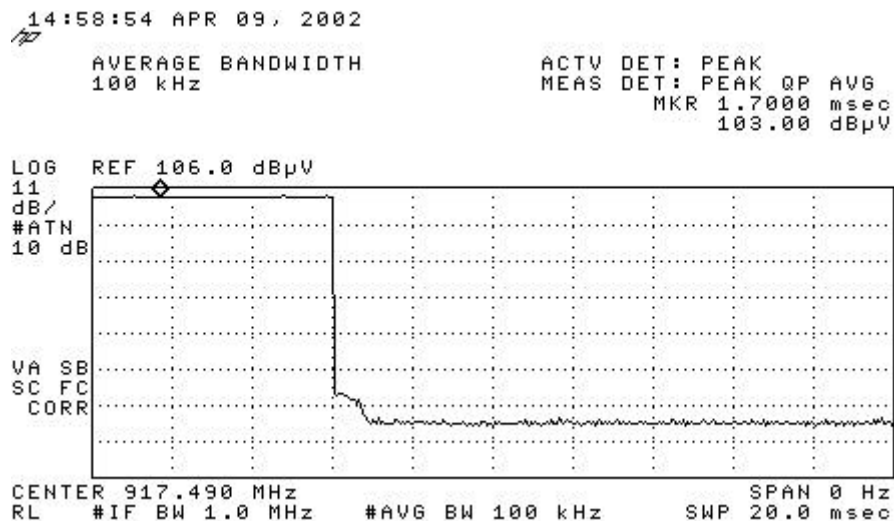
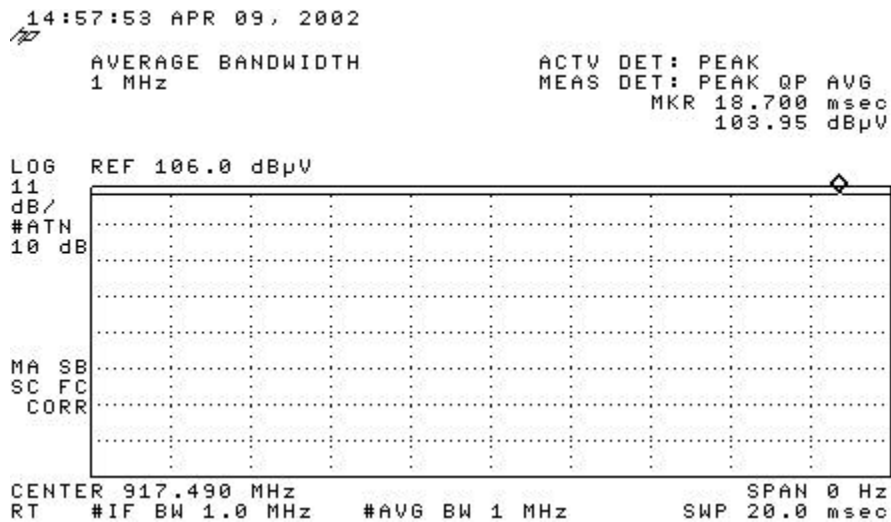


## Average Measurements

The following plots compare the fundamental signal level when using different video bandwidths and a fixed resolution bandwidth of 1MHz. The summary of the levels is shown in the table following the plots.

Plots using VBW = 10Hz were made at different sweep times with no significant change in the level recorded.



15:01:03 APR 09, 2002

AVERAGE BANDWIDTH  
10 kHz

ACTV DET: PEAK  
MEAS DET: PEAK QP AVG  
MKR 19.200 msec  
99.88 dBpV

LOG REF 106.0 dBpV

11  
dB/  
#ATN  
10 dB

VA SB  
SC FC  
CORR

CENTER 917.490 MHz SPAN 0 Hz  
RL #IF BW 1.0 MHz #AVG BW 10 kHz SWP 20.0 msec

15:01:42 APR 09, 2002

AVERAGE BANDWIDTH  
1 kHz

ACTV DET: PEAK  
MEAS DET: PEAK QP AVG  
MKR 1.9500 msec  
98.73 dBpV

LOG REF 106.0 dBpV

11  
dB/  
#ATN  
10 dB

VA SB  
SC FC  
CORR

CENTER 917.490 MHz SPAN 0 Hz  
RT #IF BW 1.0 MHz #AVG BW 1 kHz SWP 20.0 msec

15:03:23 APR 09, 2002

AVERAGE BANDWIDTH  
100 Hz

ACTV DET: PEAK  
MEAS DET: PEAK QP AVG  
MKR 7.2000 msec  
98.17 dBpV

LOG REF 106.0 dBpV

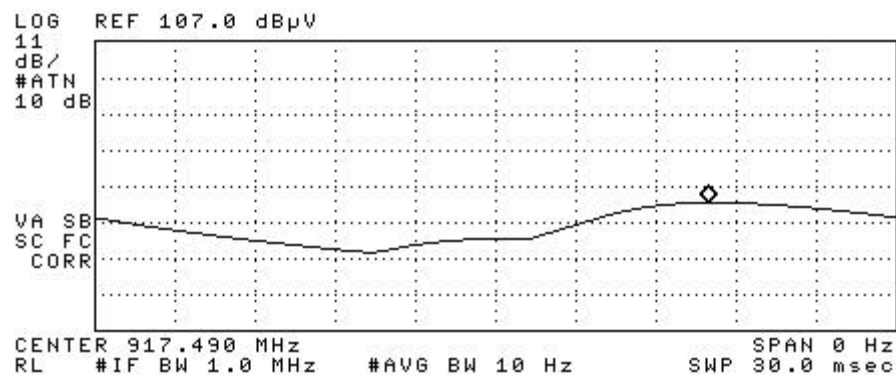
11  
dB/  
#ATN  
10 dB

VA SB  
SC FC  
CORR

CENTER 917.490 MHz SPAN 0 Hz  
L #IF BW 1.0 MHz #AVG BW 100 Hz SWP 20.0 msec

15:11:42 APR 09, 2002

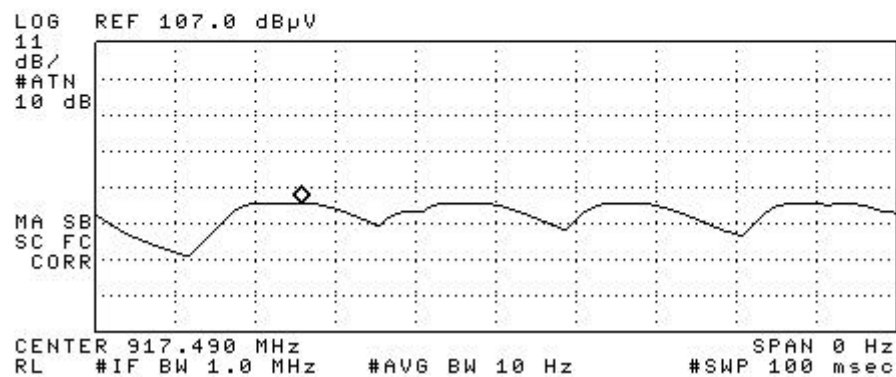
ACTV DET: PEAK  
MEAS DET: PEAK QP AVG  
MKR 22.950 msec  
57.96 dBpV



15:09:37 APR 09, 2002

REF LEVEL  
107.0 dBpV

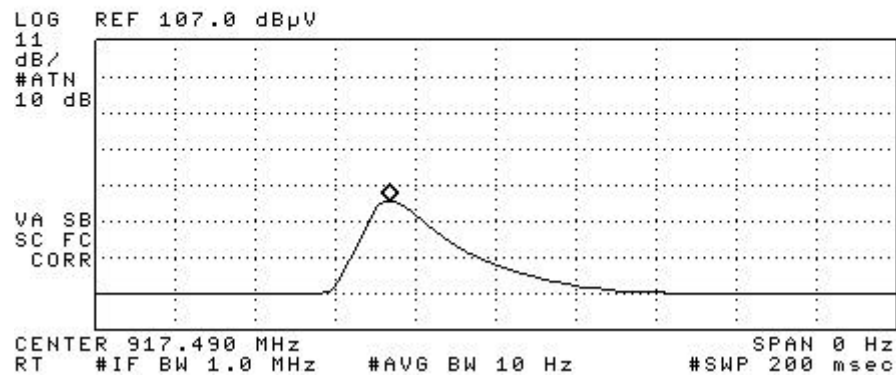
ACTV DET: PEAK  
MEAS DET: PEAK QP AVG  
MKR 25.750 msec  
58.03 dBpV



15:10:20 APR 09, 2002

SWEETIME  
200 msec

ACTV DET: PEAK  
MEAS DET: PEAK QP AVG  
MKR 73.500 msec  
57.94 dBpV



RBW	VBW	Signal Level
1 MHz	1 MHz	103.95 dBuV
1 MHz	100 kHz	103 dBuV
1 MHz	10kHz	99.88 dBuV
1 MHz	1kHz	98.73 dBuV
1 MHz	100Hz	98.17 dBuV
1 MHz	10Hz	57.96 dBuV

Summary Table

The sudden change in level between VBW = 100Hz and VBW = 10Hz is due to the pulsed nature of the signal. The pulse period is of the order of 20mS, so it has a bandwidth of about 50Hz. The VBW acts as a low-pass filter, so VBW = 100Hz would have little effect on the signal level but a VBW = 10Hz would have a significant effect.

Further, changing the sweep time has little effect on the overall signal level

### Output Power Measurement

Output power as measured directly from the device (conducted measurement) gave a reading of 23dBm. The plot below shows the parameter used and includes a reference level offset of 30dB to account for the external attenuator used.

