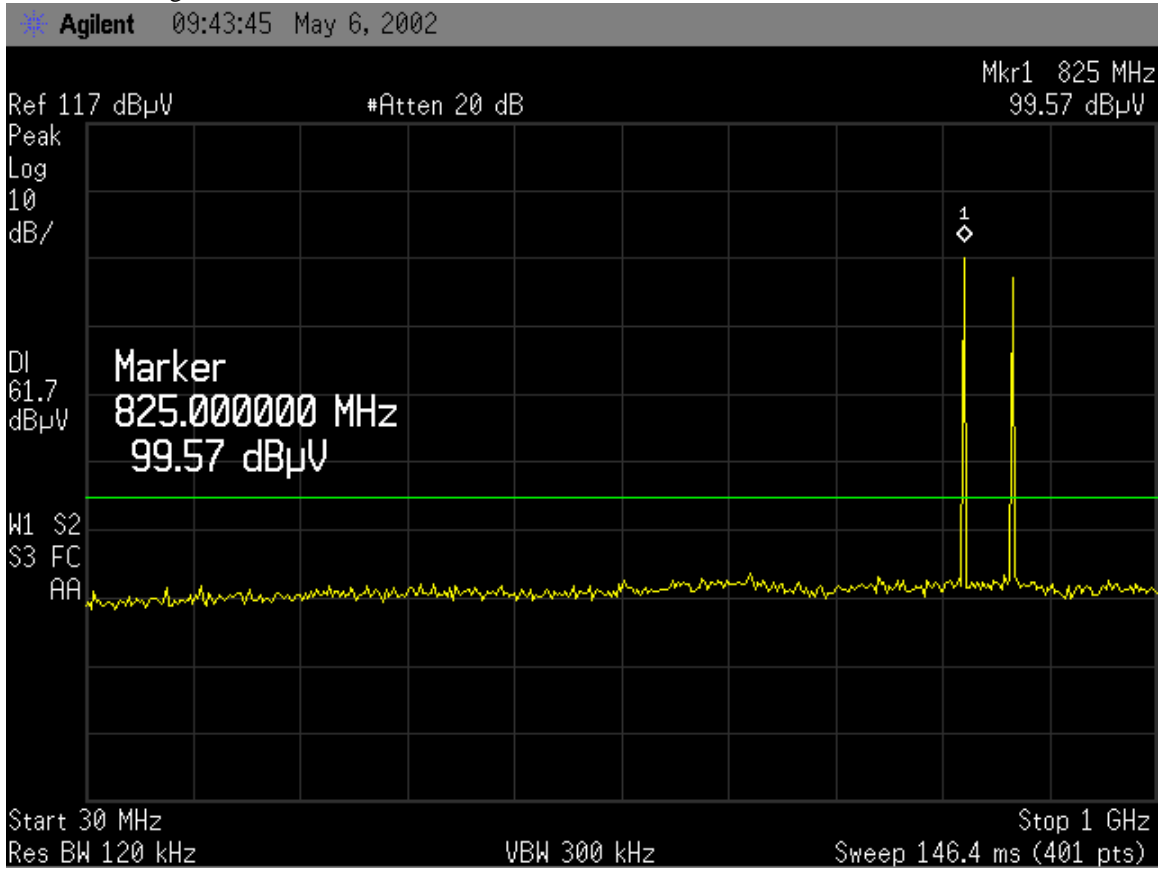
Low Power Mid Transmit Channel 1 GHz – 5.5 GHz



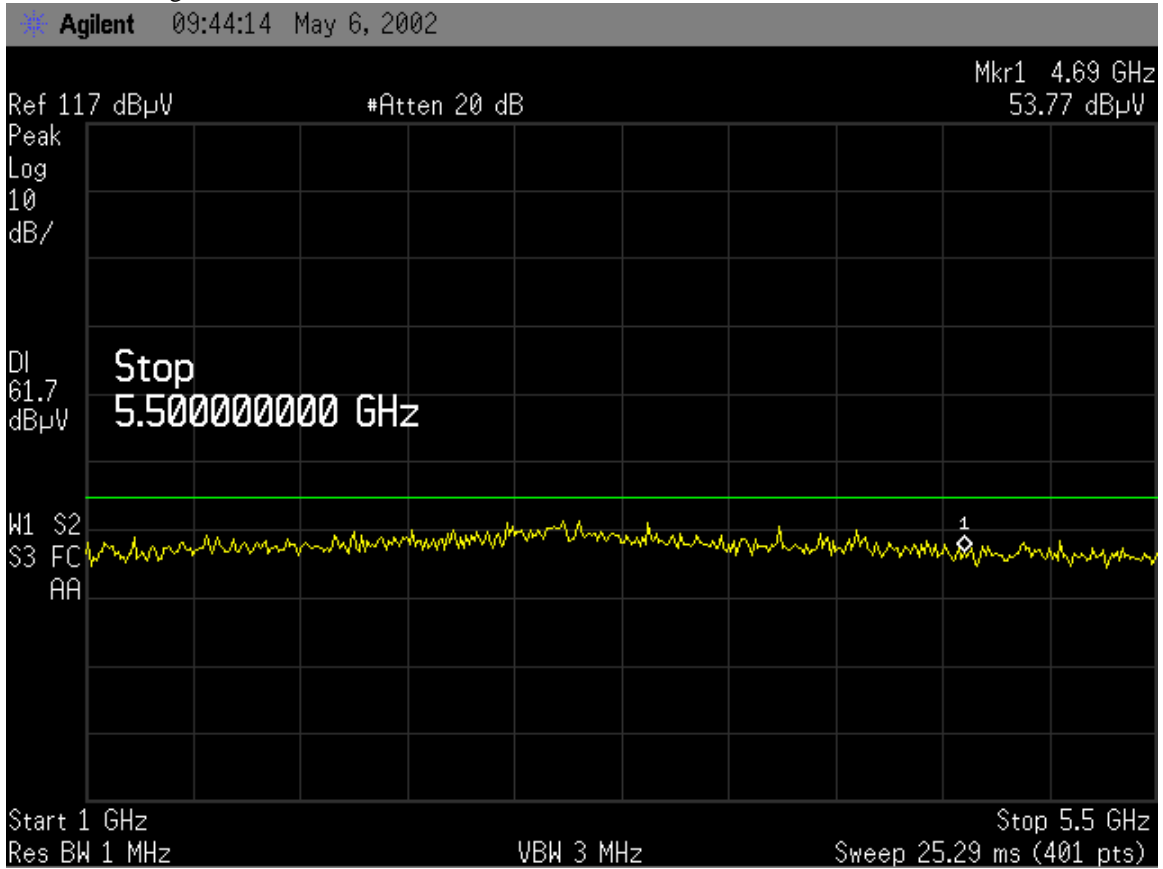
Low Power Low Transmit Channel 5.5 GHz – 10 GHz



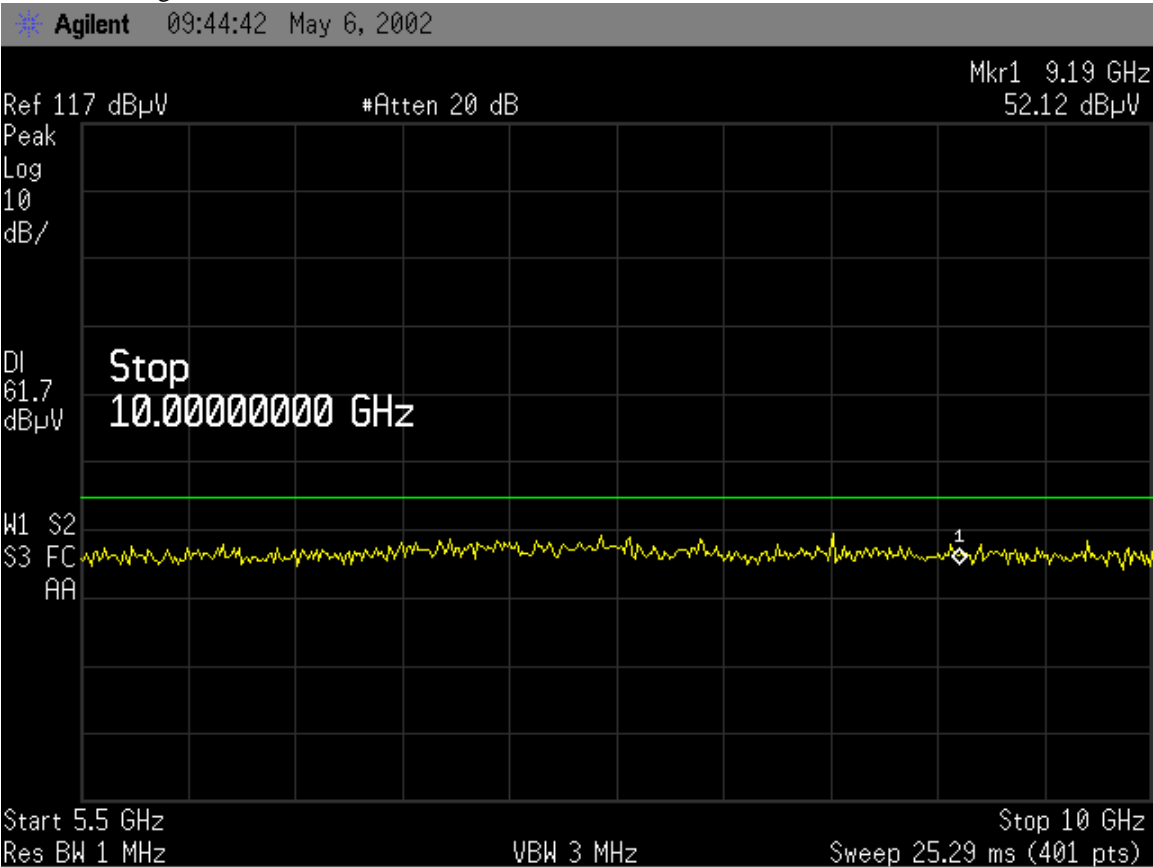
Low Power High Transmit Channel 30 MHz – 1 GHz



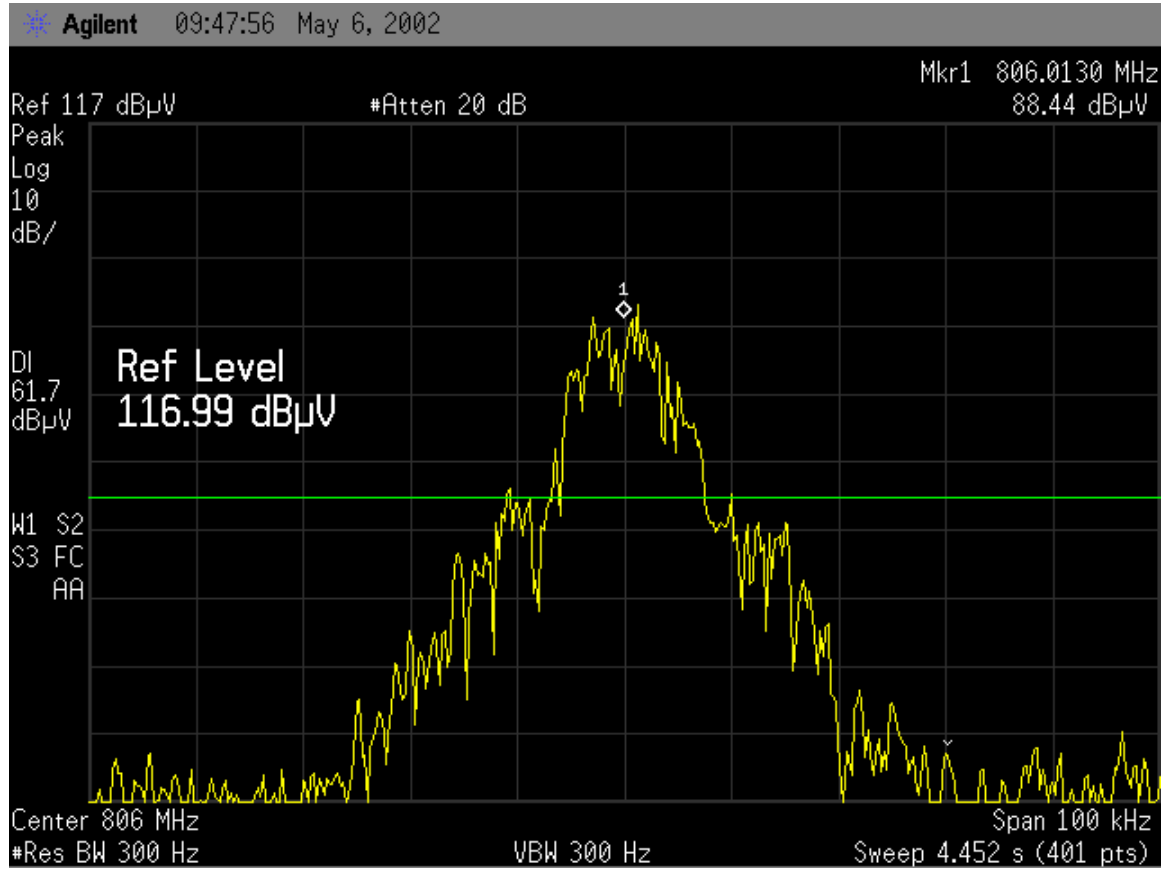
Low Power High Transmit Channel 1 GHz – 5.5 GHz



Low Power High Transmit Channel 5.5 GHz – 10 GHz

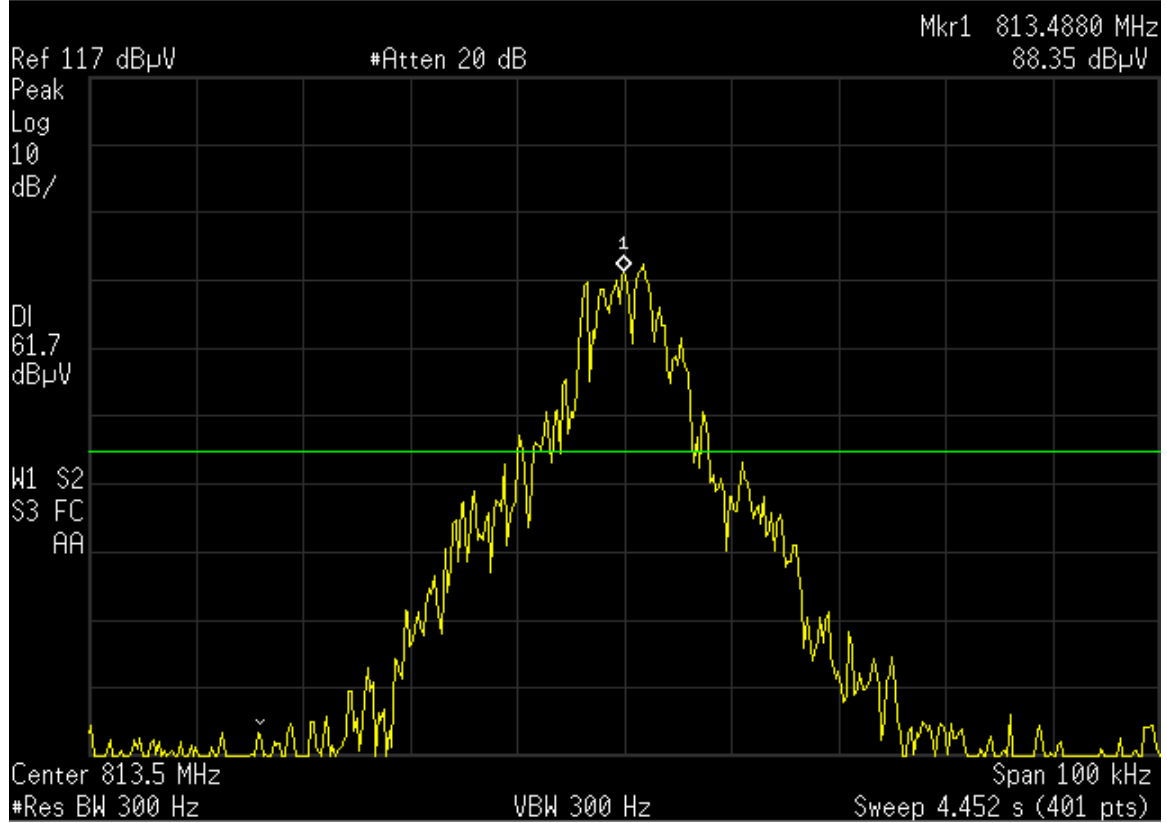


Low Power Low Transmit Channel Mask G VRM



Low Power Mid Transmit Channel Mask G VRM

Agilent 09:49:26 May 6, 2002



Low Power High Transmit Channel Mask G VRM

Agilent 09:50:59 May 6, 2002



Low Power Low Transmit Channel Mask H VRM

Agilent 09:52:48 May 6, 2002



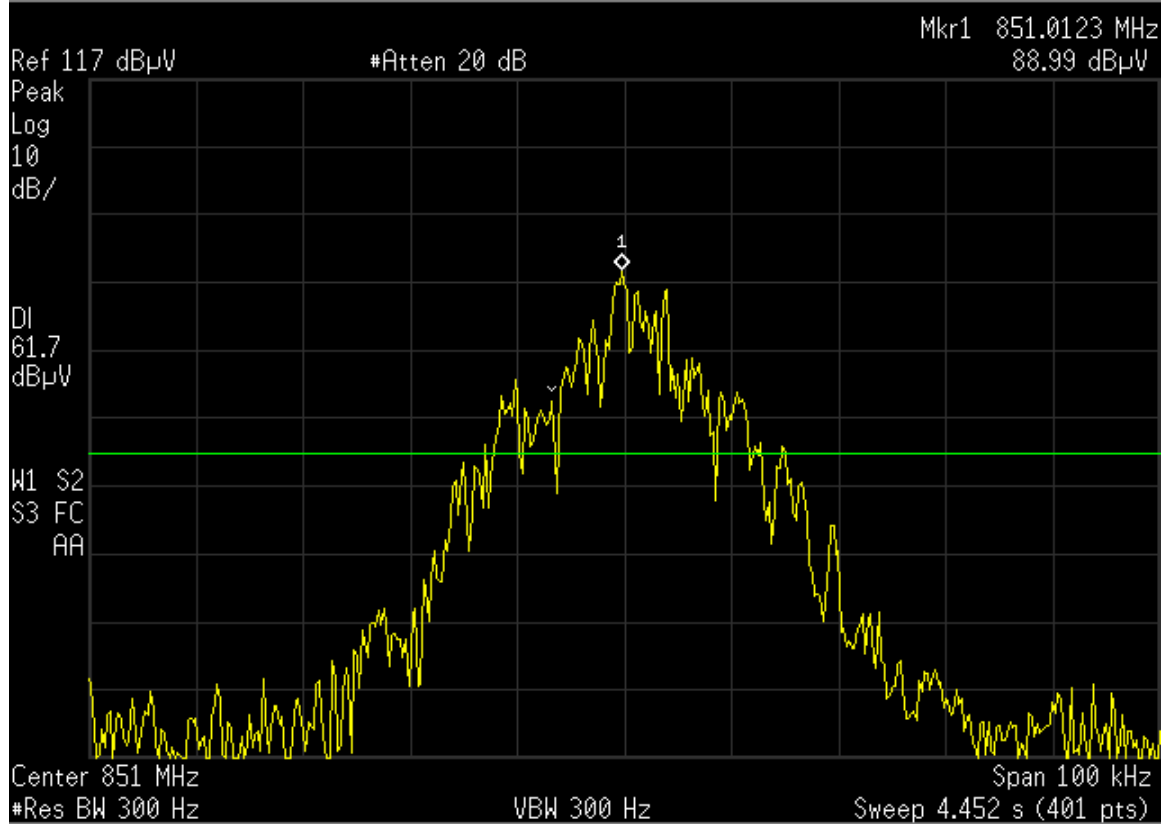
Low Power High Transmit Channel Mask H VRM

Agilent 09:53:34 May 6, 2002



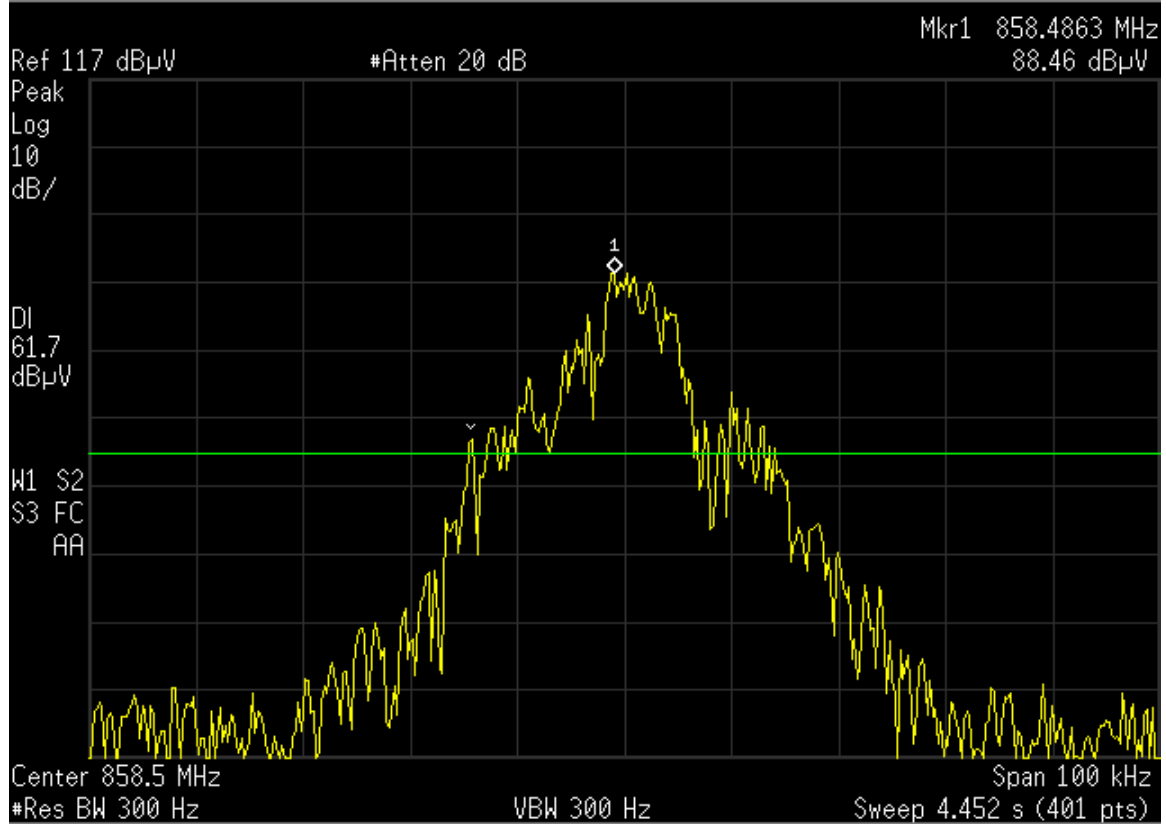
Low Power Low Transmit Channel Mask G VRB

Agilent 09:57:39 May 6, 2002



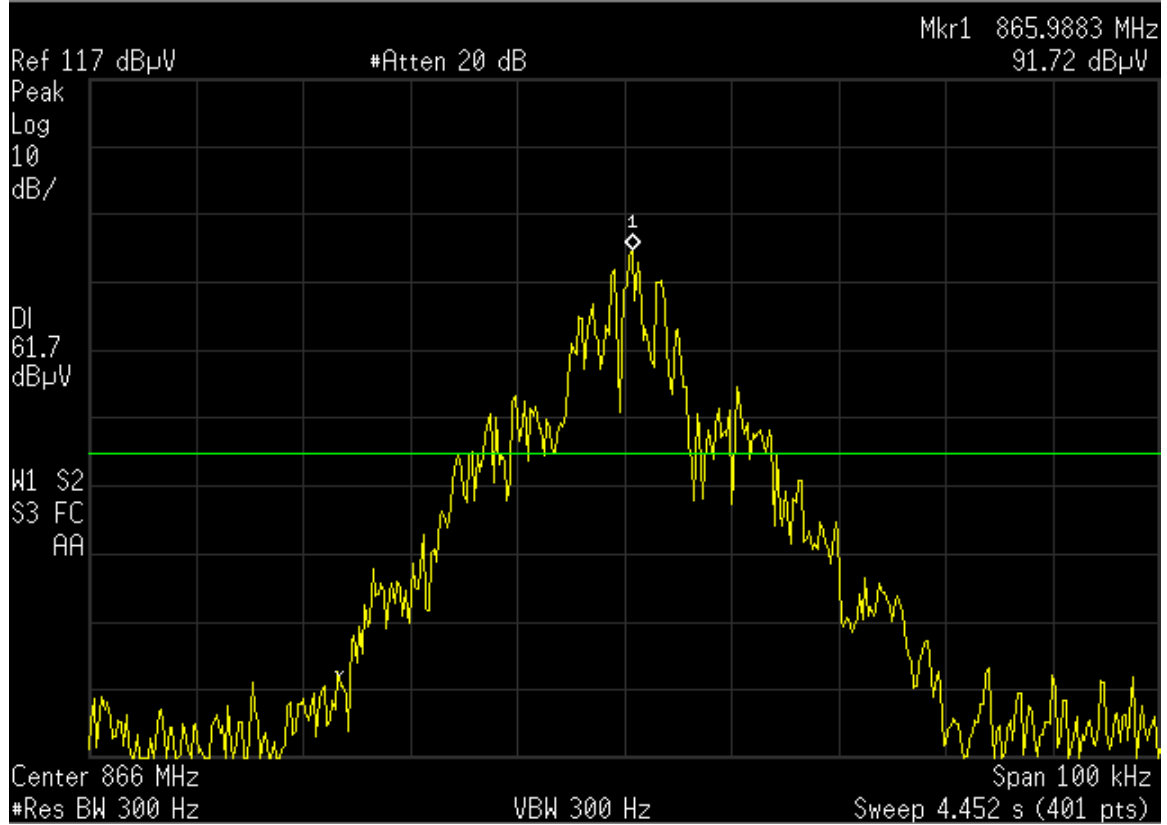
Low Power Mid Transmit Channel Mask G VRB

Agilent 09:58:33 May 6, 2002



Low Power High Transmit Channel Mask G VRB

Agilent 09:59:23 May 6, 2002



Low Power Low Transmit Channel Mask H VRB



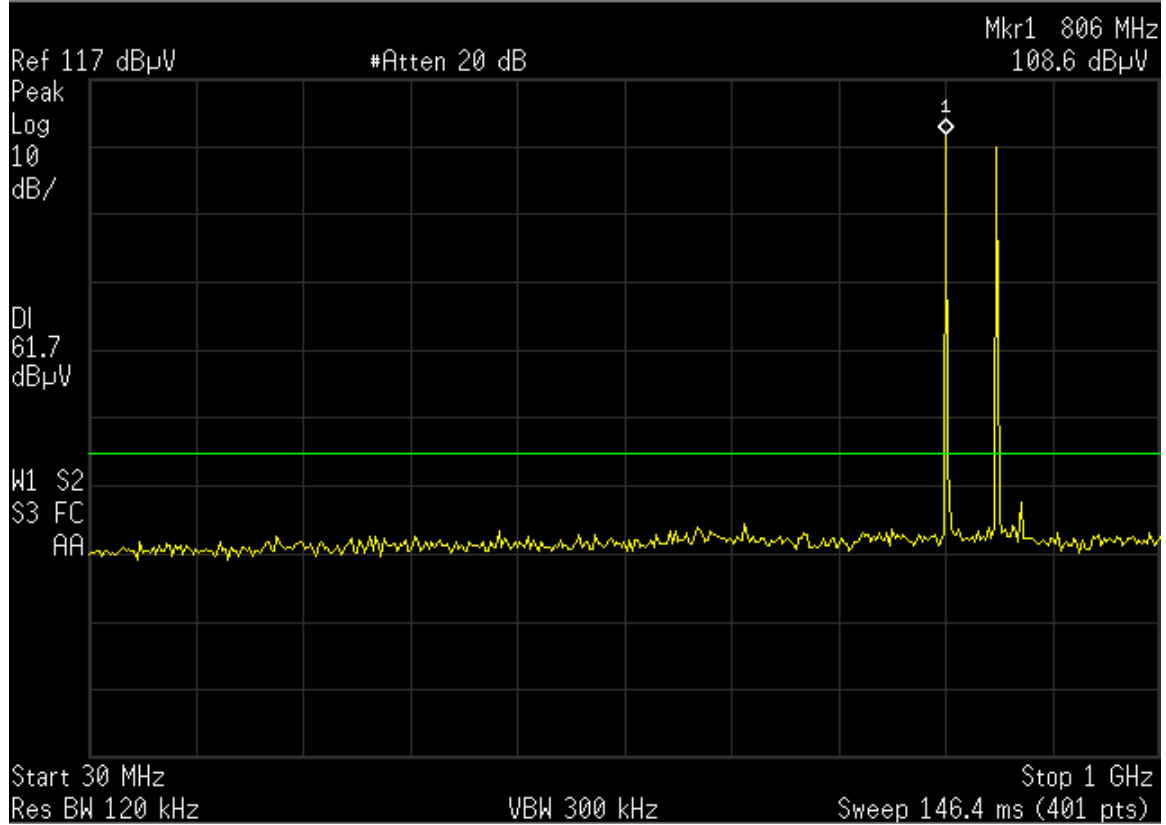
Low Power High Transmit Channel Mask H VRB

Agilent 10:01:07 May 6, 2002



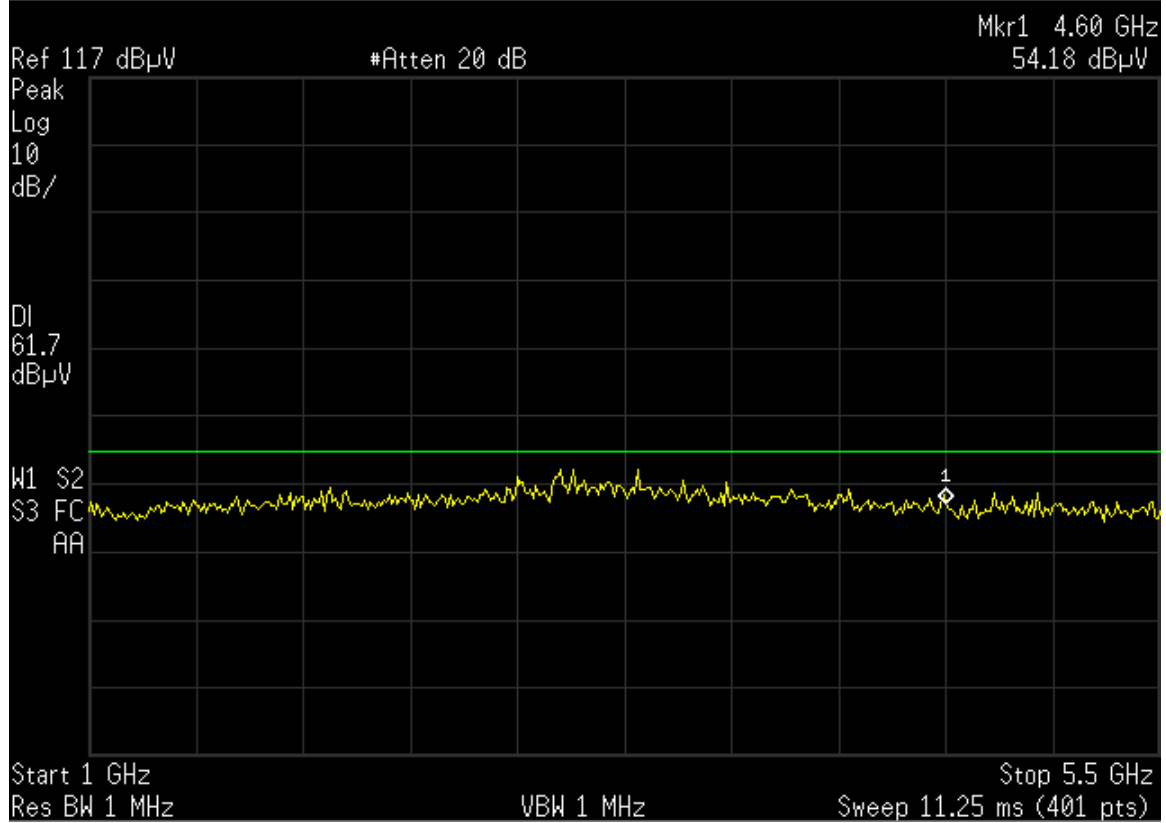
Mid Power Low Transmit Channel 30 MHz – 1 GHz

Agilent 10:21:54 May 6, 2002

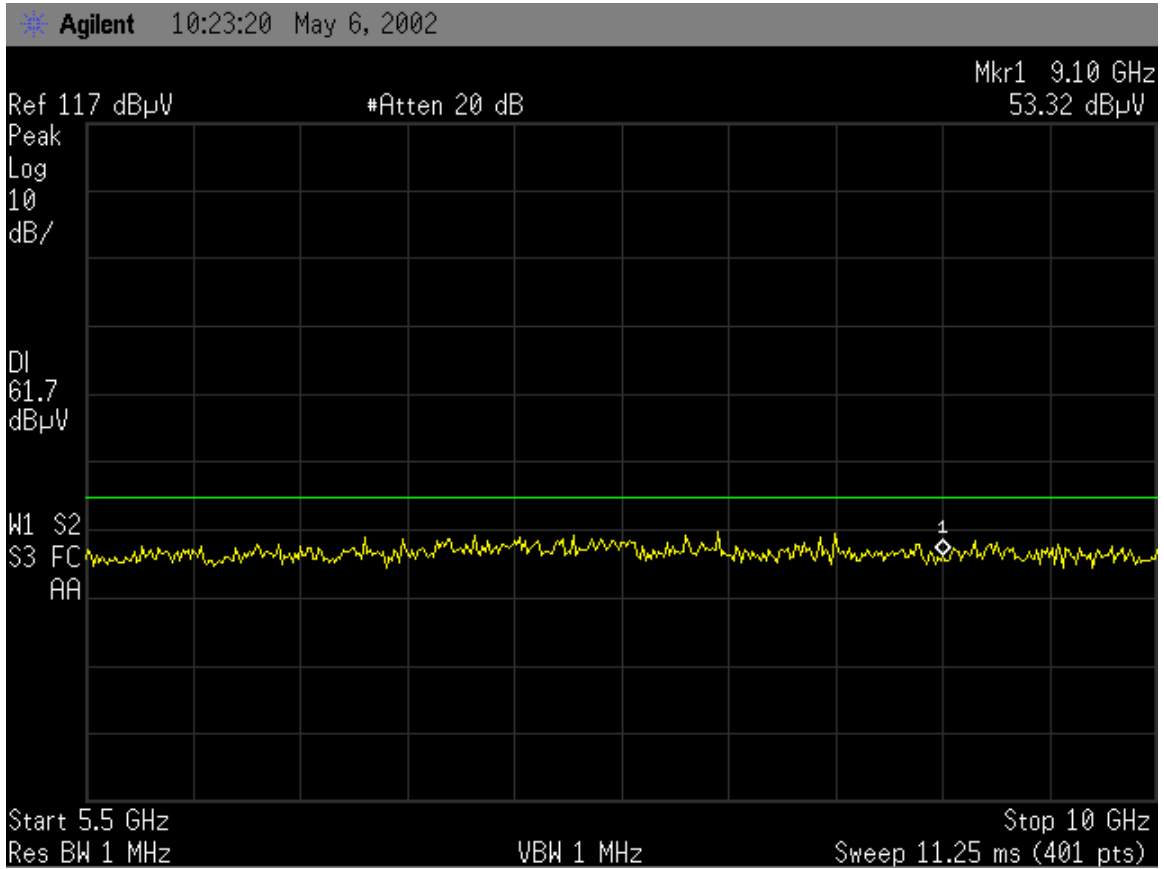


Mid Power Low Transmit Channel 1 GHz – 5.5 GHz

Agilent 10:22:38 May 6, 2002

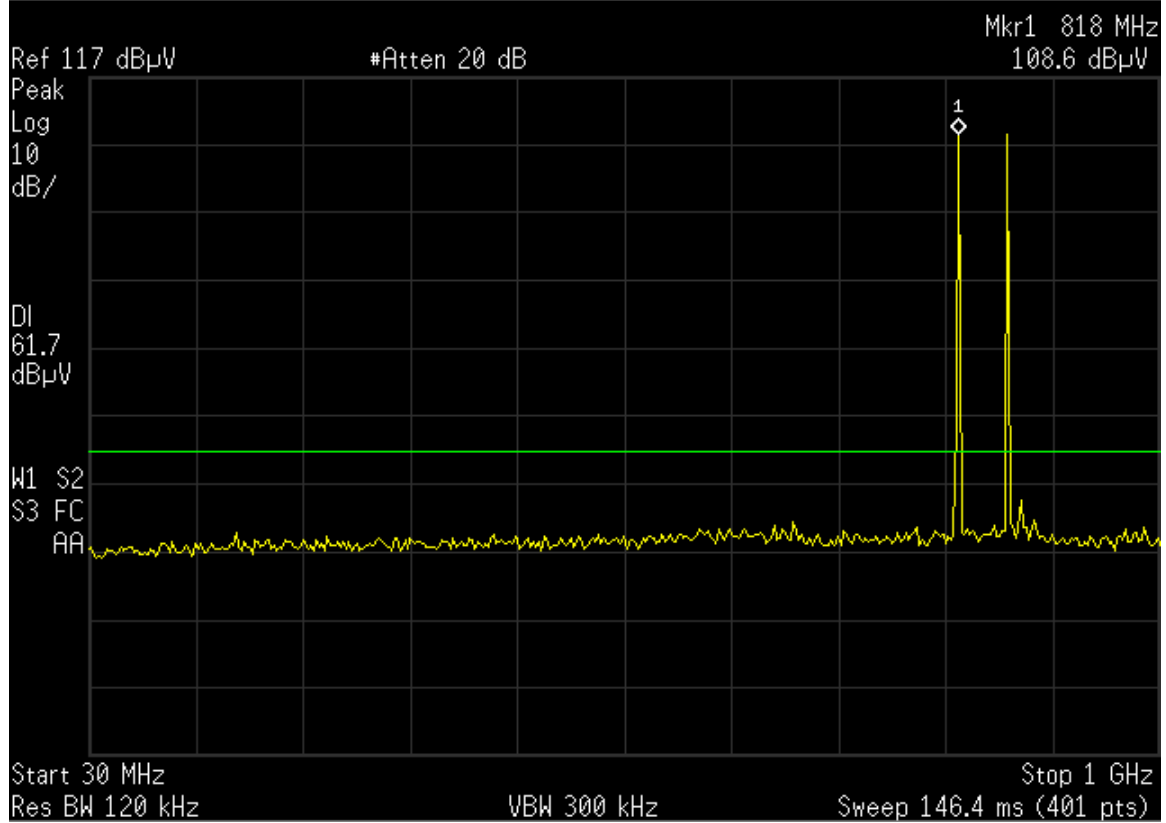


Mid Power Low Transmit Channel 5.5 GHz – 10 GHz

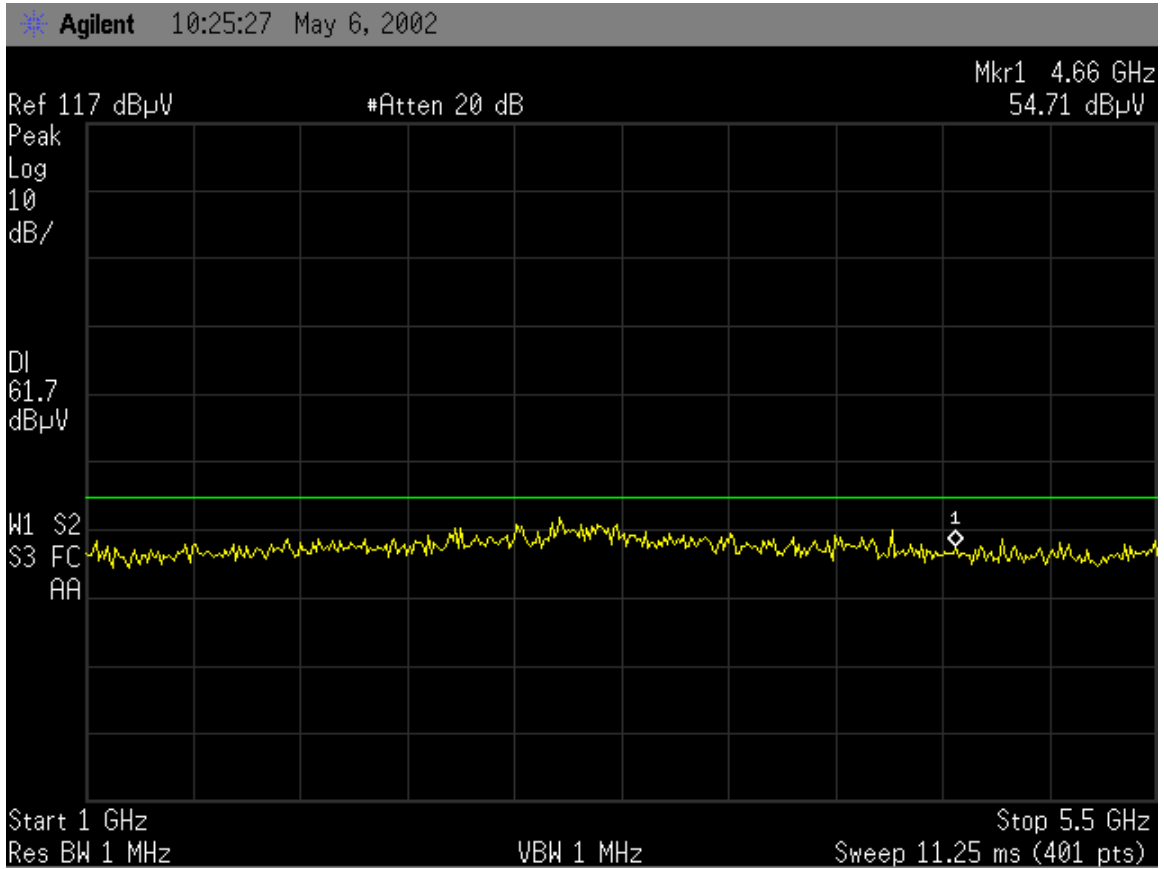


Mid Power Mid Transmit Channel 30 MHz – 1 GHz

Agilent 10:24:57 May 6, 2002

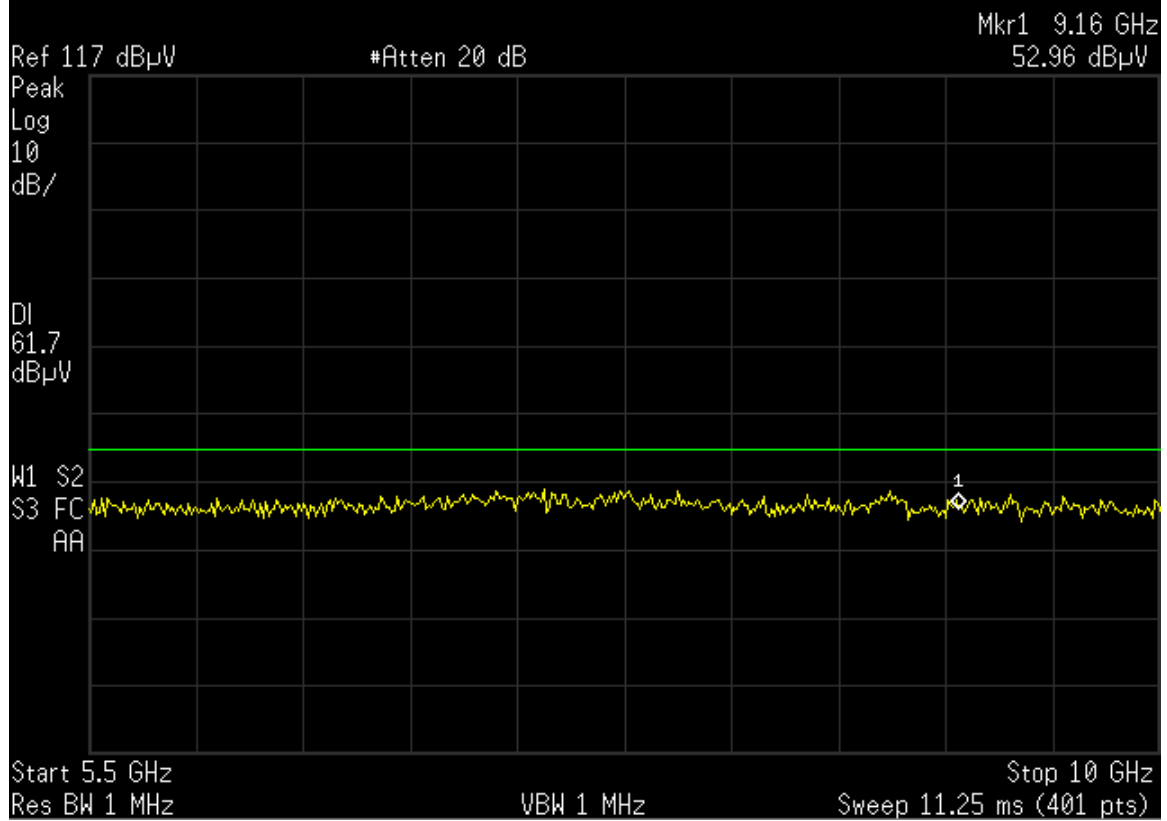


Mid Power Mid Transmit Channel 1 GHz – 5.5 GHz



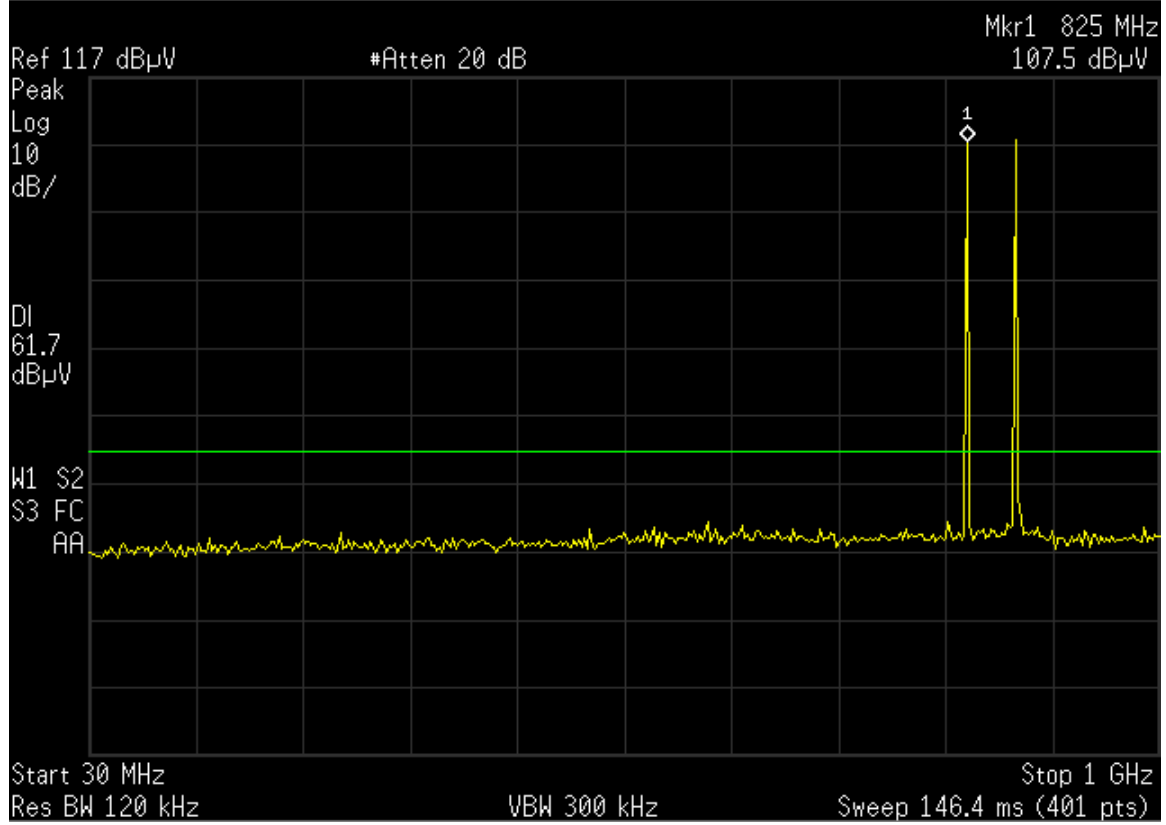
Mid Power Mid Transmit Channel 5.5 GHz – 10 GHz

Agilent 10:25:59 May 6, 2002



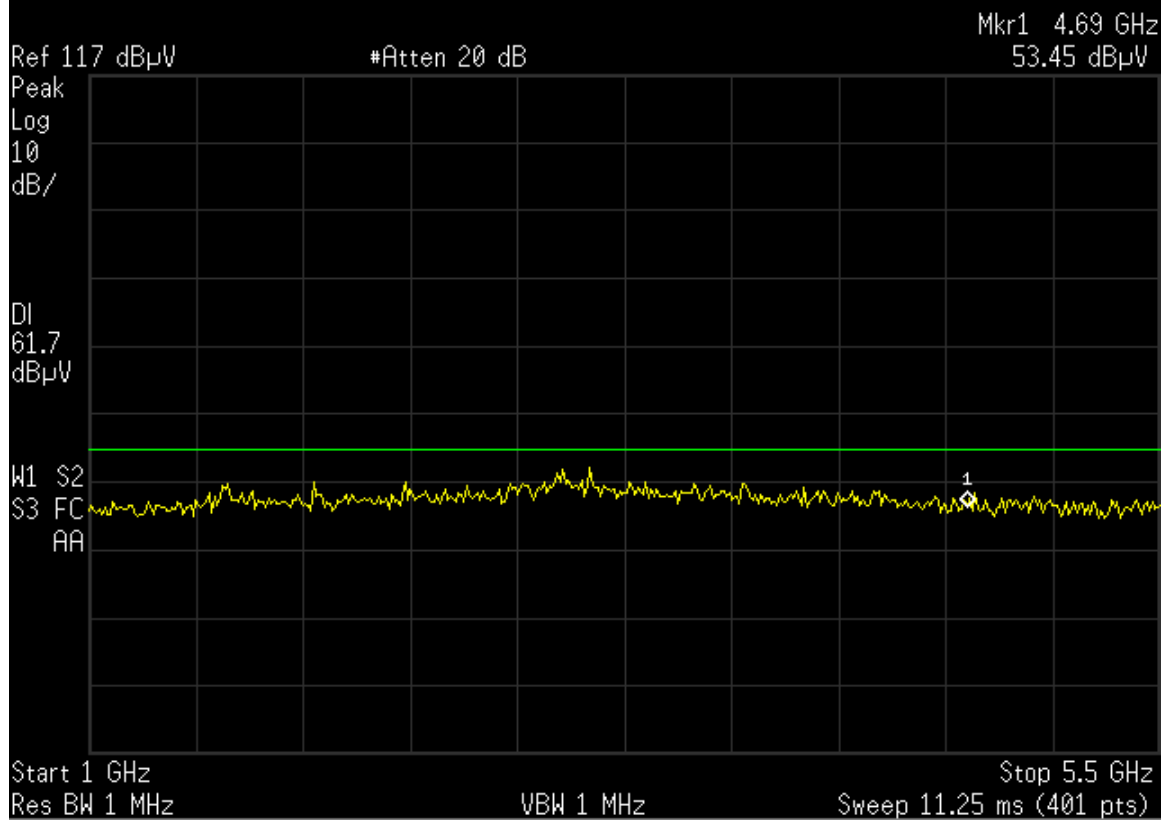
Mid Power High Transmit Channel 30 MHz – 1 GHz

Agilent 10:26:32 May 6, 2002

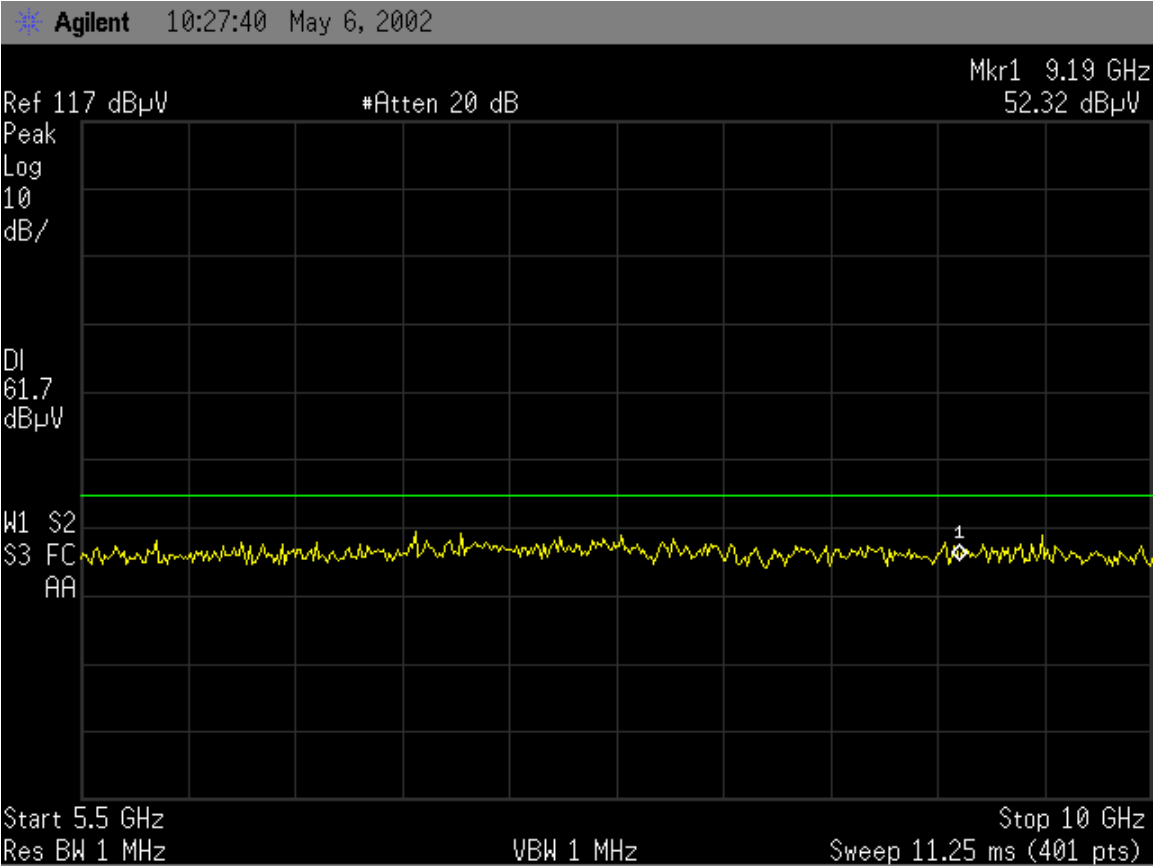


Mid Power High Transmit Channel 1 GHz – 5.5 GHz

Agilent 10:27:06 May 6, 2002

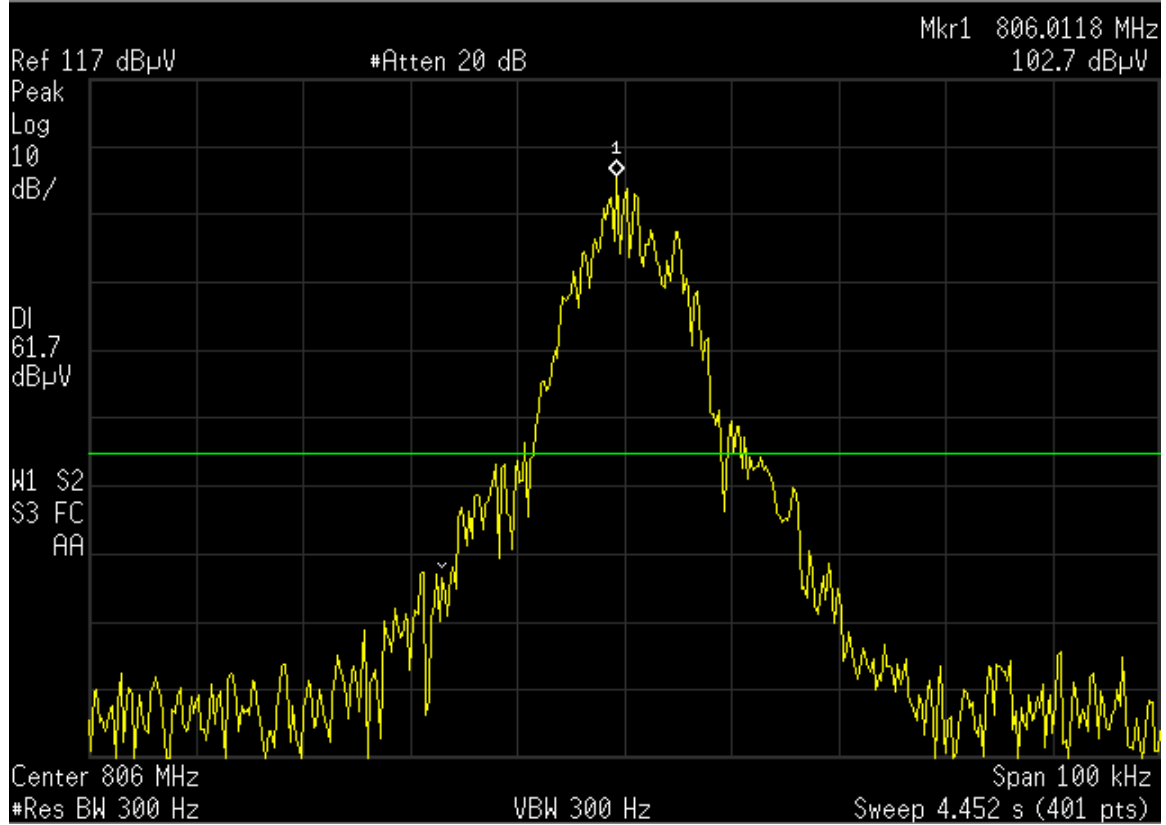


Mid Power High Transmit Channel 5.5 GHz – 10 GHz



Mid Power Low Transmit Channel Mask G VRM

Agilent 10:28:40 May 6, 2002



Mid Power Mid Transmit Channel Mask G VRM

Agilent 10:29:25 May 6, 2002



Mid Power High Transmit Channel Mask G VRM

Agilent 10:30:27 May 6, 2002



Mid Power Low Transmit Channel Mask H VRM

Agilent 10:32:22 May 6, 2002

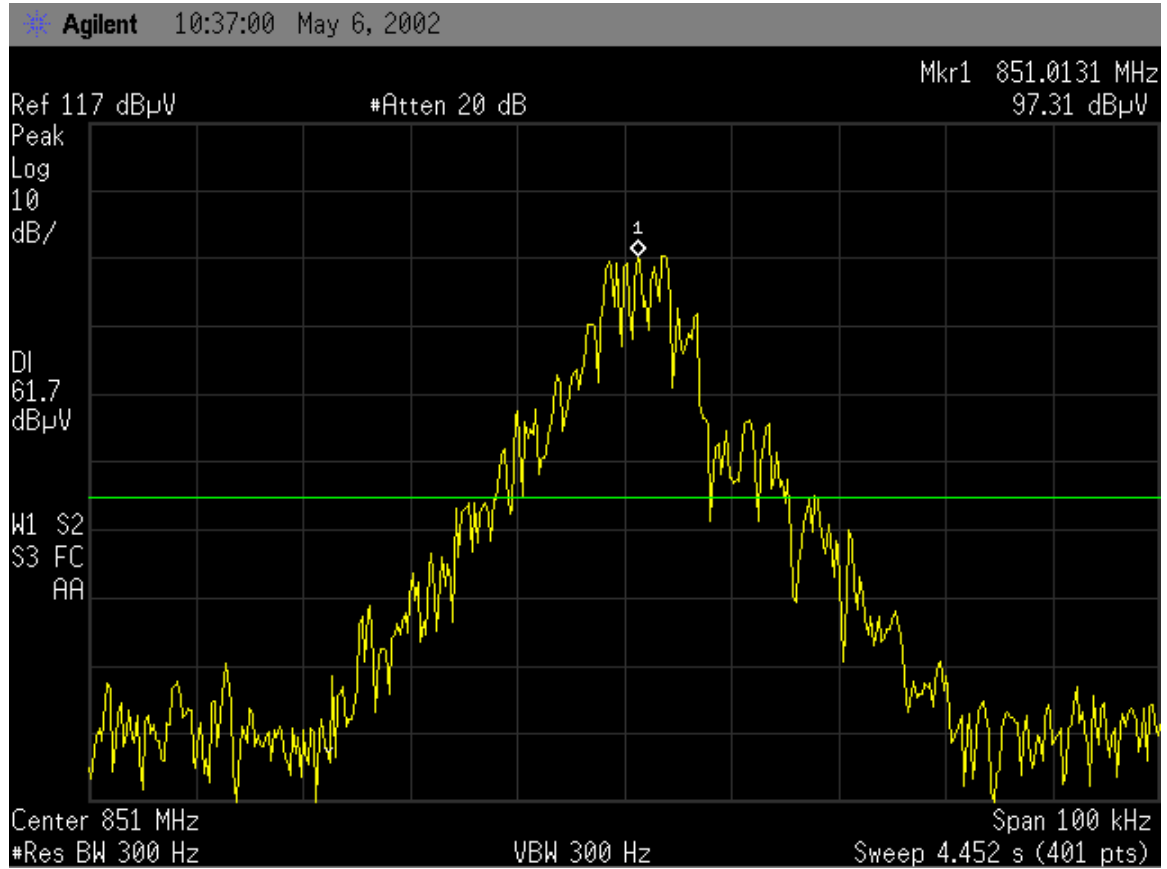


Mid Power High Transmit Channel Mask H VRM

Agilent 10:33:06 May 6, 2002



Mid Power Low Transmit Channel Mask G VRB

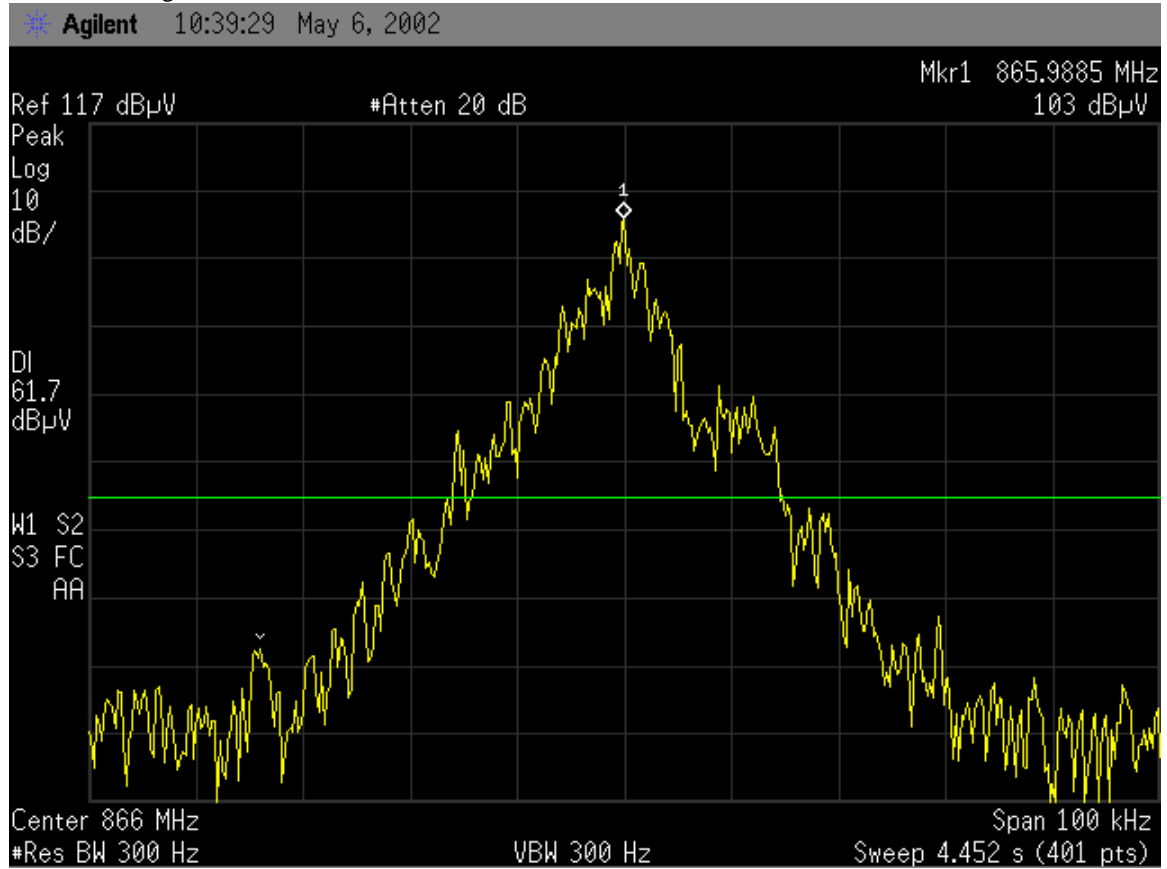


Mid Power Mid Transmit Channel Mask G VRB

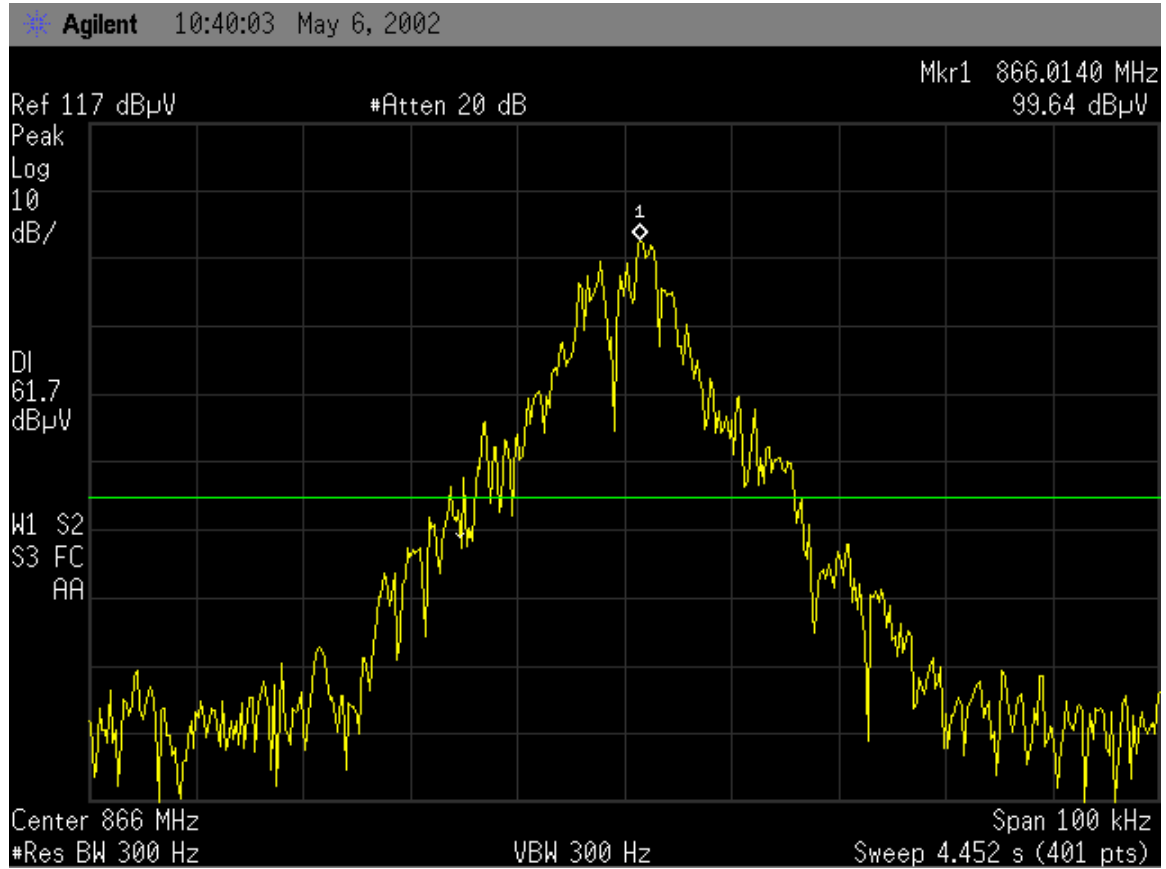
Agilent 10:37:48 May 6, 2002



Mid Power High Transmit Channel Mask G VRB



Mid Power Low Transmit Channel Mask H VRB



Mid Power High Transmit Channel Mask H VRB

