# Appendix B

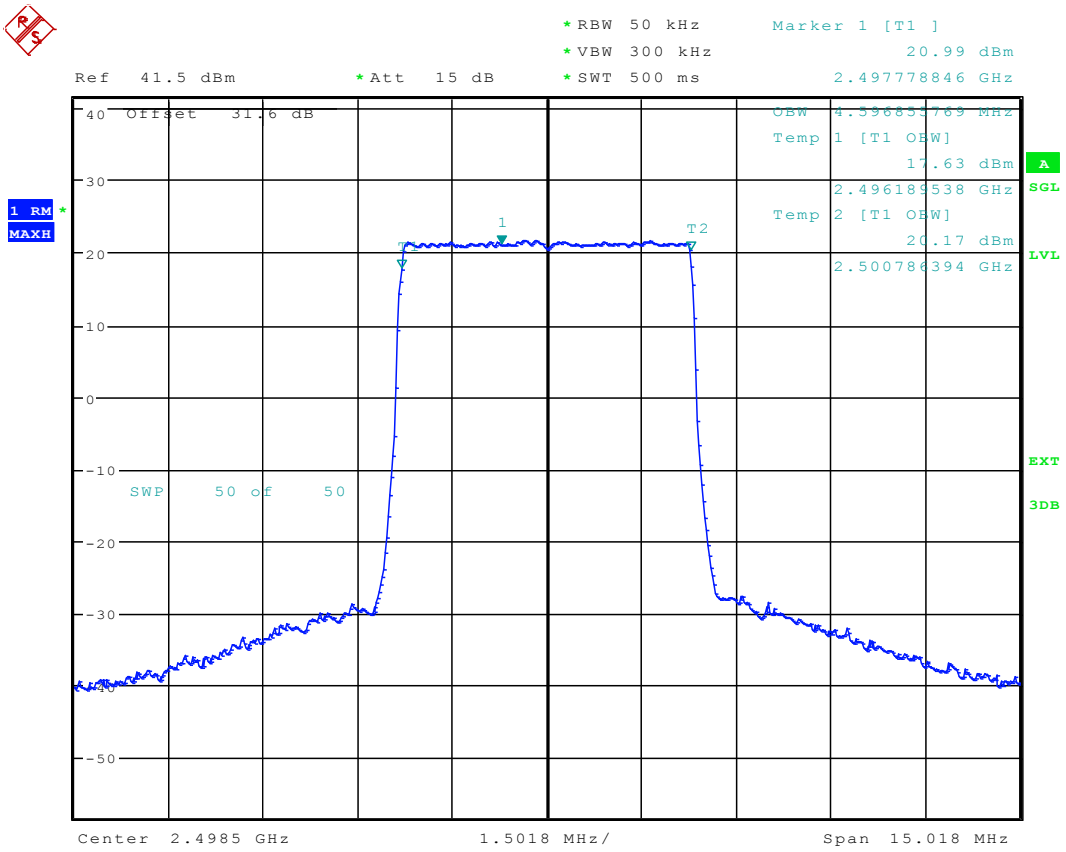
# Occupied Bandwidth Measurement

According to FCC part 2.1049 and part 27 subpart C & M

# (1) WiMAX, 5MHz Channel Bandwidth:

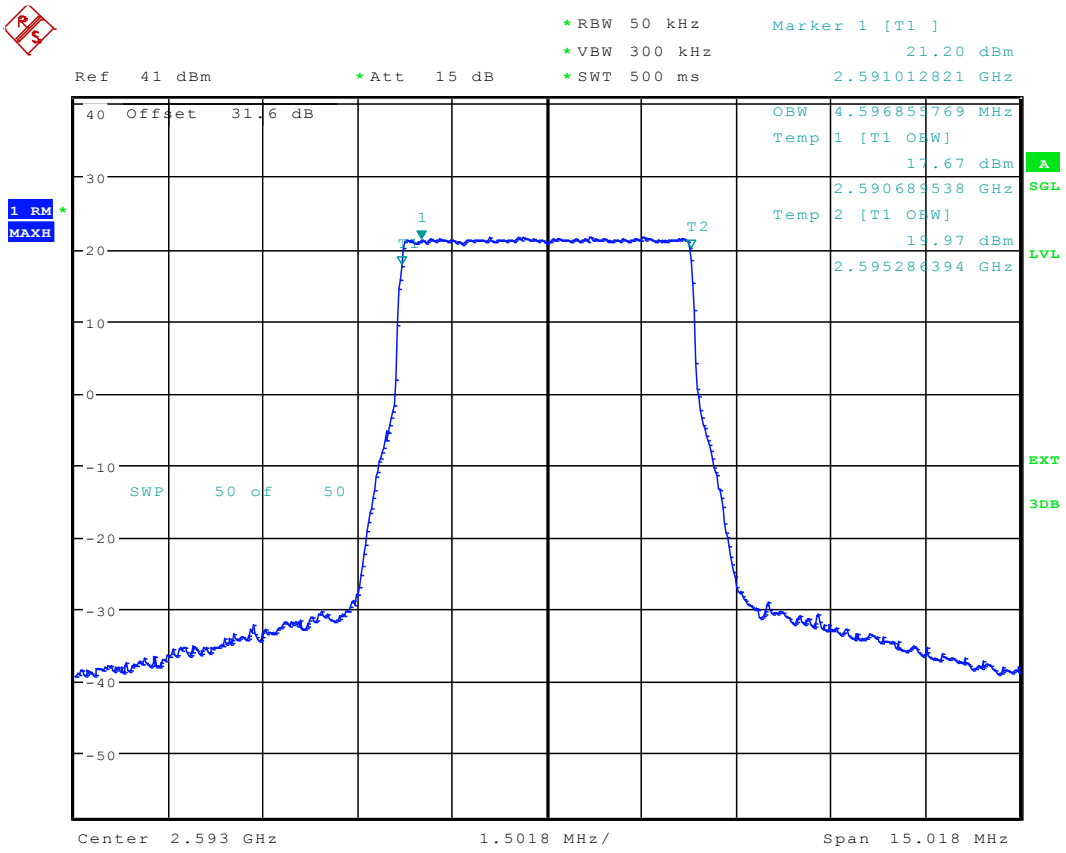
## TM1:

### Ch.B



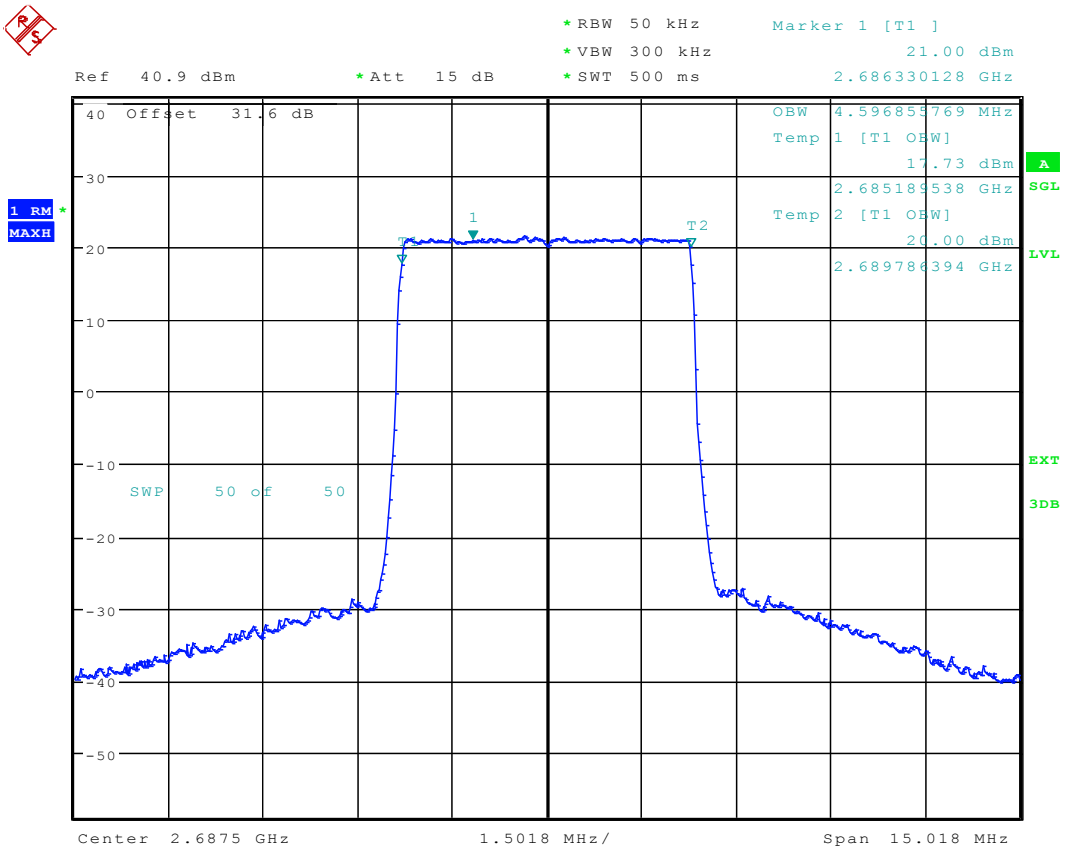

Date: 13.FEB.2009 11:53:34

# Ch.M




Date: 13.FEB.2009 11:48:56

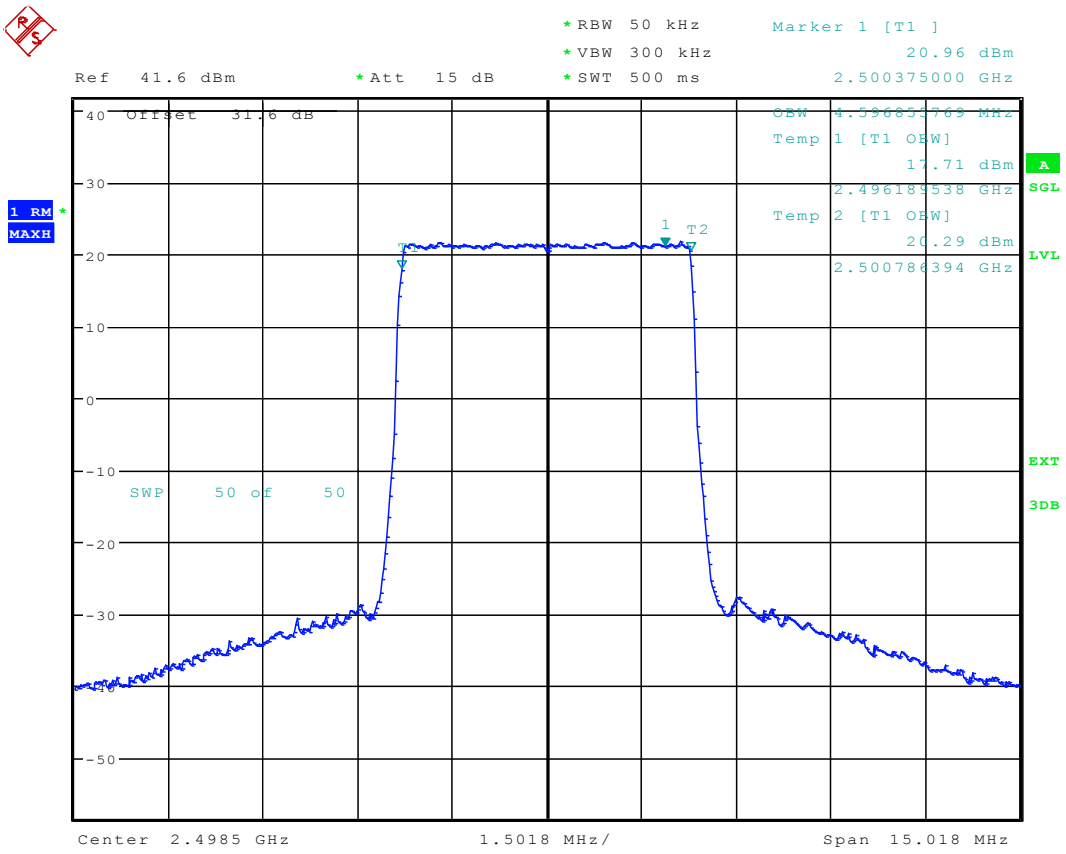
# Ch.T




Date: 13.FEB.2009 12:31:06

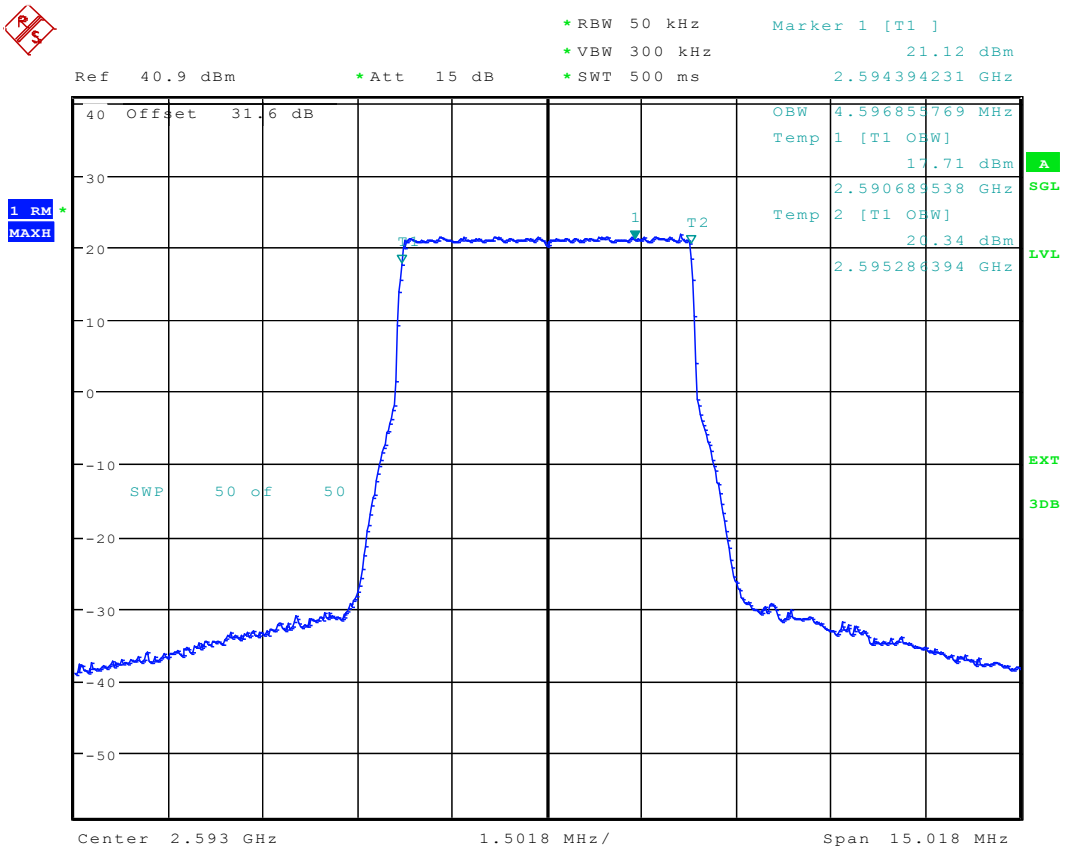
# TM2:

## Ch.B



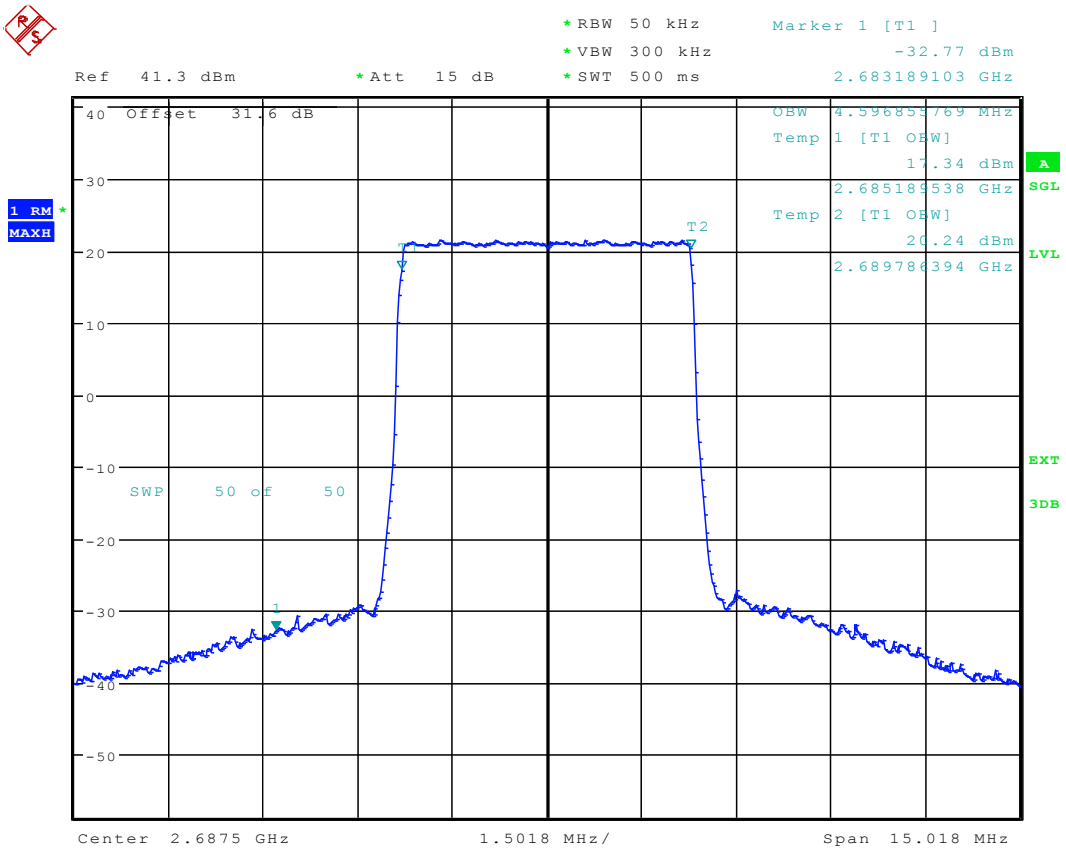

Date: 13.FEB.2009 11:56:59

# Ch.M




Date: 13.FEB.2009 11:48:01

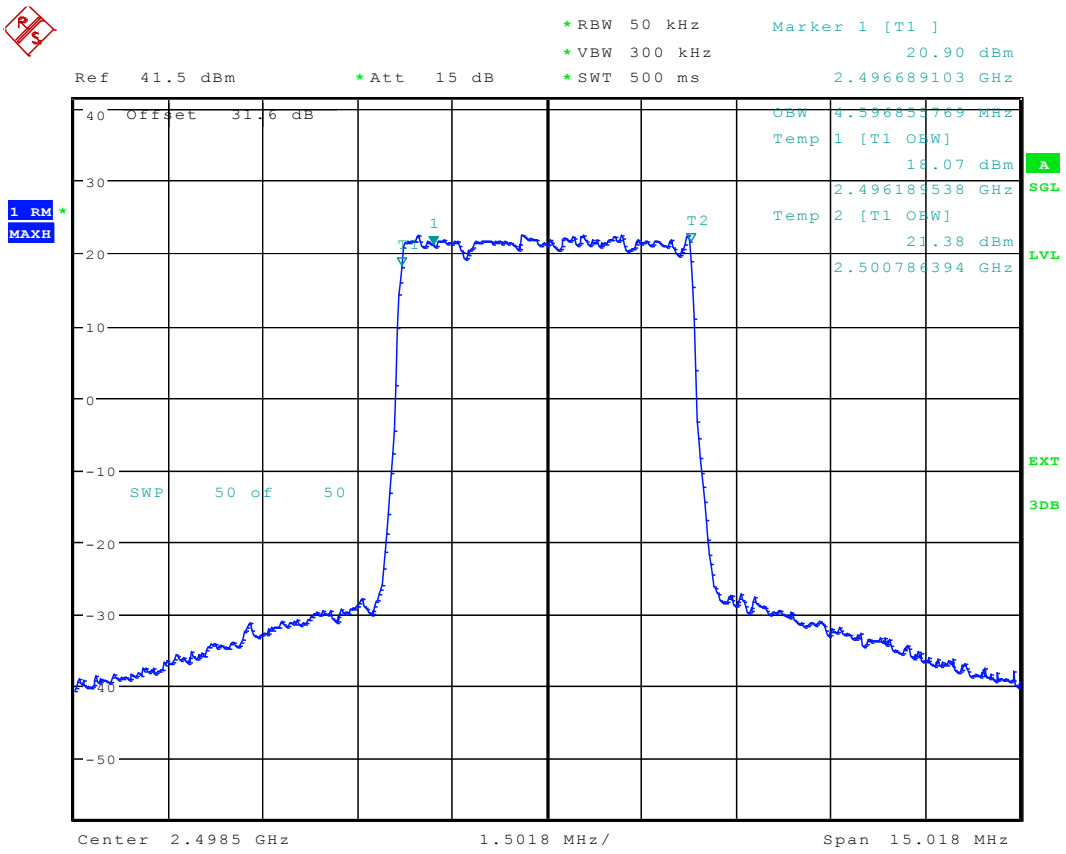
# Ch.T




Date: 13.FEB.2009 12:30:17

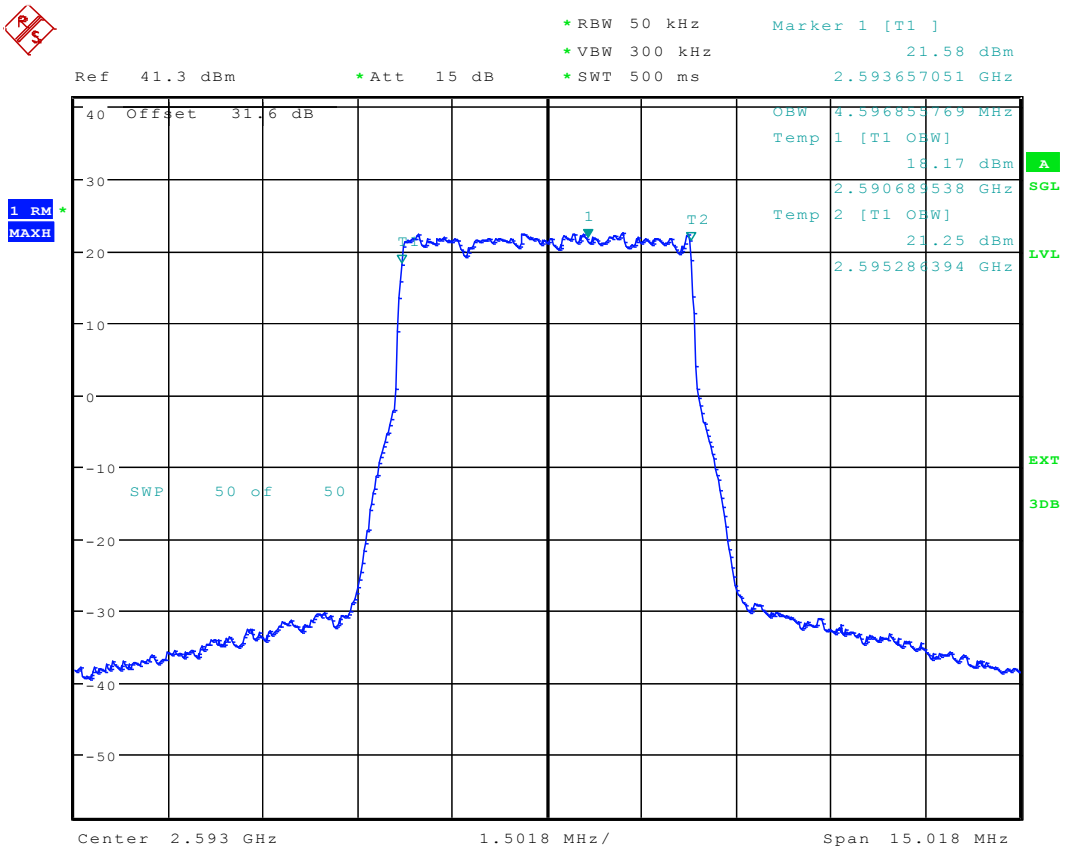
# TM3:

## Ch.B



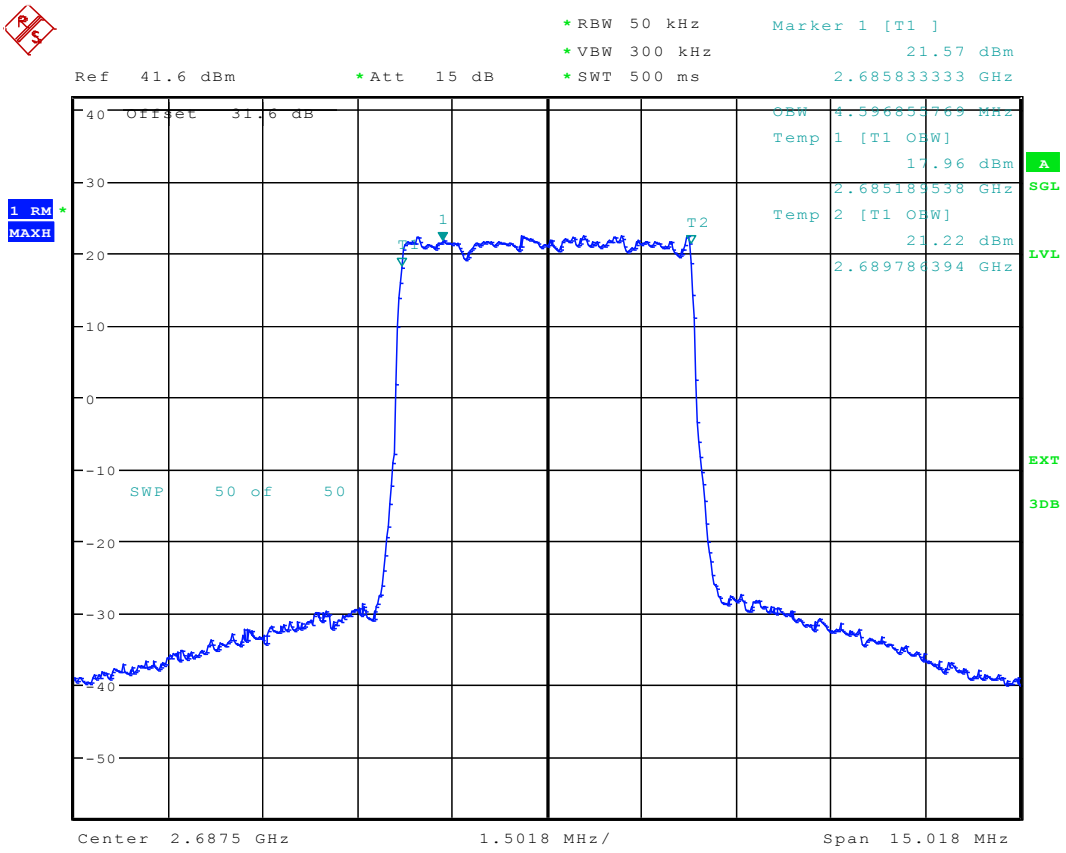

Date: 13.FEB.2009 11:59:43

# Ch.M




Date: 13.FEB.2009 11:47:12

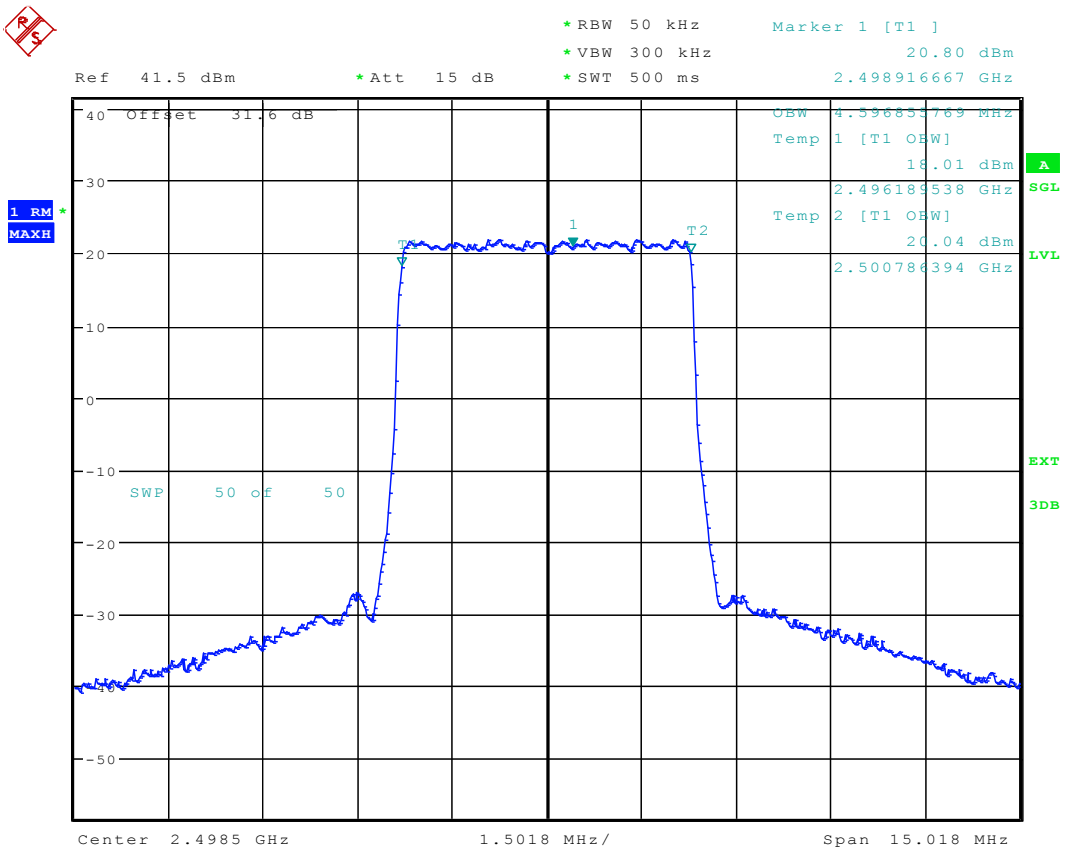
# Ch.T




Date: 13.FEB.2009 12:29:25

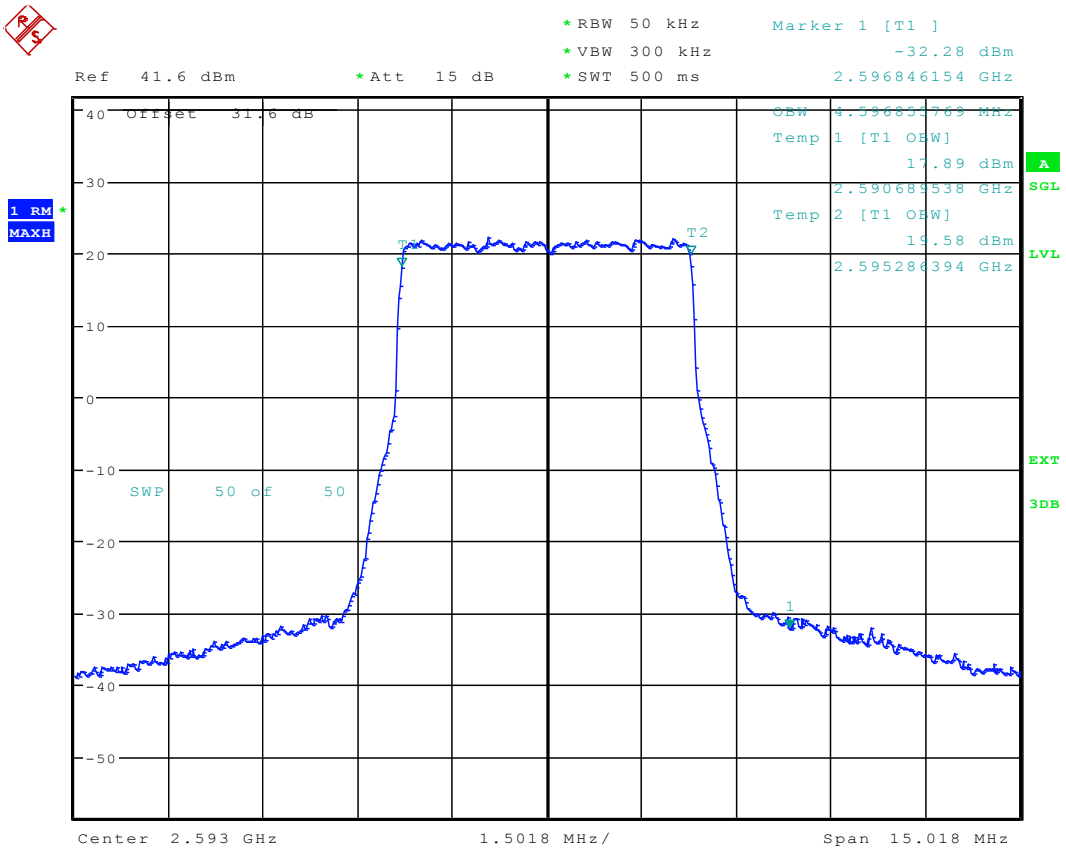
# TM4:

## Ch.B



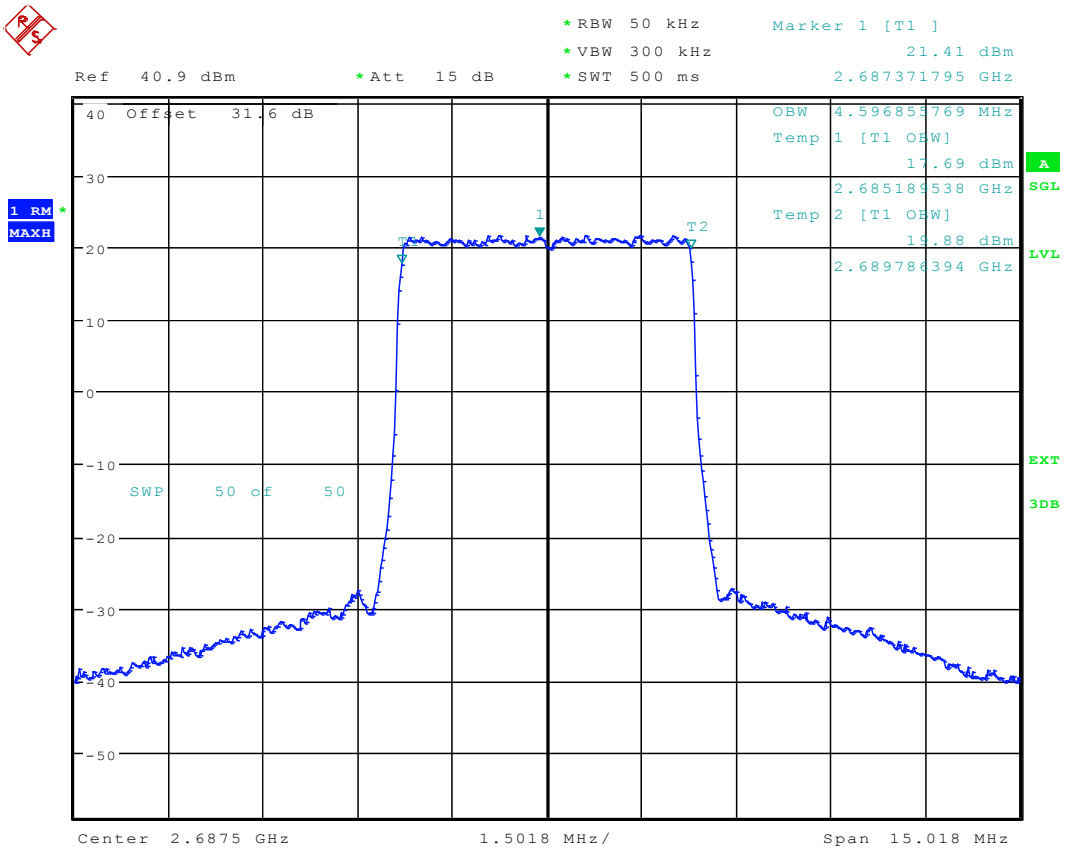

Date: 13.FEB.2009 12:01:47

# Ch.M




Date: 13.FEB.2009 11:45:16

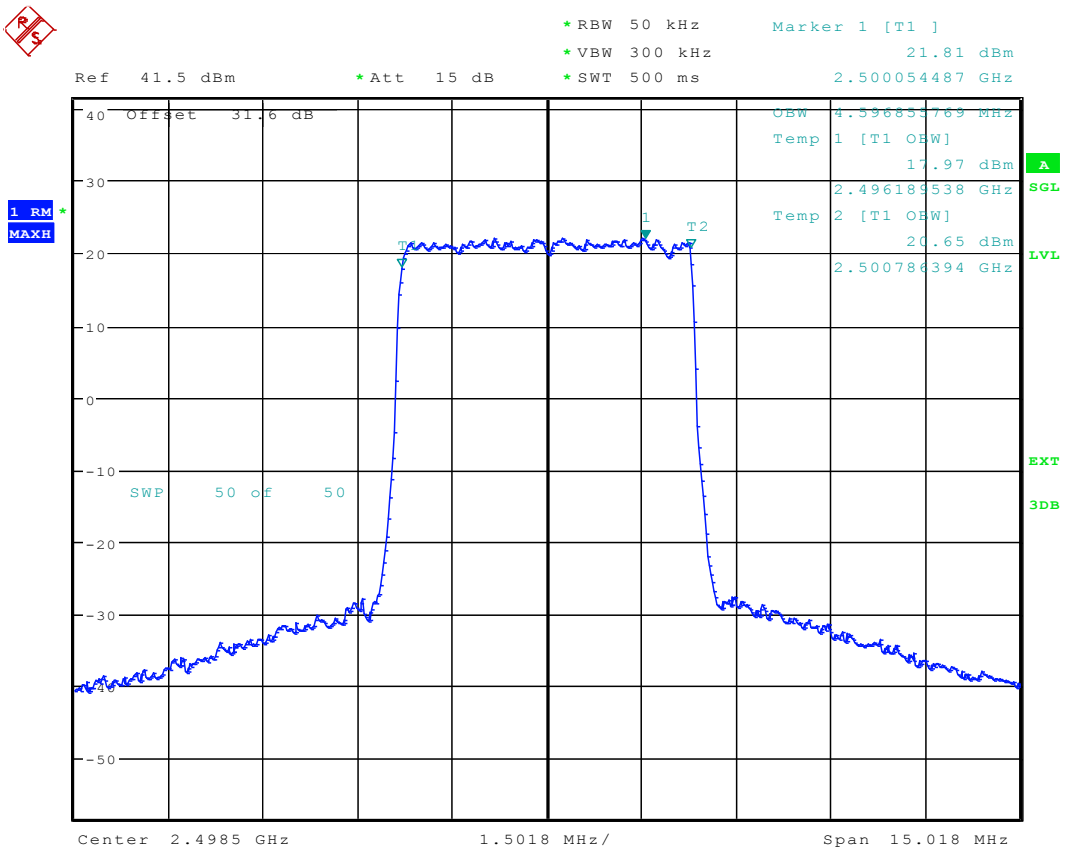
# Ch.T




Date: 13.FEB.2009 12:28:24

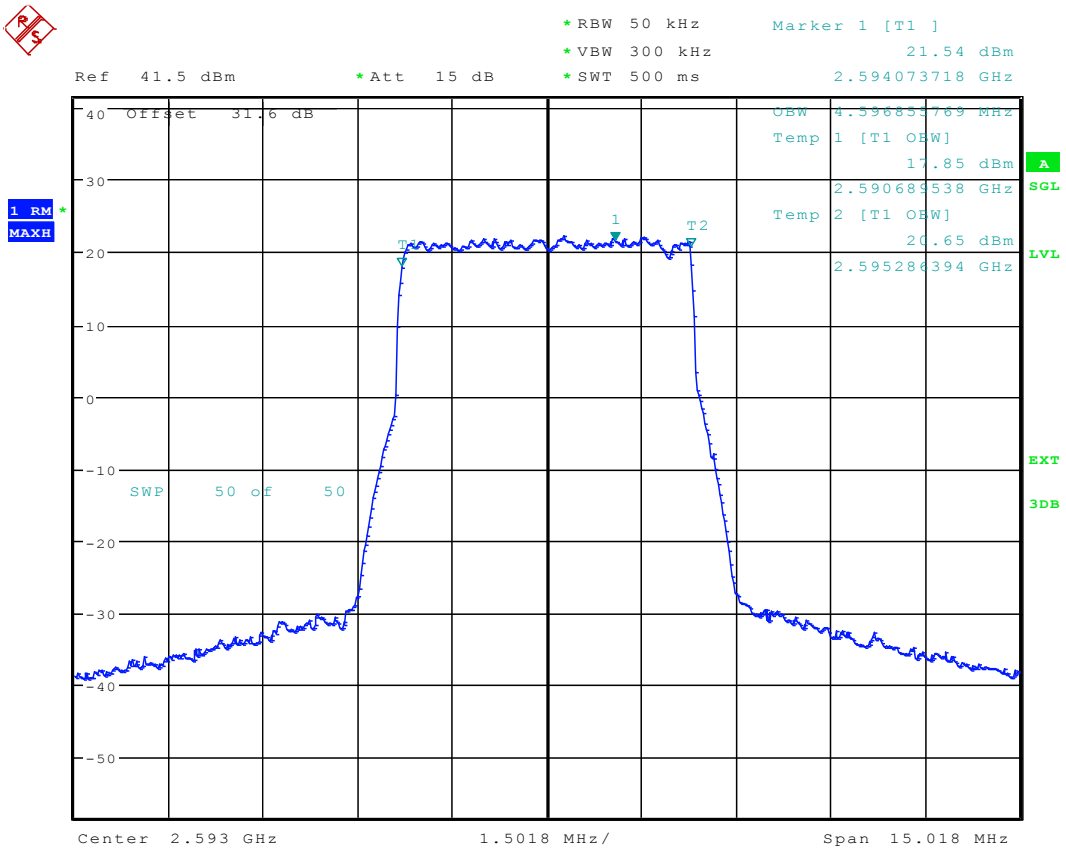
# TM5:

## Ch.B



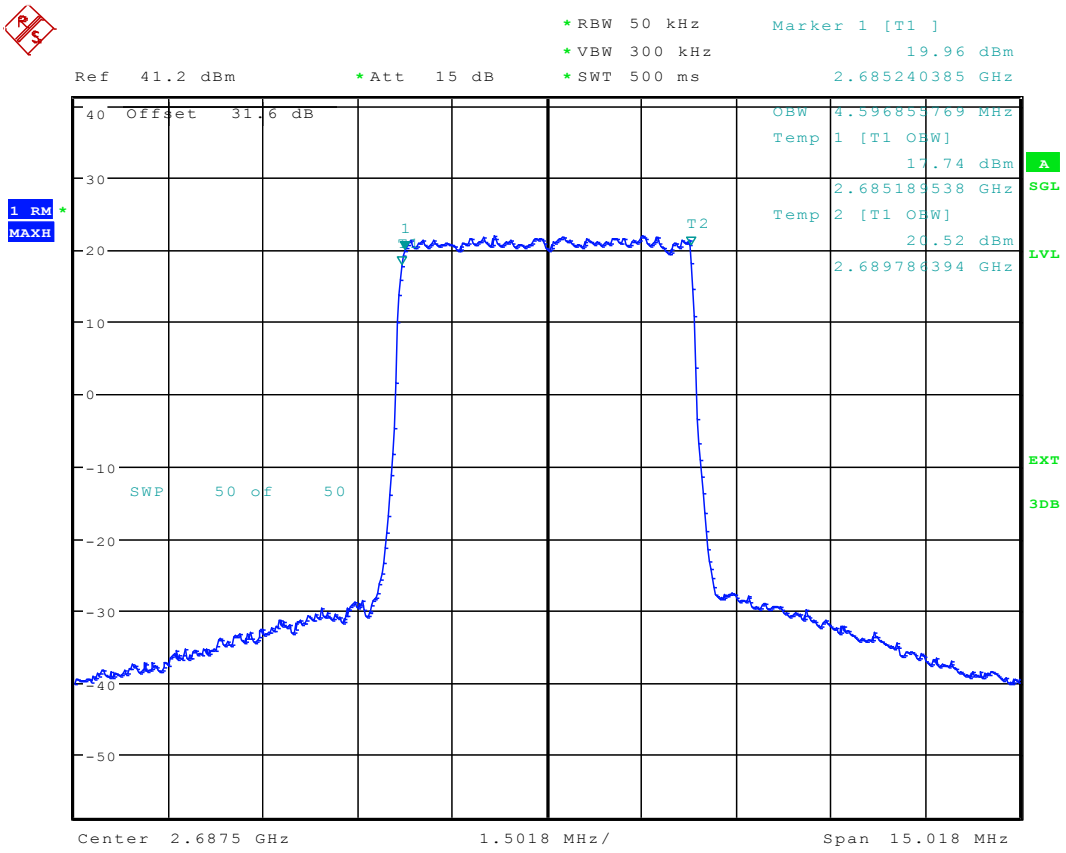

Date: 13.FEB.2009 12:03:47

# Ch.M




Date: 13.FEB.2009 11:43:58

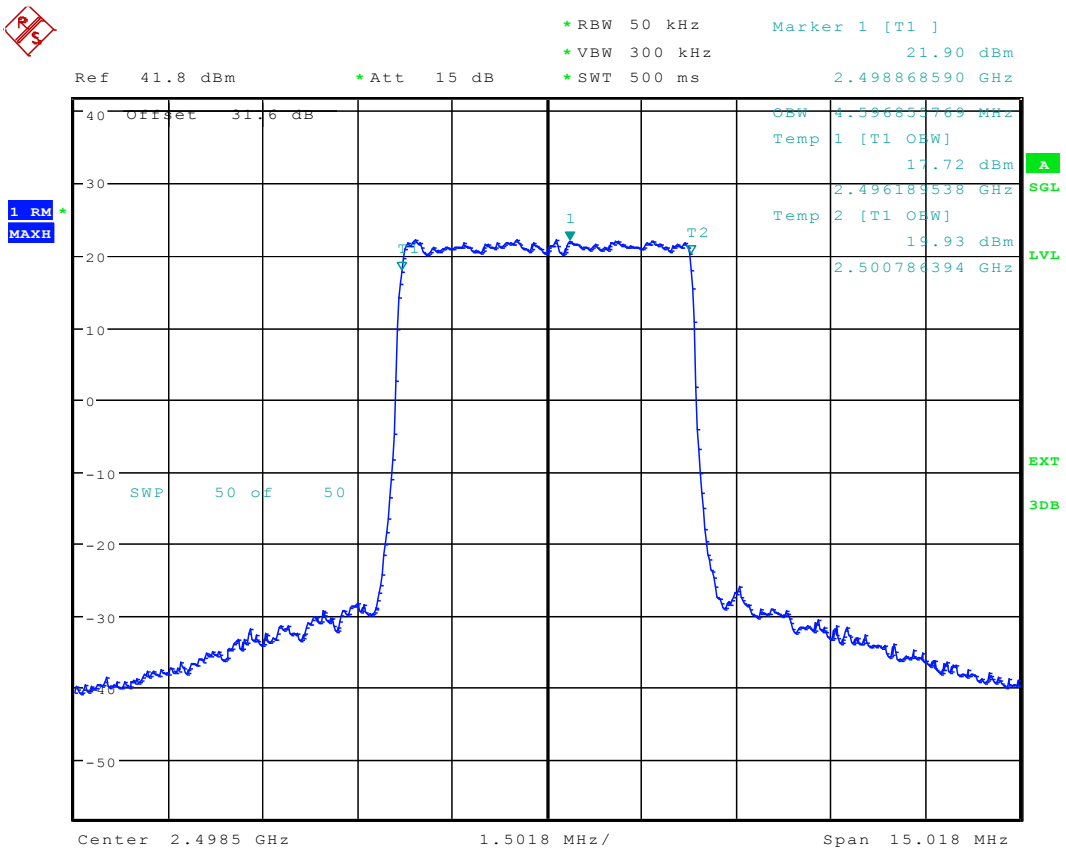
# Ch.T




Date: 13.FEB.2009 12:22:44

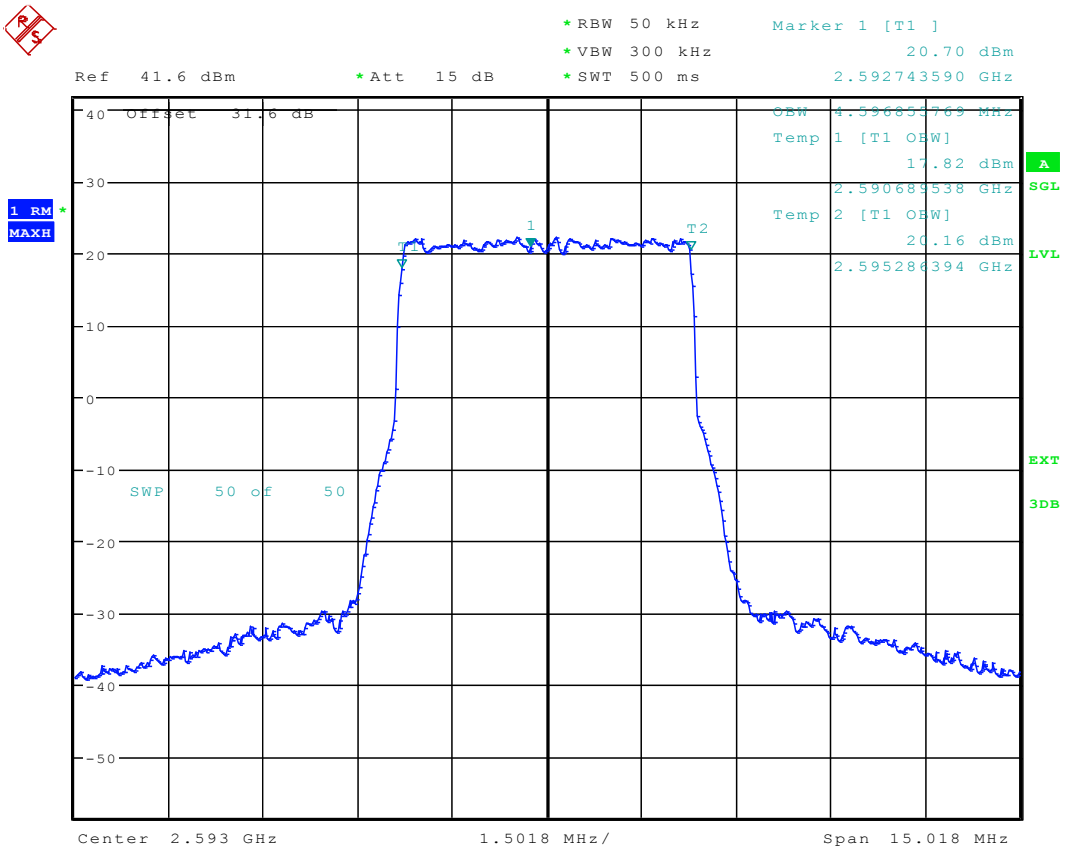
# TM6:

## Ch.B



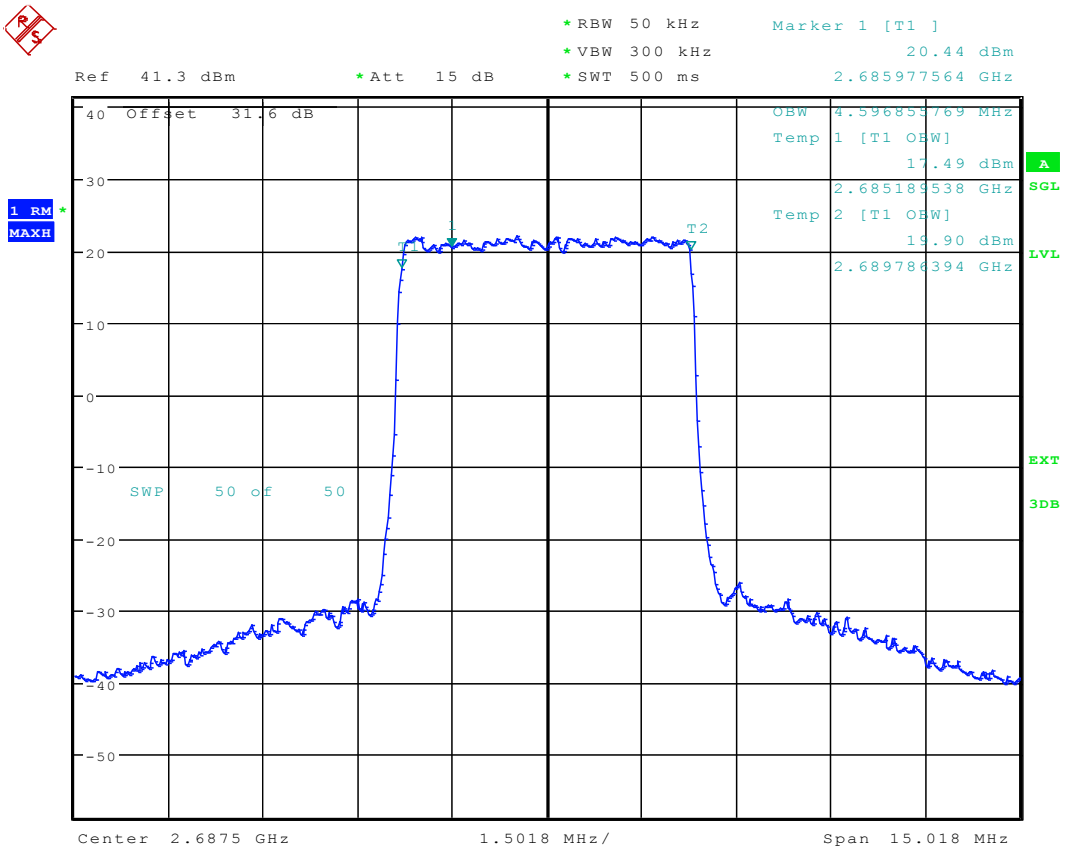

Date: 13.FEB.2009 12:05:59

# Ch.M




Date: 13.FEB.2009 11:43:03

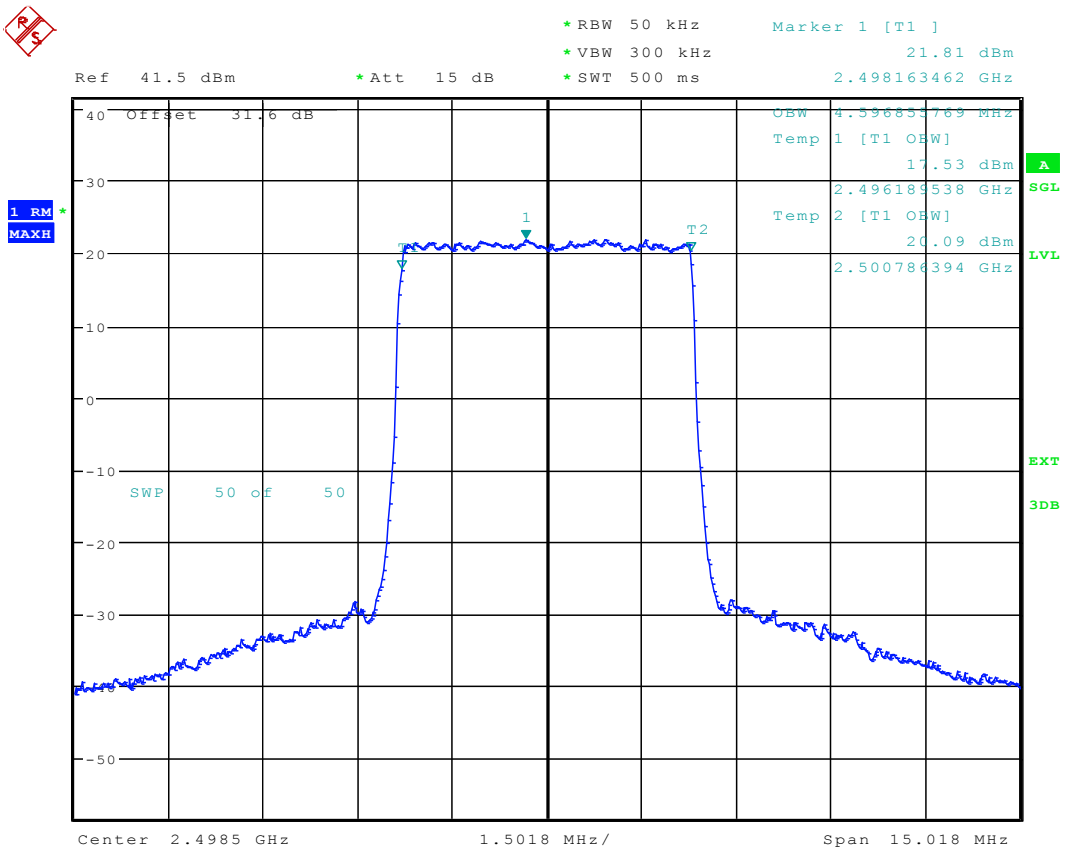
# Ch.T



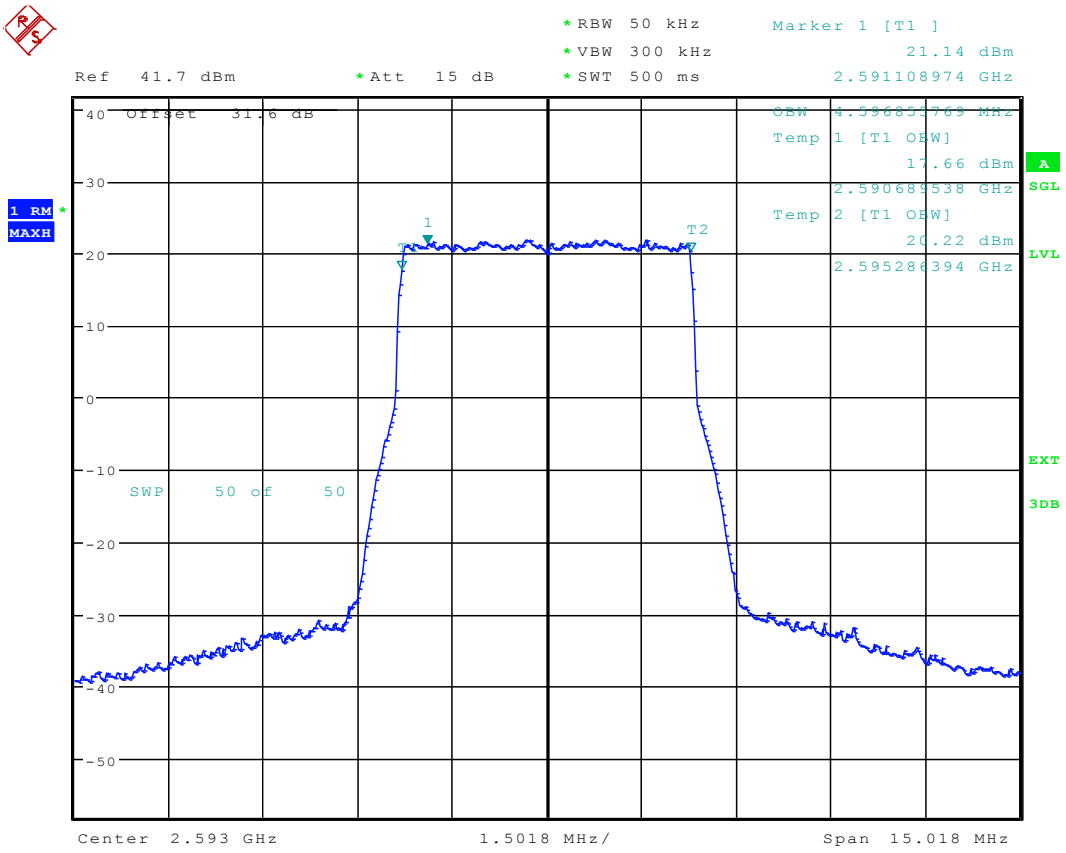

Date: 13.FEB.2009 12:21:52

# TM7:

## Ch.B

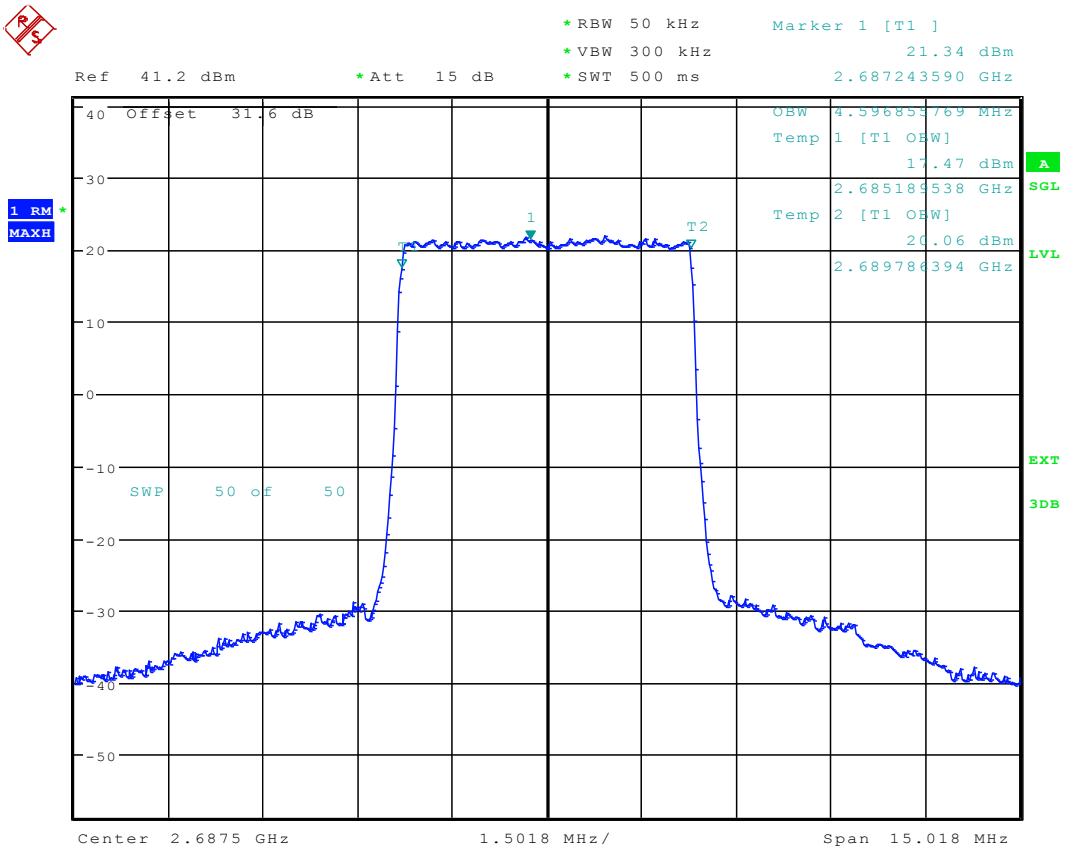

RBW 50 kHz
VBW 300 kHz
SWT 500 ms
Marker 1 [T1 ]
21.81 dBm
2.498163462 GHz
Ref 41.5 dBm
Att 15 dB
Offset 31.6 dB
OBW 4.596853769 MHz
Temp 1 [T1 OBW]
17.53 dBm
2.496189538 GHz
Temp 2 [T1 OBW]
20.09 dBm
2.500786394 GHz
1 RM
MAXH
A
SGL
LVL
EXT
3DB
SWP 50 of 50
Center 2.4985 GHz
1.5018 MHz/
Span 15.018 MHz
Date: 13.FEB.2009 12:08:46

# Ch.M




Date: 13.FEB.2009 11:42:04

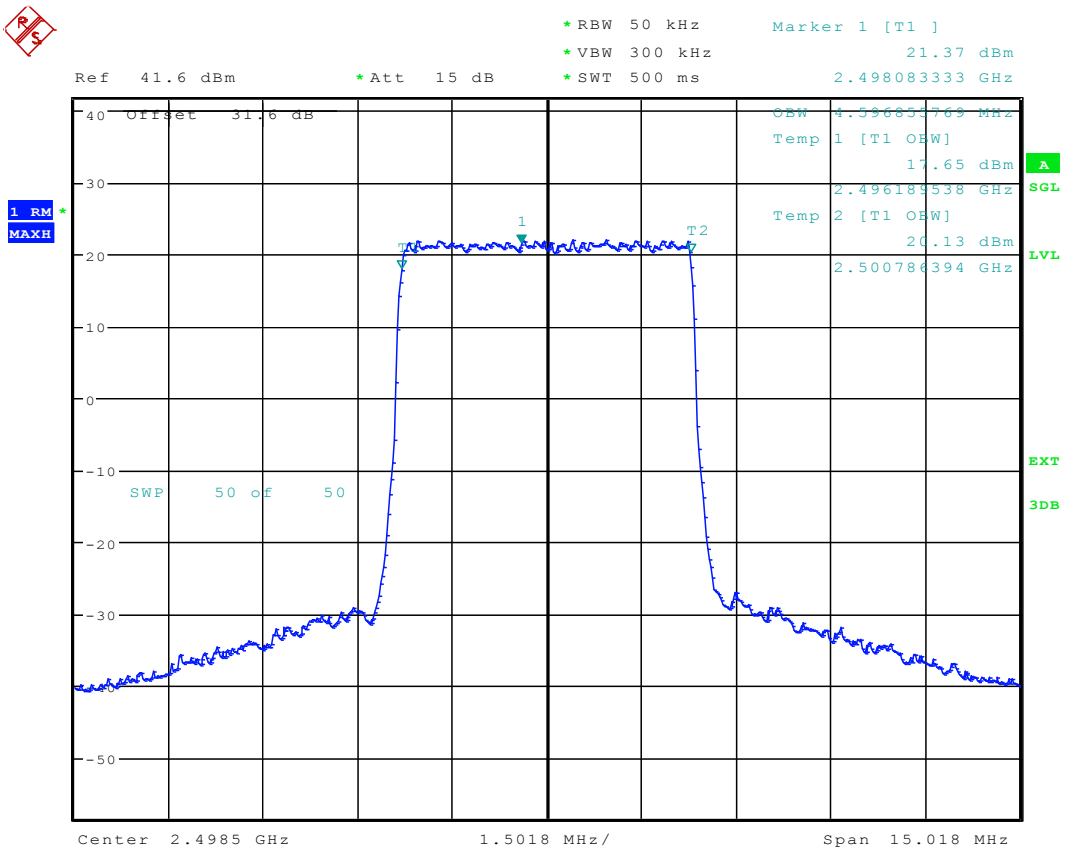
# Ch.T




Date: 13.FEB.2009 12:20:22

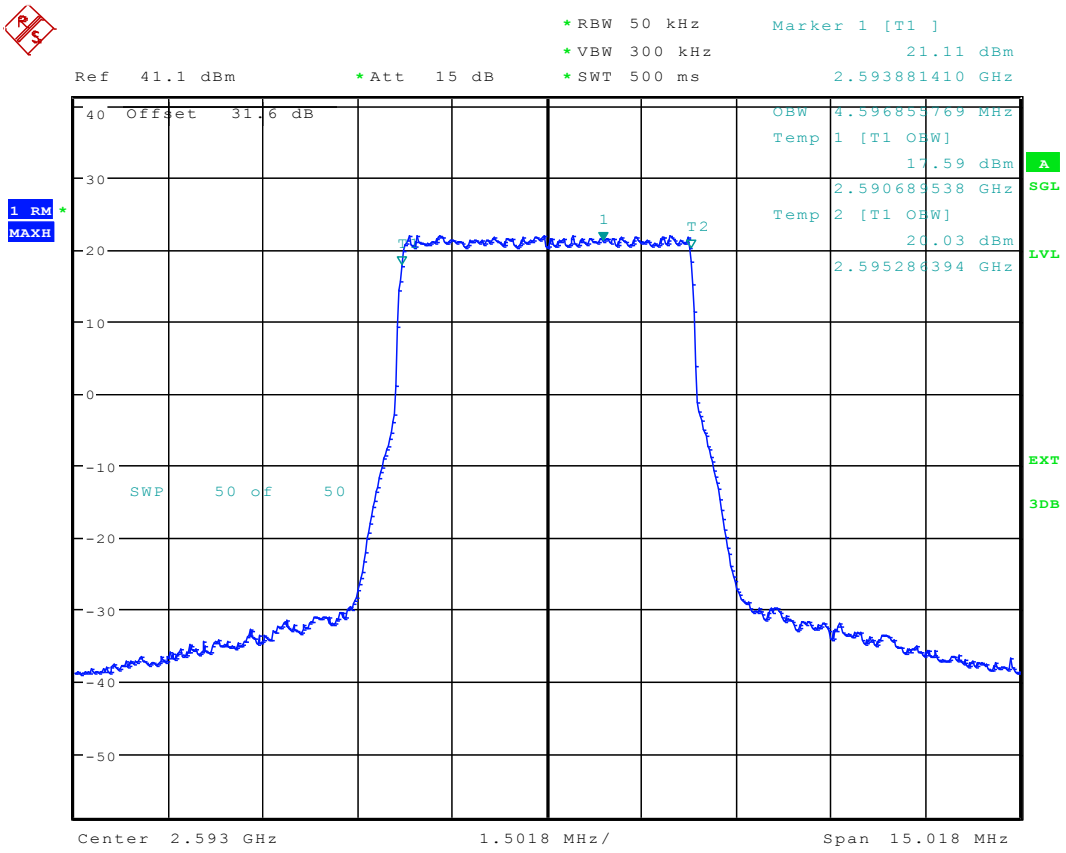
# TM8:

## Ch.B



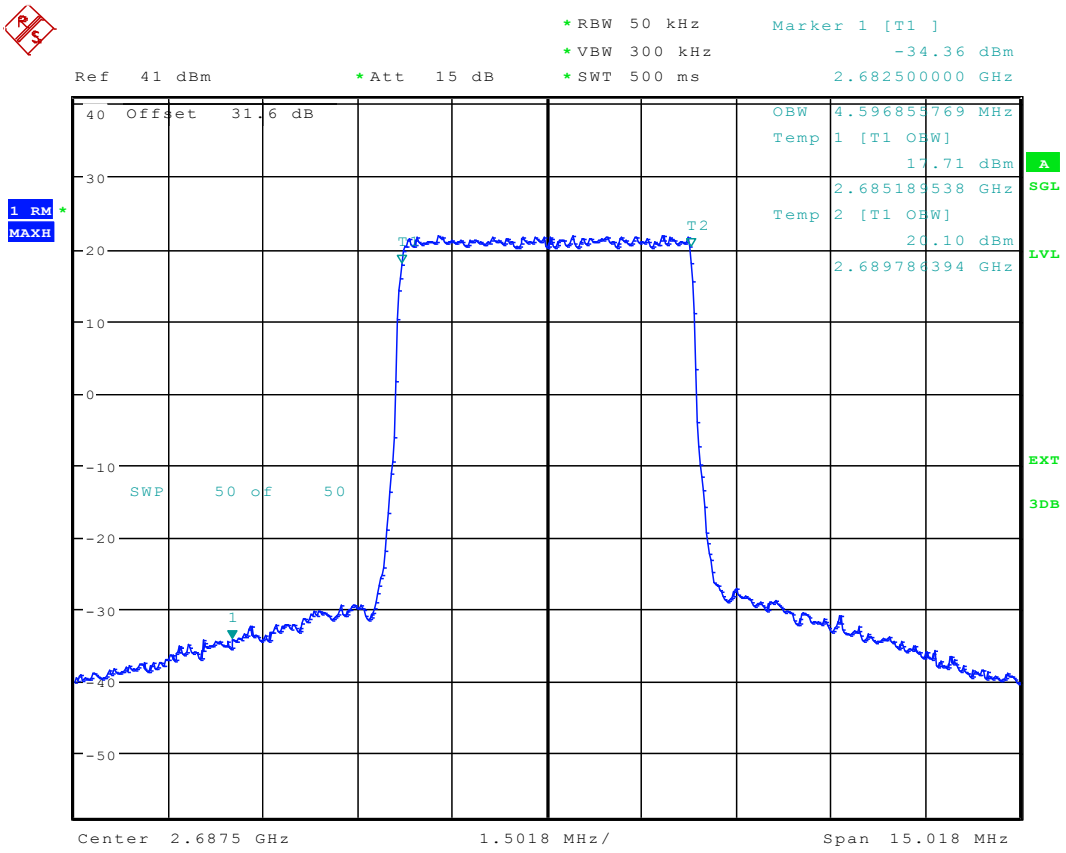

Date: 13.FEB.2009 12:12:23

# Ch.M




Date: 13.FEB.2009 11:39:31

# Ch.T

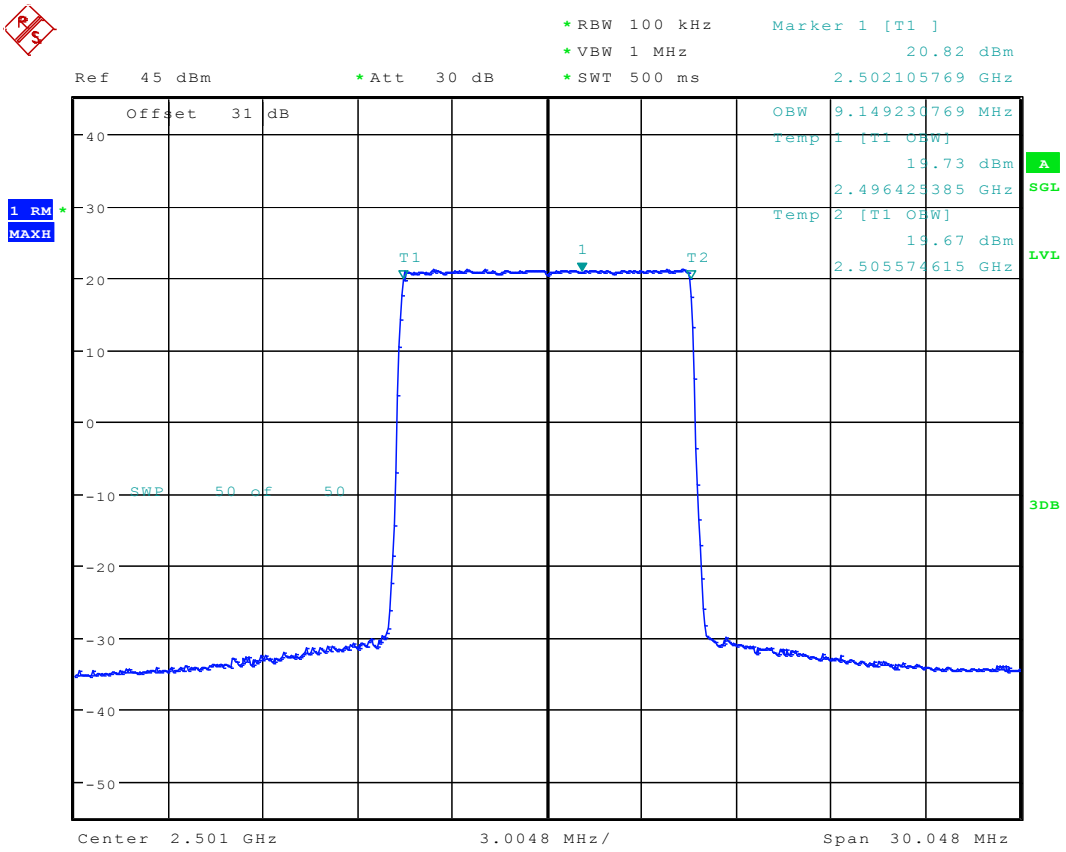



Date: 13.FEB.2009 12:17:51

# (2) WiMAX, 10MHz Channel Bandwidth:

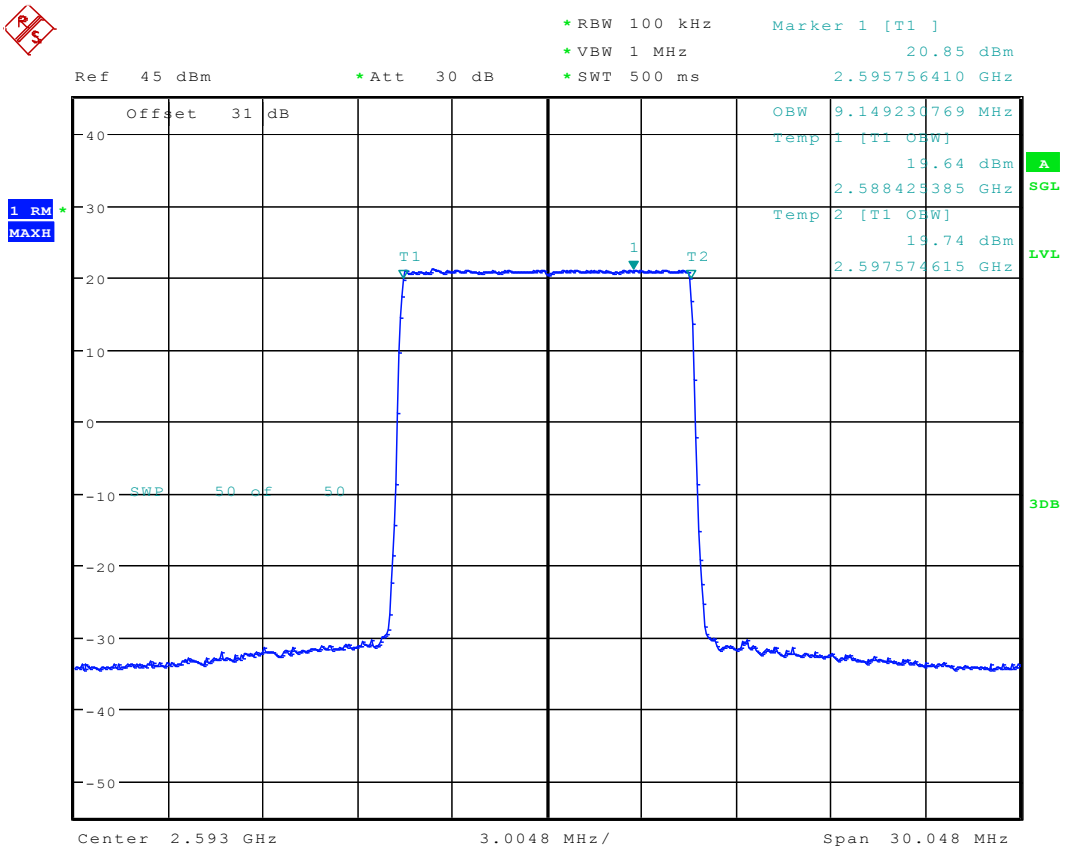
## TM1:

### Ch.B



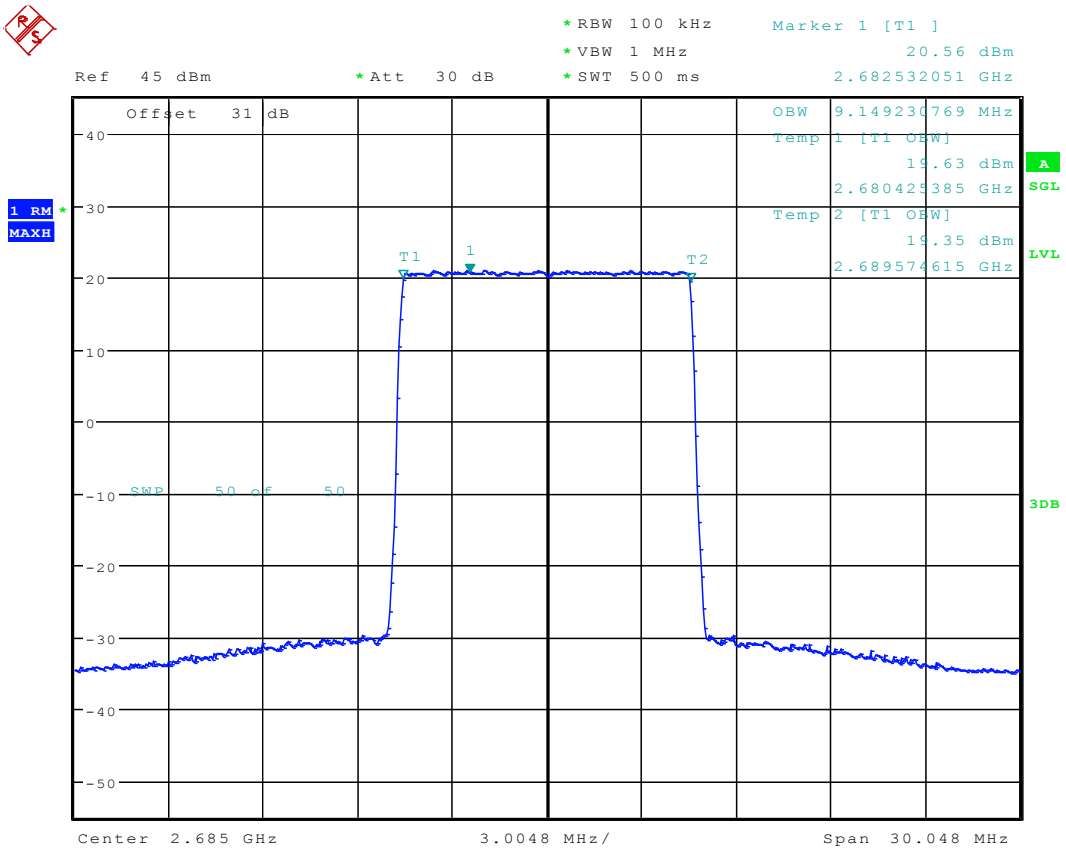

Date: 9.JAN.2009 08:34:06

# Ch.M




Date: 9.JAN.2009 09:59:35

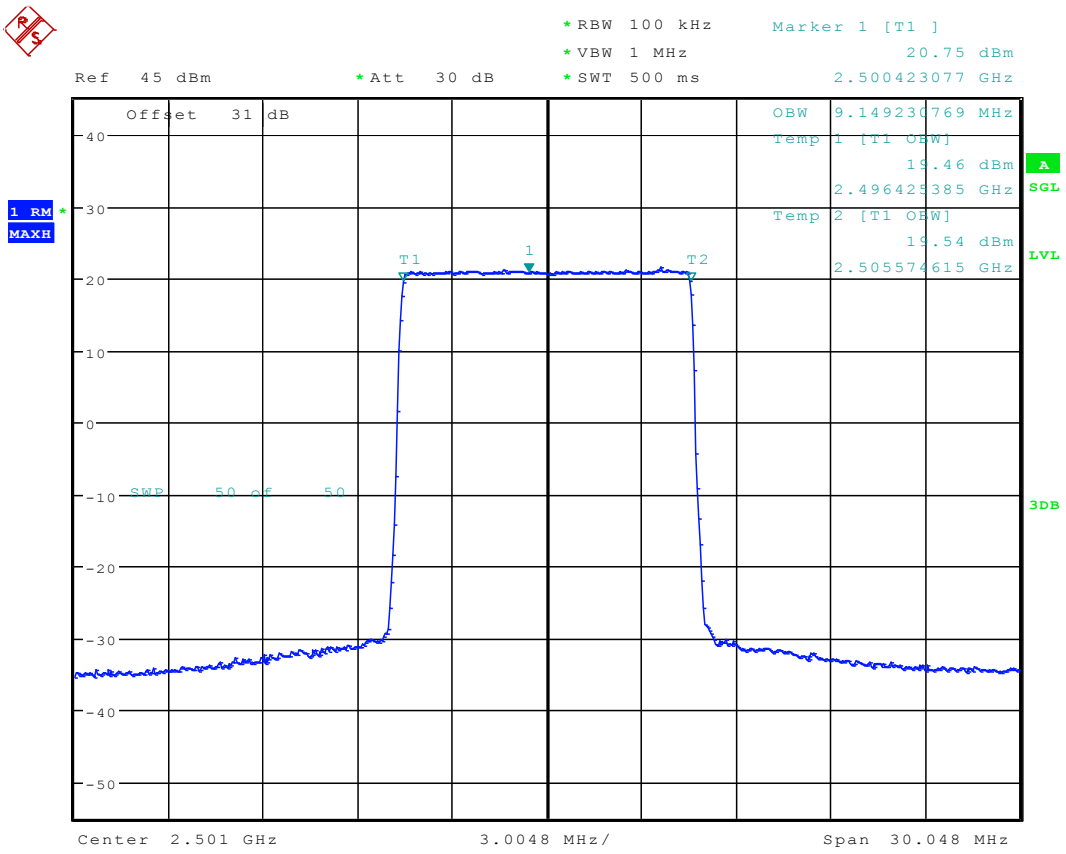
# Ch.T




Date: 9.JAN.2009 11:14:39

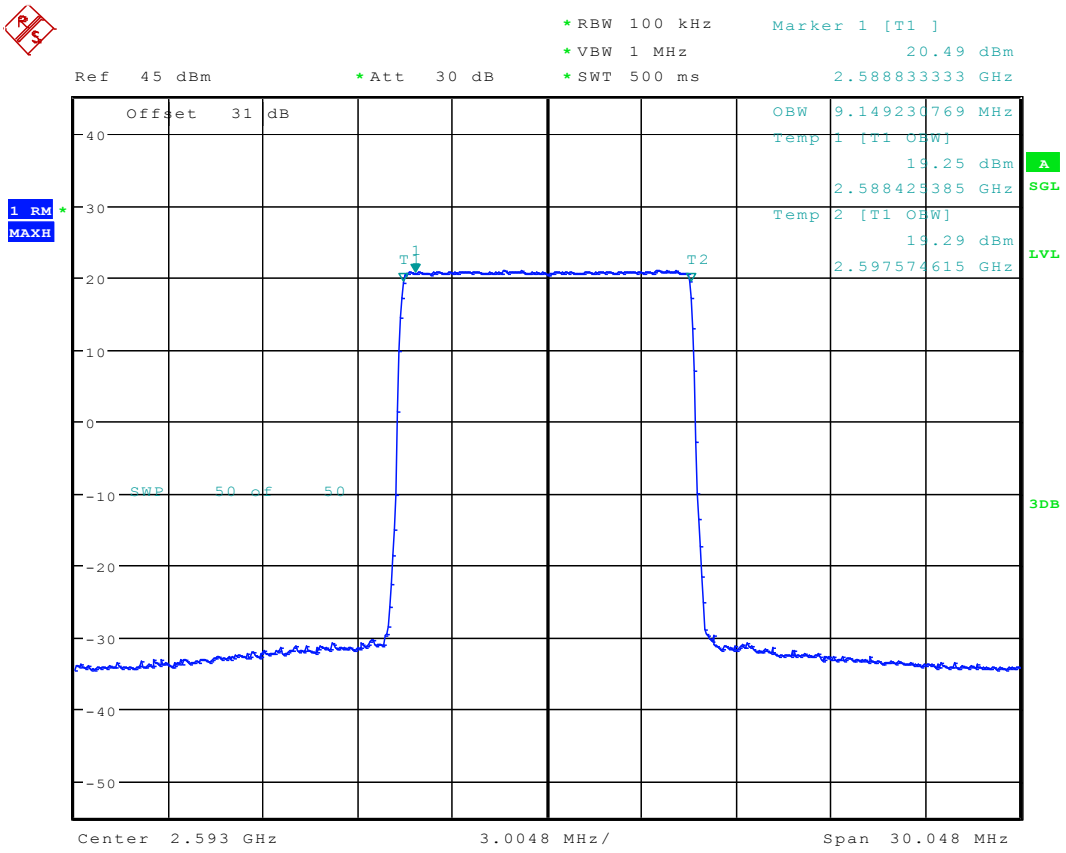
# TM2:

## Ch.B



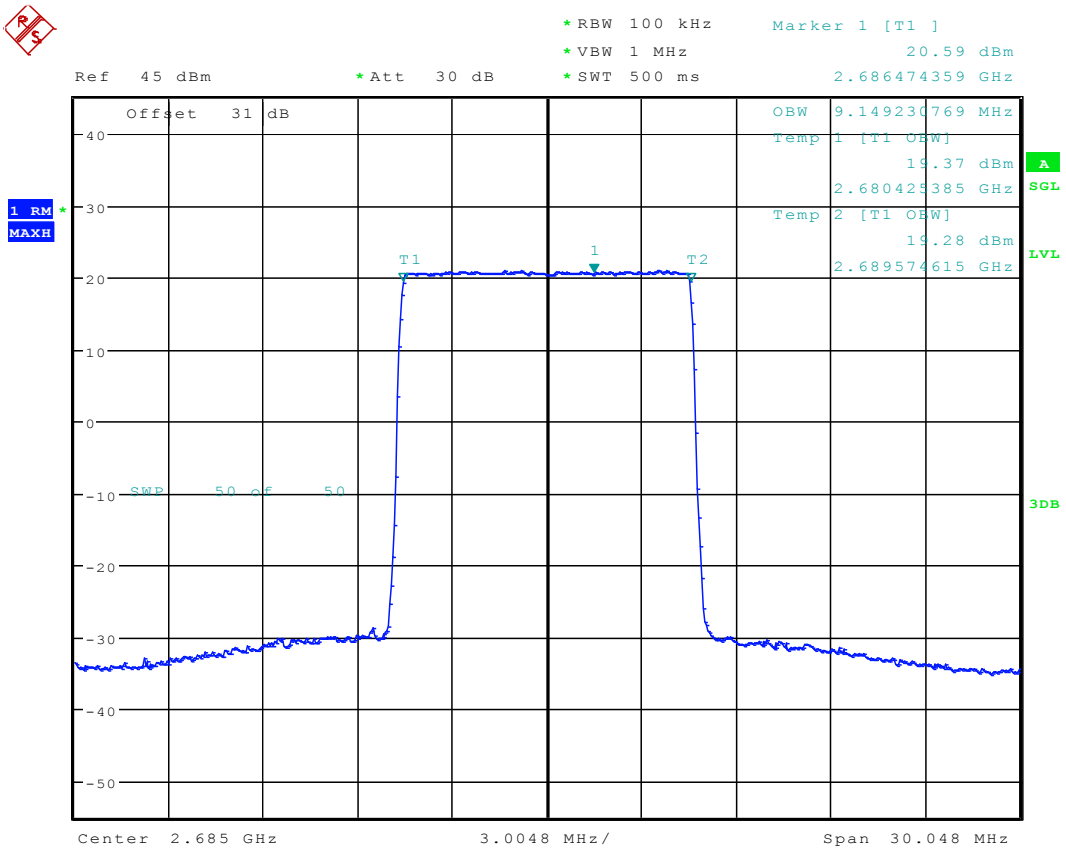

Date: 9.JAN.2009 08:36:06

# Ch.M




Date: 9.JAN.2009 09:31:31

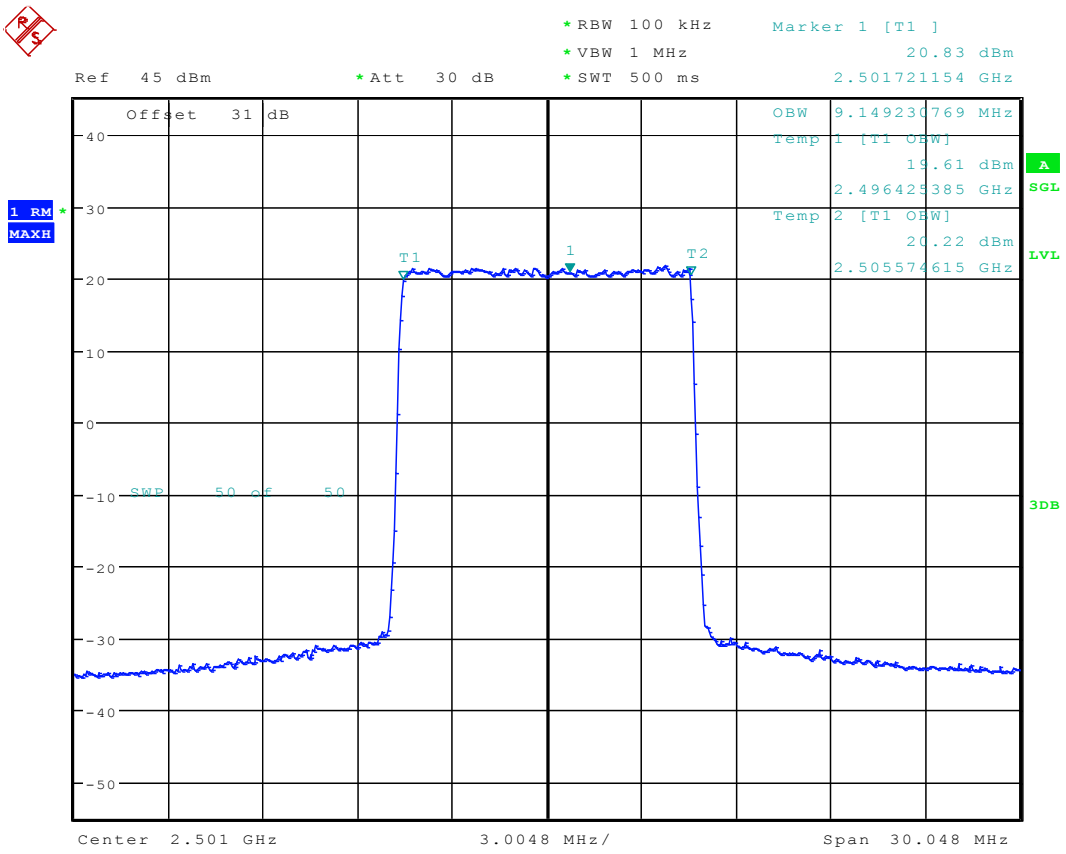
# Ch.T



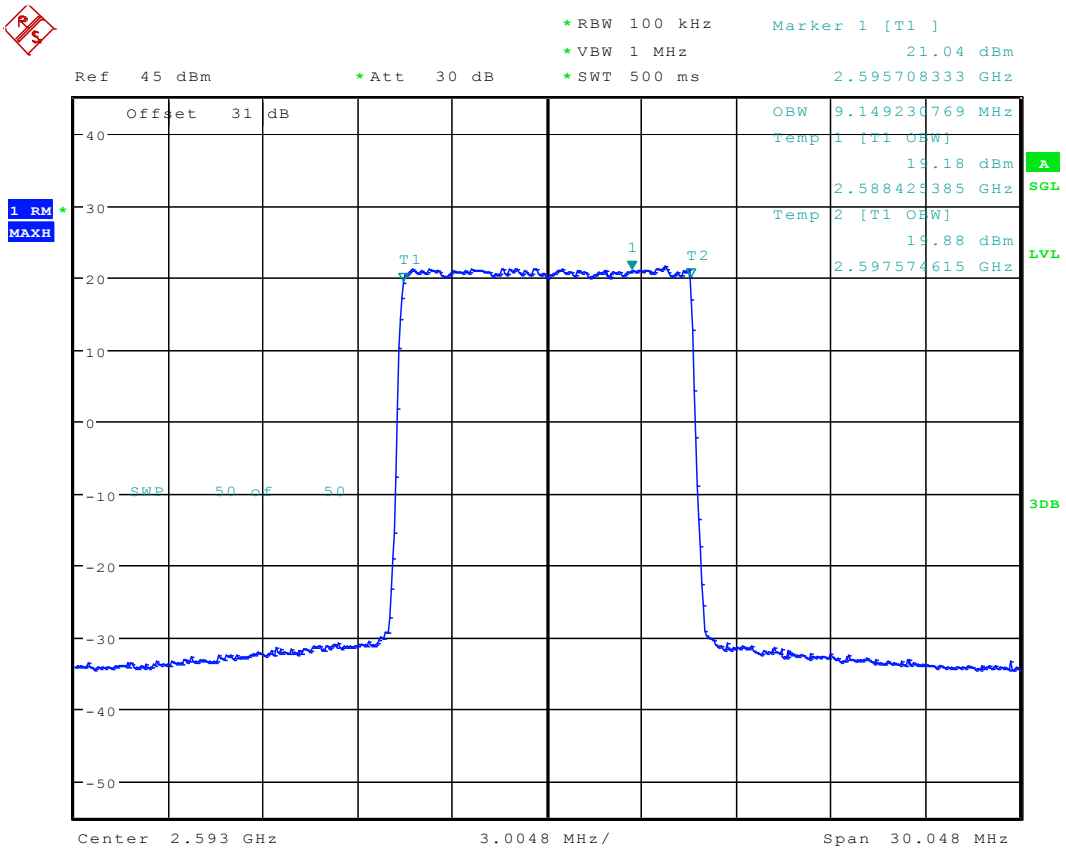

Date: 9.JAN.2009 11:11:33

# TM3:

## Ch.B

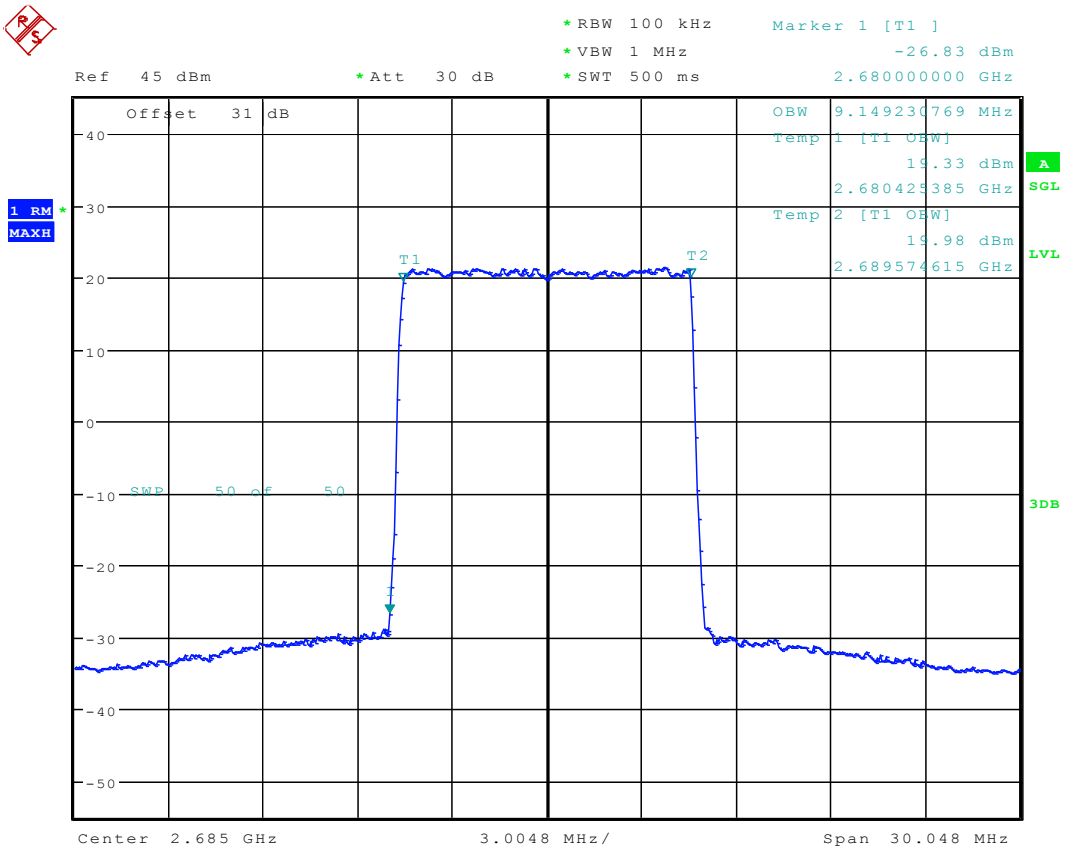

RBW 100 kHz
VBW 1 MHz
SWT 500 ms
Marker 1 [T1 ]
20.83 dBm
2.501721154 GHz
Ref 45 dBm
Att 30 dB
Offset 31 dB
OBW 9.149230769 MHz
Temp 1 [T1 OBW]
19.61 dBm
2.496425385 GHz
Temp 2 [T1 OBW]
20.22 dBm
2.505574615 GHz
1 RM
MAXH
A
SGL
LVL
3DB
T1
T2
SWP 50 of 50
Center 2.501 GHz
3.0048 MHz/
Span 30.048 MHz
Date: 9.JAN.2009 08:39:39

# Ch.M




Date: 9.JAN.2009 09:29:29

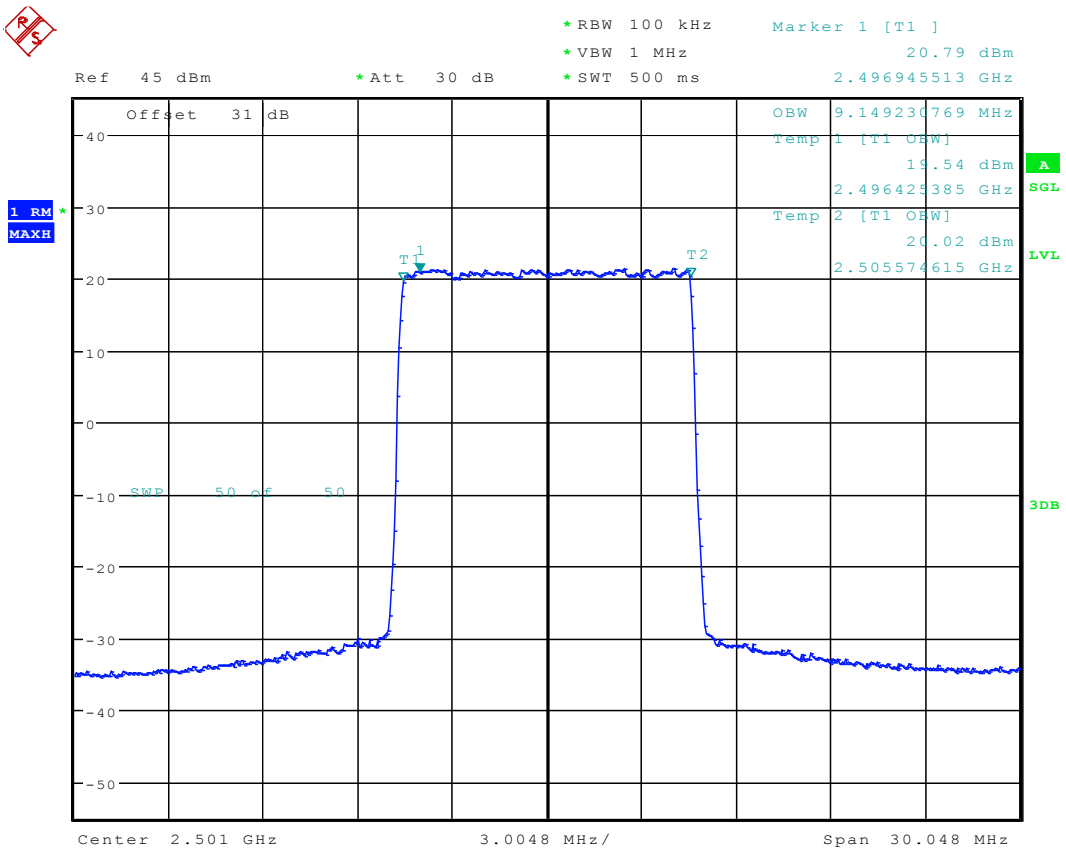
# Ch.T




Date: 9.JAN.2009 11:08:50

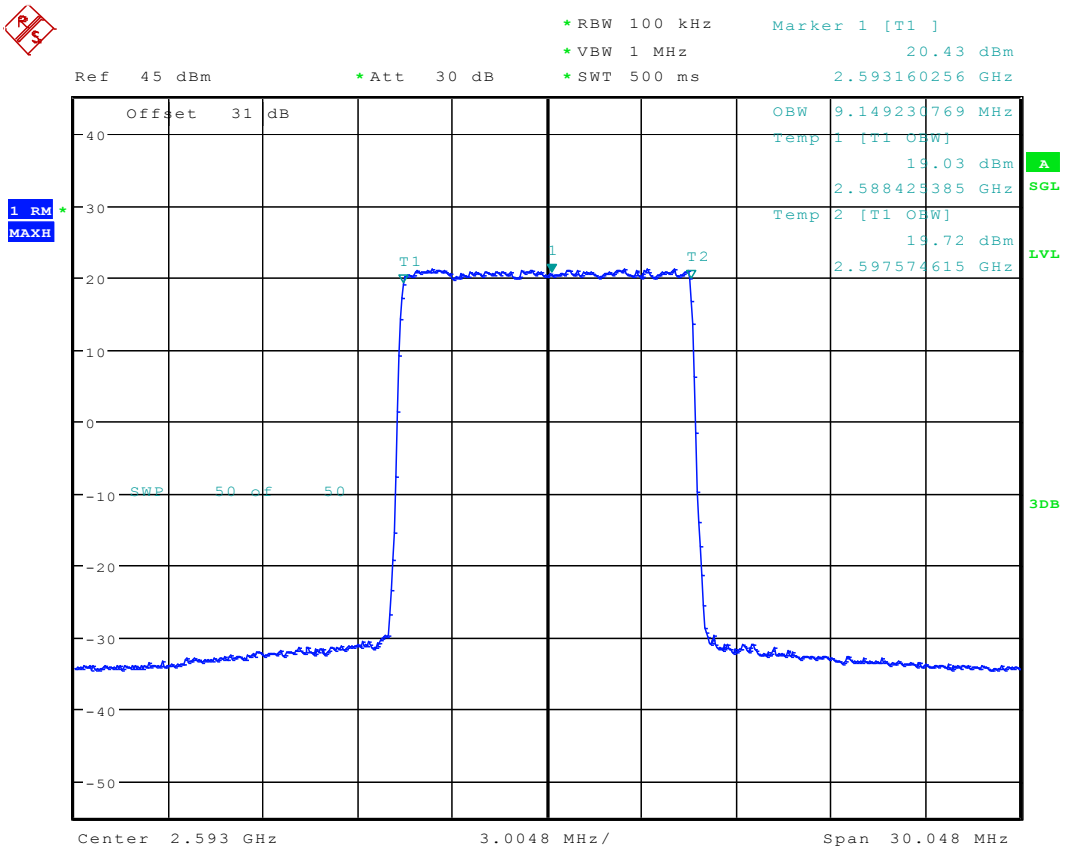
# TM4:

## Ch.B



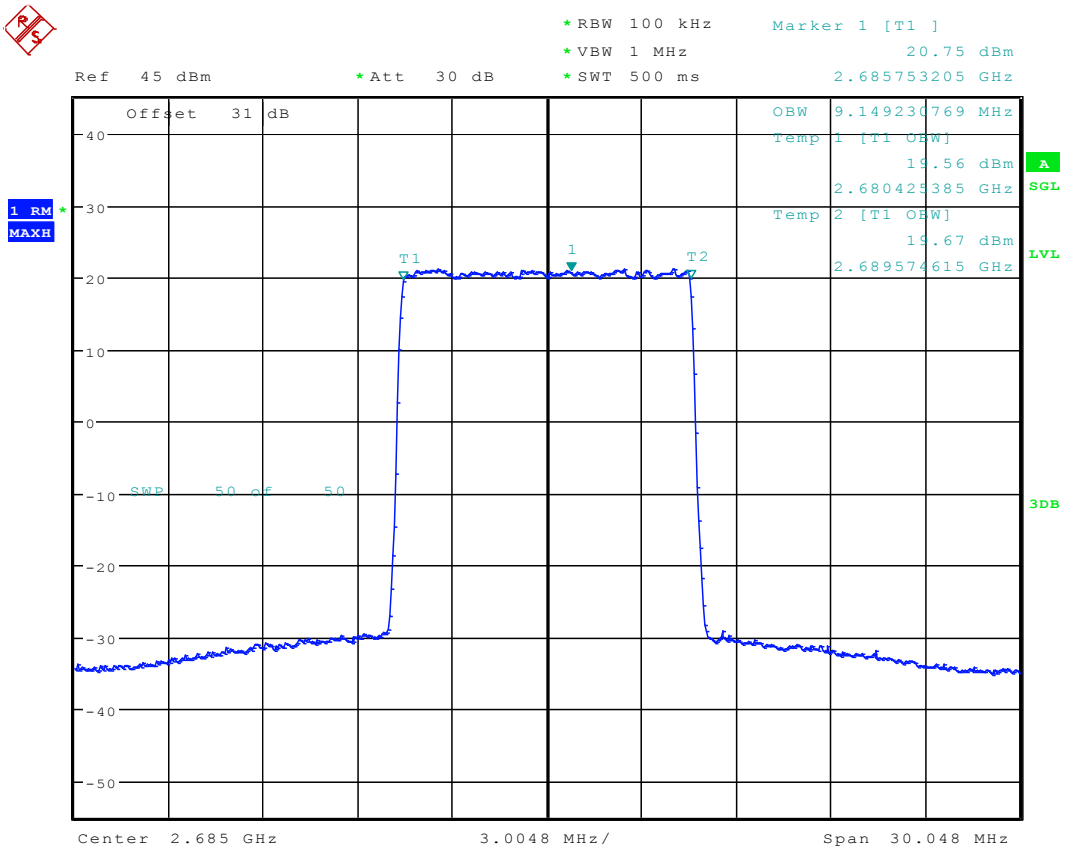

Date: 9.JAN.2009 08:42:23

# Ch.M




Date: 9.JAN.2009 09:27:22

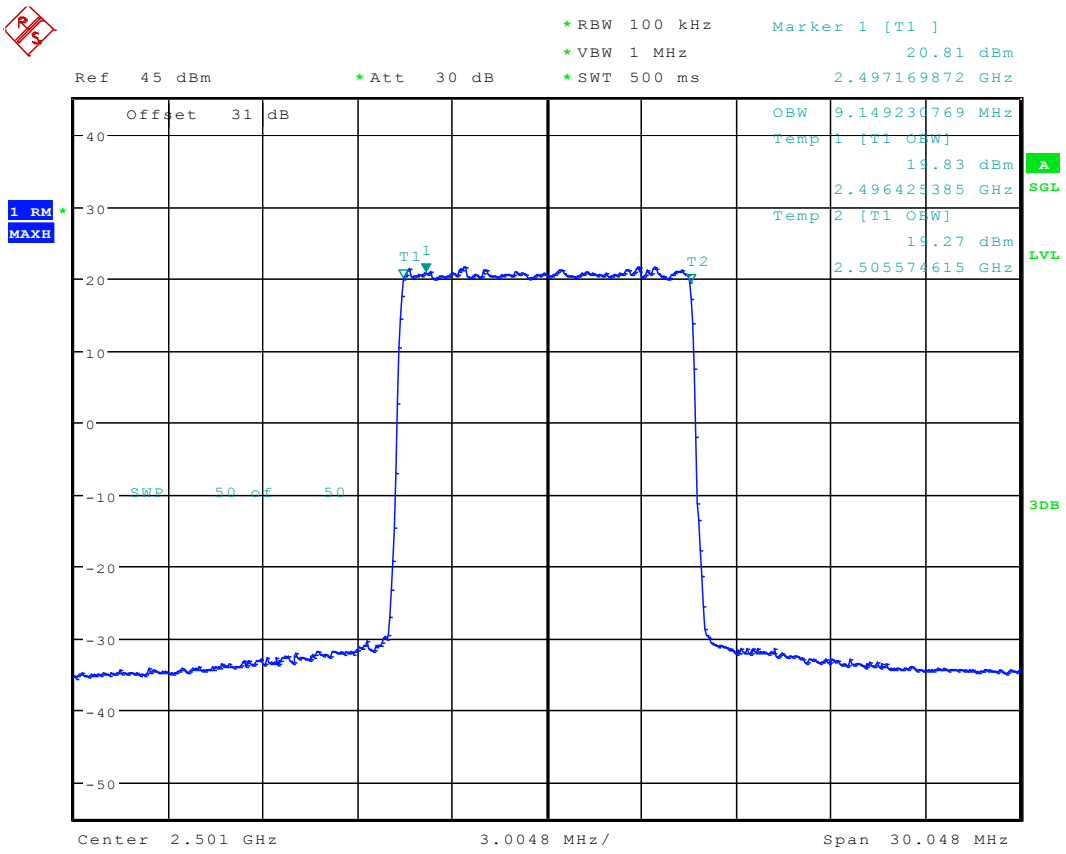
# Ch.T




Date: 9.JAN.2009 11:06:10

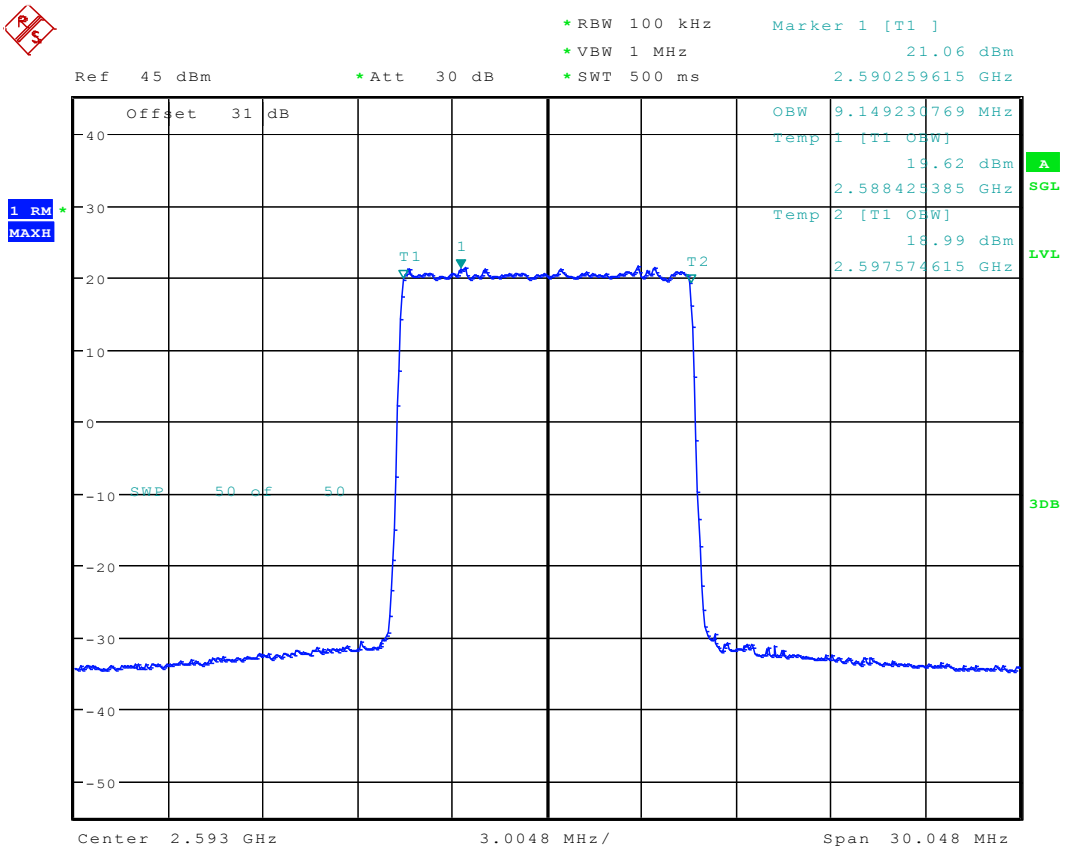
# TM5:

## Ch.B



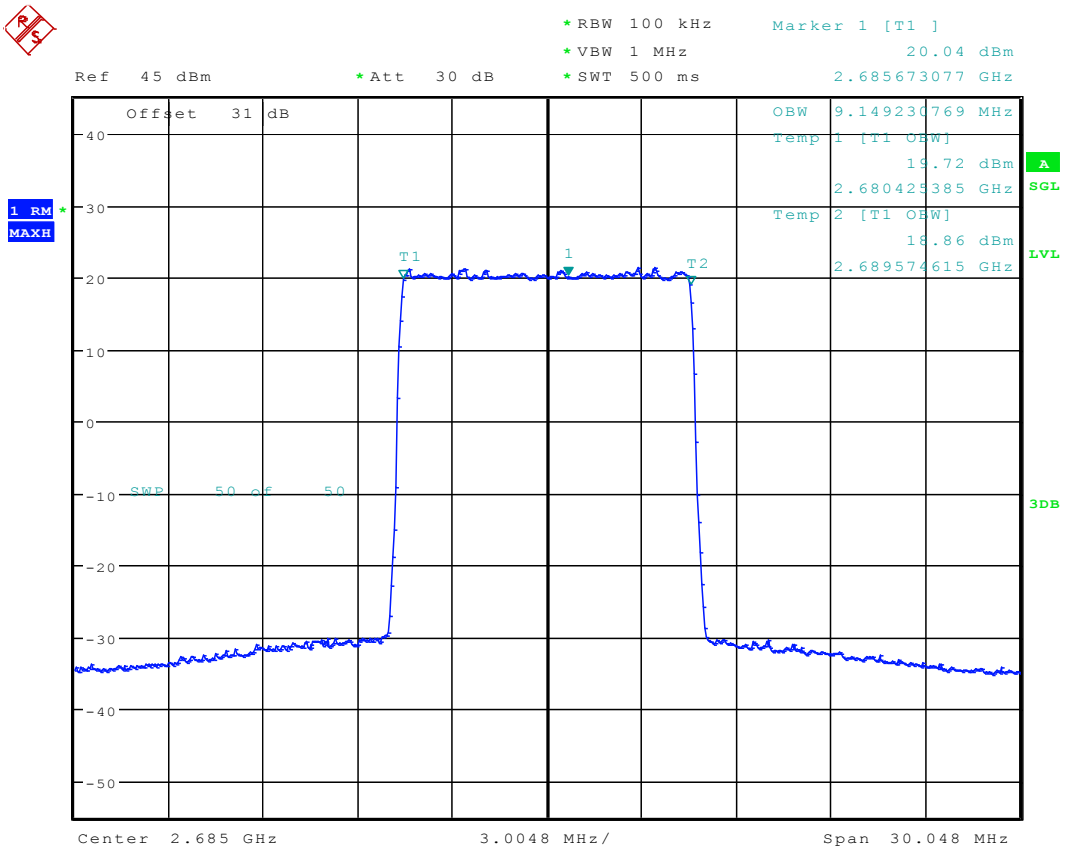

Date: 9.JAN.2009 08:45:26

# Ch.M




Date: 9.JAN.2009 09:25:08

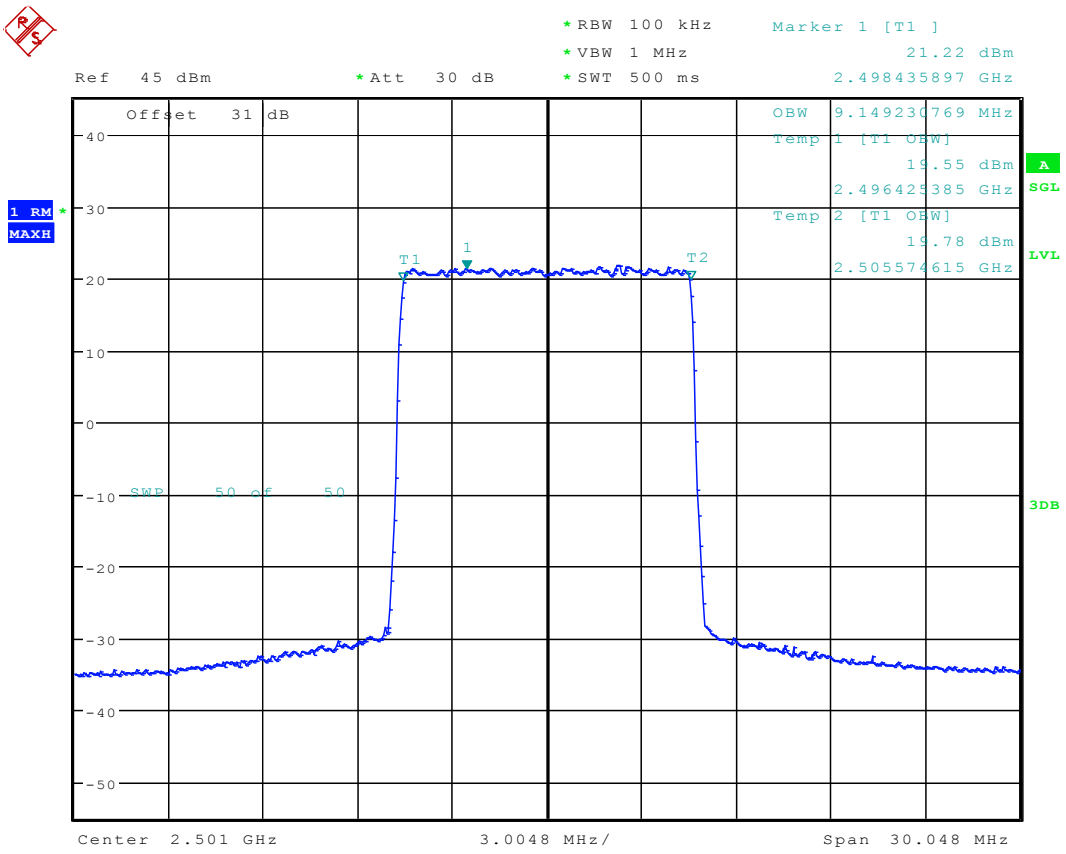
# Ch.T




Date: 9.JAN.2009 10:20:05

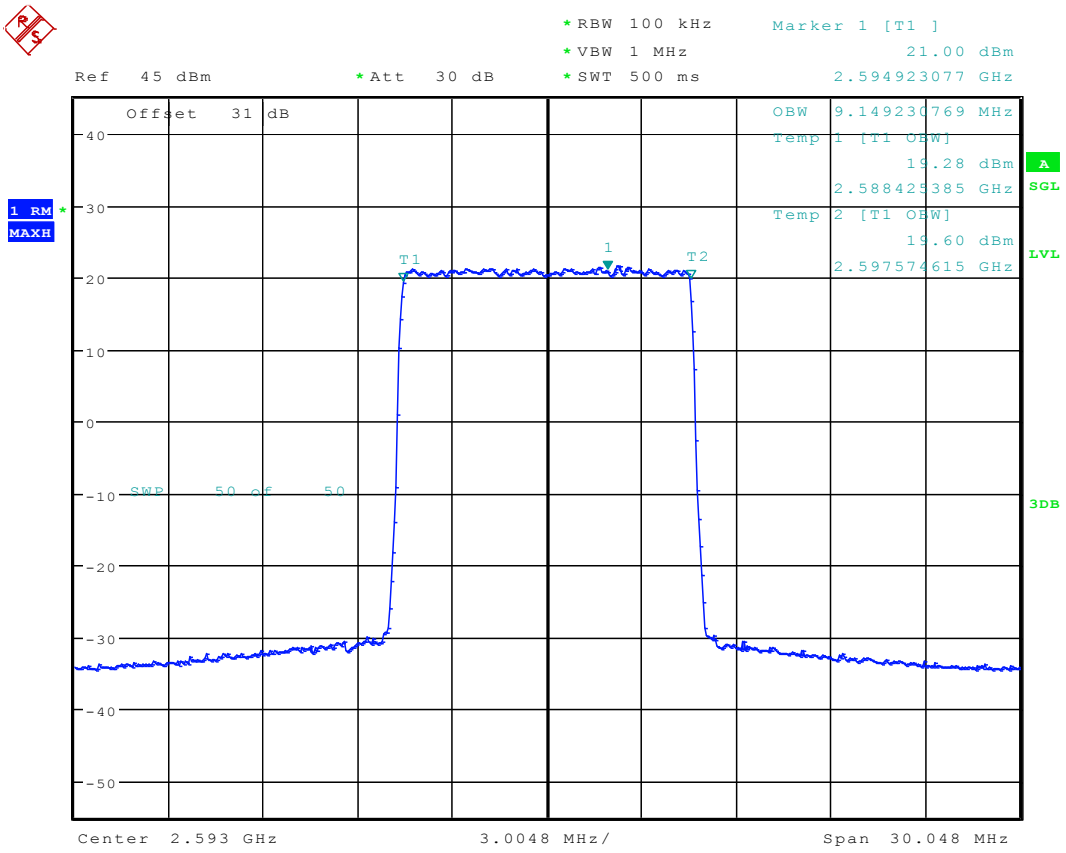
# TM6:

## Ch.B



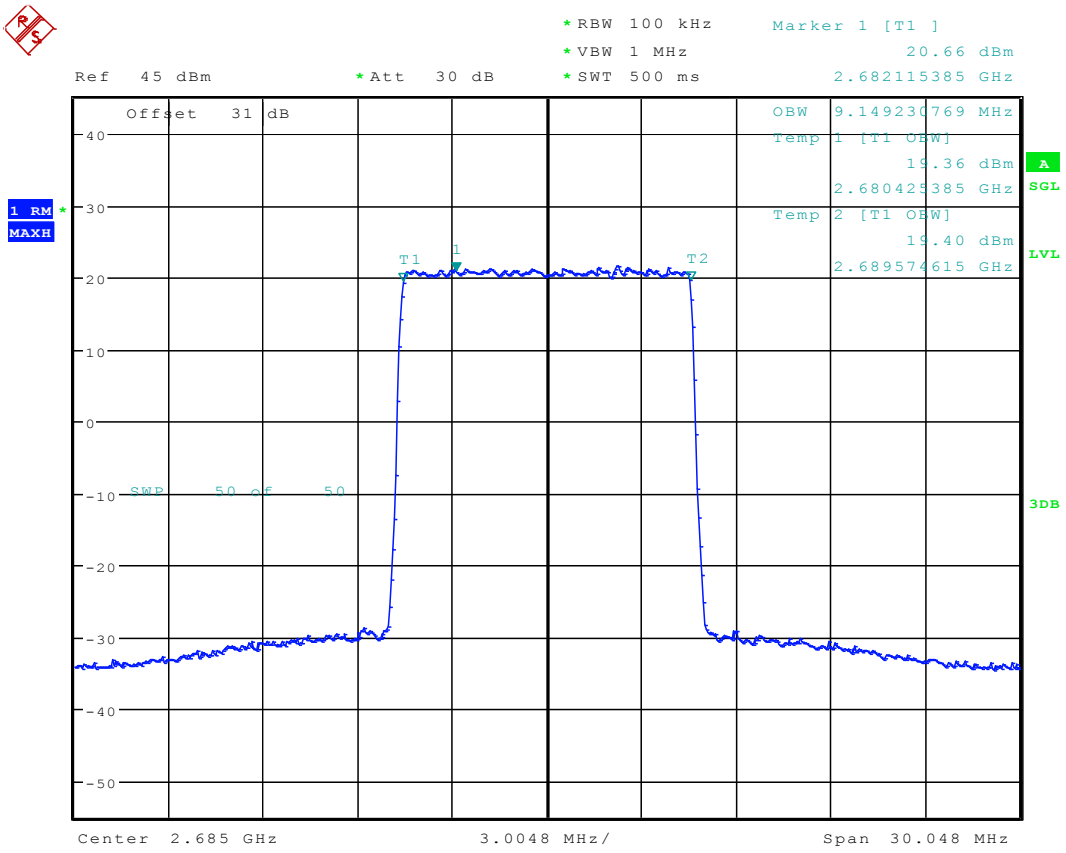

Date: 9.JAN.2009 08:48:03

# Ch.M




Date: 9.JAN.2009 09:23:02

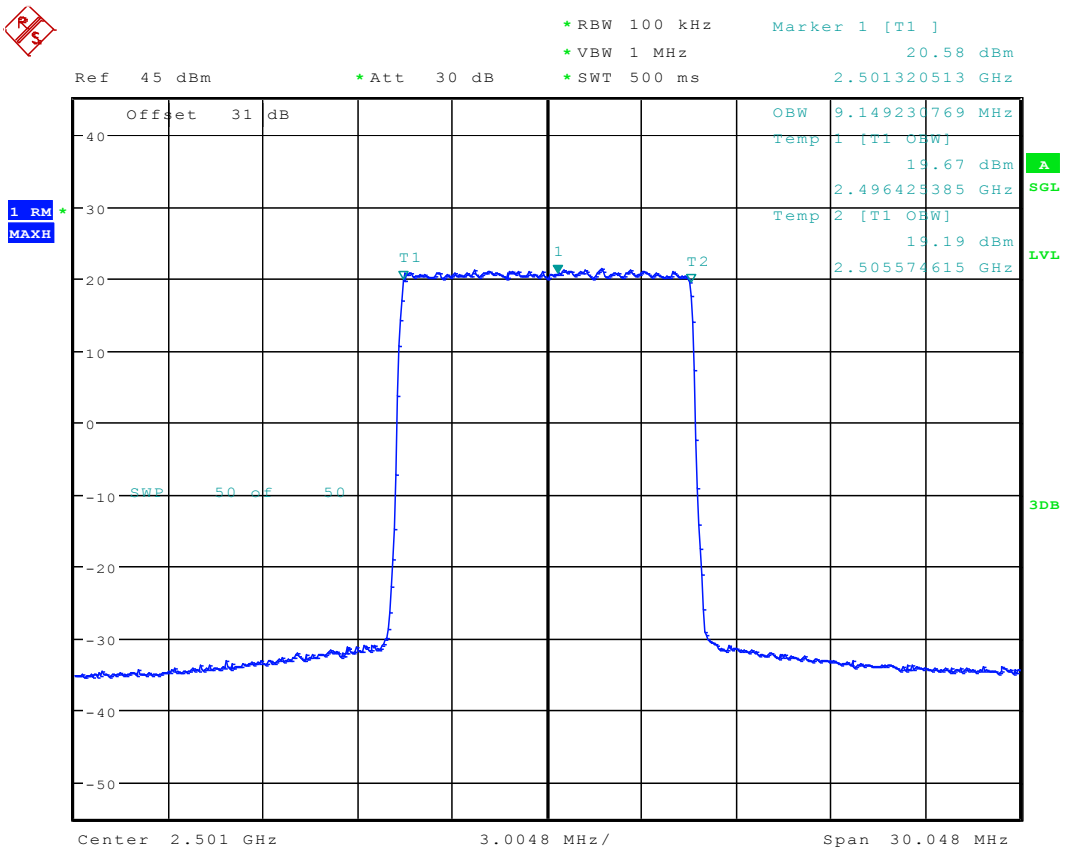
# Ch.T




Date: 9.JAN.2009 10:17:24

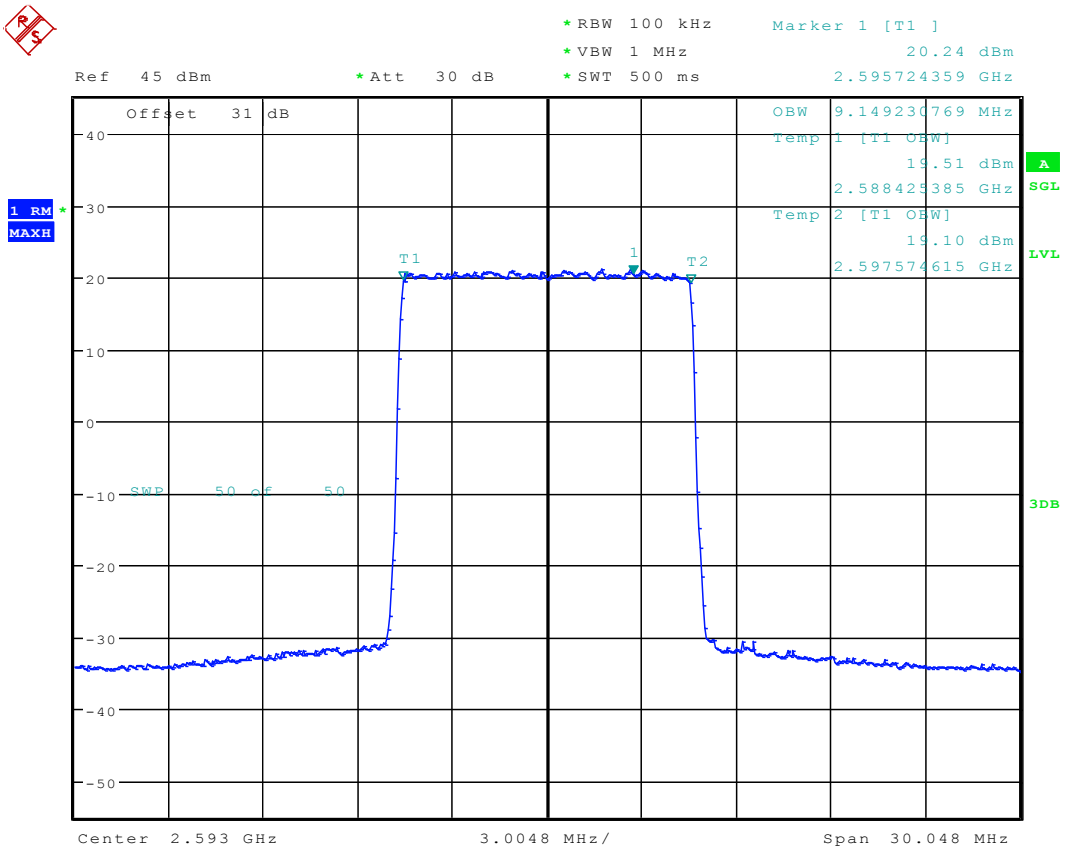
# TM7:

## Ch.B



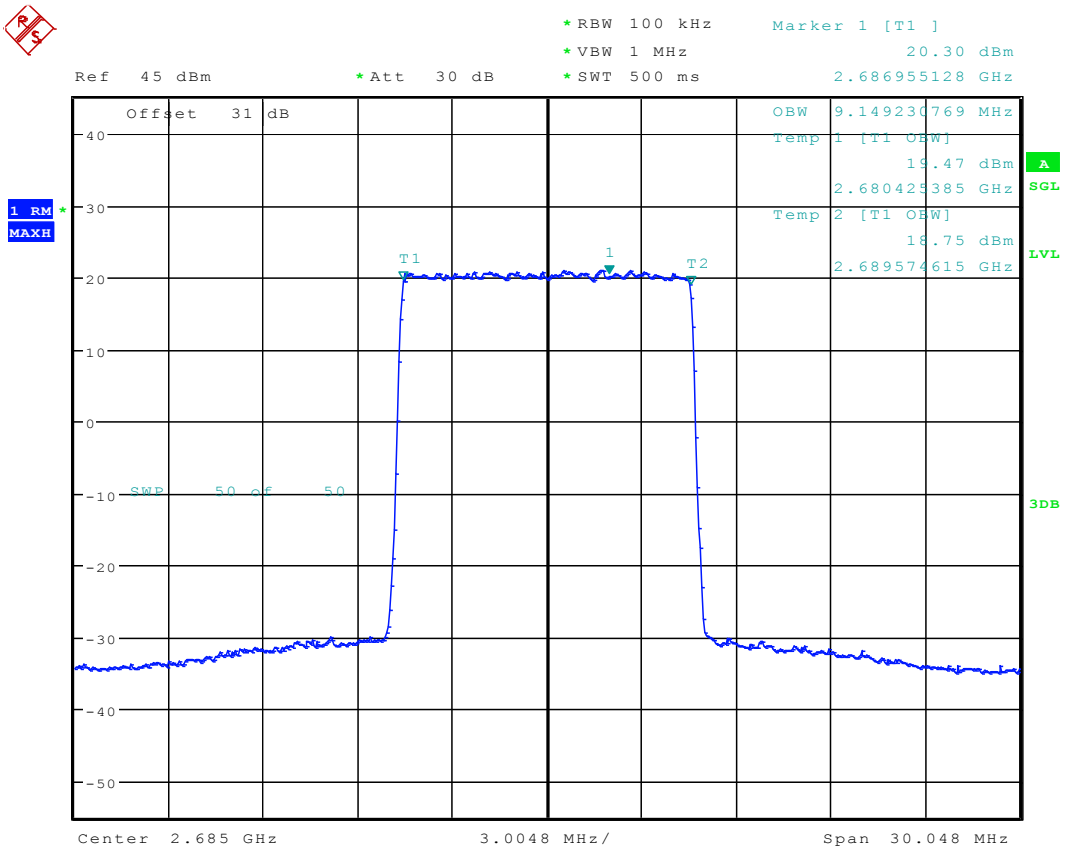

Date: 9.JAN.2009 08:50:44

# Ch.M




Date: 9.JAN.2009 09:20:37

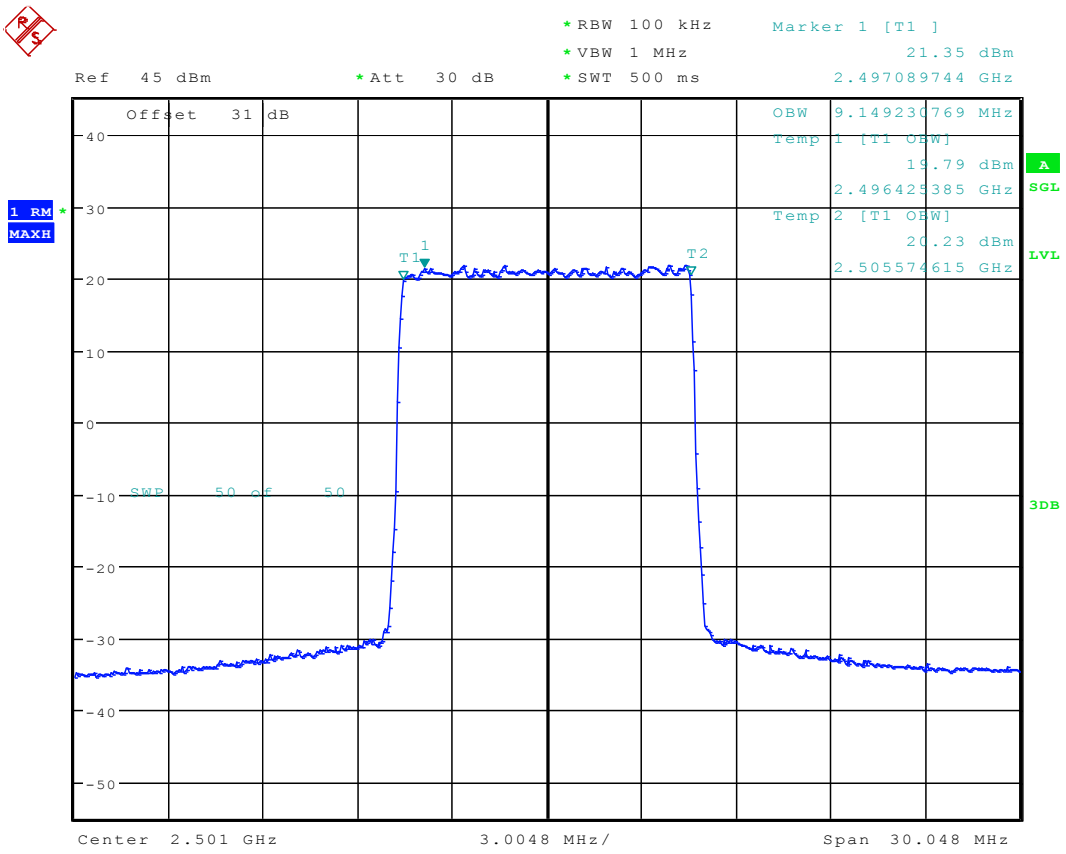
# Ch.T




Date: 9.JAN.2009 10:14:41

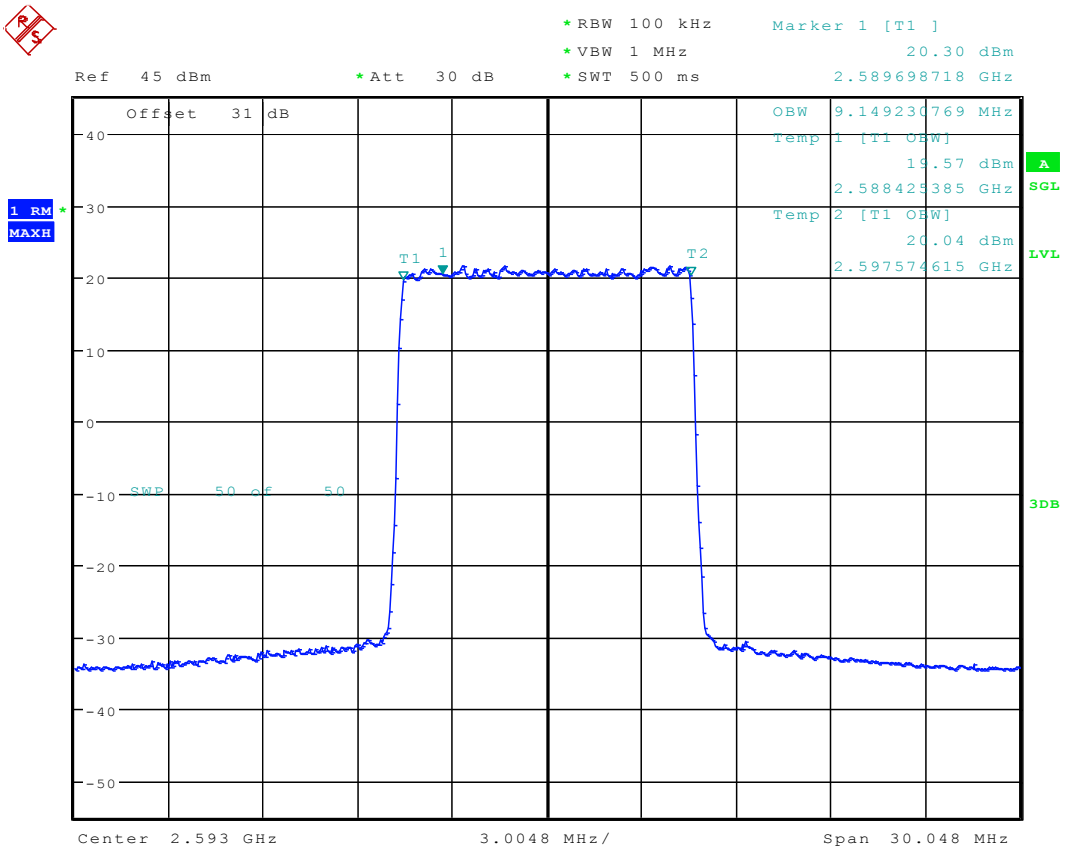
# TM8:

## Ch.B



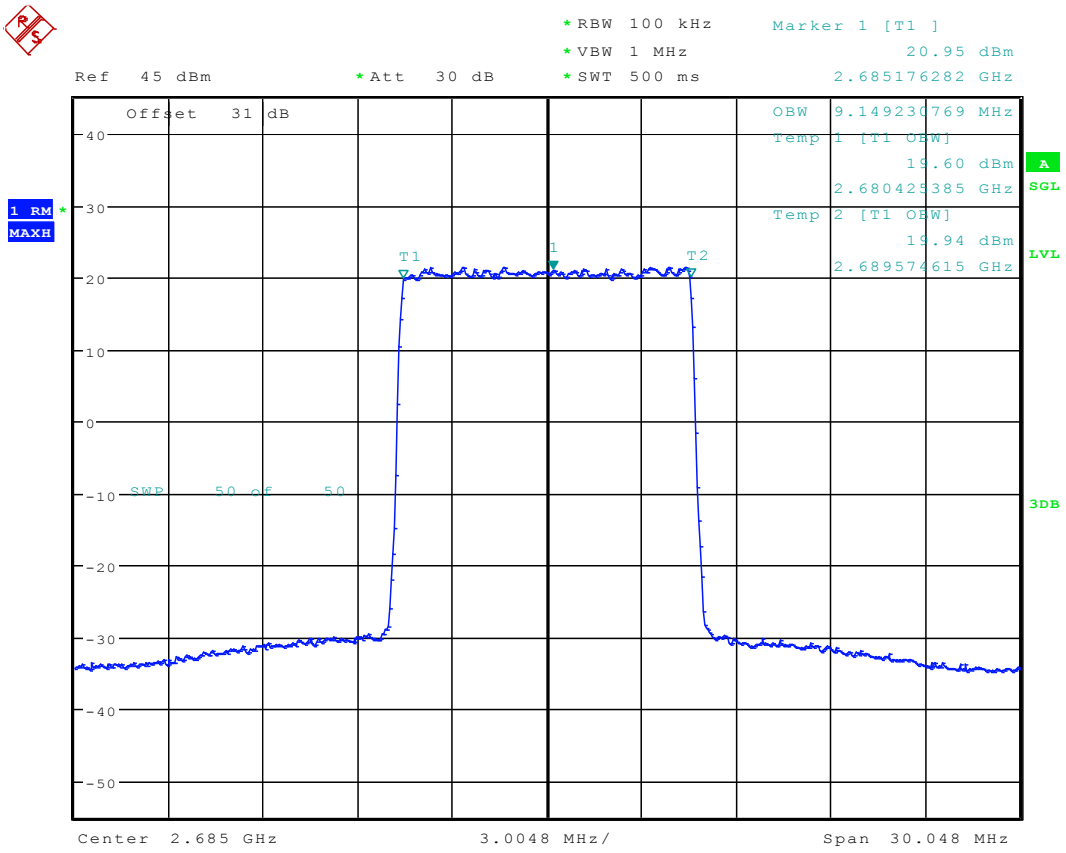

Date: 9.JAN.2009 08:53:29

# Ch.M




Date: 9.JAN.2009 09:17:51

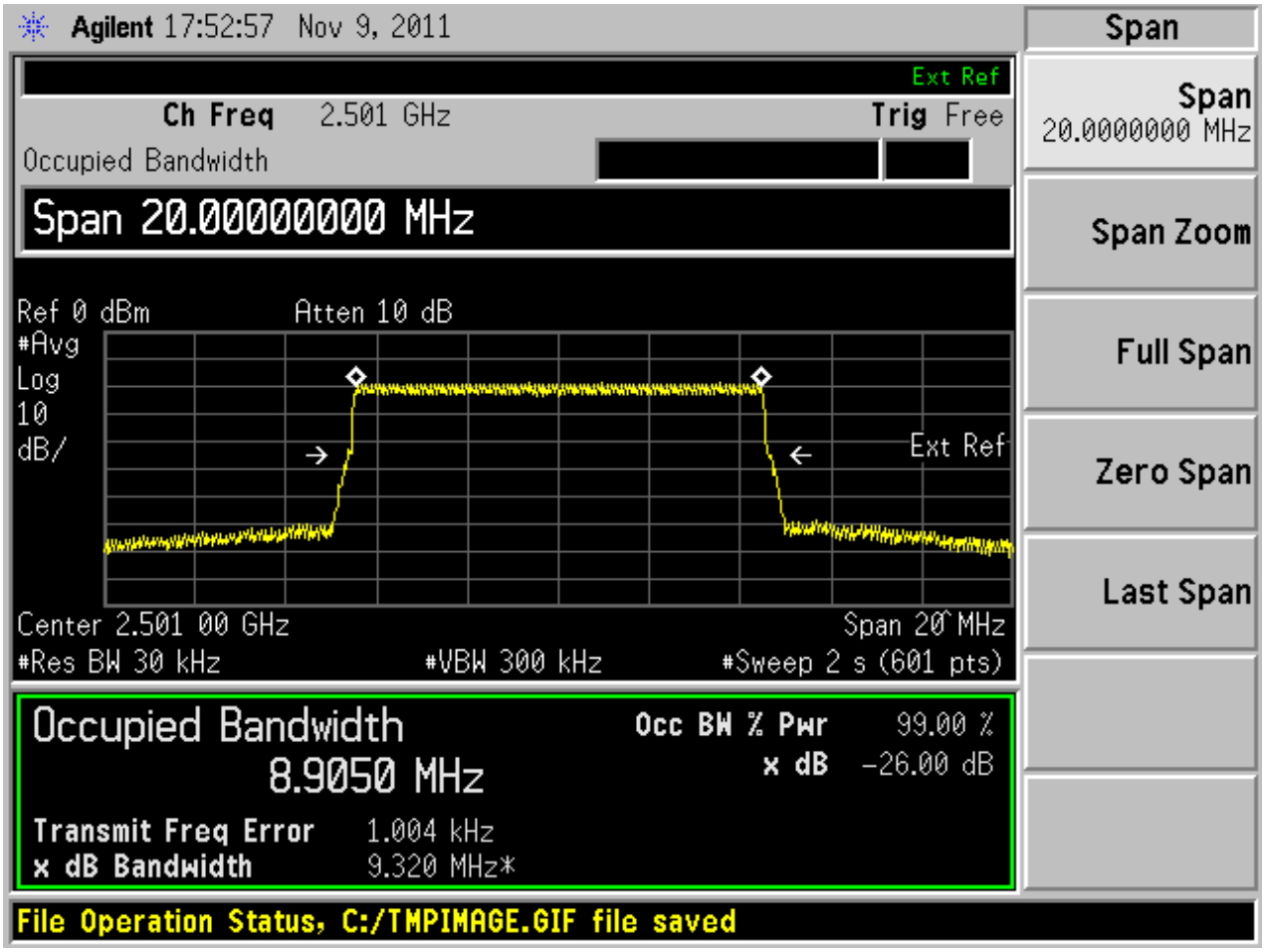
# Ch.T



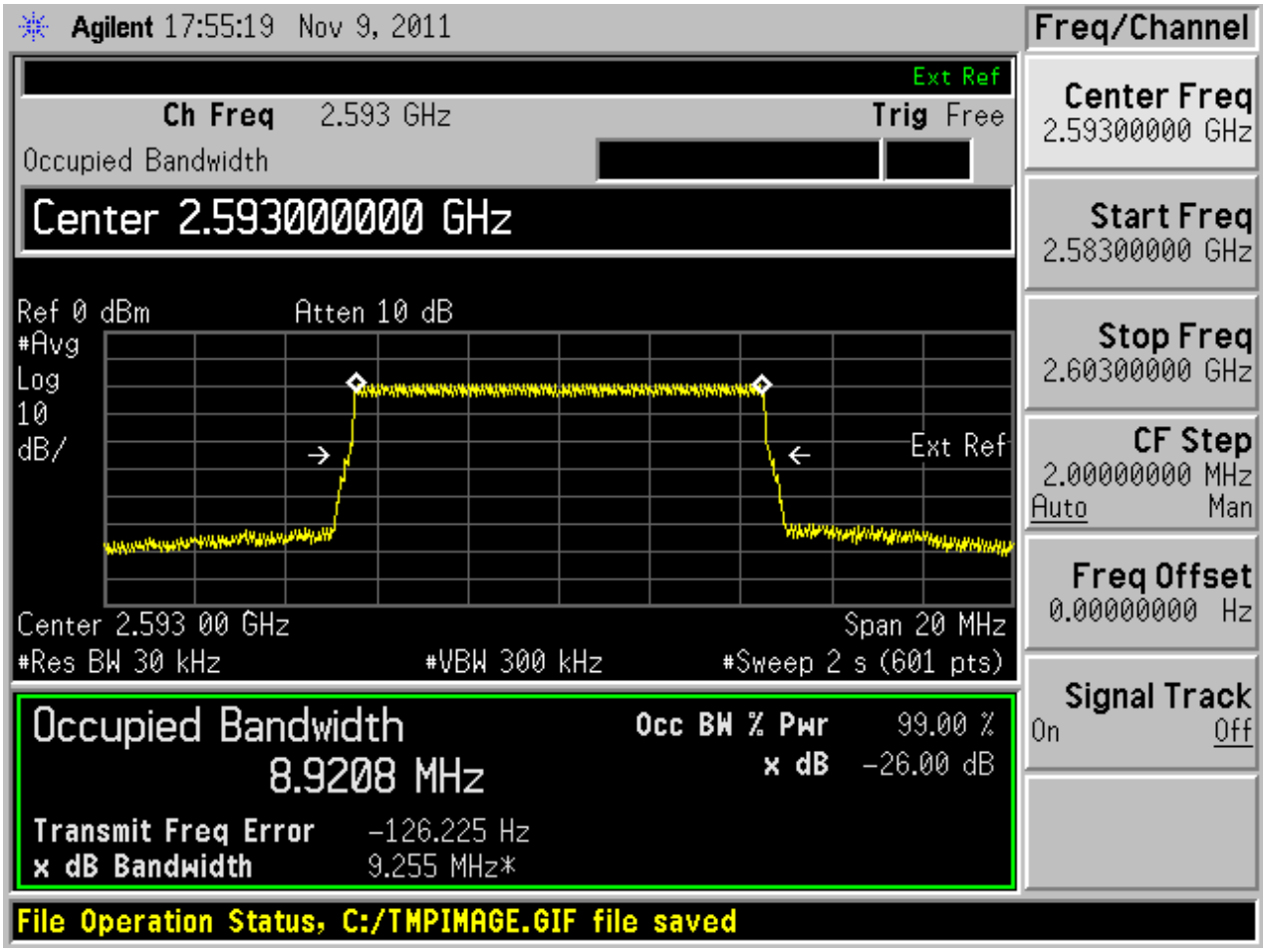

Date: 9.JAN.2009 10:12:00

# (3) LTE, 10MHz Channel Bandwidth:

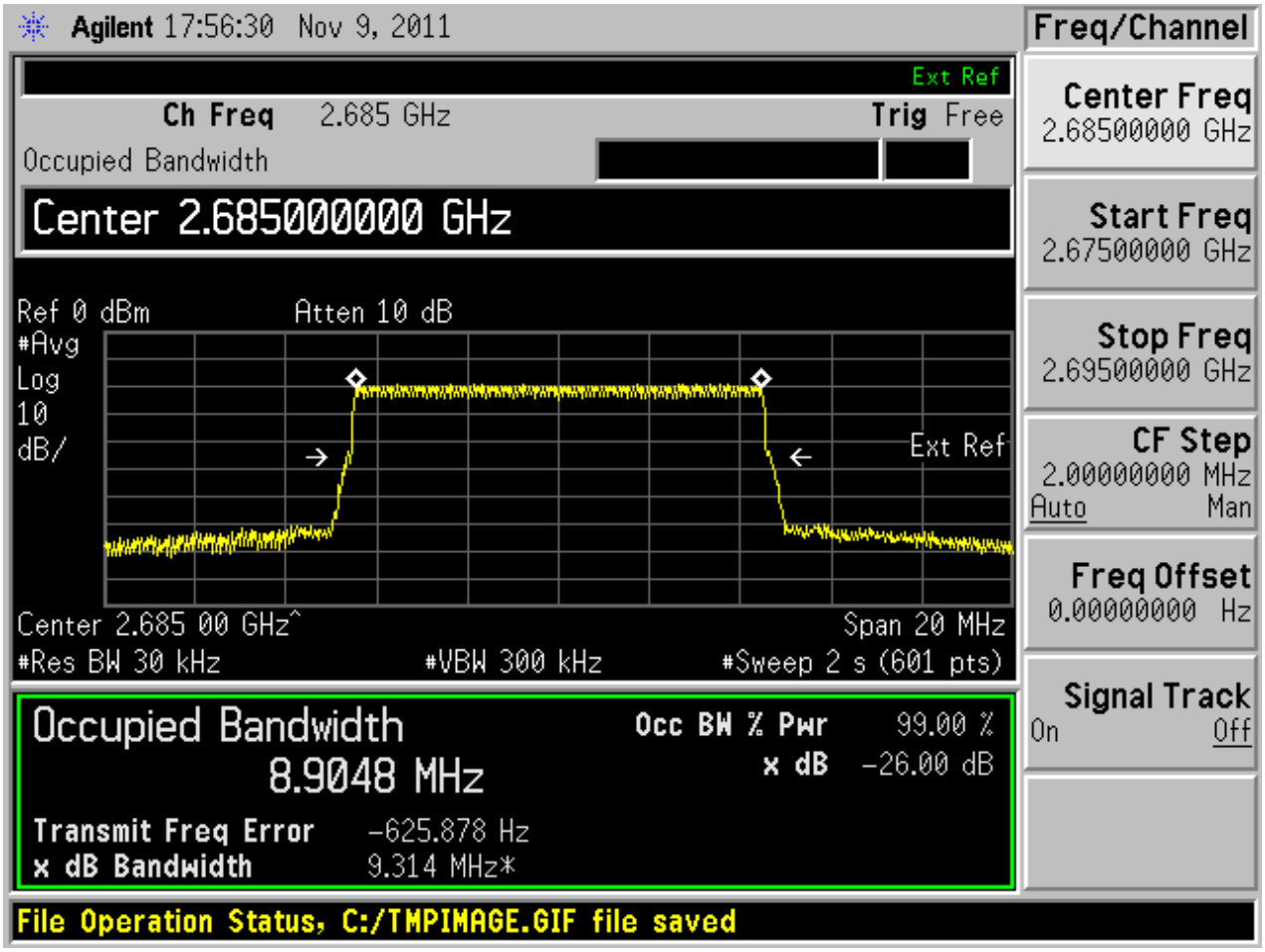
## Ch. B



# Ch. M

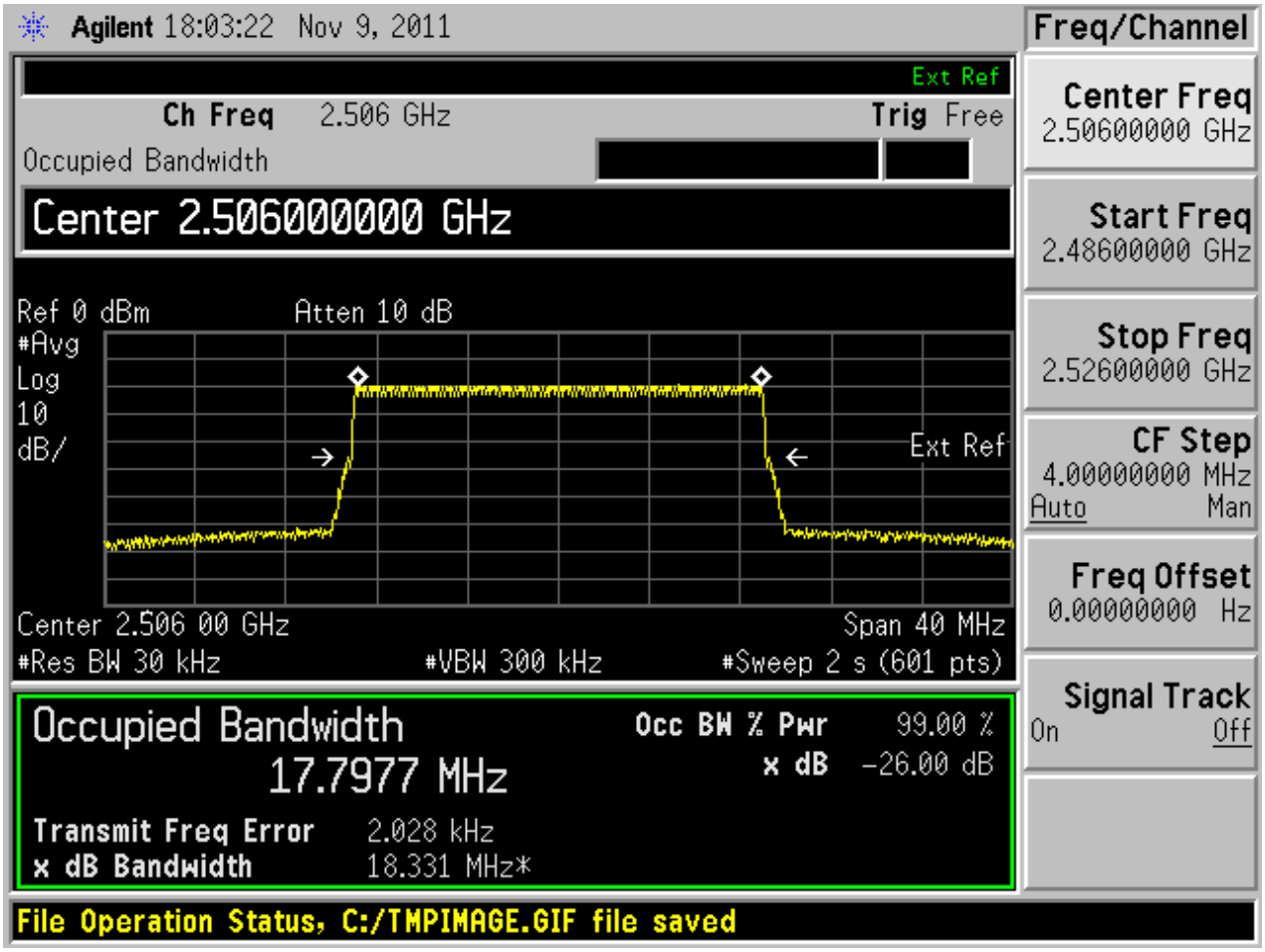

Agilent 17:55:19 Nov 9, 2011
Freq/Channel
Ext Ref
Ch Freq 2.593 GHz
Trig Free
Occupied Bandwidth
Center 2.593000000 GHz
Ref 0 dBm
Atten 10 dB
#Avg
Log
10
dB/
Ext Ref
Center 2.593 00 GHz
Span 20 MHz
#Res BW 30 kHz
#VBW 300 kHz
#Sweep 2 s (601 pts)
Occupied Bandwidth
8.9208 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error -126.225 Hz
x dB Bandwidth 9.255 MHz*
Center Freq
2.59300000 GHz
Start Freq
2.58300000 GHz
Stop Freq
2.60300000 GHz
CF Step
2.00000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
File Operation Status, C:/TMPIMAGE.GIF file saved

# Ch. T

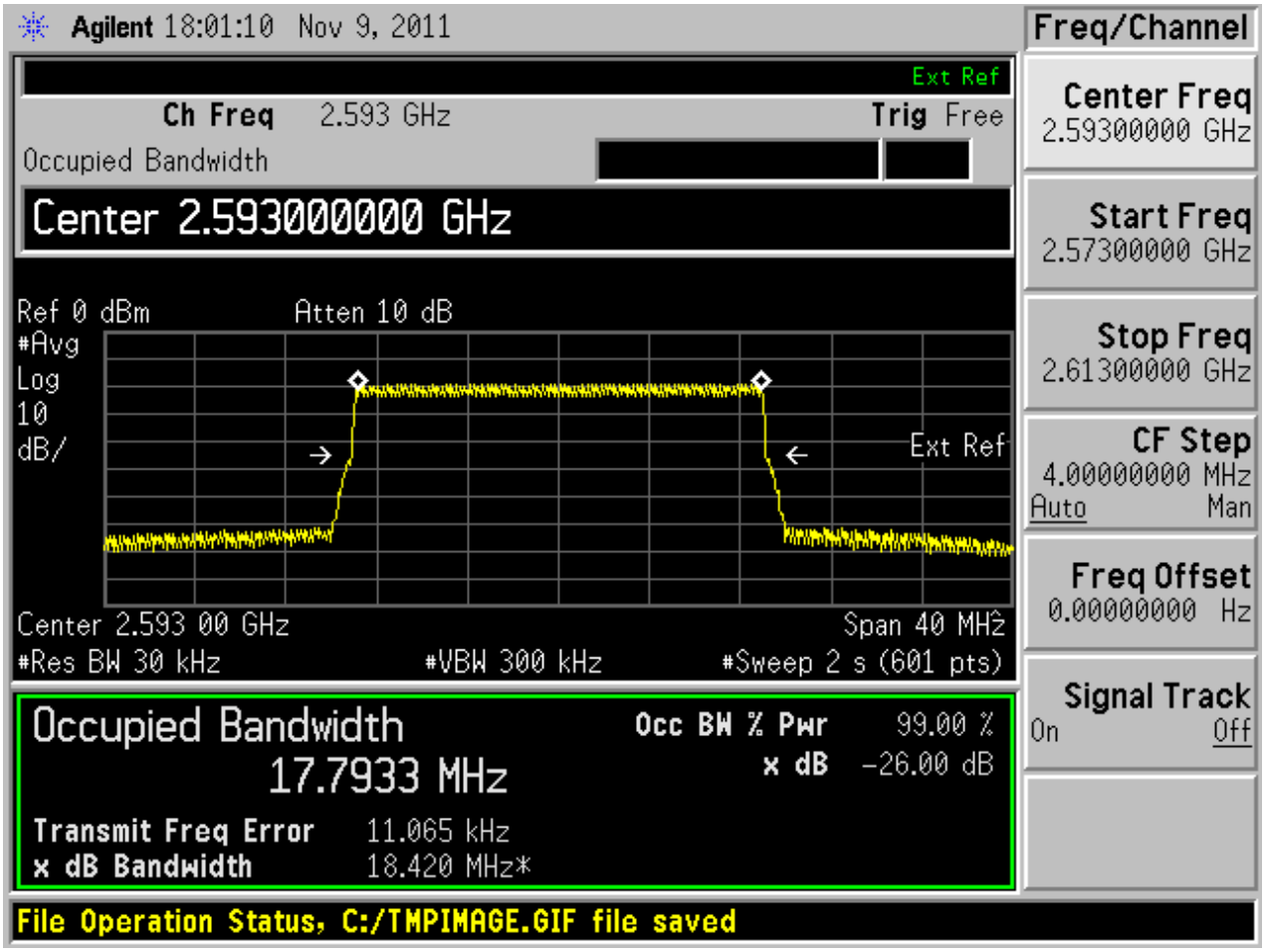

Agilent 17:56:30 Nov 9, 2011
Freq/Channel
Ext Ref
Ch Freq 2.685 GHz
Trig Free
Occupied Bandwidth
Center 2.685000000 GHz
Ref 0 dBm
Atten 10 dB
#Avg
Log
10
dB/
Ext Ref
Center 2.685 00 GHz^
Span 20 MHz
#Res BW 30 kHz
#VBW 300 kHz
#Sweep 2 s (601 pts)
Occupied Bandwidth
8.9048 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error -625.878 Hz
x dB Bandwidth 9.314 MHz*
File Operation Status, C:/TMPIMAGE.GIF file saved
Center Freq
2.68500000 GHz
Start Freq
2.67500000 GHz
Stop Freq
2.69500000 GHz
CF Step
2.00000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

# (4) LTE, 20MHz Channel Bandwidth:

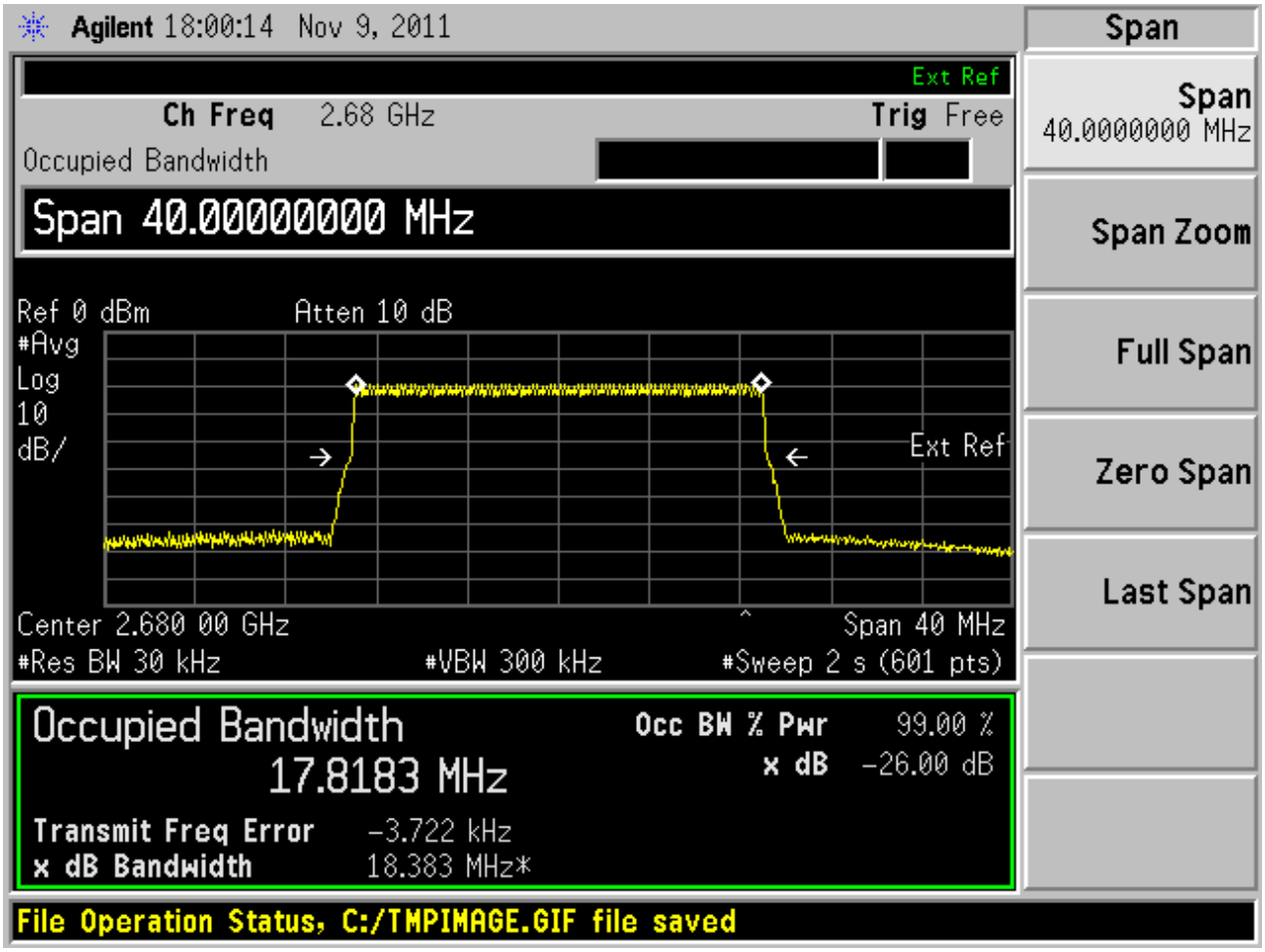
## Ch. B



# Ch. M


Agilent 18:01:10 Nov 9, 2011
Freq/Channel
Ext Ref
Ch Freq 2.593 GHz
Trig Free
Occupied Bandwidth
Center 2.593000000 GHz
Ref 0 dBm
Atten 10 dB
#Avg
Log
10
dB/
Ext Ref
Center 2.593 00 GHz
Span 40 MHz
#Res BW 30 kHz
#VBW 300 kHz
#Sweep 2 s (601 pts)
Occupied Bandwidth
17.7933 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error 11.065 kHz
x dB Bandwidth 18.420 MHz*
File Operation Status, C:/TMPIMAGE.GIF file saved
Center Freq
2.59300000 GHz
Start Freq
2.57300000 GHz
Stop Freq
2.61300000 GHz
CF Step
4.00000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

# Ch. T


Agilent 18:00:14 Nov 9, 2011
Ext Ref
Ch Freq 2.68 GHz
Trig Free
Occupied Bandwidth
Span 40.00000000 MHz
Ref 0 dBm
Atten 10 dB
#Avg
Log
10
dB/
Ext Ref
Center 2.680 00 GHz
Span 40 MHz
#Res BW 30 kHz
#VBW 300 kHz
#Sweep 2 s (601 pts)
Occupied Bandwidth
17.8183 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error -3.722 kHz
x dB Bandwidth 18.383 MHz*
File Operation Status, C:/TMPIMAGE.GIF file saved
Span
Span
40.0000000 MHz
Span Zoom
Full Span
Zero Span
Last Span