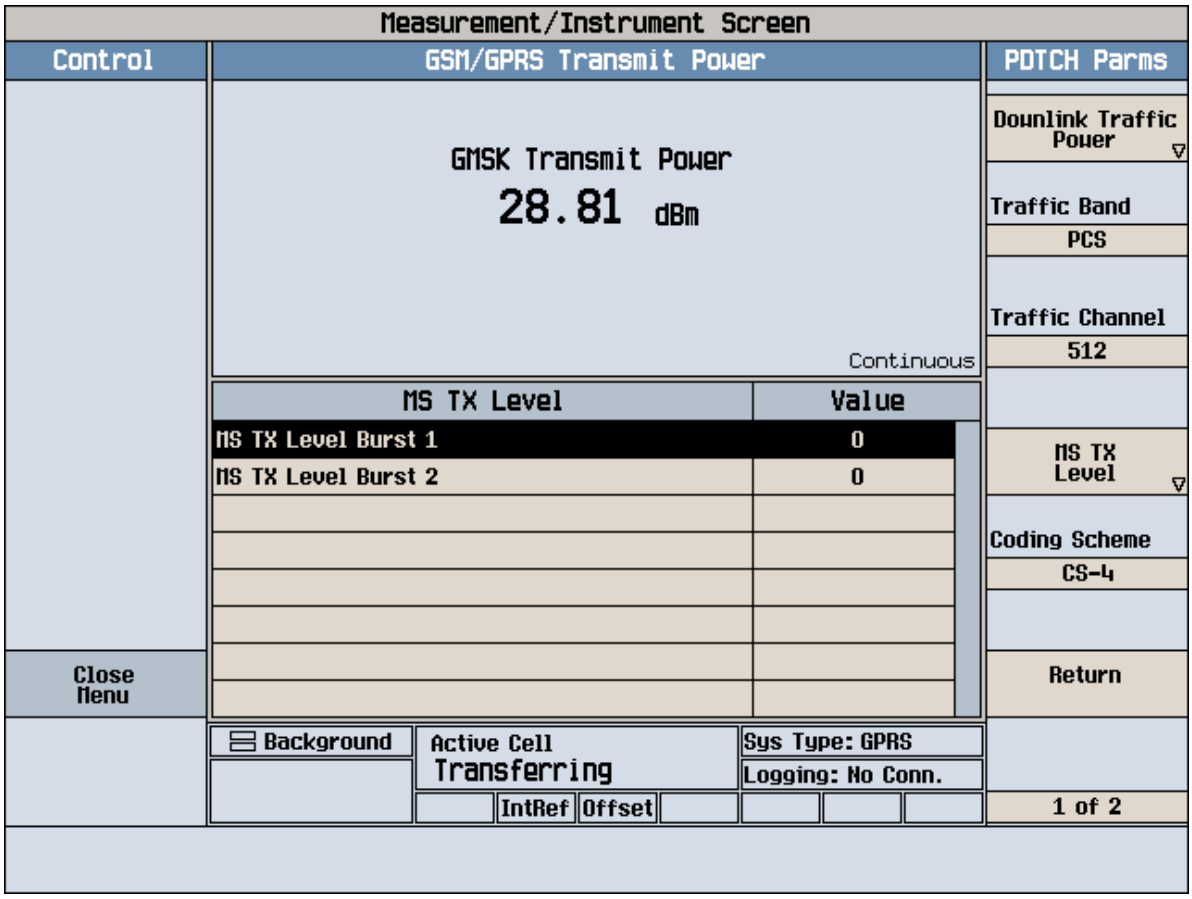
Appendix A

Effective Radiated Power of Transmitter

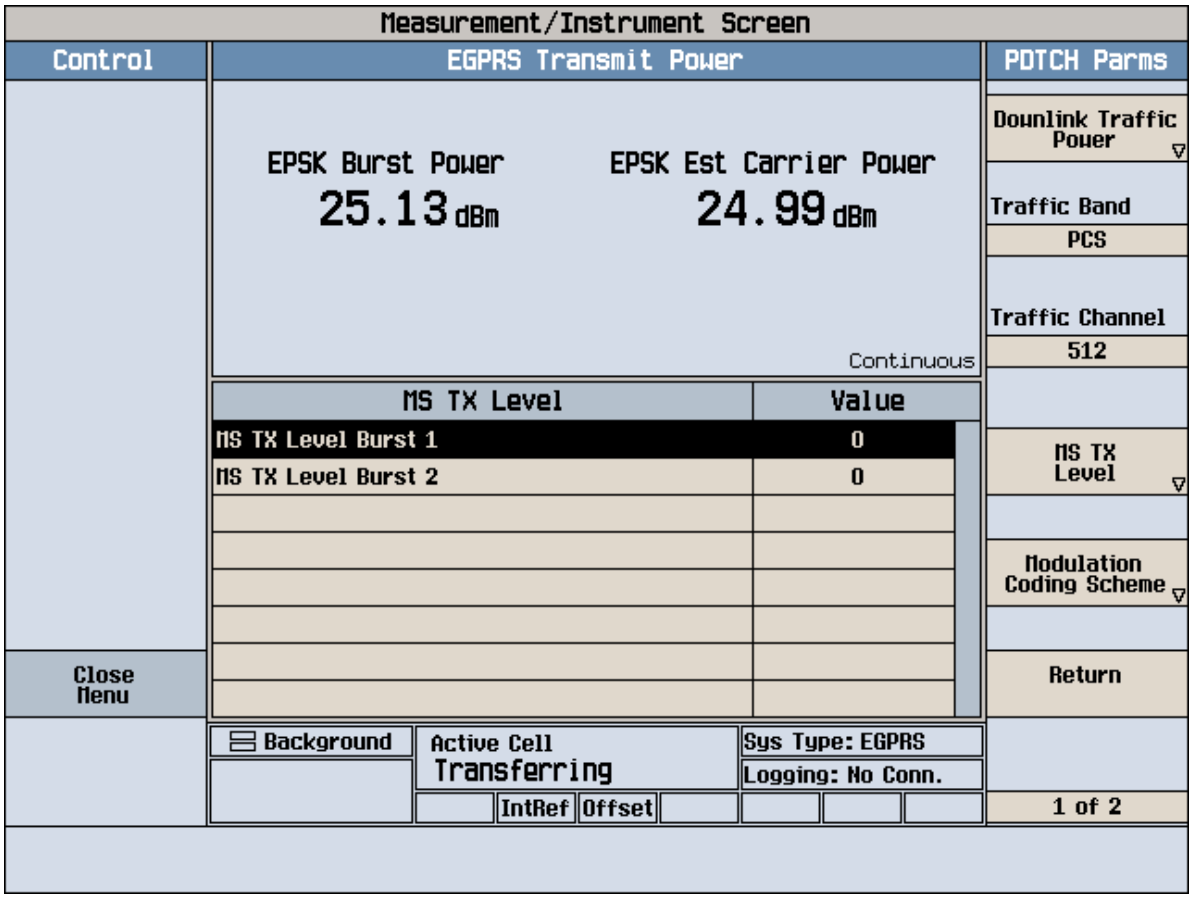
According to FCC Part 2.1046 & 24.232

Channel 512

GPRS MODE:

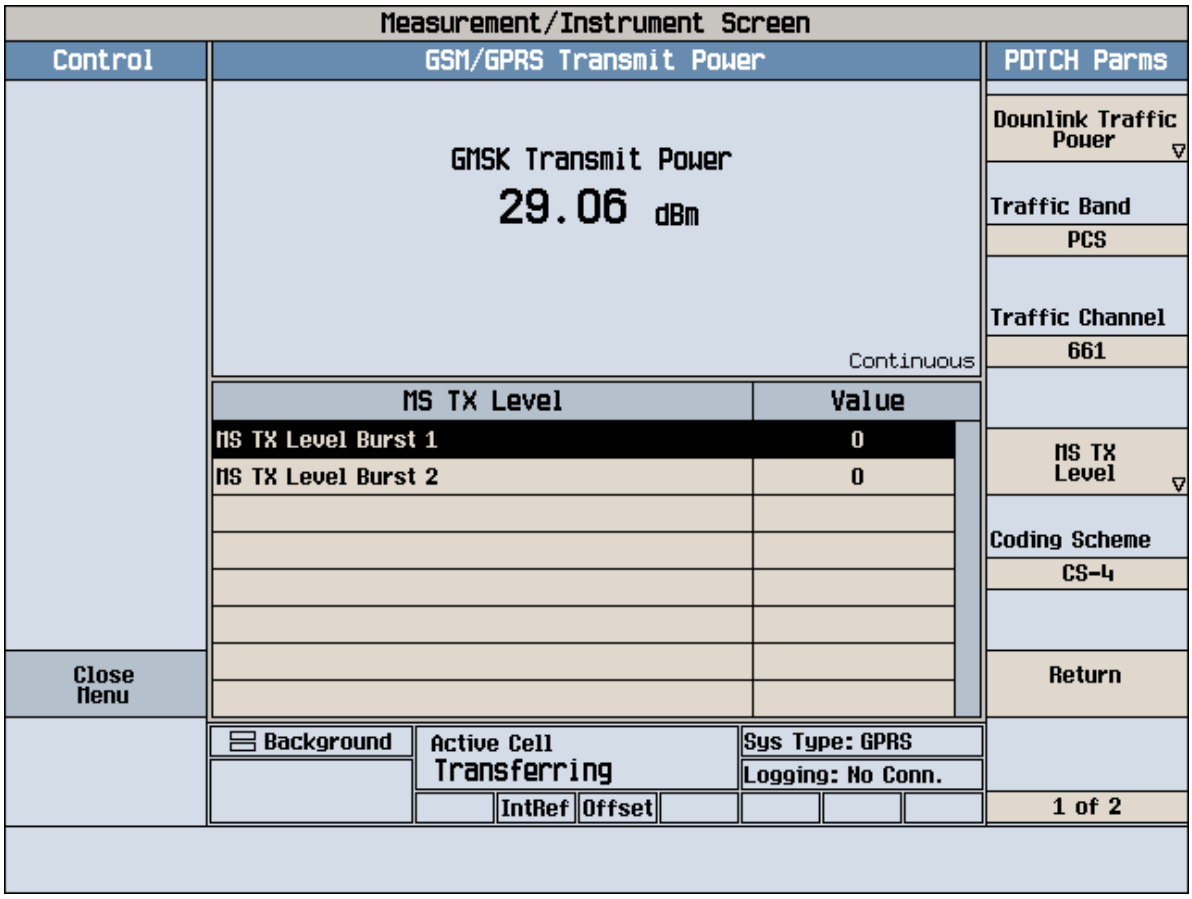


EDGE MODE:

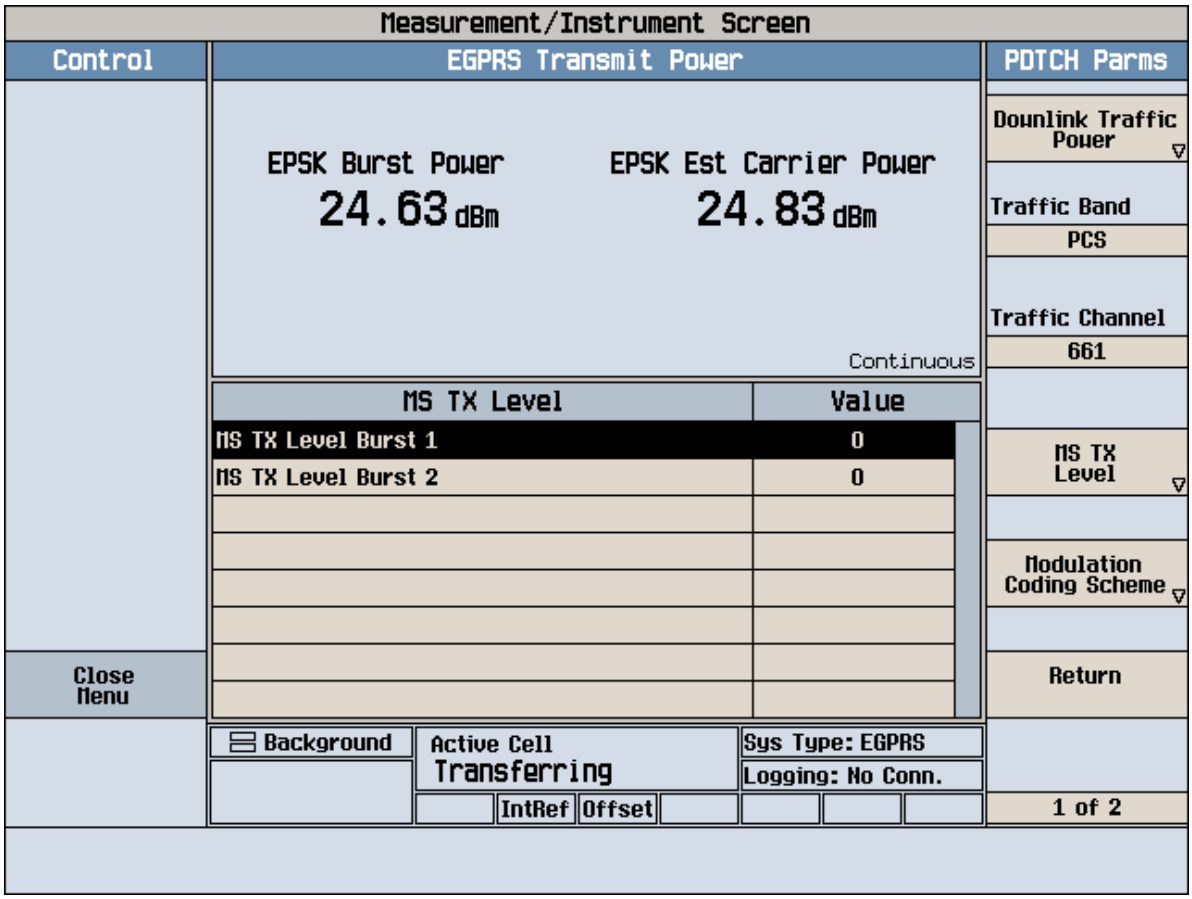

Measurement/Instrument Screen
Control
EGPRS Transmit Power
PDTCH Parms
EPSK Burst Power
25.13 dBm
EPSK Est Carrier Power
24.99 dBm
Continuous
Dounlink Traffic Power
Traffic Band
PCS
Traffic Channel
512
MS TX Level
Value
MS TX Level Burst 1
0
MS TX Level Burst 2
0
MS TX Level
Modulation Coding Scheme
Close Menu
Return
Background
Active Cell
Transferring
Sys Type: EGPRS
Logging: No Conn.
IntRef
Offset
1 of 2

Channel 661

GPRS MODE:

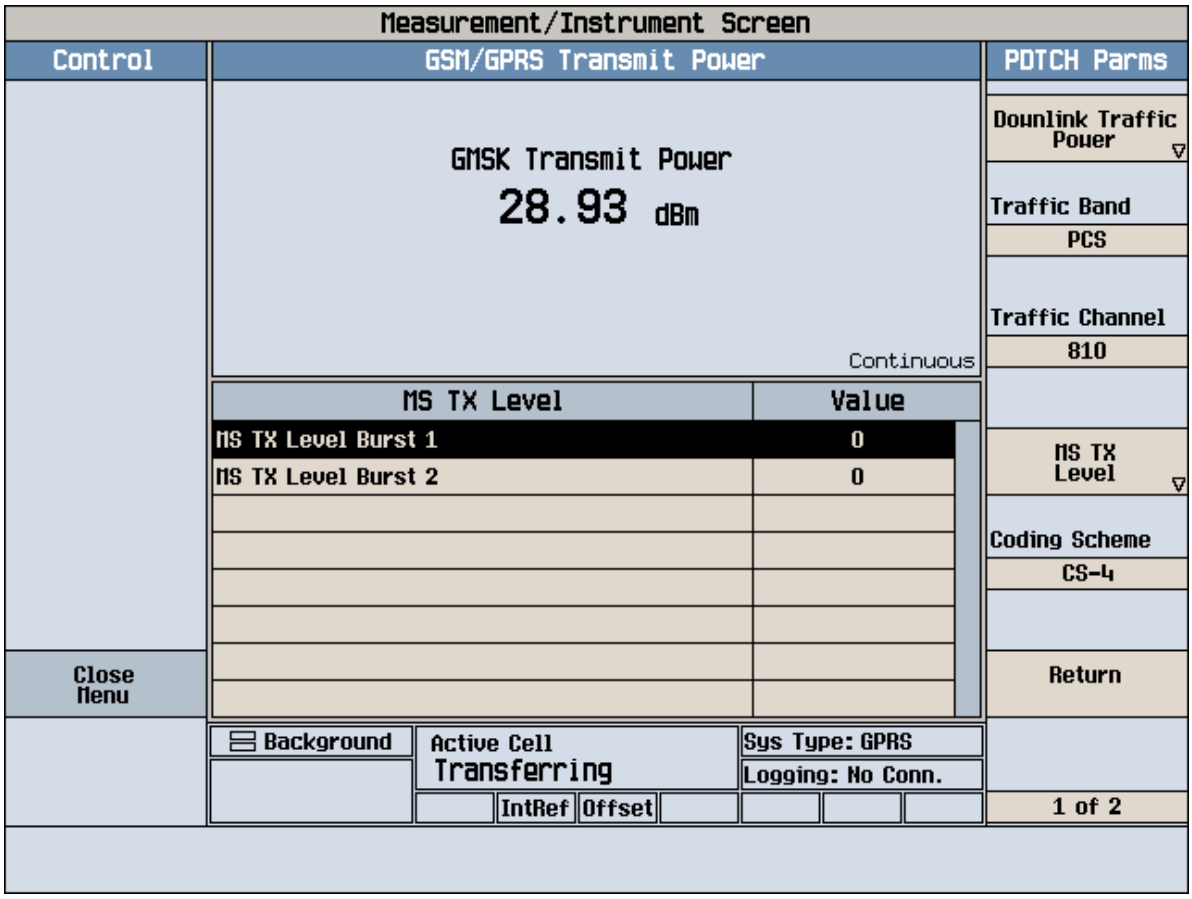


EDGE MODE:

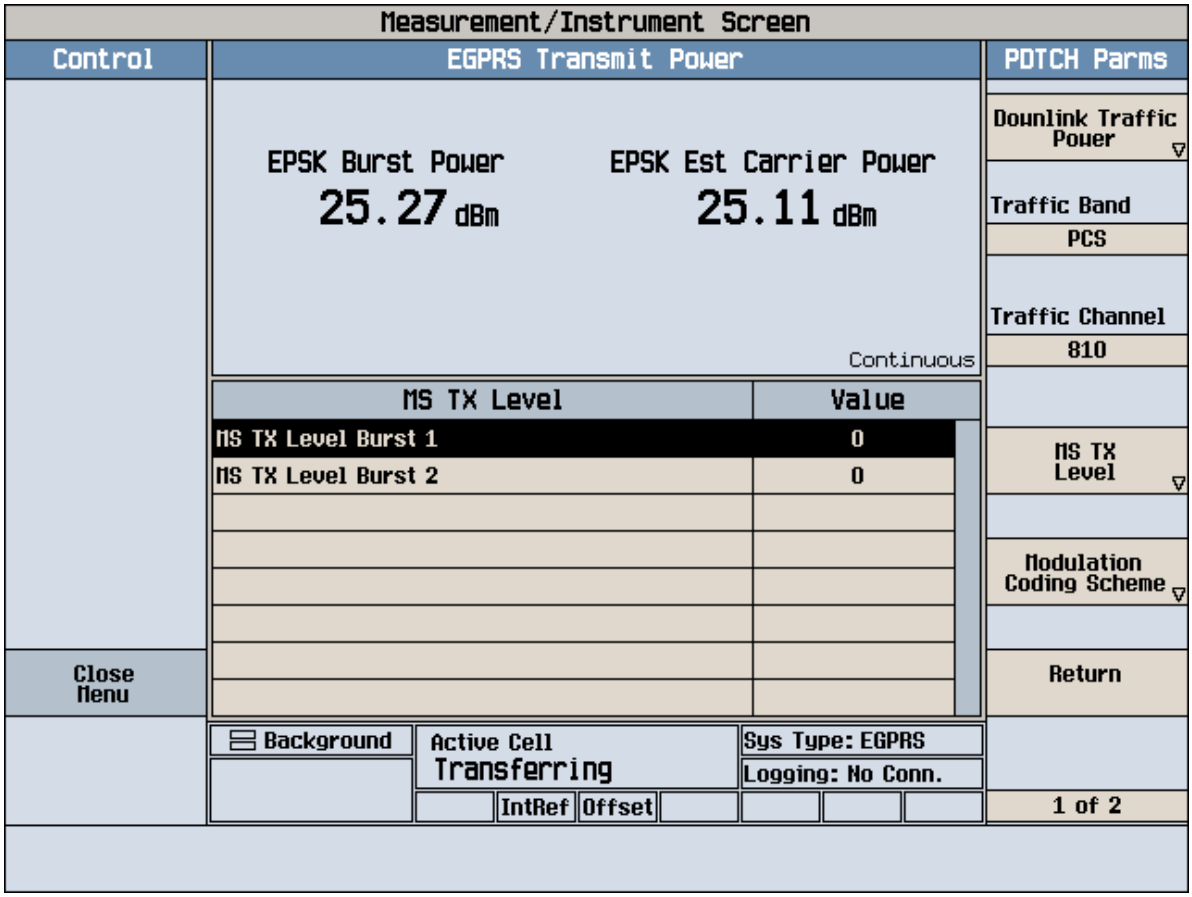

Measurement/Instrument Screen
Control
EGPRS Transmit Power
PDTCH Parms
EPSK Burst Power
24.63 dBm
EPSK Est Carrier Power
24.83 dBm
Continuous
Dounlink Traffic Power
Traffic Band
PCS
Traffic Channel
661
MS TX Level
Value
MS TX Level Burst 1
0
MS TX Level Burst 2
0
MS TX Level
Modulation Coding Scheme
Close Menu
Return
Background
Active Cell
Transferring
Sys Type: EGPRS
Logging: No Conn.
IntRef
Offset
1 of 2

Channel 810

GPRS MODE:



EDGE MODE:

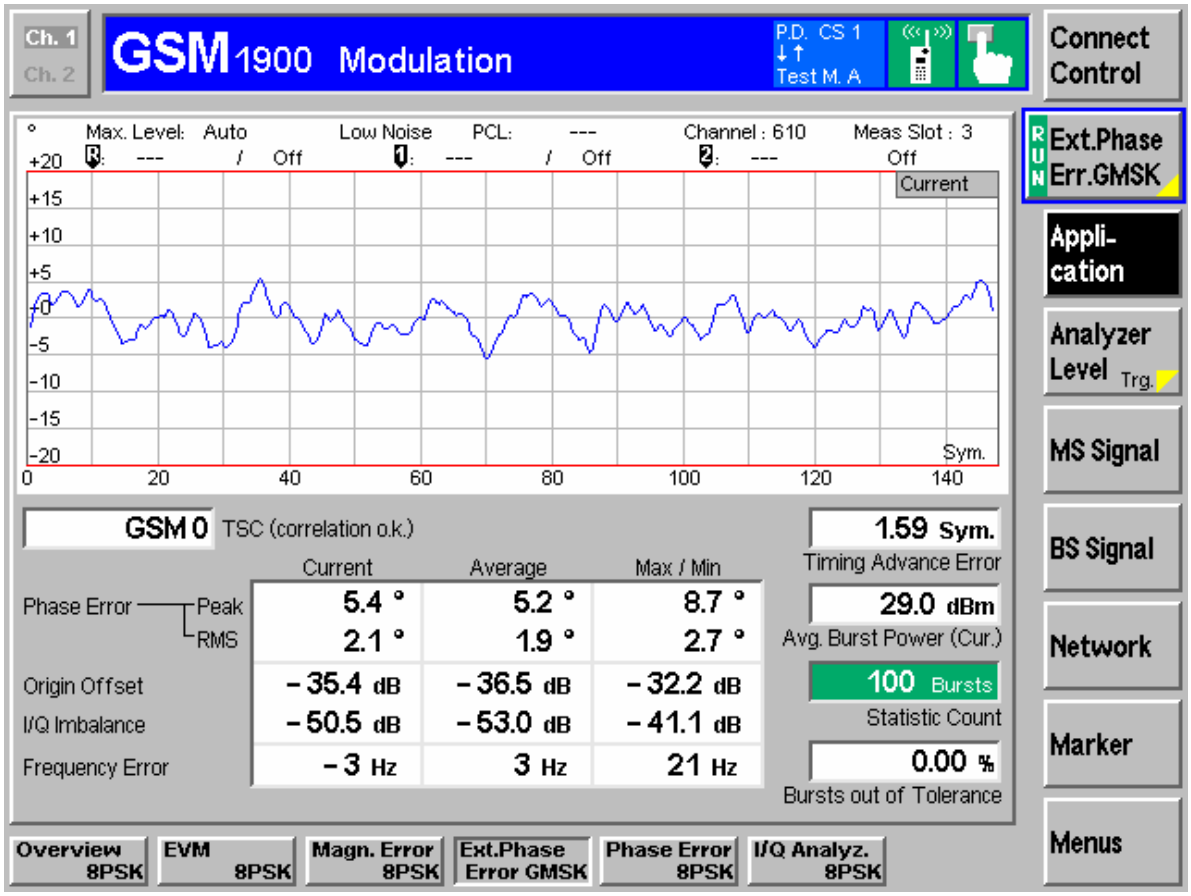

Measurement/Instrument Screen
Control
EGPRS Transmit Power
PDTCH Parms
EPSK Burst Power
25.27 dBm
EPSK Est Carrier Power
25.11 dBm
Continuous
Dounlink Traffic Power
Traffic Band
PCS
Traffic Channel
810
MS TX Level
Value
MS TX Level Burst 1
0
MS TX Level Burst 2
0
MS TX Level
Modulation Coding Scheme
Close Menu
Return
Background
Active Cell
Transferring
Sys Type: EGPRS
Logging: No Conn.
IntRef
Offset
1 of 2

Appendix B

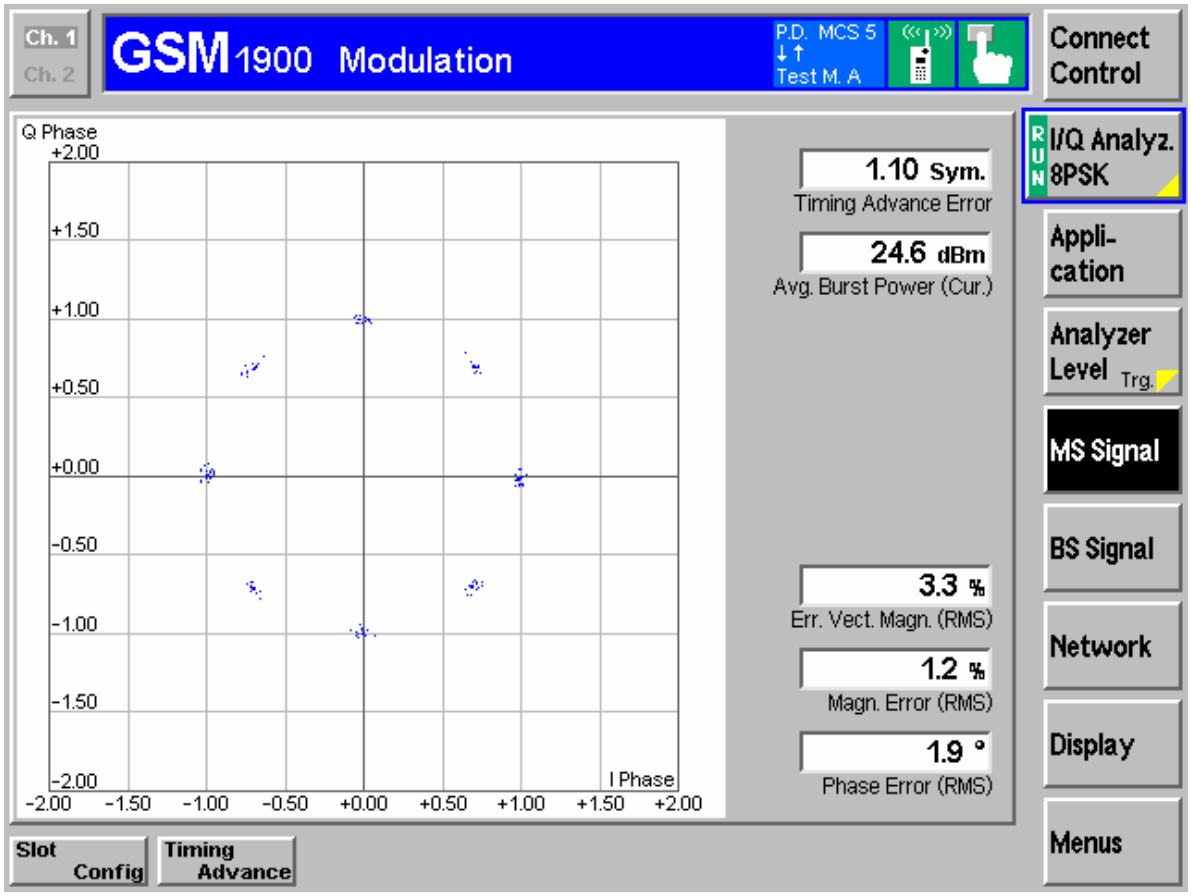
Modulation Characteristics

According to FCC Part 2.1047& Part 24 Subpart E

Channel 661(GPRS)



Channel 661(EDGE)



Appendix C

Occupied Bandwidth

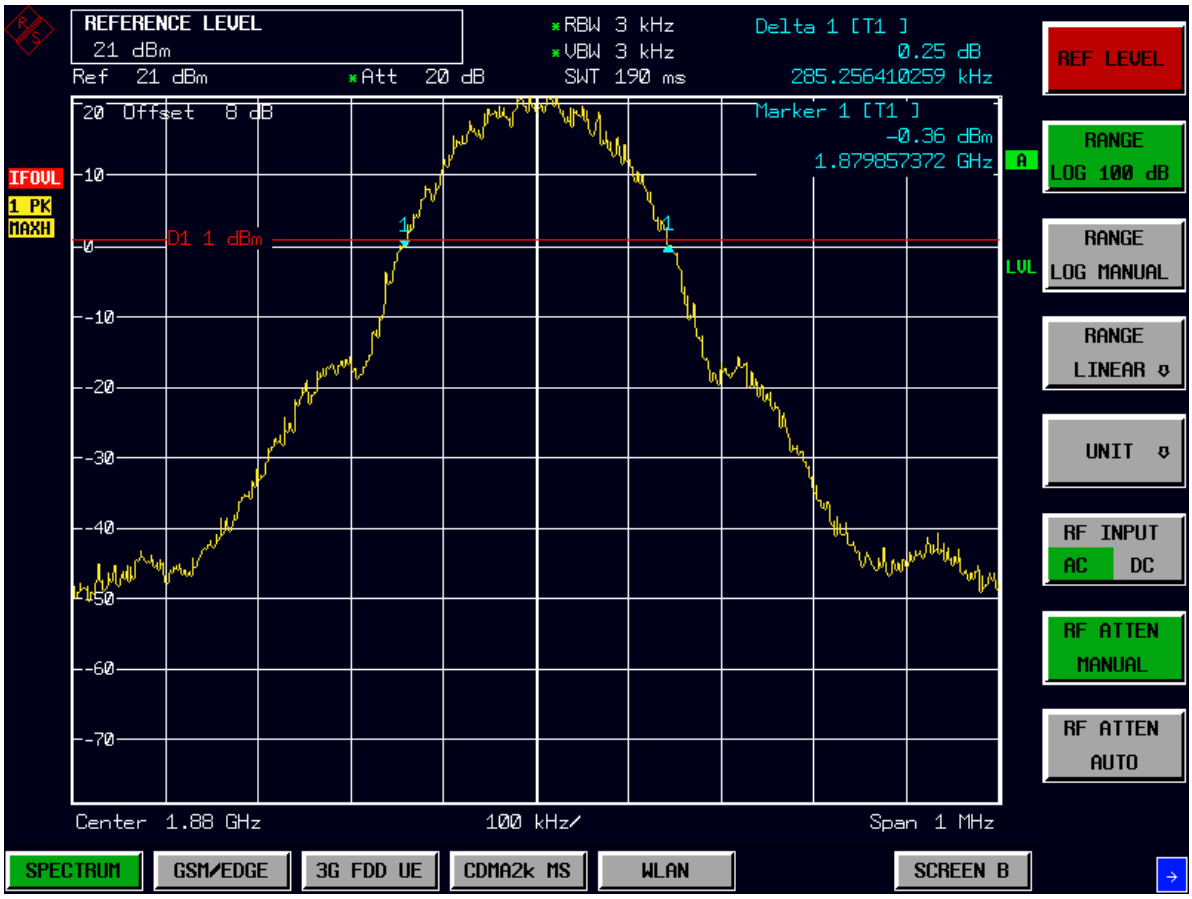
According to FCC part 2.1049 & Part 24 Subpart E

99%:

Channel 512(GPRS)

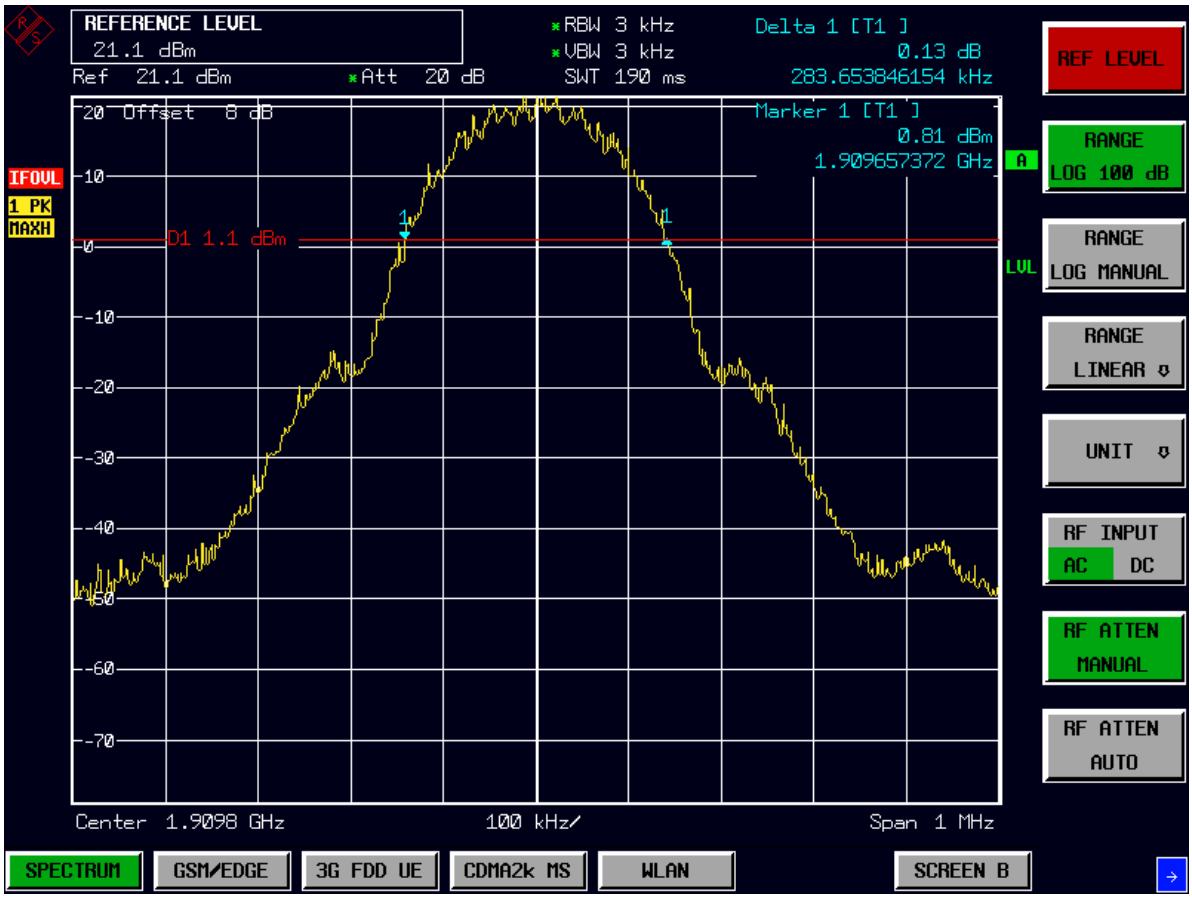
Channel 512(EDGE)

Channel 661(GPRS)



Channel 661(EDGE)

Channel 810(GPRS)

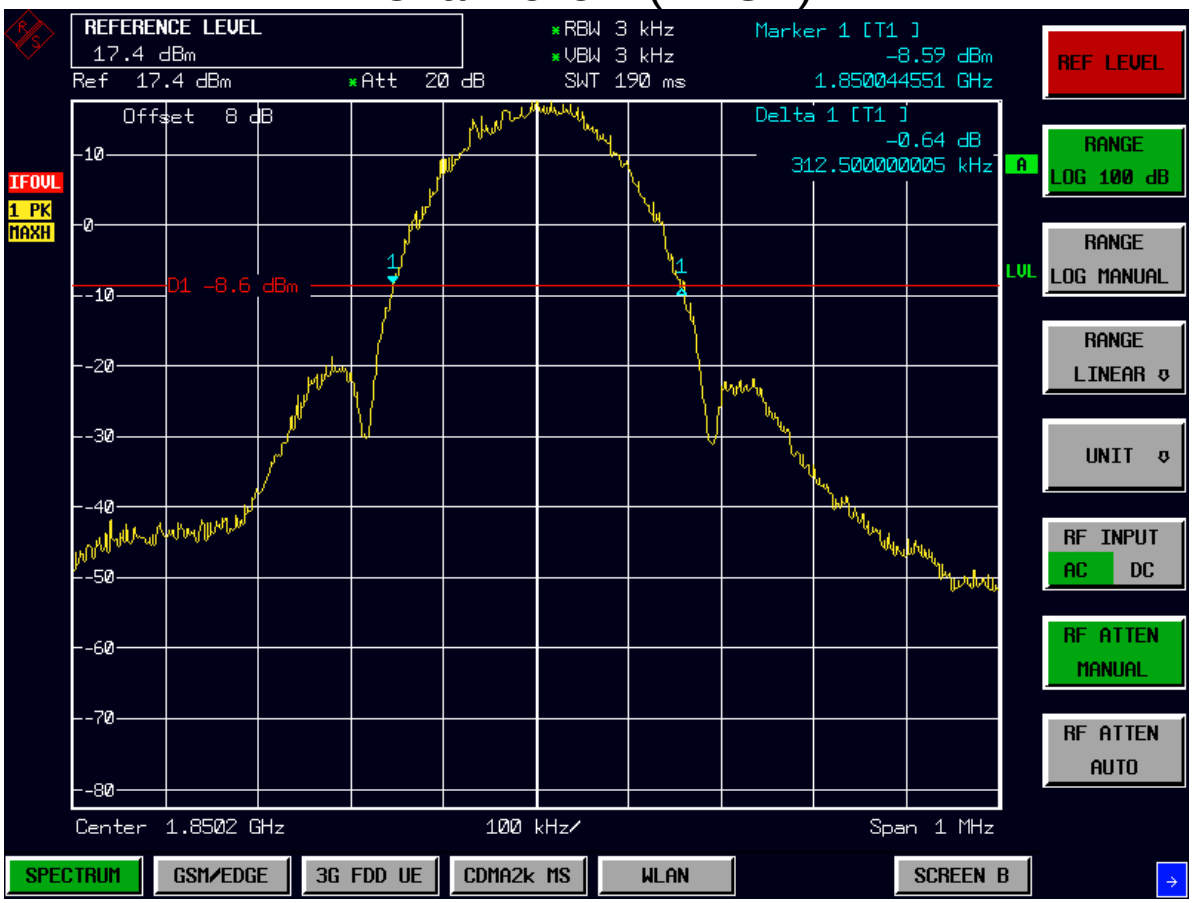


Channel 810(EDGE)

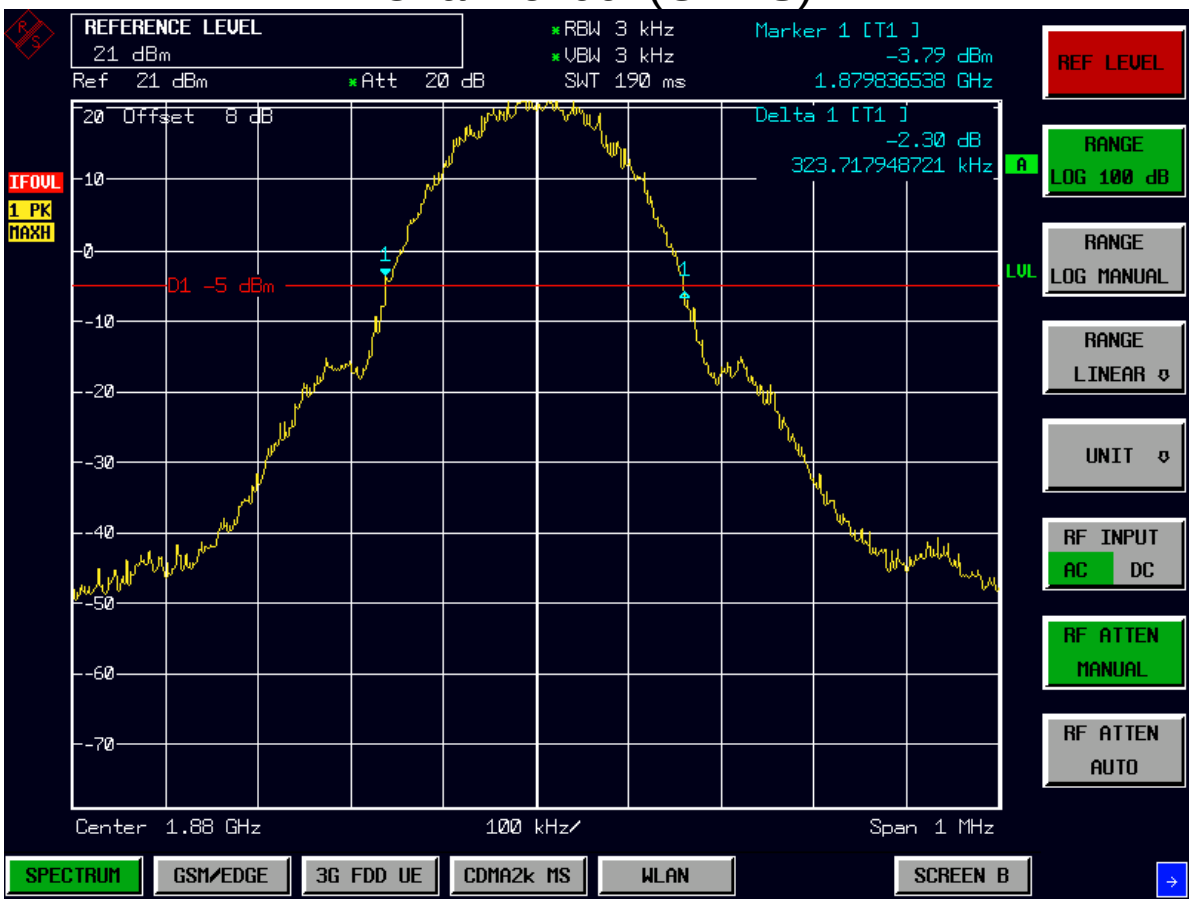
26dBc：

Channel 512(GPRS)

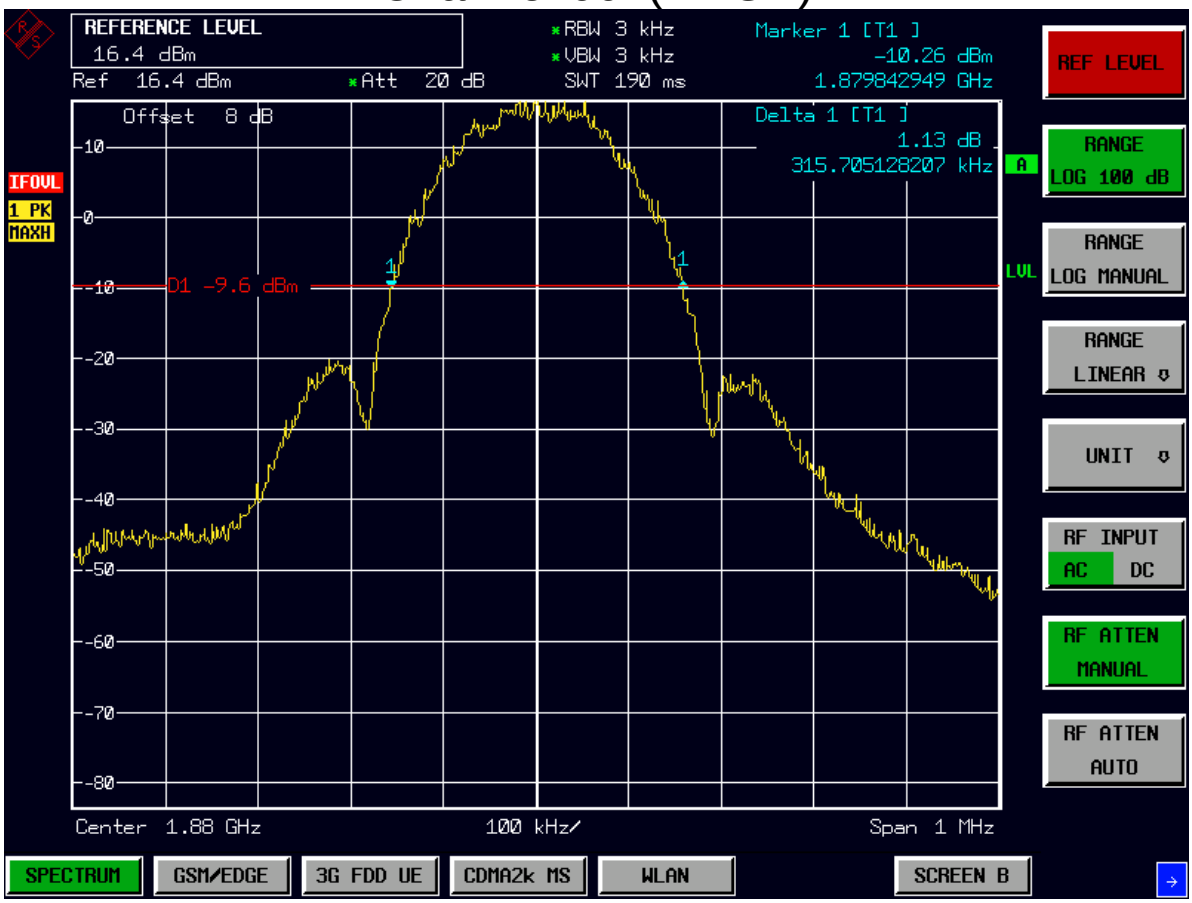
Channel 512(EDGE)



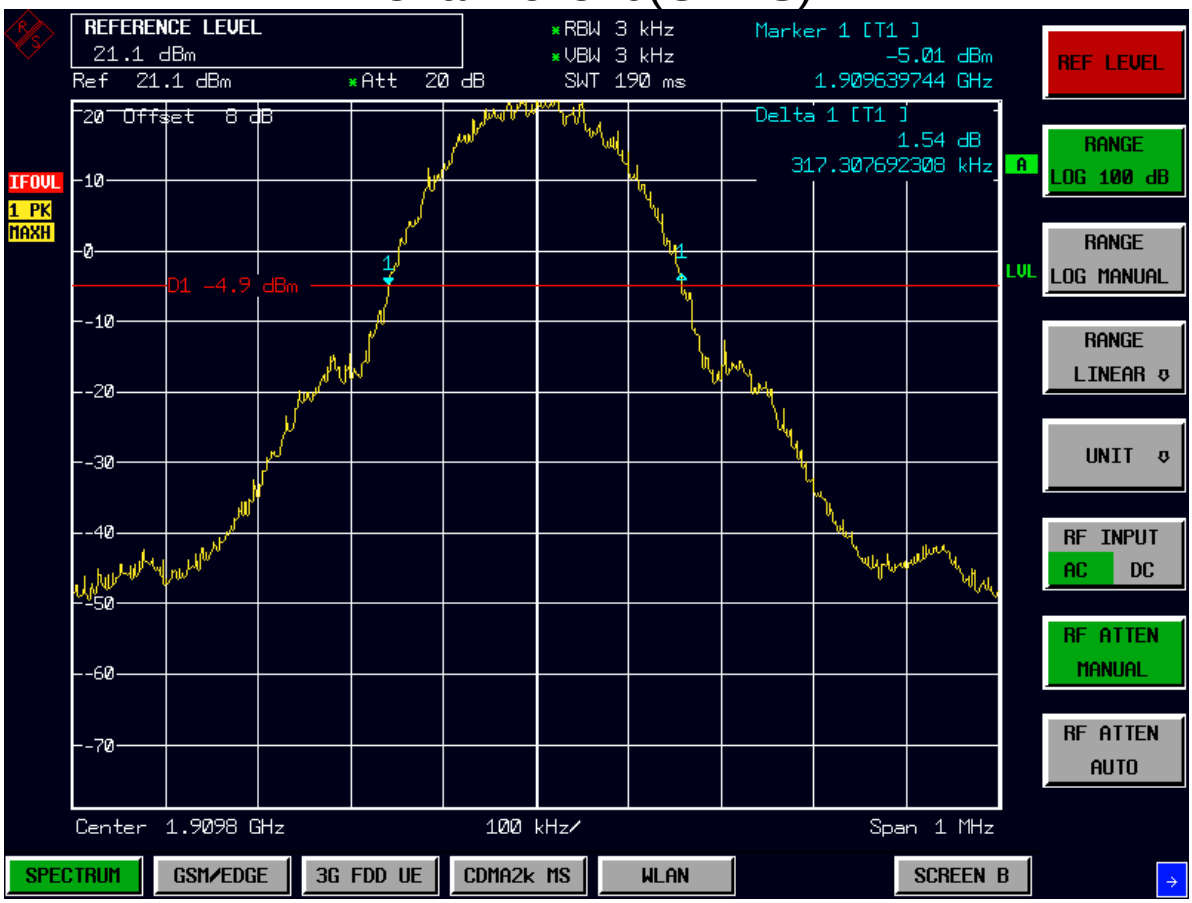
Channel 661(GPRS)



Channel 661(EDGE)



Channel 810(GPRS)



Channel 810(EDGE)

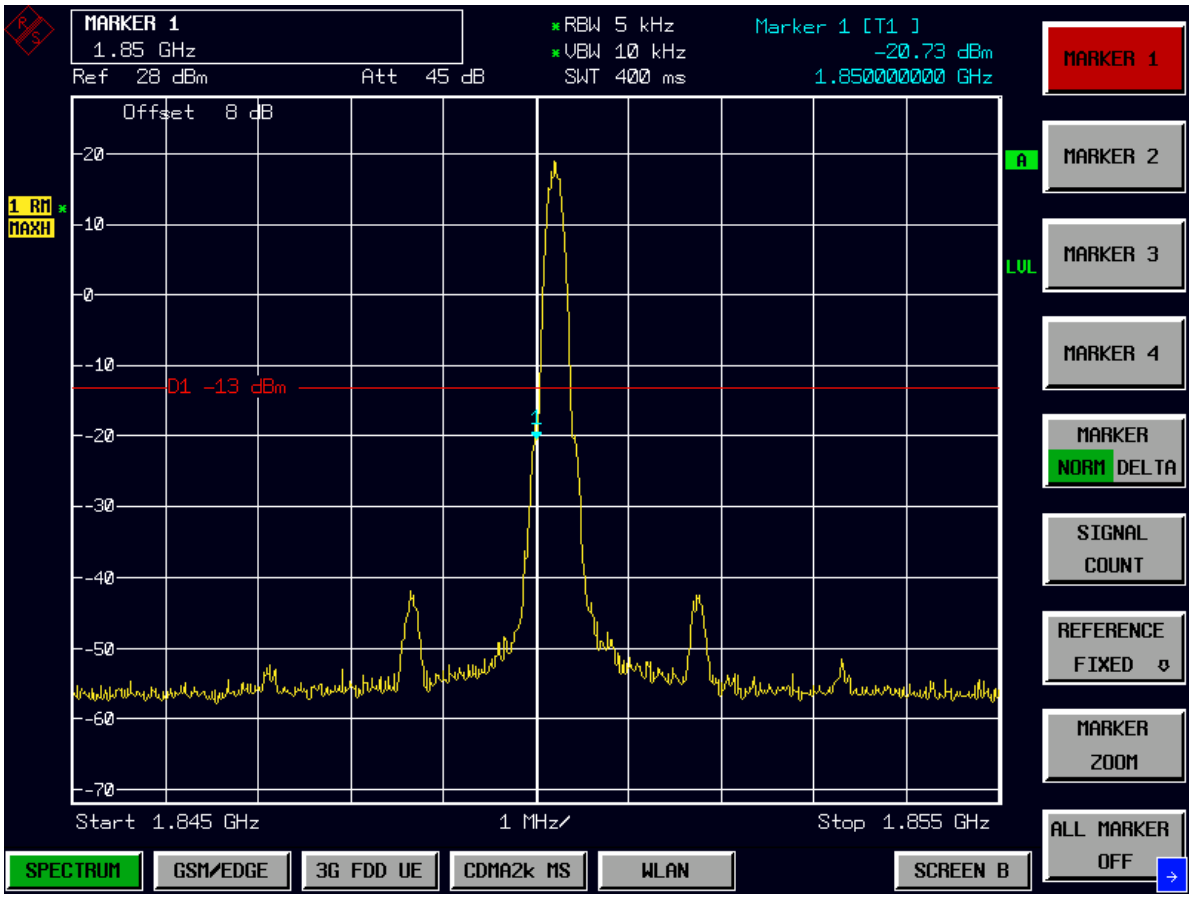
Appendix D

Band Edges Compliance

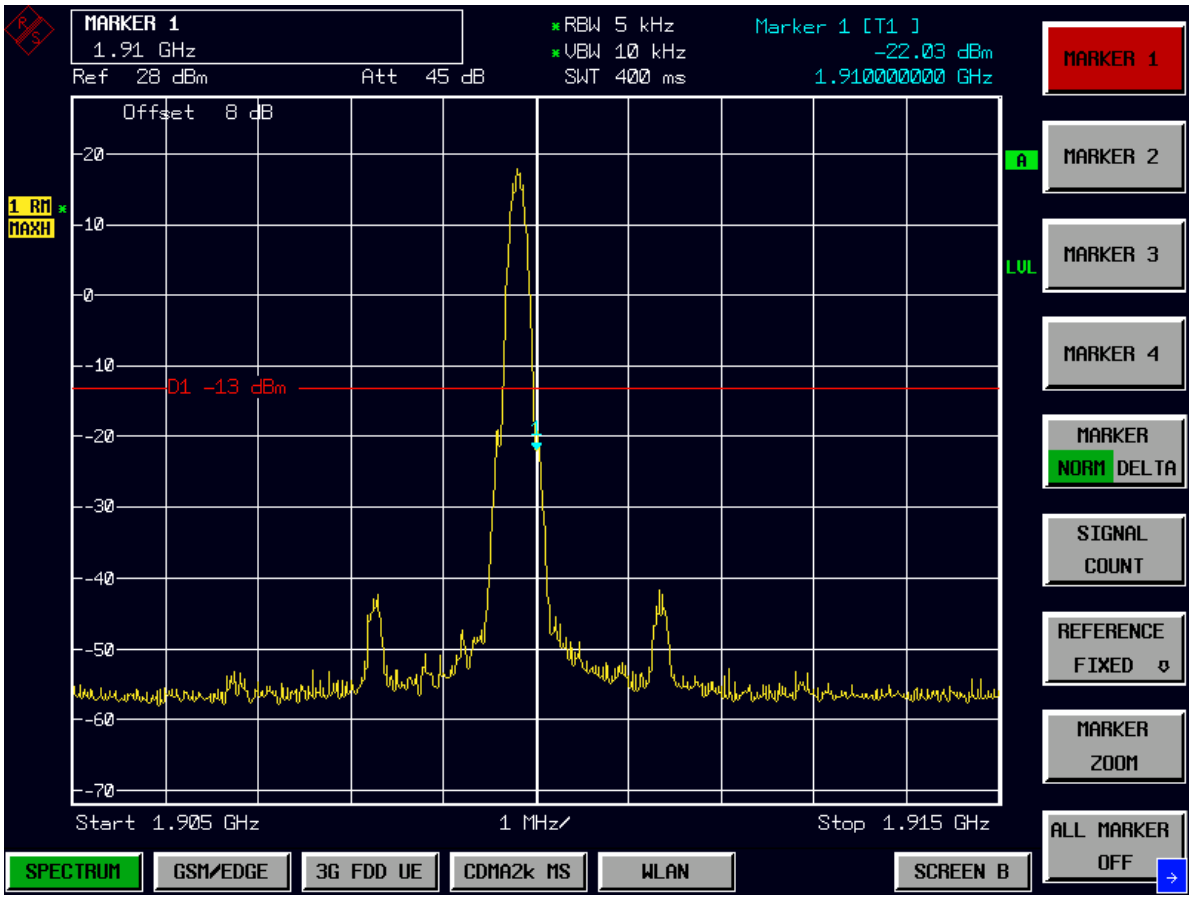
According to FCC Part 2.1051 & 24.238

GPRS

Left Edge
Channel 512

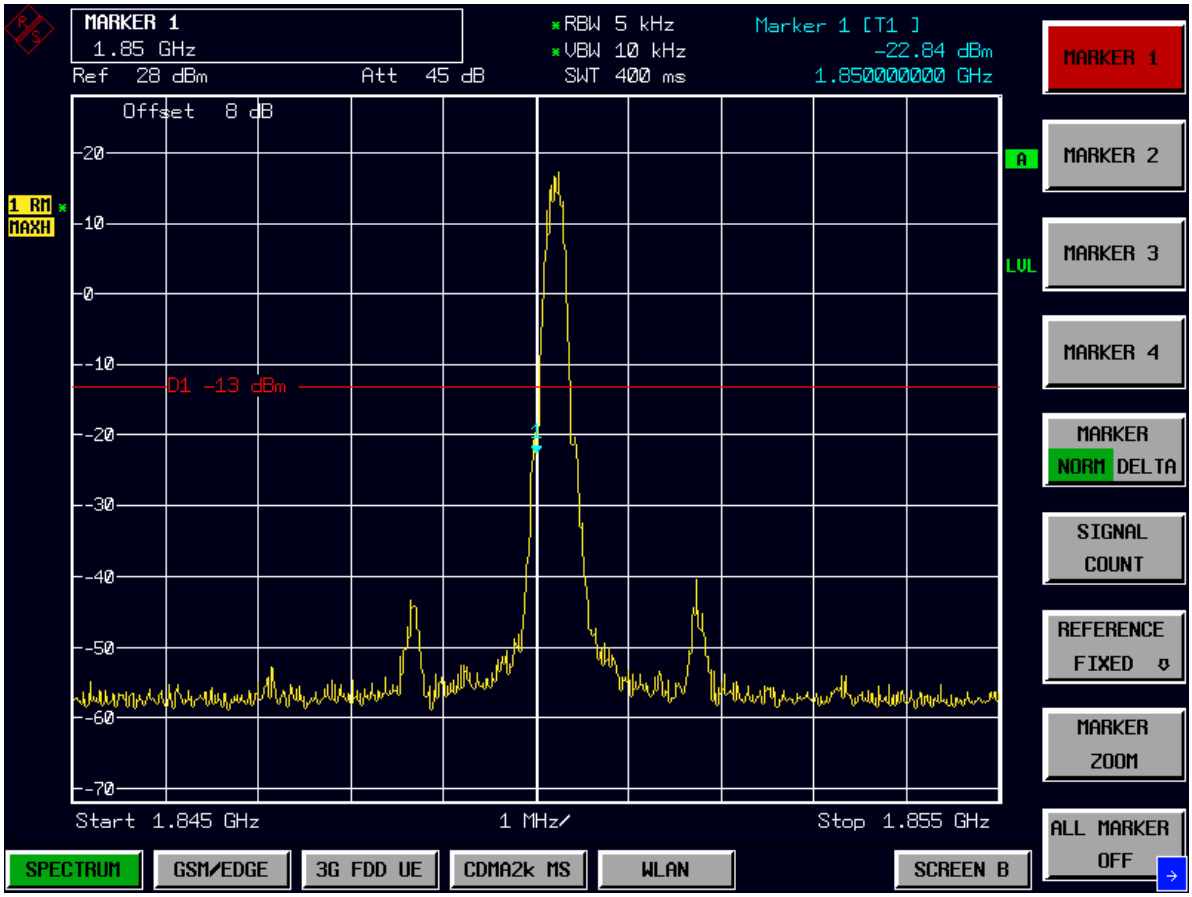


Right Edge
Channel 810

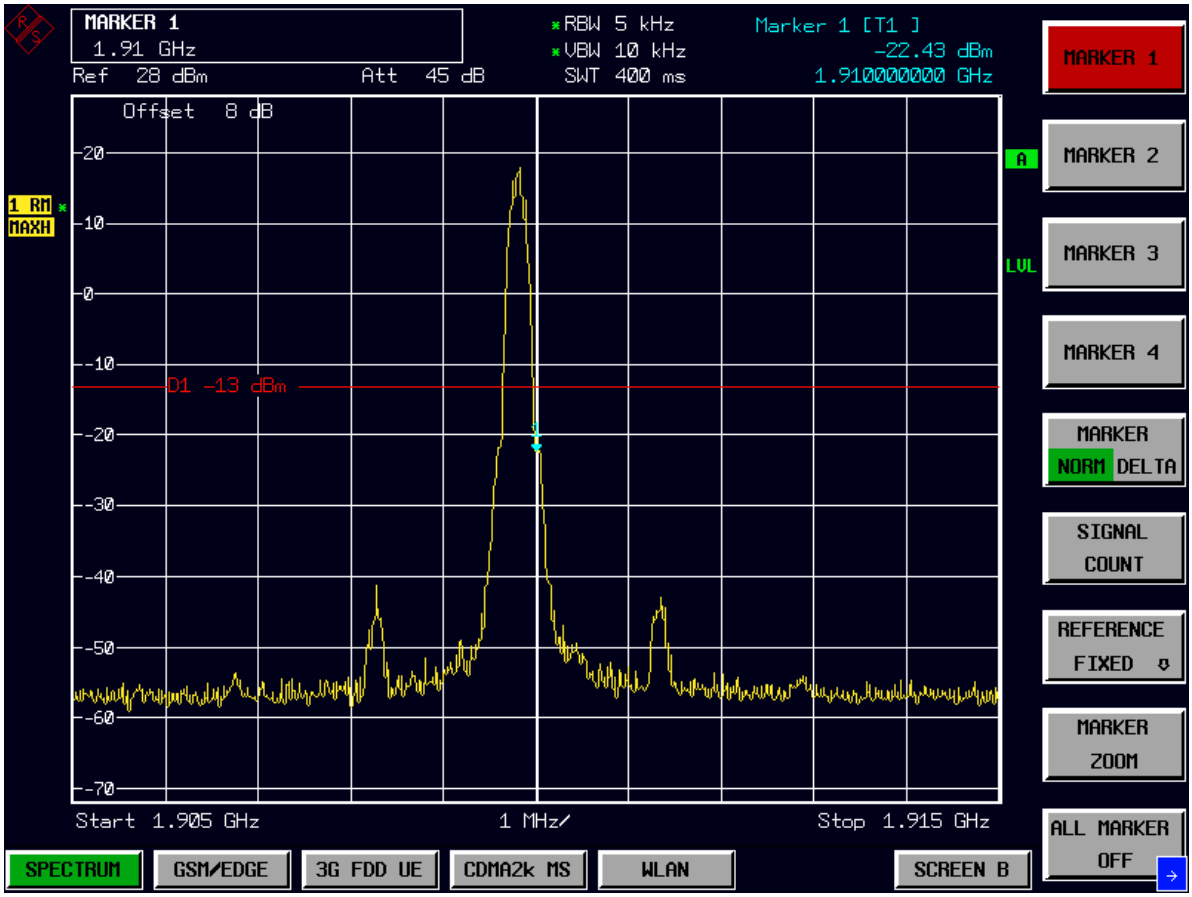


EDGE

Left Edge
Channel 512



Right Edge
Channel 810



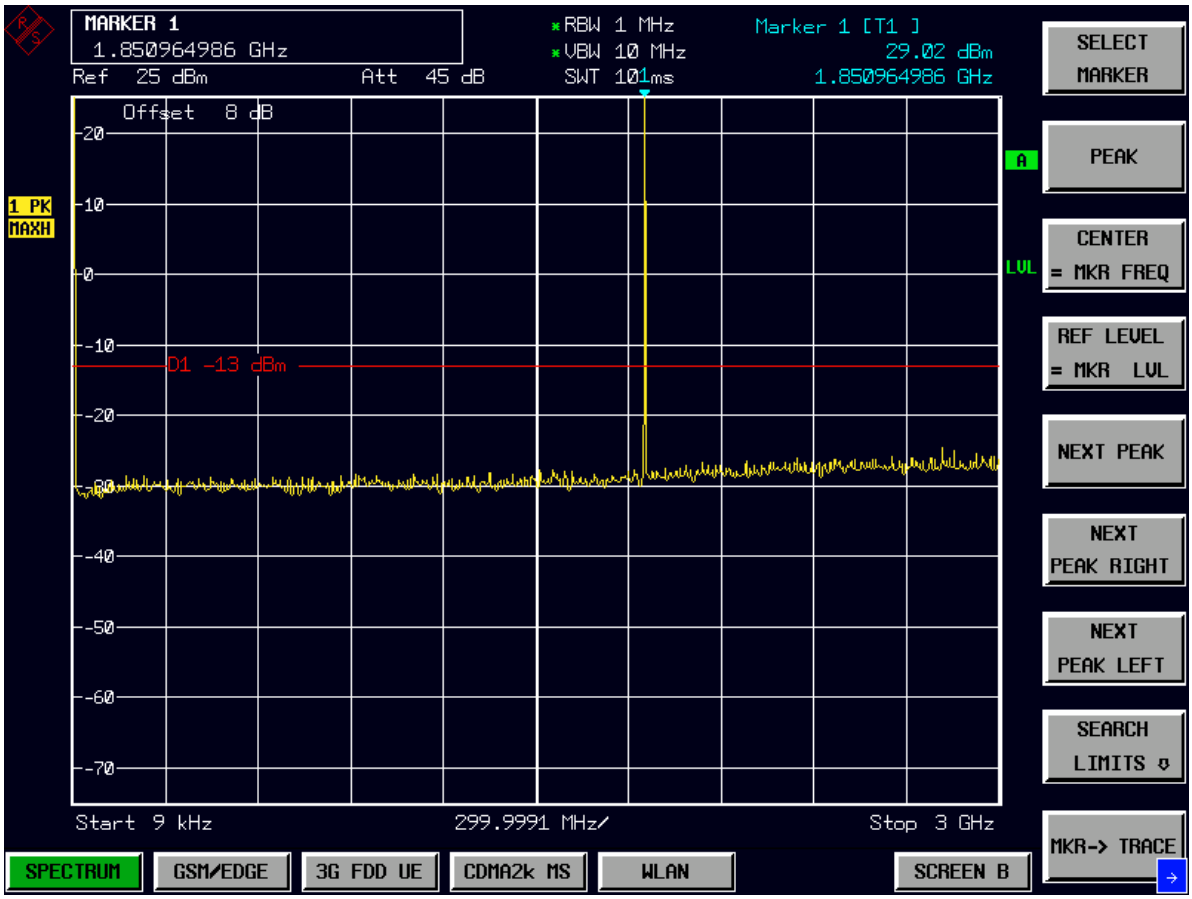
Appendix E

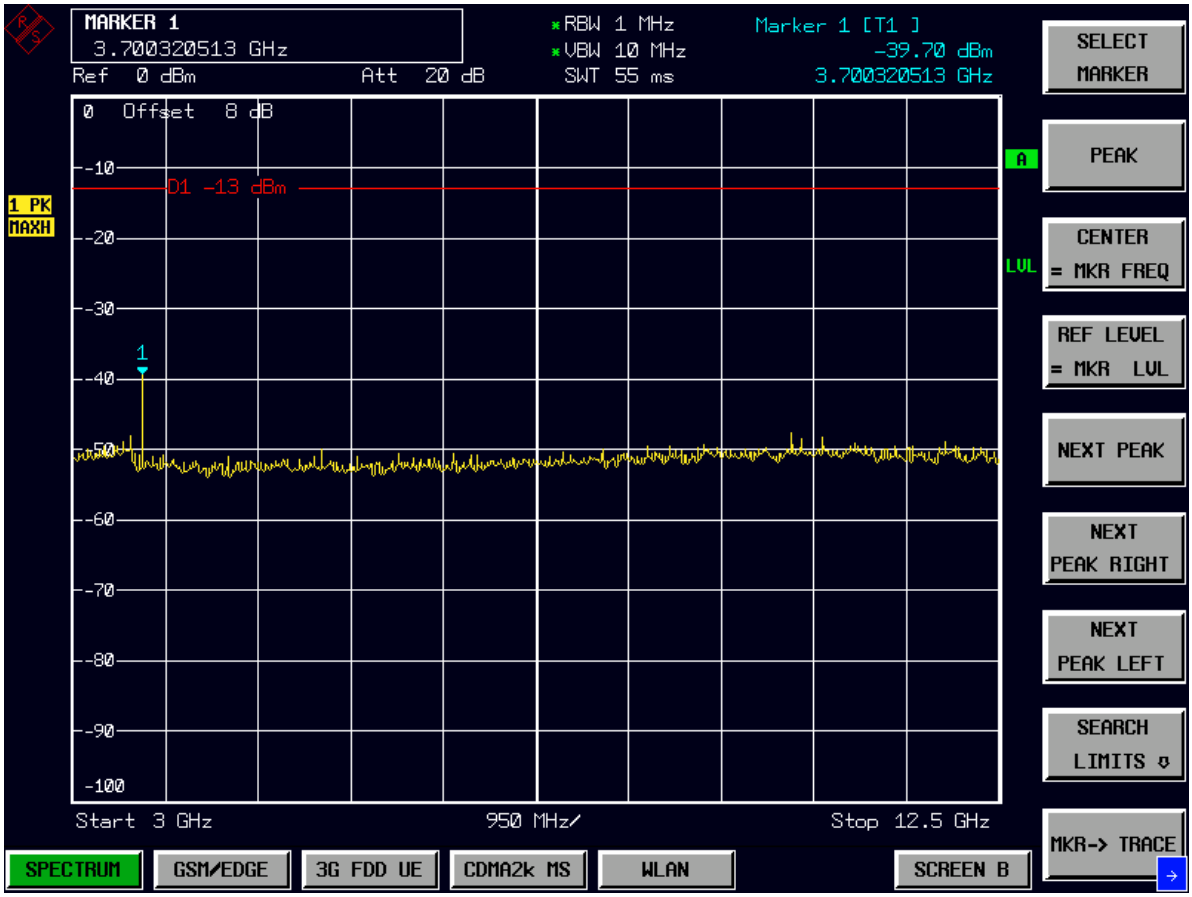
Spurious Emission at Antenna Terminal

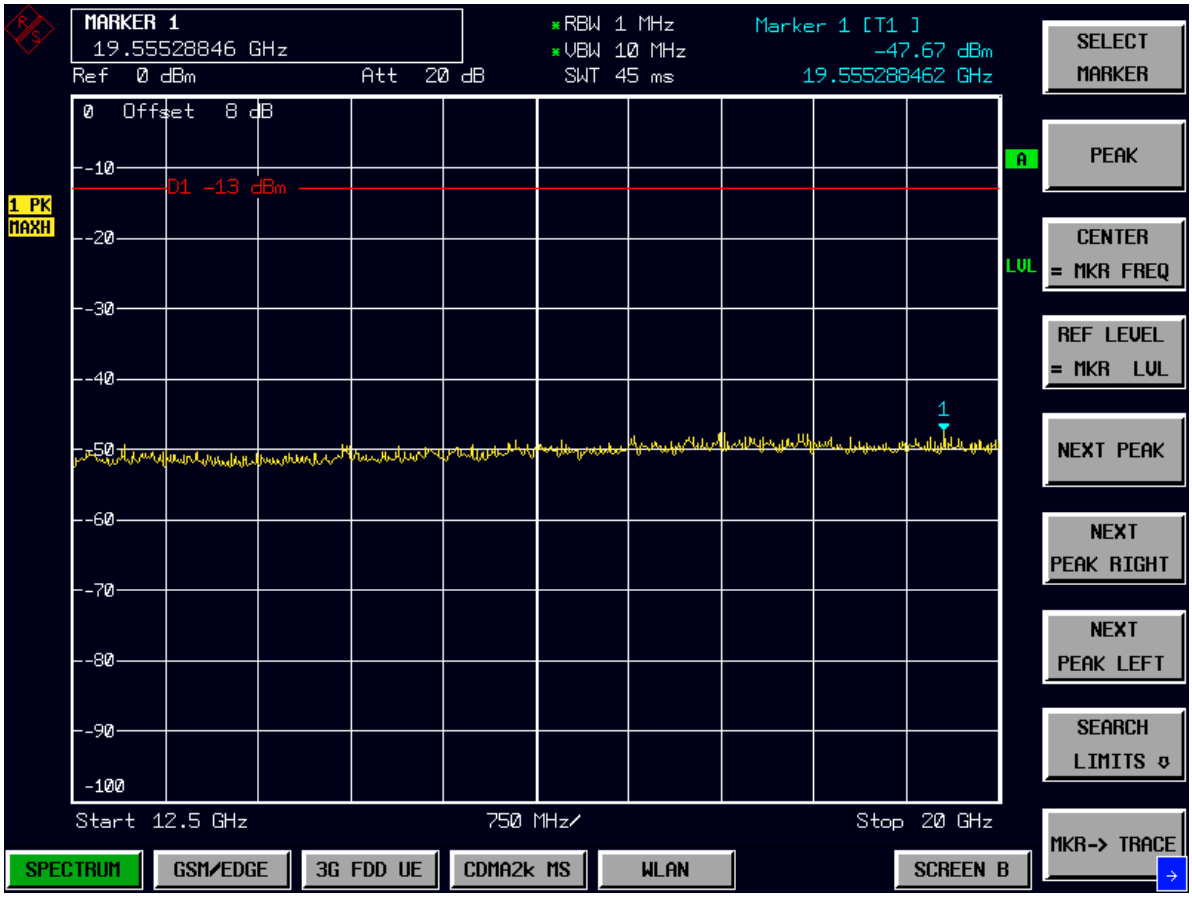
According to FCC Part 2.1051 & 24.238

1.1 GPRS

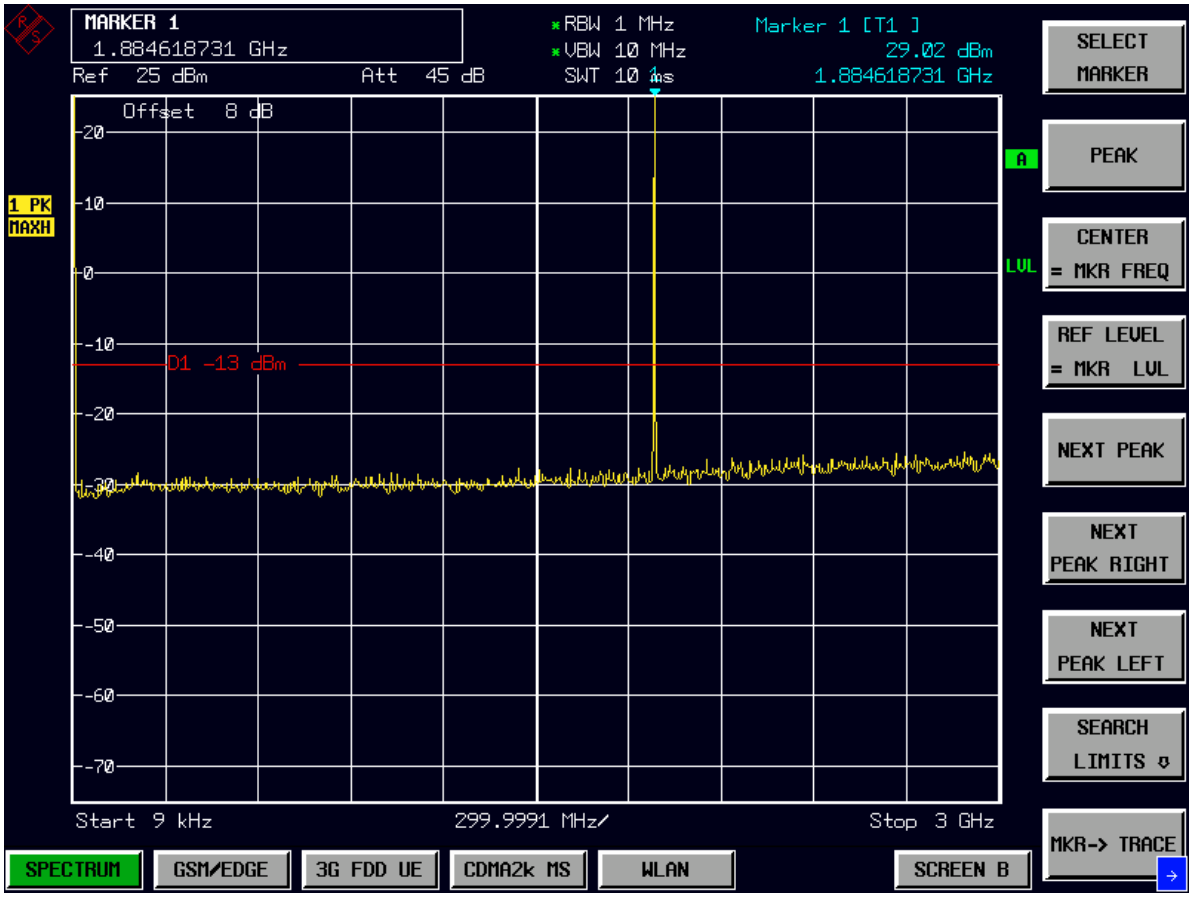
Channel 512

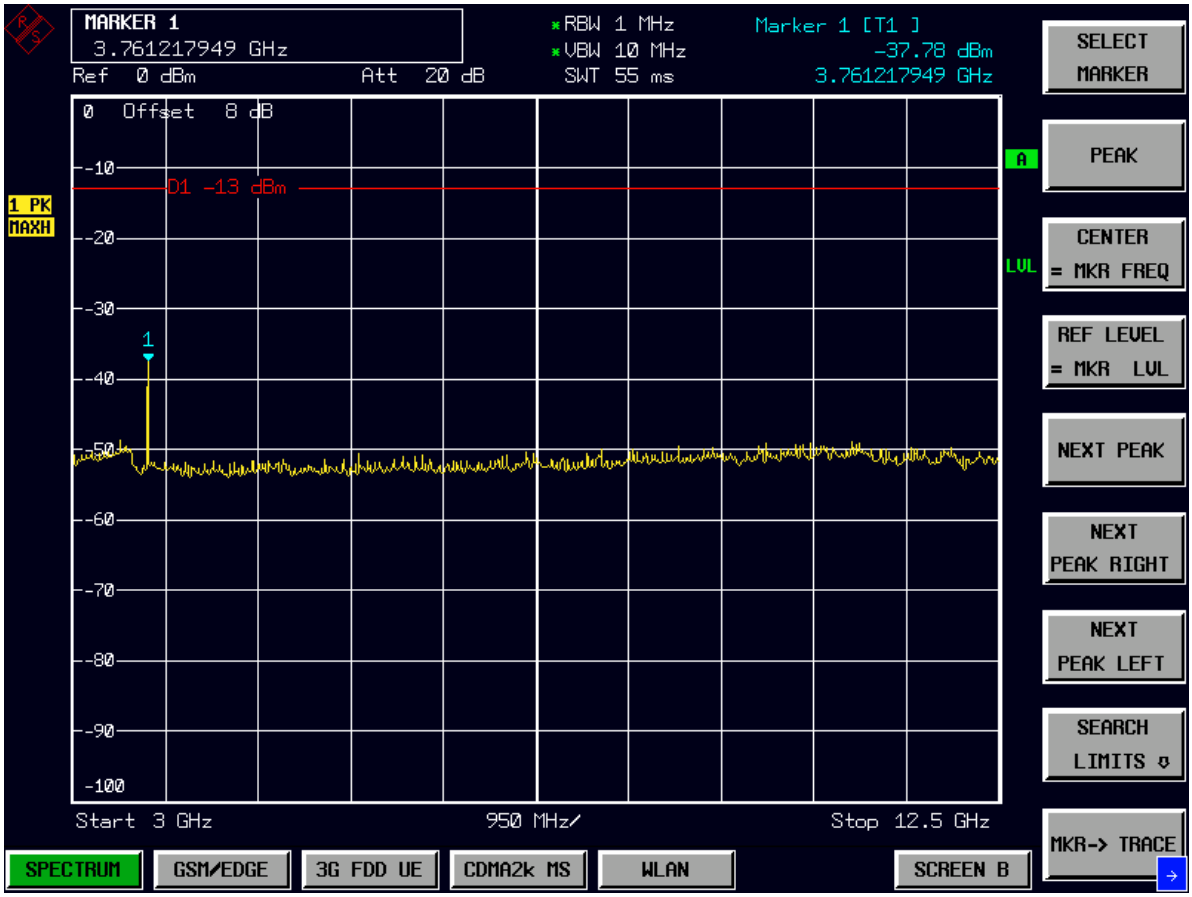


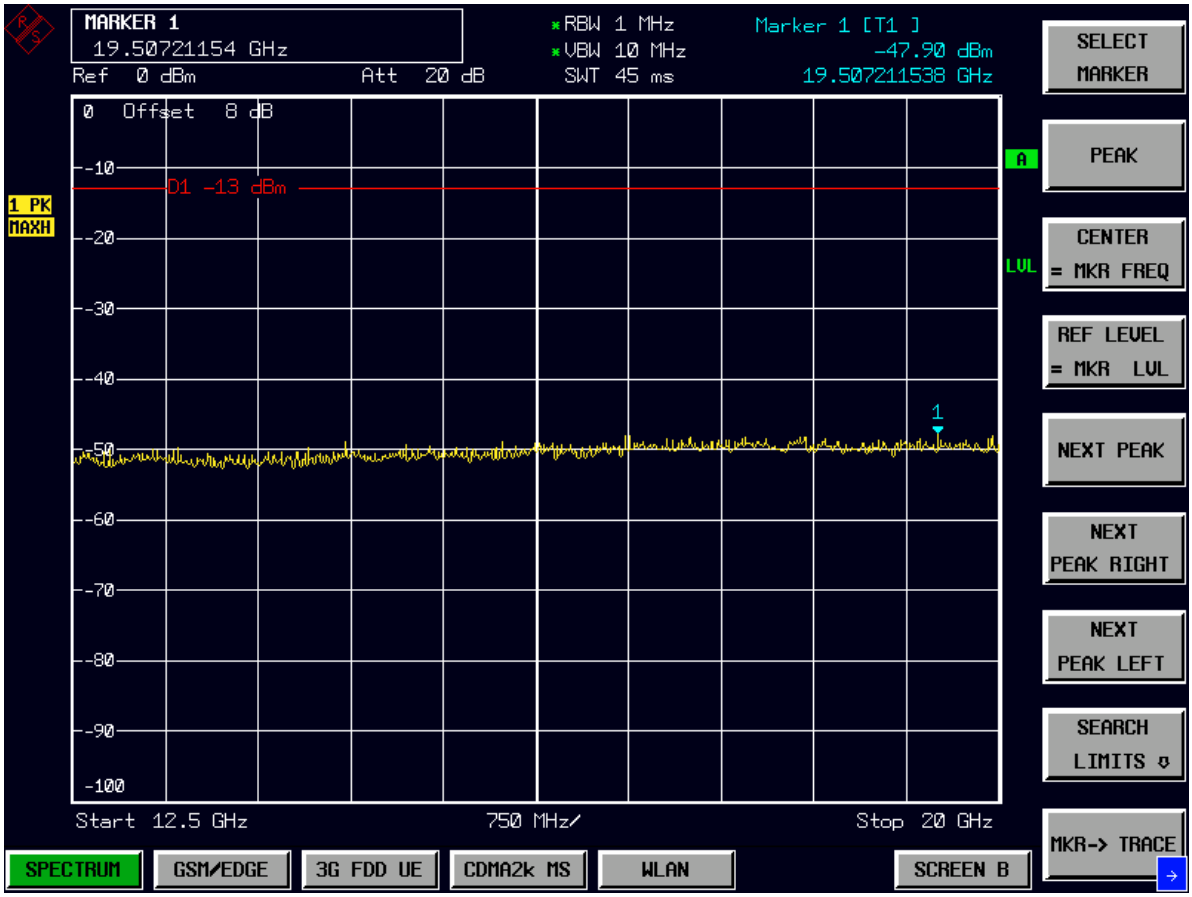

MARKER 1
3.700320513 GHz
RBW 1 MHz
VBW 10 MHz
SWT 55 ms
Marker 1 [T1]
-39.70 dBm
3.700320513 GHz
Ref 0 dBm
Att 20 dB
0 Offset 8 dB
D1 -13 dBm
1 PK
MAXH
A
LVL
Start 3 GHz
950 MHz/
Stop 12.5 GHz
SELECT MARKER
PEAK
CENTER = MKR FREQ
REF LEVEL = MKR LVL
NEXT PEAK
NEXT PEAK RIGHT
NEXT PEAK LEFT
SEARCH LIMITS
MKR-> TRACE
SPECTRUM
GSM/EDGE
3G FDD UE
CDMA2k MS
WLAN
SCREEN B


MARKER 1
19.55528846 GHz
RBW 1 MHz
VBW 10 MHz
SWT 45 ms
Marker 1 [T1]
-47.67 dBm
19.555288462 GHz
Ref 0 dBm
Att 20 dB
0 Offset 8 dB
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
D1 -13 dBm
1 PK
MAXH
A
LVL
1
Start 12.5 GHz
750 MHz/
Stop 20 GHz
SELECT MARKER
PEAK
CENTER = MKR FREQ
REF LEVEL = MKR LVL
NEXT PEAK
NEXT PEAK RIGHT
NEXT PEAK LEFT
SEARCH LIMITS
MKR-> TRACE
SPECTRUM
GSM/EDGE
3G FDD UE
CDMA2k MS
WLAN
SCREEN B

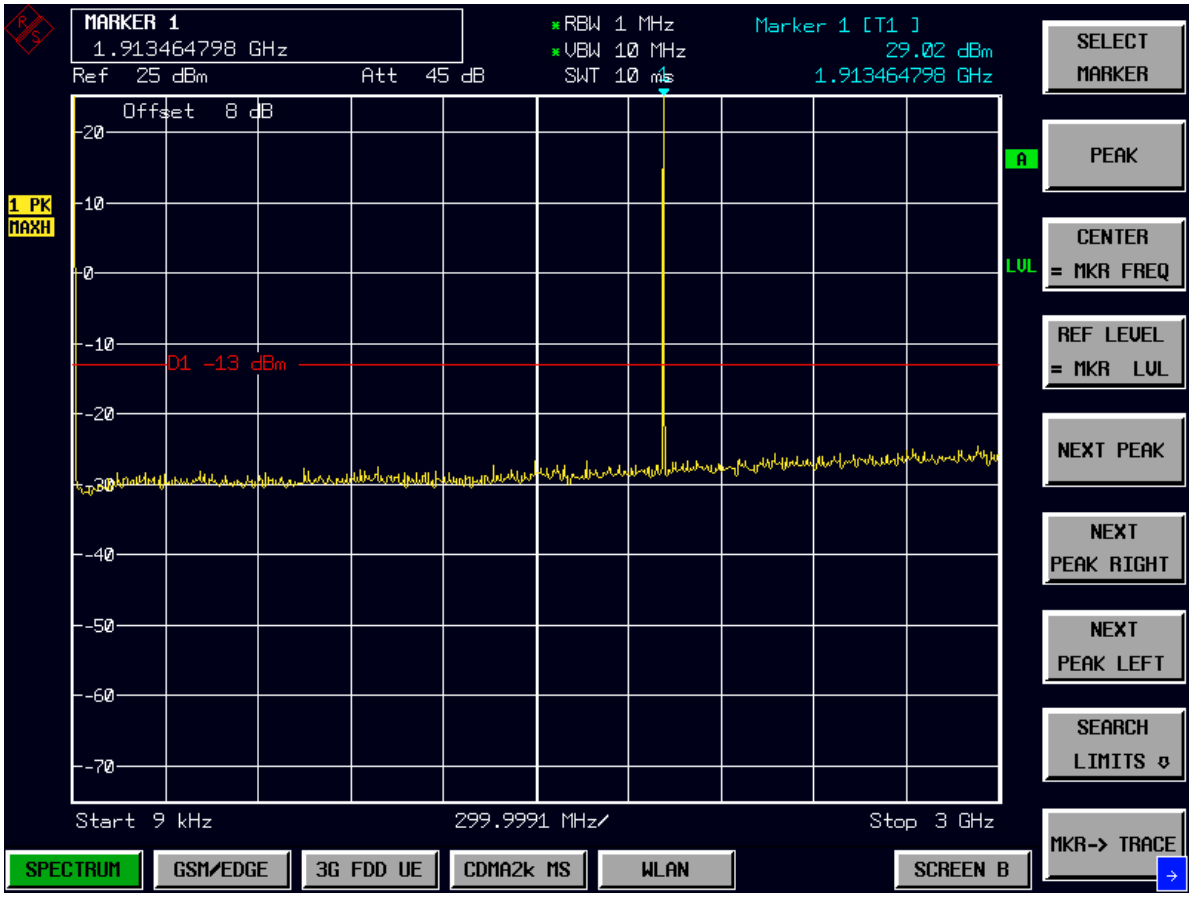
Channel 661

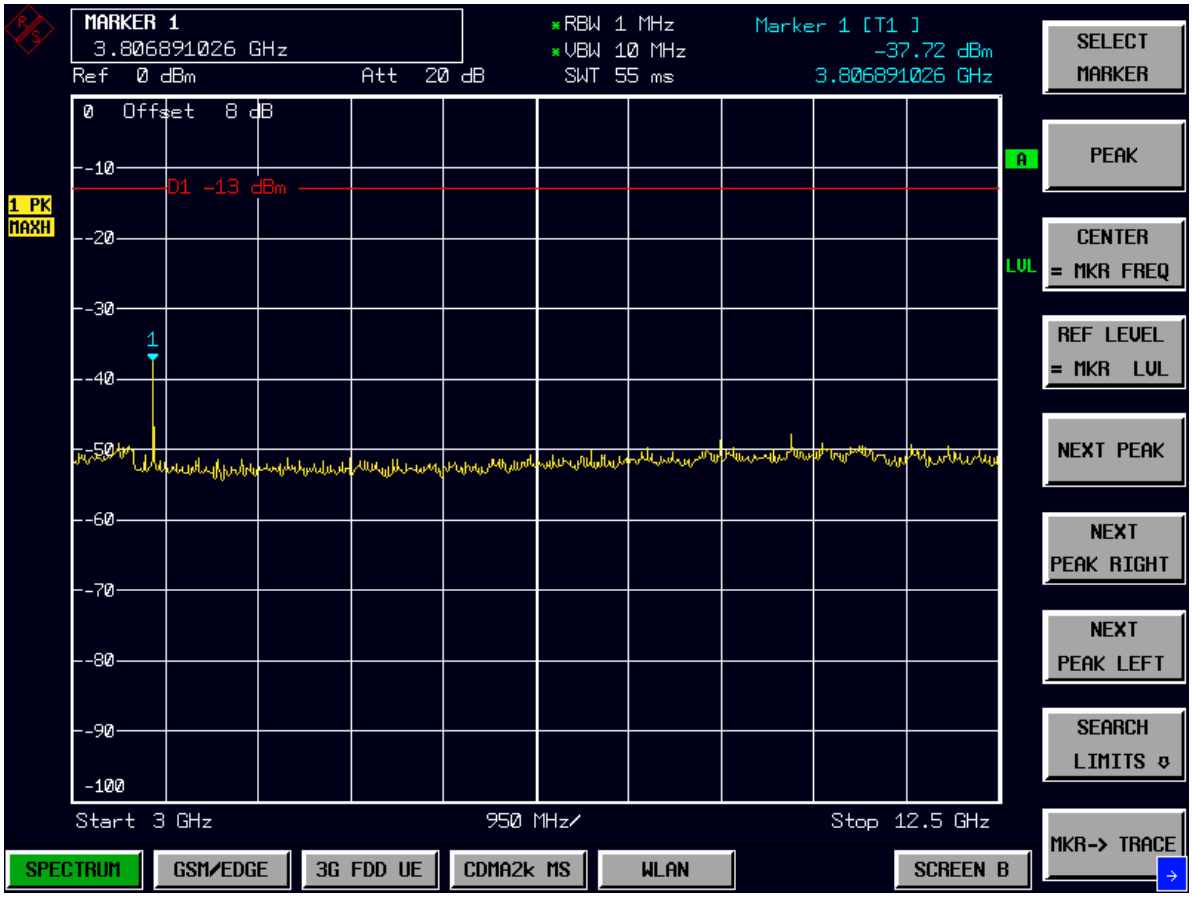

MARKER 1
1.884618731 GHz
Ref 25 dBm
Att 45 dB
RBW 1 MHz
VBW 10 MHz
SWT 10 ms
Marker 1 [T1]
29.02 dBm
1.884618731 GHz
Offset 8 dB
1 PK
MAXH
D1 -13 dBm
Start 9 kHz
299.9991 MHz/
Stop 3 GHz
SELECT MARKER
PEAK
CENTER = MKR FREQ
REF LEVEL = MKR LVL
NEXT PEAK
NEXT PEAK RIGHT
NEXT PEAK LEFT
SEARCH LIMITS
MKR-> TRACE
SPECTRUM
GSM/EDGE
3G FDD UE
CDMA2k MS
WLAN
SCREEN B

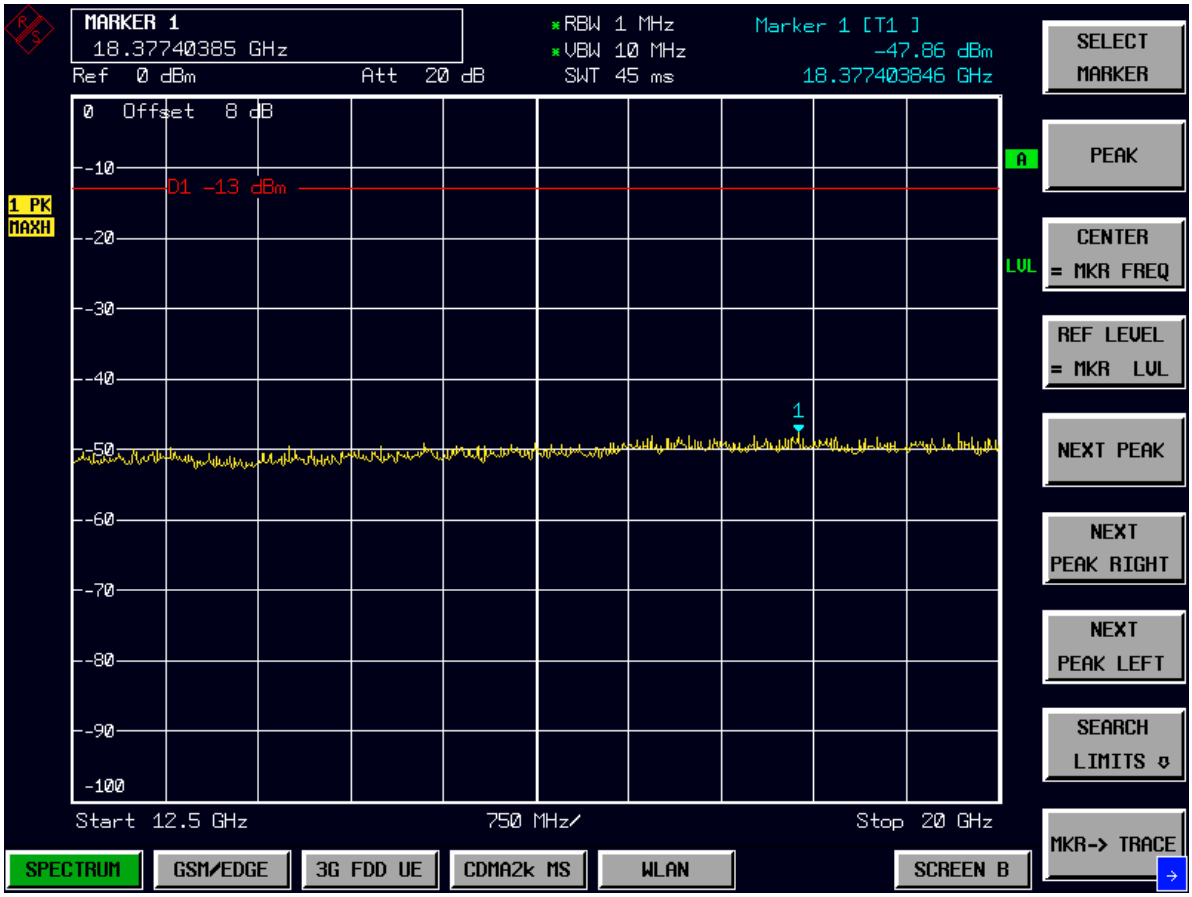

MARKER 1
3.761217949 GHz
RBW 1 MHz
VBW 10 MHz
SWT 55 ms
Marker 1 [T1]
-37.78 dBm
3.761217949 GHz
Ref 0 dBm
Att 20 dB
0 Offset 8 dB
D1 -13 dBm
1 PK
MAXH
A
LVL
Start 3 GHz
950 MHz/
Stop 12.5 GHz
SELECT MARKER
PEAK
CENTER = MKR FREQ
REF LEVEL = MKR LVL
NEXT PEAK
NEXT PEAK RIGHT
NEXT PEAK LEFT
SEARCH LIMITS
MKR-> TRACE
SPECTRUM
GSM/EDGE
3G FDD UE
CDMA2k MS
WLAN
SCREEN B


MARKER 1
19.50721154 GHz
RBW 1 MHz
VBW 10 MHz
SWT 45 ms
Marker 1 [T1]
-47.90 dBm
19.507211538 GHz
Ref 0 dBm
Att 20 dB
0 Offset 8 dB
D1 -13 dBm
1 PK
MAXH
A
LVL
Start 12.5 GHz
750 MHz/
Stop 20 GHz
SELECT MARKER
PEAK
CENTER = MKR FREQ
REF LEVEL = MKR LVL
NEXT PEAK
NEXT PEAK RIGHT
NEXT PEAK LEFT
SEARCH LIMITS
MKR-> TRACE
SPECTRUM
GSM/EDGE
3G FDD UE
CDMA2k MS
WLAN
SCREEN B

Channel 810

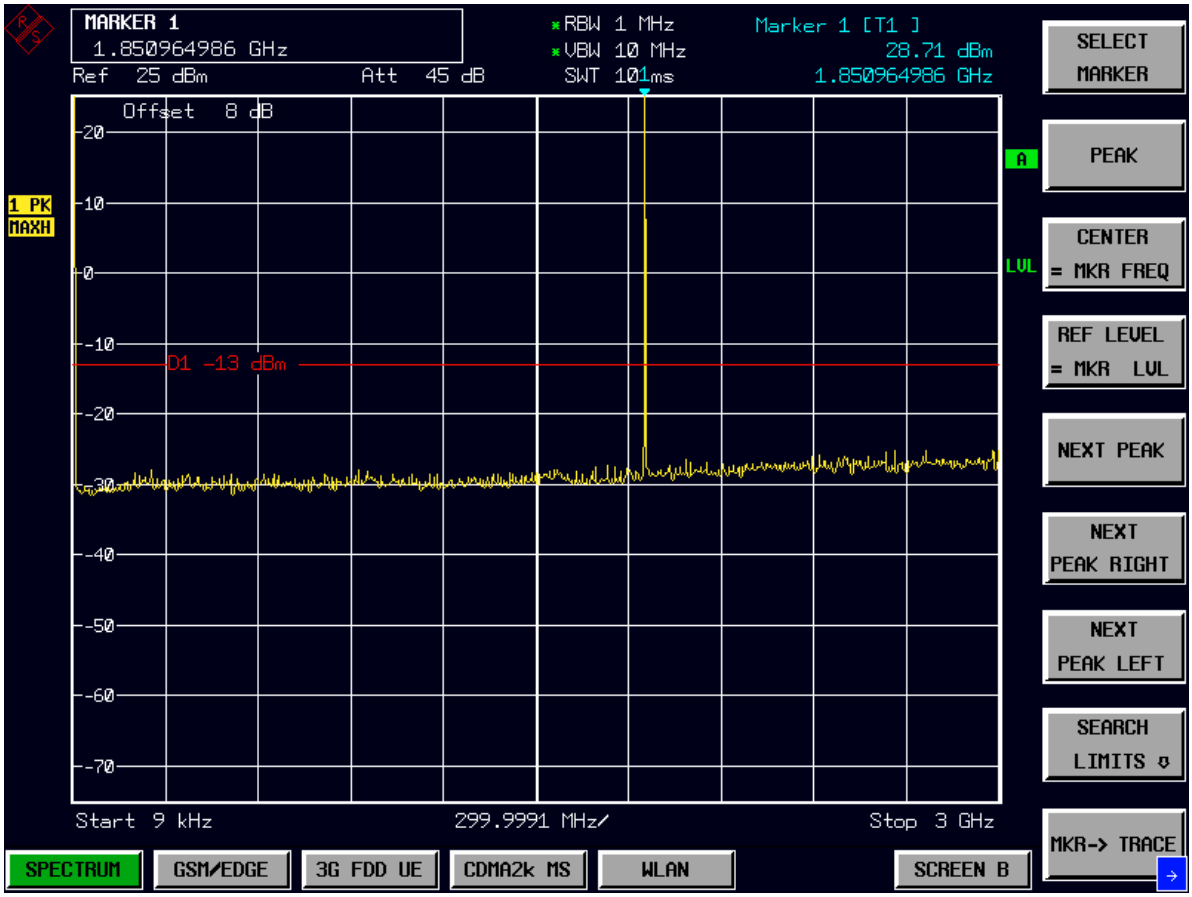

MARKER 1
1.913464798 GHz
RBW 1 MHz
VBW 10 MHz
SWT 10 ms
Marker 1 [T1]
29.02 dBm
1.913464798 GHz
Ref 25 dBm
Att 45 dB
Offset 8 dB
1 PK
MAXH
D1 -13 dBm
Start 9 kHz
299.9991 MHz/
Stop 3 GHz
SELECT MARKER
PEAK
CENTER = MKR FREQ
REF LEVEL = MKR LVL
NEXT PEAK
NEXT PEAK RIGHT
NEXT PEAK LEFT
SEARCH LIMITS
MKR-> TRACE
SPECTRUM
GSM/EDGE
3G FDD UE
CDMA2k MS
WLAN
SCREEN B

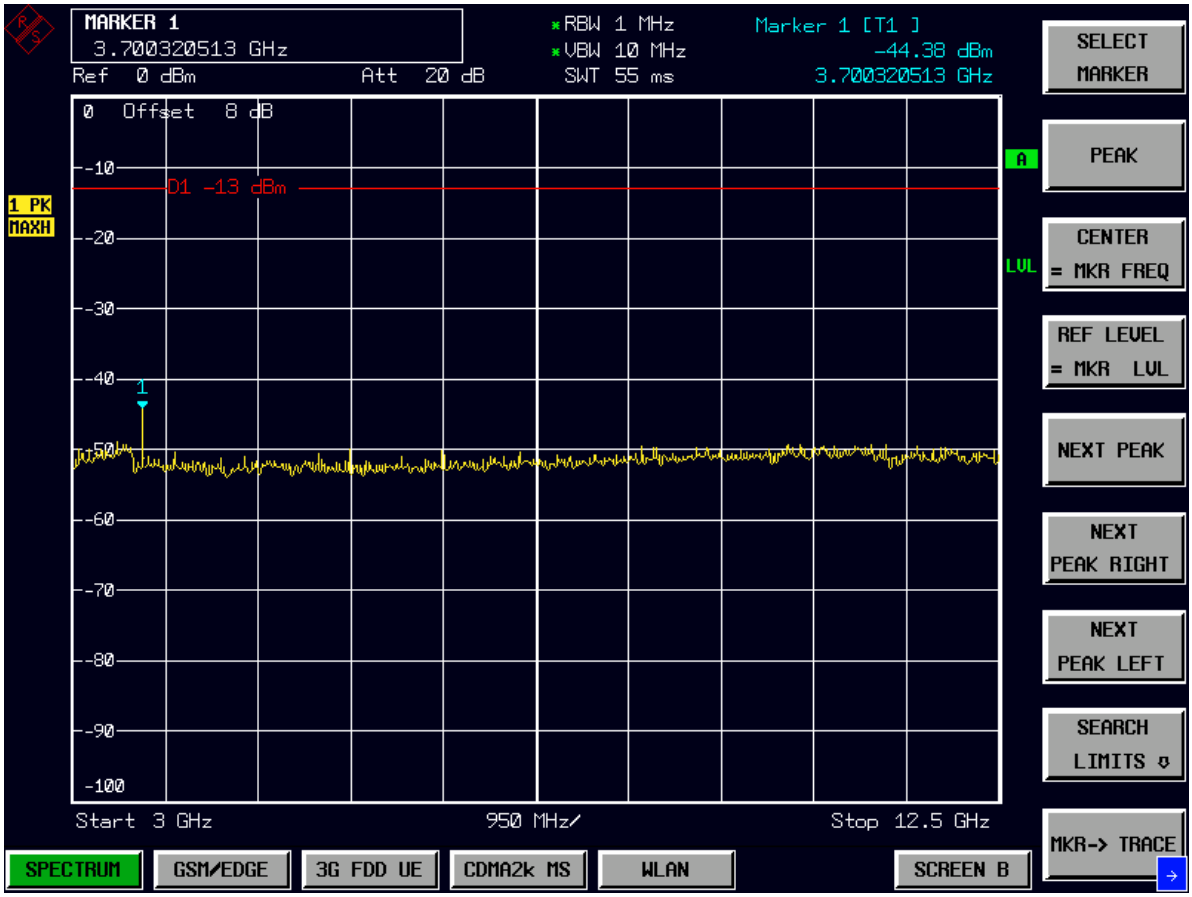

MARKER 1
3.806891026 GHz
RBW 1 MHz
VBW 10 MHz
SWT 55 ms
Marker 1 [T1]
-37.72 dBm
3.806891026 GHz
Ref 0 dBm
Att 20 dB
0 Offset 8 dB
D1 -13 dBm
1 PK
MAXH
A
LVL
Start 3 GHz
950 MHz/
Stop 12.5 GHz
SELECT MARKER
PEAK
CENTER = MKR FREQ
REF LEVEL = MKR LVL
NEXT PEAK
NEXT PEAK RIGHT
NEXT PEAK LEFT
SEARCH LIMITS
MKR-> TRACE
SPECTRUM
GSM/EDGE
3G FDD UE
CDMA2k MS
WLAN
SCREEN B

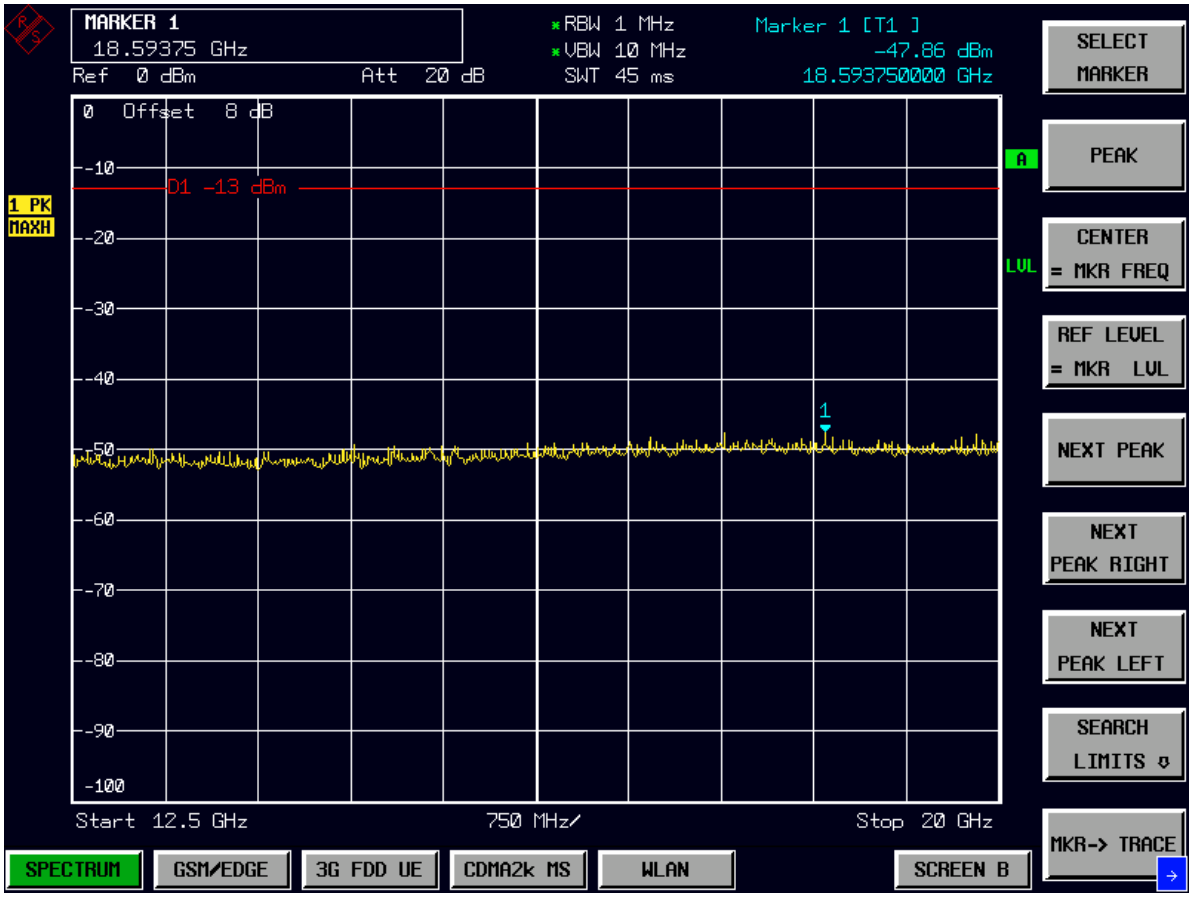

MARKER 1
18.37740385 GHz
RBW 1 MHz
VBW 10 MHz
SWT 45 ms
Marker 1 [T1]
-47.86 dBm
18.377403846 GHz
Ref 0 dBm
Att 20 dB
0 Offset 8 dB
D1 -13 dBm
1 PK
MAXH
A
LVL
Start 12.5 GHz
750 MHz/
Stop 20 GHz
SELECT MARKER
PEAK
CENTER = MKR FREQ
REF LEVEL = MKR LVL
NEXT PEAK
NEXT PEAK RIGHT
NEXT PEAK LEFT
SEARCH LIMITS
MKR-> TRACE
SPECTRUM
GSM/EDGE
3G FDD UE
CDMA2k MS
WLAN
SCREEN B

EDGE

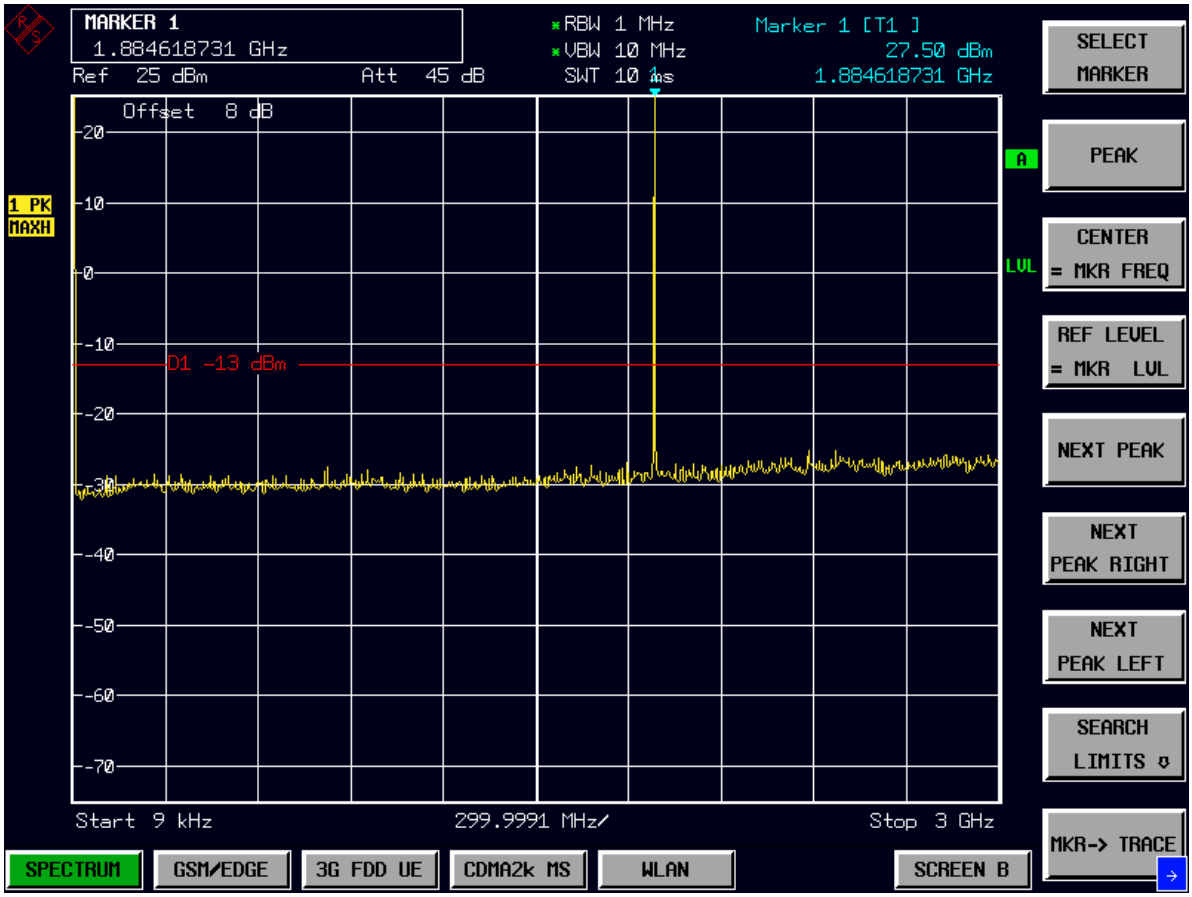
Channel 512

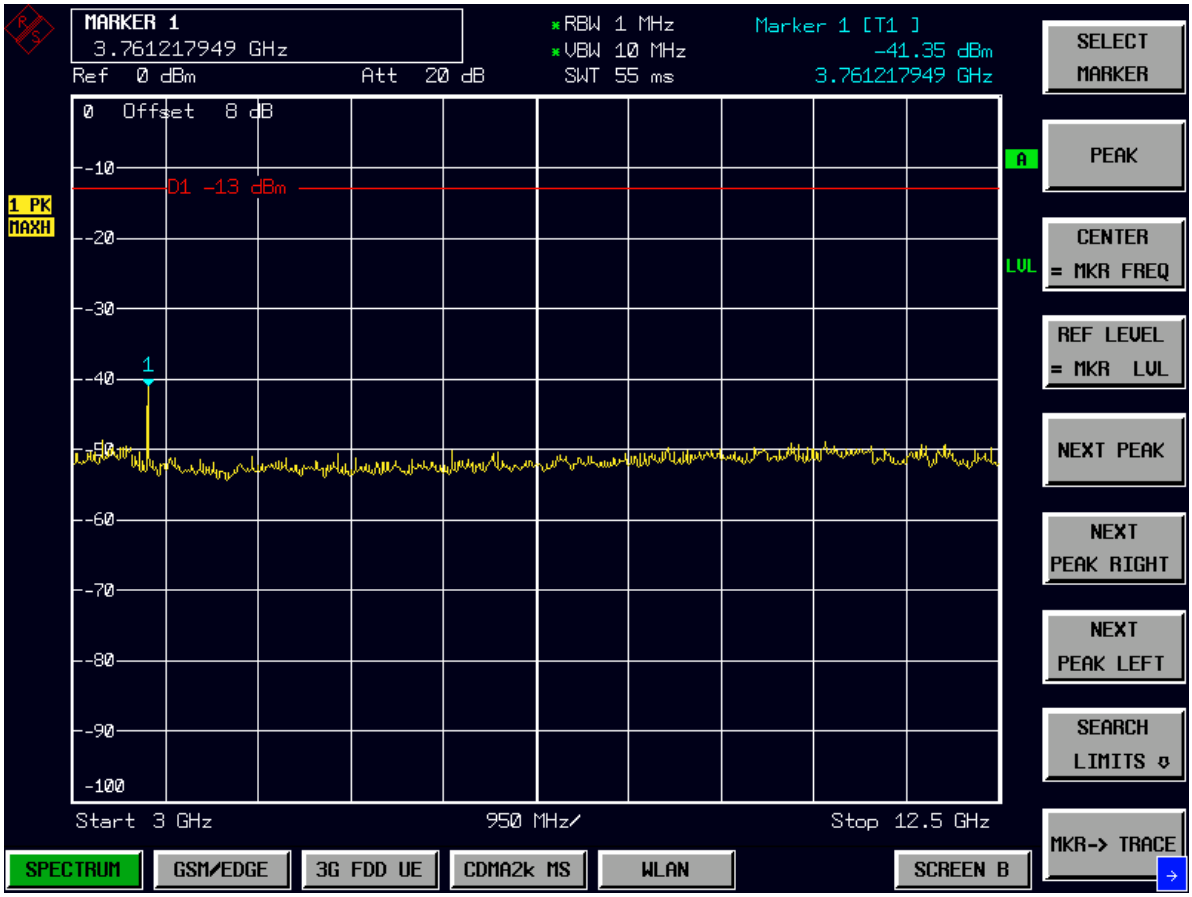


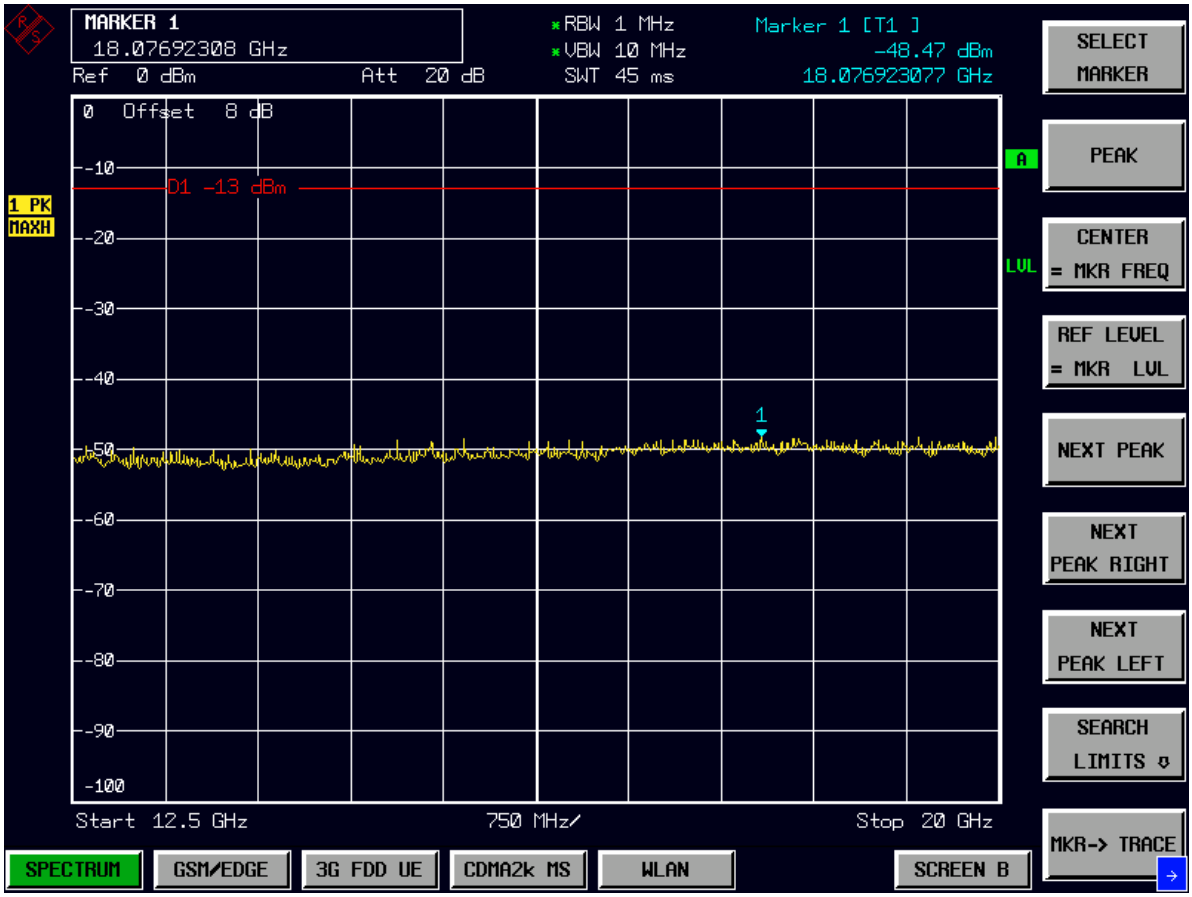

MARKER 1
3.700320513 GHz
RBW 1 MHz
VBW 10 MHz
SWT 55 ms
Marker 1 [T1]
-44.38 dBm
3.700320513 GHz
Ref 0 dBm
Att 20 dB
0 Offset 8 dB
D1 -13 dBm
1 PK
MAXH
A
LVL
Start 3 GHz
950 MHz/
Stop 12.5 GHz
SELECT MARKER
PEAK
CENTER = MKR FREQ
REF LEVEL = MKR LVL
NEXT PEAK
NEXT PEAK RIGHT
NEXT PEAK LEFT
SEARCH LIMITS
MKR-> TRACE
SPECTRUM
GSM/EDGE
3G FDD UE
CDMA2k MS
WLAN
SCREEN B


MARKER 1
18.59375 GHz
RBW 1 MHz
VBW 10 MHz
SWT 45 ms
Marker 1 [T1]
-47.86 dBm
18.593750000 GHz
Ref 0 dBm
Att 20 dB
0 Offset 8 dB
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
D1 -13 dBm
1 PK
MAXH
A
LVL
Start 12.5 GHz
750 MHz/
Stop 20 GHz
SELECT MARKER
PEAK
CENTER = MKR FREQ
REF LEVEL = MKR LVL
NEXT PEAK
NEXT PEAK RIGHT
NEXT PEAK LEFT
SEARCH LIMITS
MKR-> TRACE
SPECTRUM
GSM/EDGE
3G FDD UE
CDMA2k MS
WLAN
SCREEN B

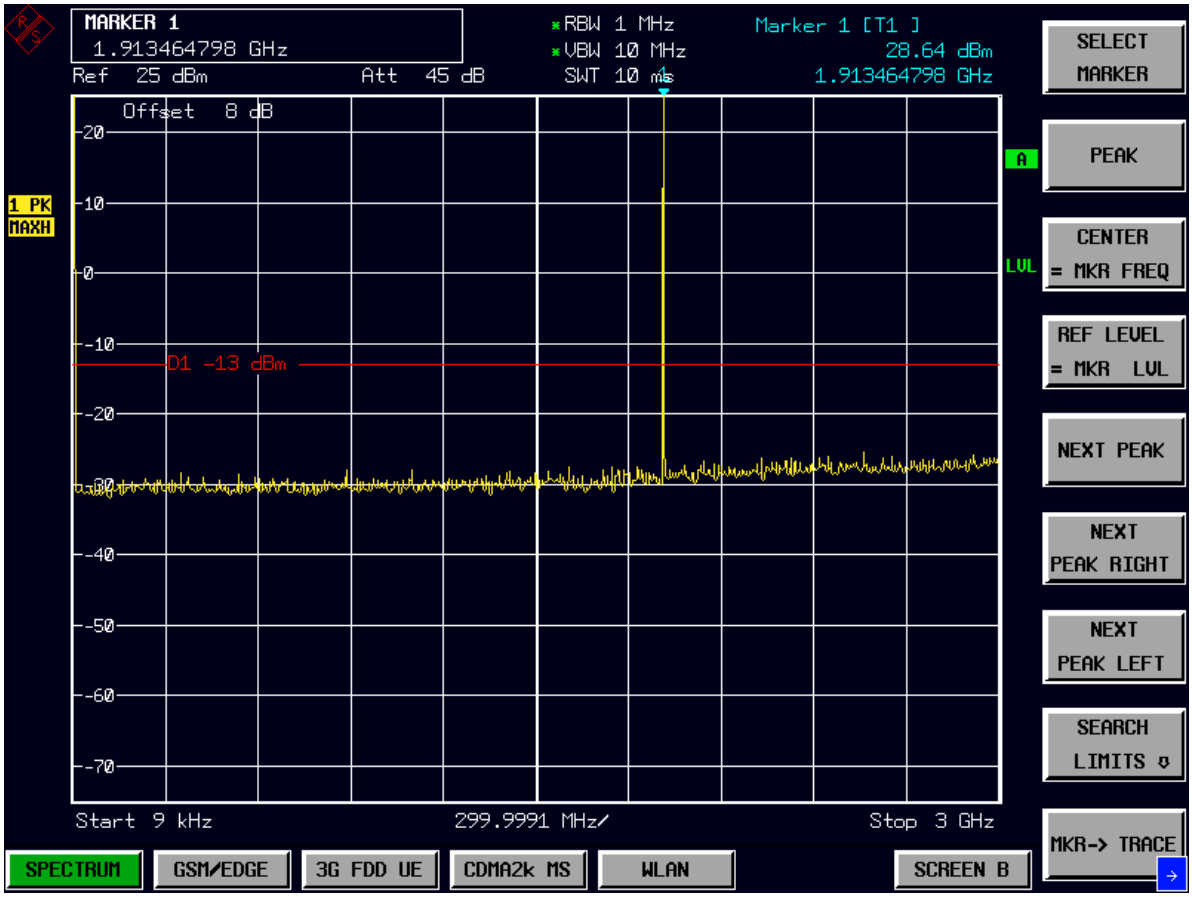
Channel 661

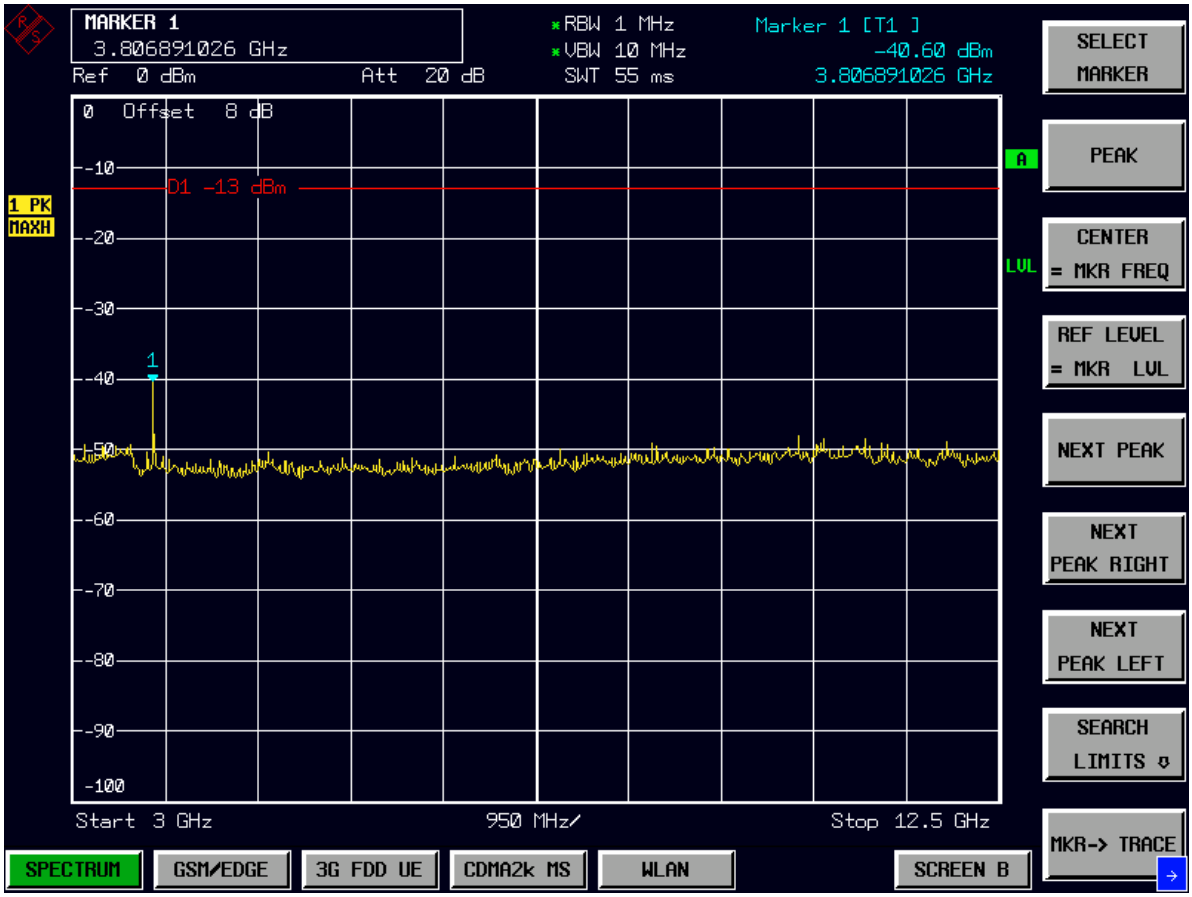

MARKER 1
1.884618731 GHz
Ref 25 dBm
Att 45 dB
RBW 1 MHz
VBW 10 MHz
SWT 10 ms
Marker 1 [T1]
27.50 dBm
1.884618731 GHz
Offset 8 dB
1 PK
MAXH
D1 -13 dBm
Start 9 kHz
299.9991 MHz/
Stop 3 GHz
SELECT MARKER
PEAK
CENTER = MKR FREQ
REF LEVEL = MKR LVL
NEXT PEAK
NEXT PEAK RIGHT
NEXT PEAK LEFT
SEARCH LIMITS
MKR-> TRACE
SPECTRUM
GSM/EDGE
3G FDD UE
CDMA2k MS
WLAN
SCREEN B

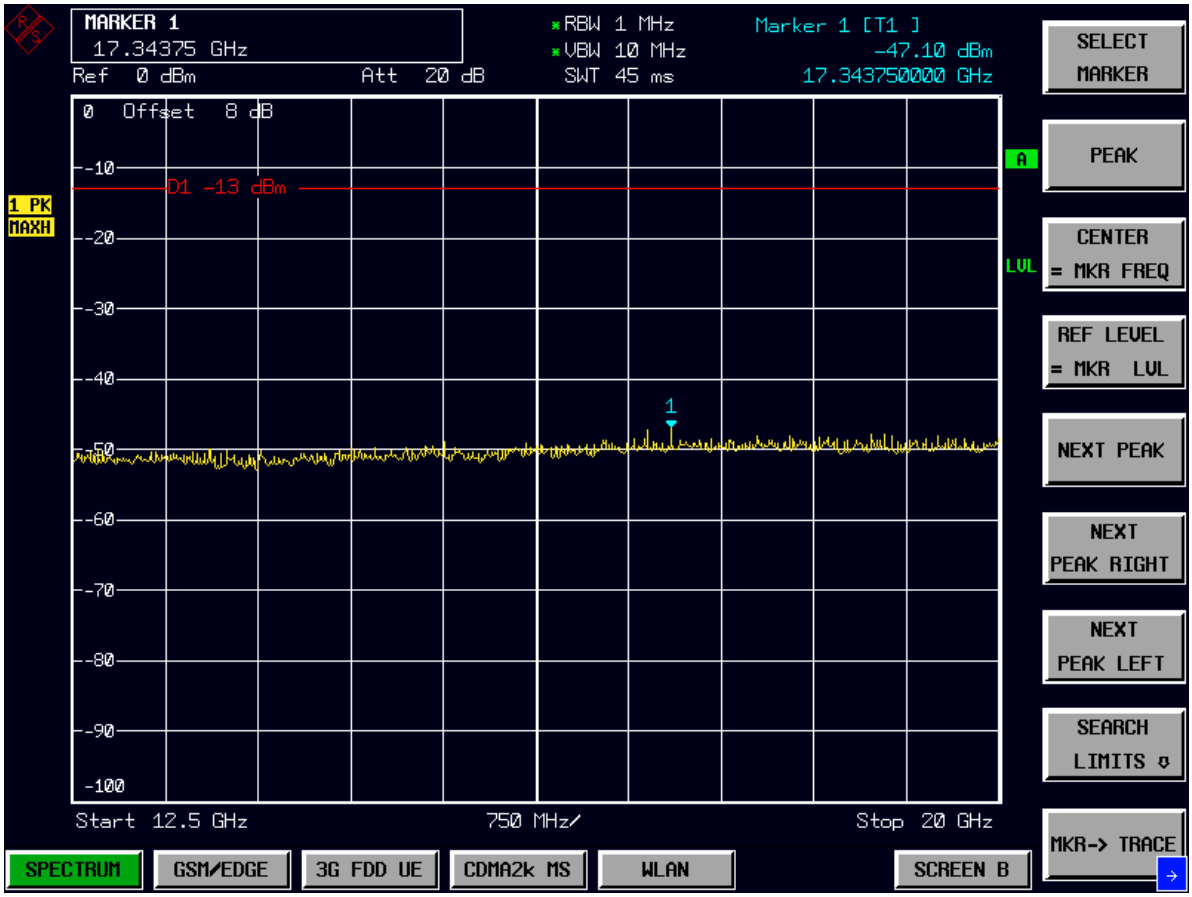

MARKER 1
3.761217949 GHz
RBW 1 MHz
VBW 10 MHz
SWT 55 ms
Marker 1 [T1]
-41.35 dBm
3.761217949 GHz
Ref 0 dBm
Att 20 dB
0 Offset 8 dB
D1 -13 dBm
1 PK
MAXH
A
LVL
Start 3 GHz
950 MHz/
Stop 12.5 GHz
SELECT MARKER
PEAK
CENTER = MKR FREQ
REF LEVEL = MKR LVL
NEXT PEAK
NEXT PEAK RIGHT
NEXT PEAK LEFT
SEARCH LIMITS
MKR-> TRACE
SPECTRUM
GSM/EDGE
3G FDD UE
CDMA2k MS
WLAN
SCREEN B


MARKER 1
18.07692308 GHz
RBW 1 MHz
VBW 10 MHz
SWT 45 ms
Marker 1 [T1]
-48.47 dBm
18.076923077 GHz
Ref 0 dBm
Att 20 dB
0 Offset 8 dB
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
D1 -13 dBm
1 PK
MAXH
A
LVL
Start 12.5 GHz
750 MHz/
Stop 20 GHz
SELECT MARKER
PEAK
CENTER = MKR FREQ
REF LEVEL = MKR LVL
NEXT PEAK
NEXT PEAK RIGHT
NEXT PEAK LEFT
SEARCH LIMITS
MKR-> TRACE
SPECTRUM
GSM/EDGE
3G FDD UE
CDMA2k MS
WLAN
SCREEN B

Channel 810


MARKER 1
1.913464798 GHz
RBW 1 MHz
VBW 10 MHz
SWT 10 ms
Marker 1 [T1]
28.64 dBm
1.913464798 GHz
Ref 25 dBm
Att 45 dB
Offset 8 dB
1 PK
MAXH
D1 -13 dBm
Start 9 kHz
299.9991 MHz/
Stop 3 GHz
SELECT MARKER
PEAK
CENTER = MKR FREQ
REF LEVEL = MKR LVL
NEXT PEAK
NEXT PEAK RIGHT
NEXT PEAK LEFT
SEARCH LIMITS
MKR-> TRACE
SPECTRUM
GSM/EDGE
3G FDD UE
CDMA2k MS
WLAN
SCREEN B


MARKER 1
3.806891026 GHz
RBW 1 MHz
VBW 10 MHz
SWT 55 ms
Marker 1 [T1]
-40.60 dBm
3.806891026 GHz
Ref 0 dBm
Att 20 dB
0 Offset 8 dB
D1 -13 dBm
1 PK
MAXH
A
LVL
Start 3 GHz
950 MHz/
Stop 12.5 GHz
SELECT MARKER
PEAK
CENTER = MKR FREQ
REF LEVEL = MKR LVL
NEXT PEAK
NEXT PEAK RIGHT
NEXT PEAK LEFT
SEARCH LIMITS
MKR-> TRACE
SPECTRUM
GSM/EDGE
3G FDD UE
CDMA2k MS
WLAN
SCREEN B


MARKER 1
17.34375 GHz
RBW 1 MHz
VBW 10 MHz
SWT 45 ms
Marker 1 [T1]
-47.10 dBm
17.343750000 GHz
Ref 0 dBm
Att 20 dB
0 Offset 8 dB
D1 -13 dBm
1 PK
MAXH
A
LVL
Start 12.5 GHz
750 MHz/
Stop 20 GHz
SELECT MARKER
PEAK
CENTER = MKR FREQ
REF LEVEL = MKR LVL
NEXT PEAK
NEXT PEAK RIGHT
NEXT PEAK LEFT
SEARCH LIMITS
MKR-> TRACE
SPECTRUM
GSM/EDGE
3G FDD UE
CDMA2k MS
WLAN
SCREEN B

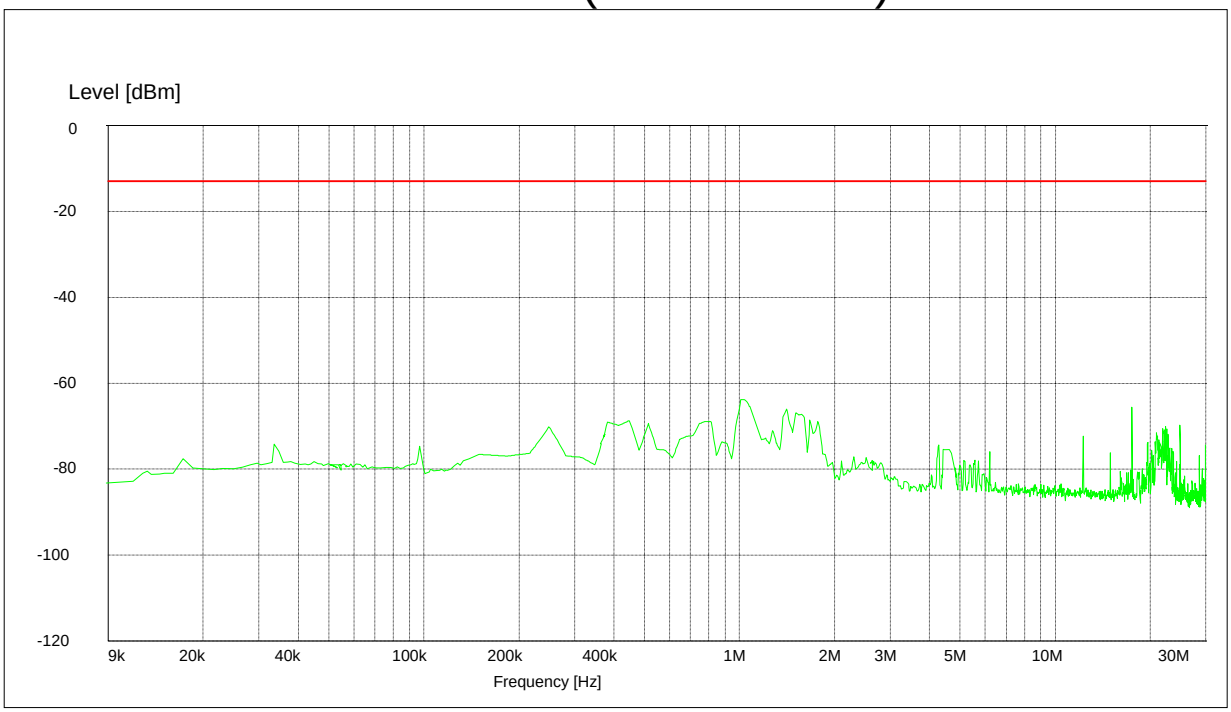
Appendix F

Radiated Spurious Emission

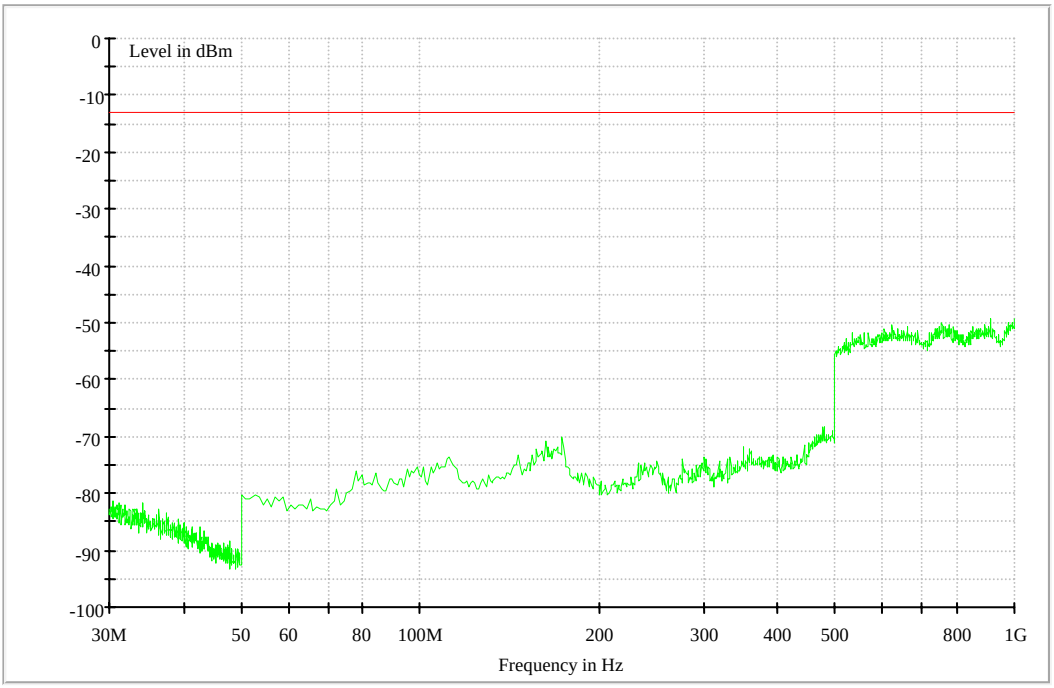
According to FCC Part 2.1053 & 24.238

GPRS MODE:

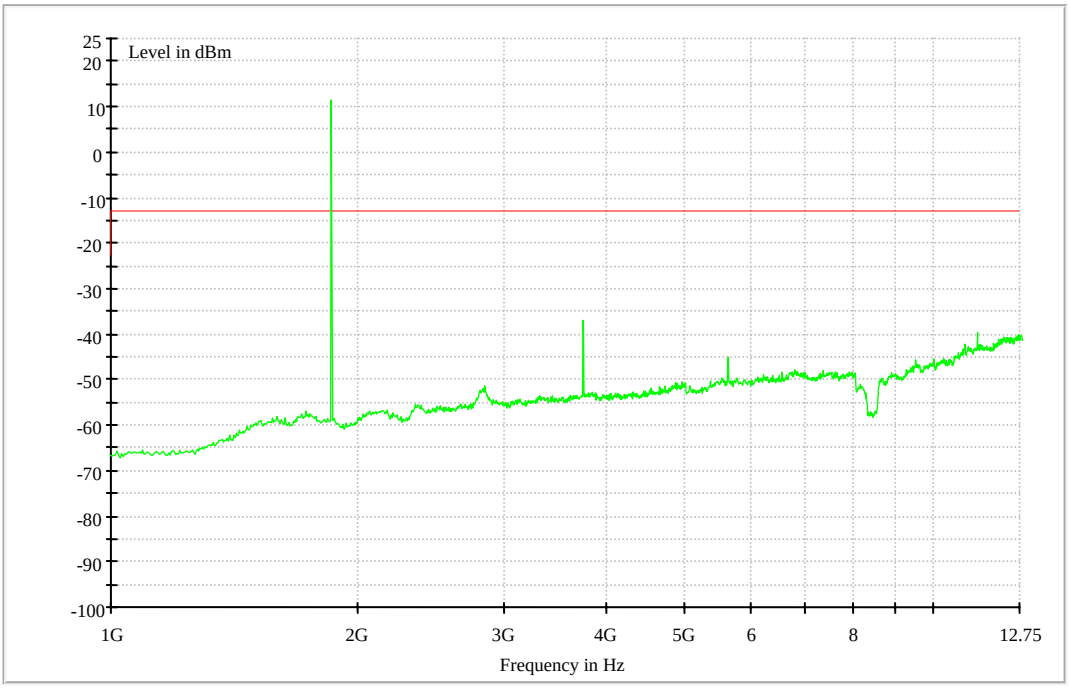
Traffic Mode (9kHz-30MHz)



Traffic Mode (30MHz-1GHz)

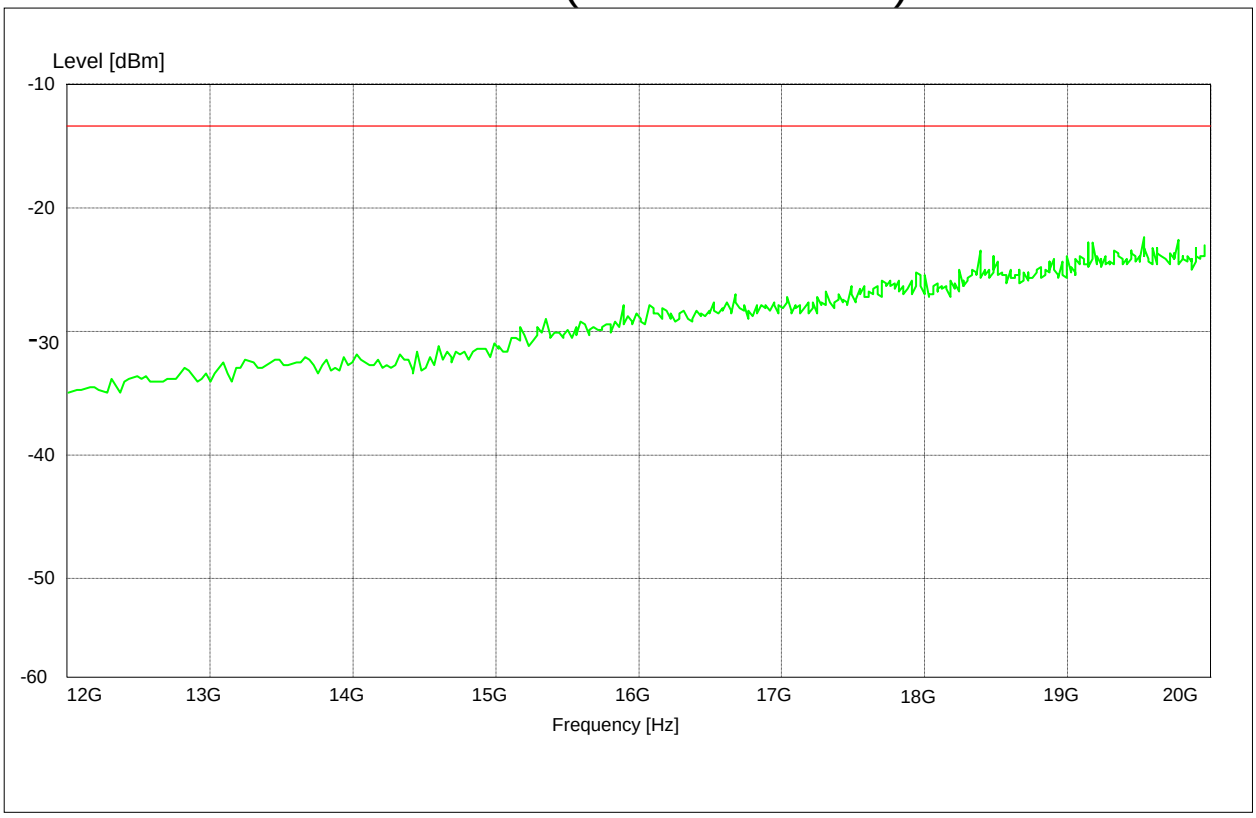


Traffic Mode (1GHz-12.75GHz)

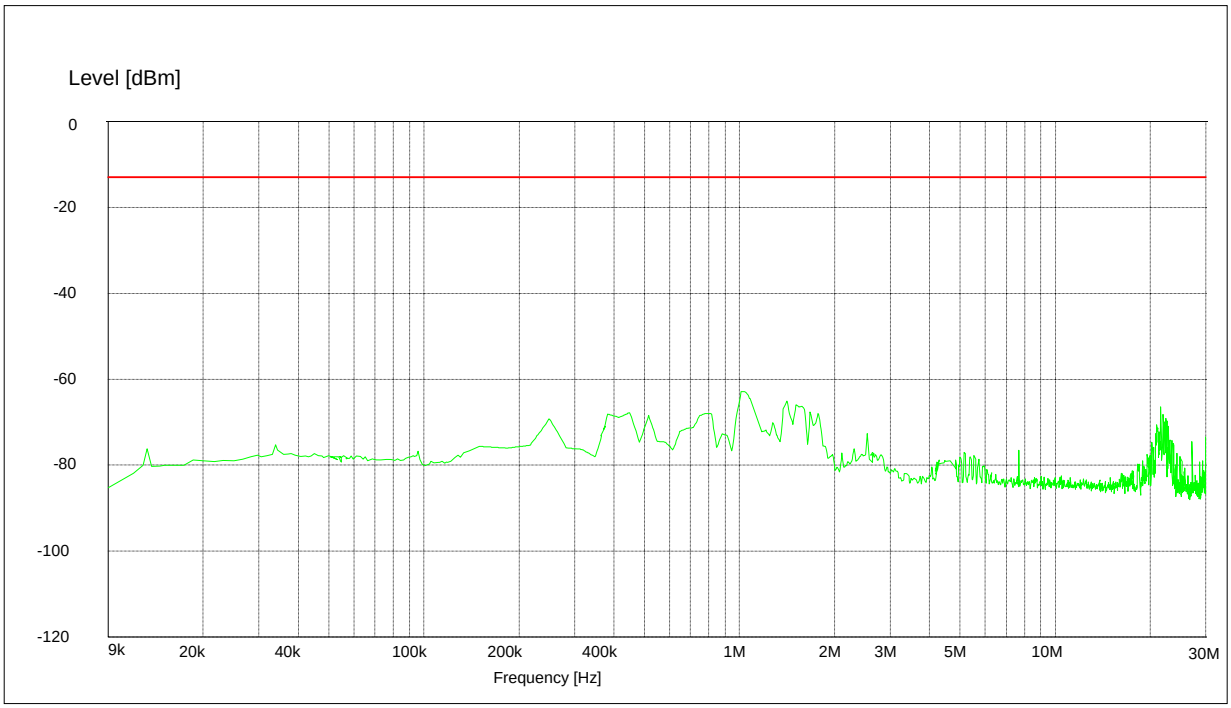


Note: The point which exceeded the limit was the carrier frequency.

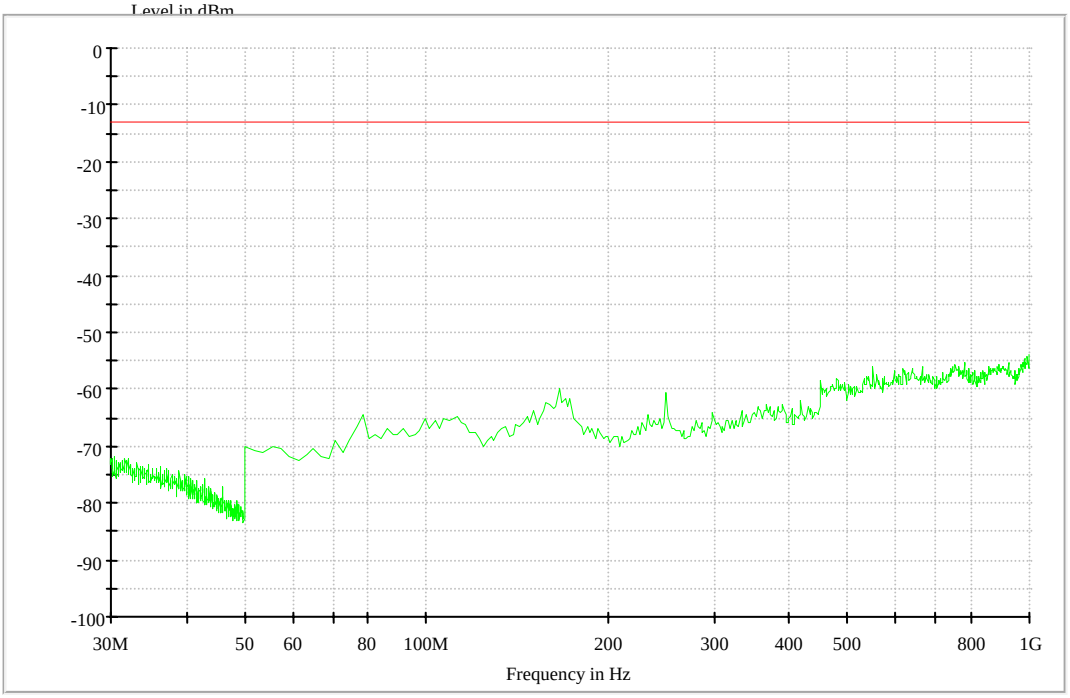
Traffic Mode (12GHz-20GHz)



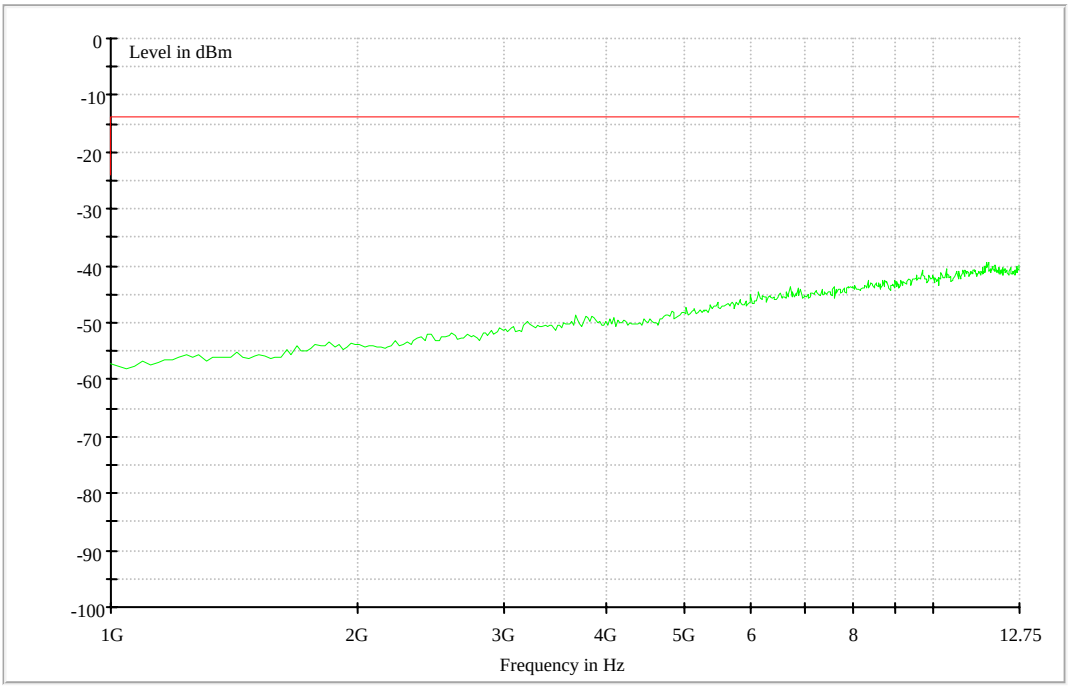
IDLE Mode (9 kHz-30MHz)



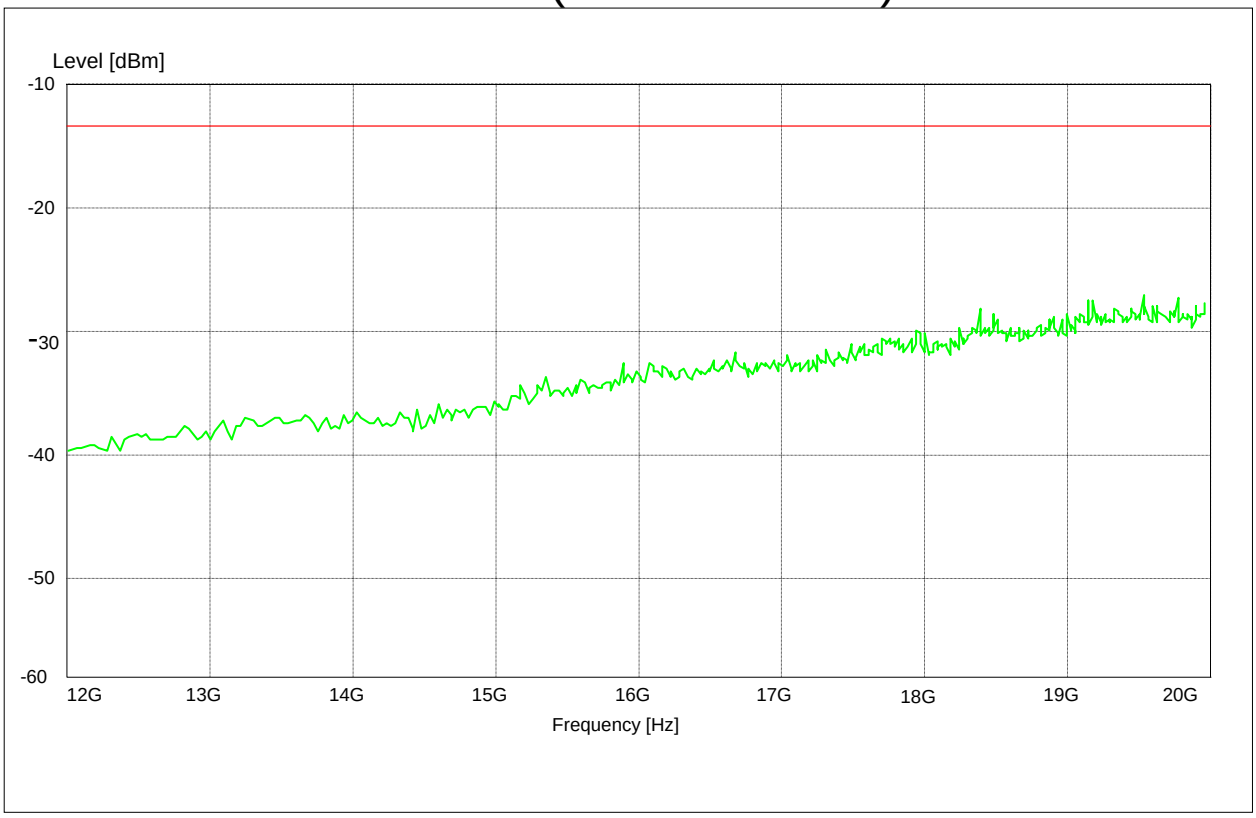
IDLE Mode (30MHz-1GHz)



IDLE Mode (1GHz-12.75GHz)

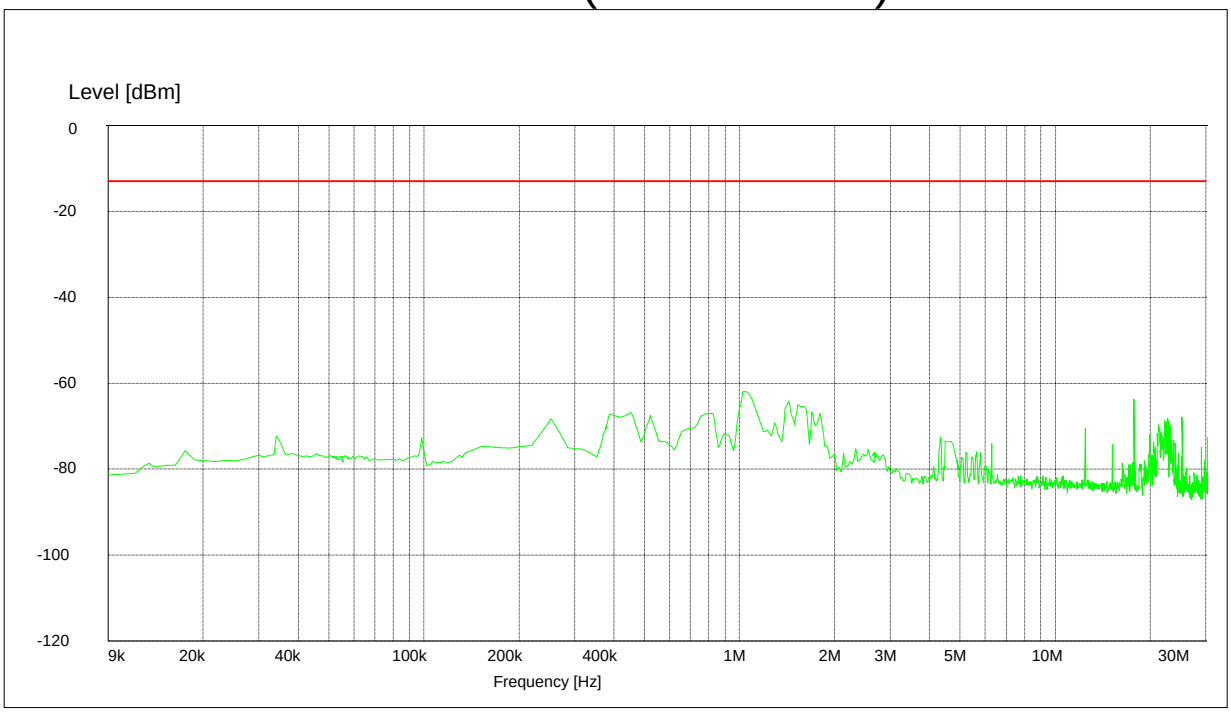


IDLE Mode (12GHz-20GHz)

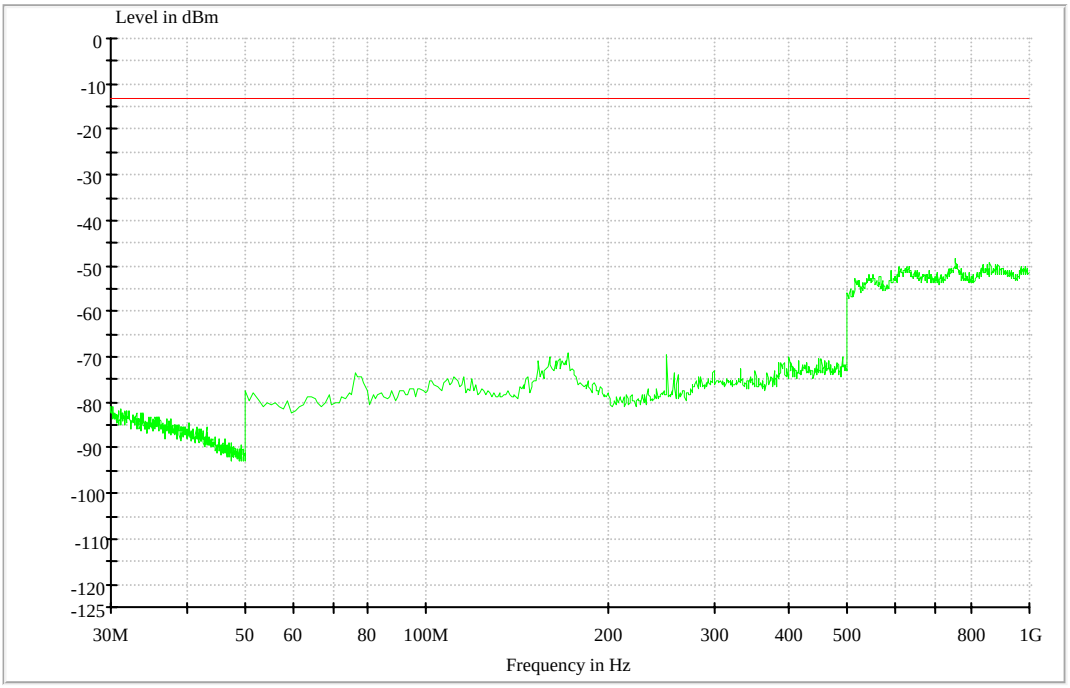


EDGE MODE:

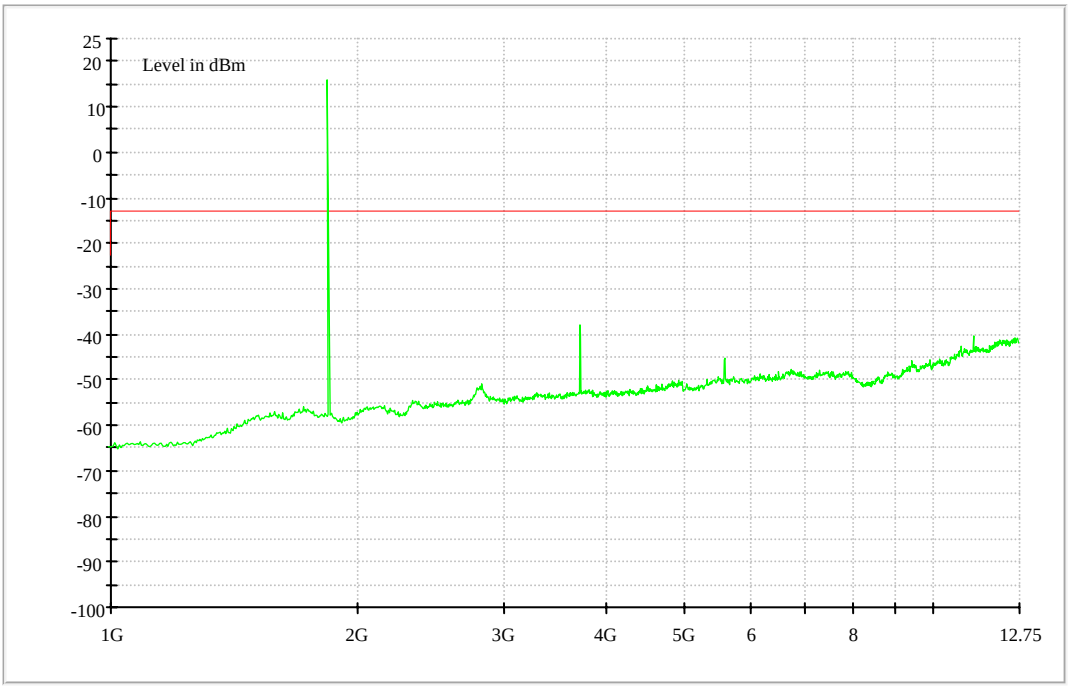
Traffic Mode (9kHz-30MHz)



Traffic Mode (30MHz-1GHz)

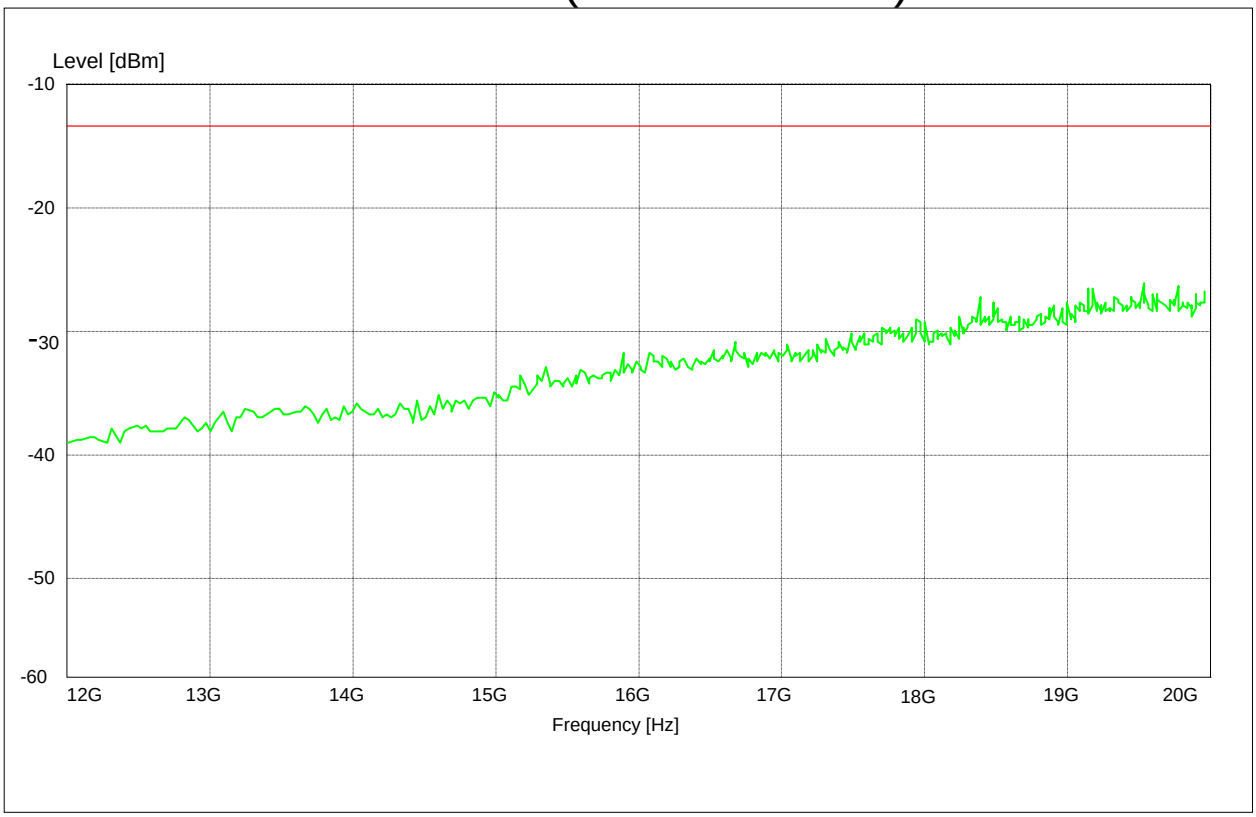


Traffic Mode (1GHz-12.75GHz)

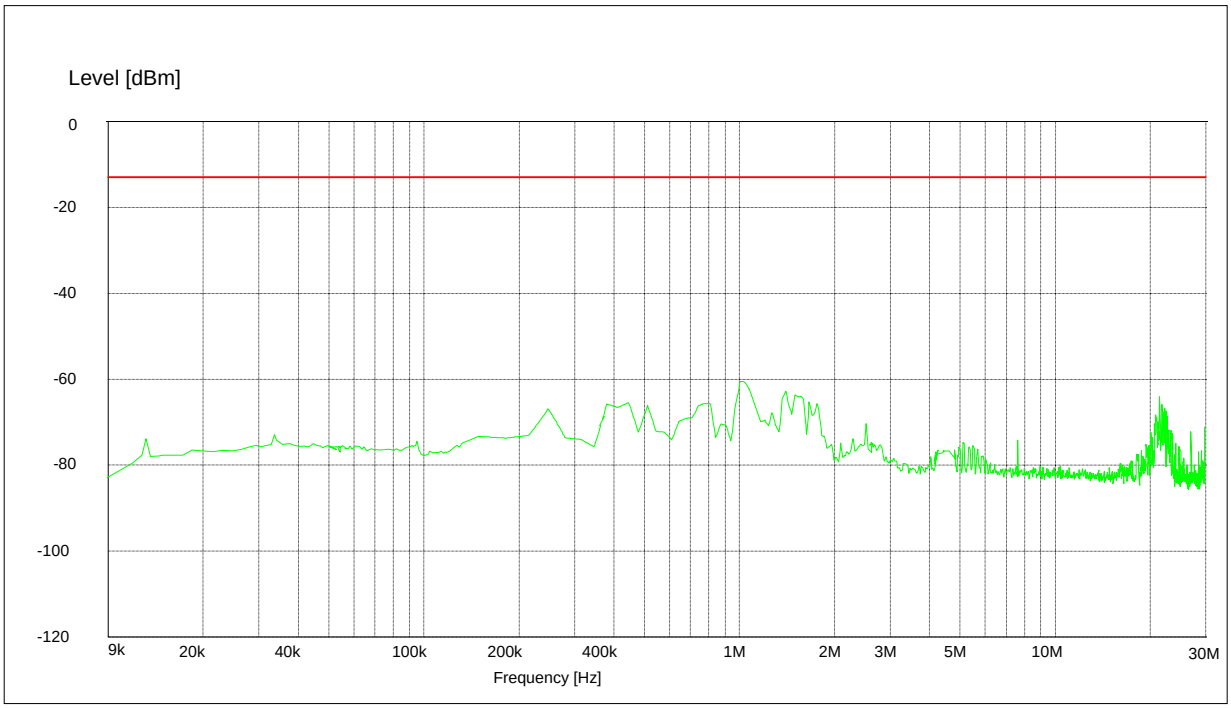


Note: The point which exceeded the limit was the carrier frequency.

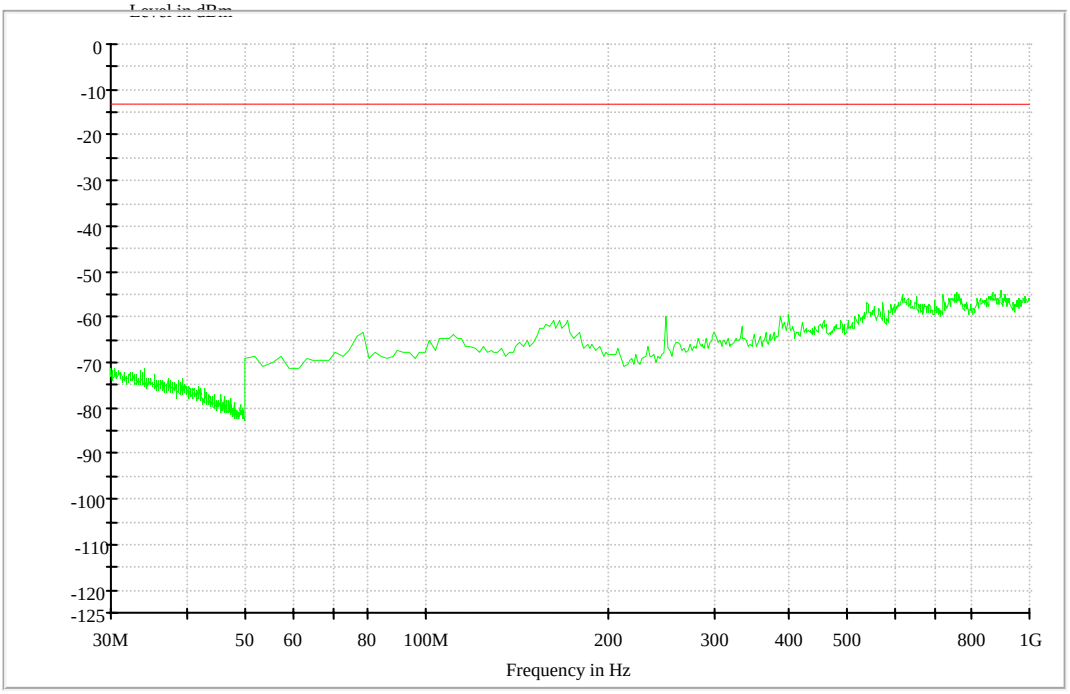
Traffic Mode (12GHz-20GHz)



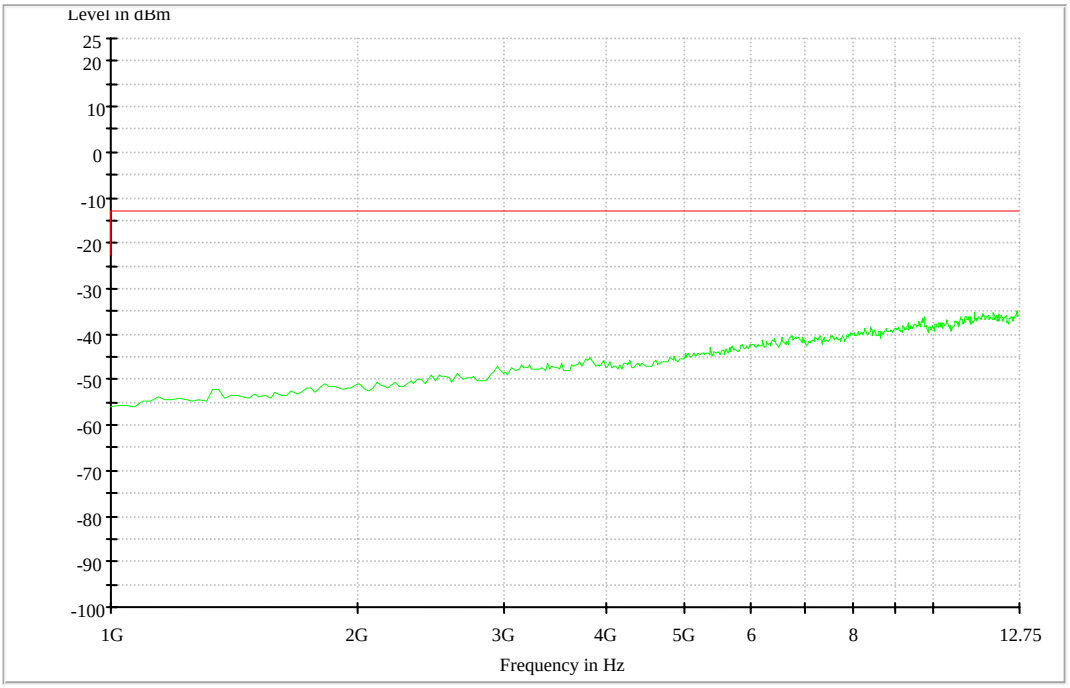
IDLE Mode (9 kHz-30MHz)



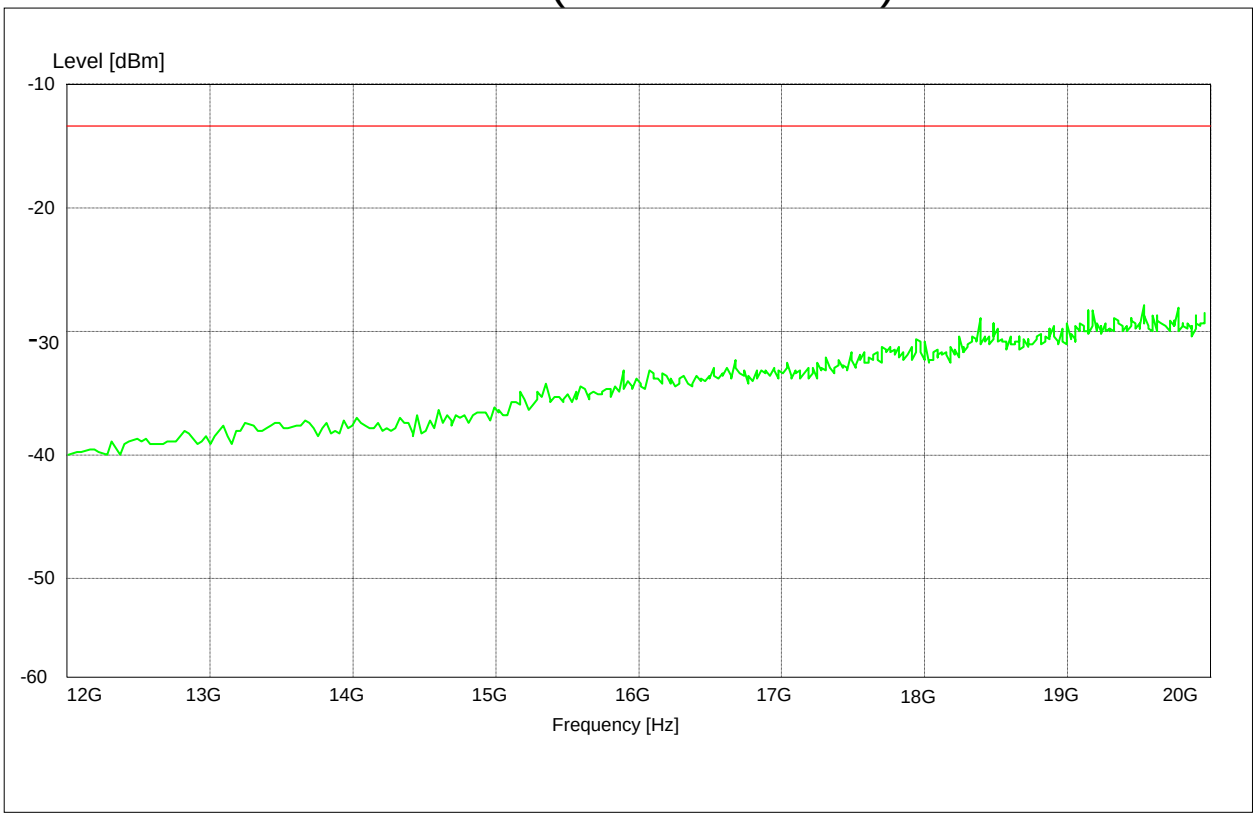
IDLE Mode (30MHz-1GHz)



IDLE Mode (1GHz-12.75GHz)



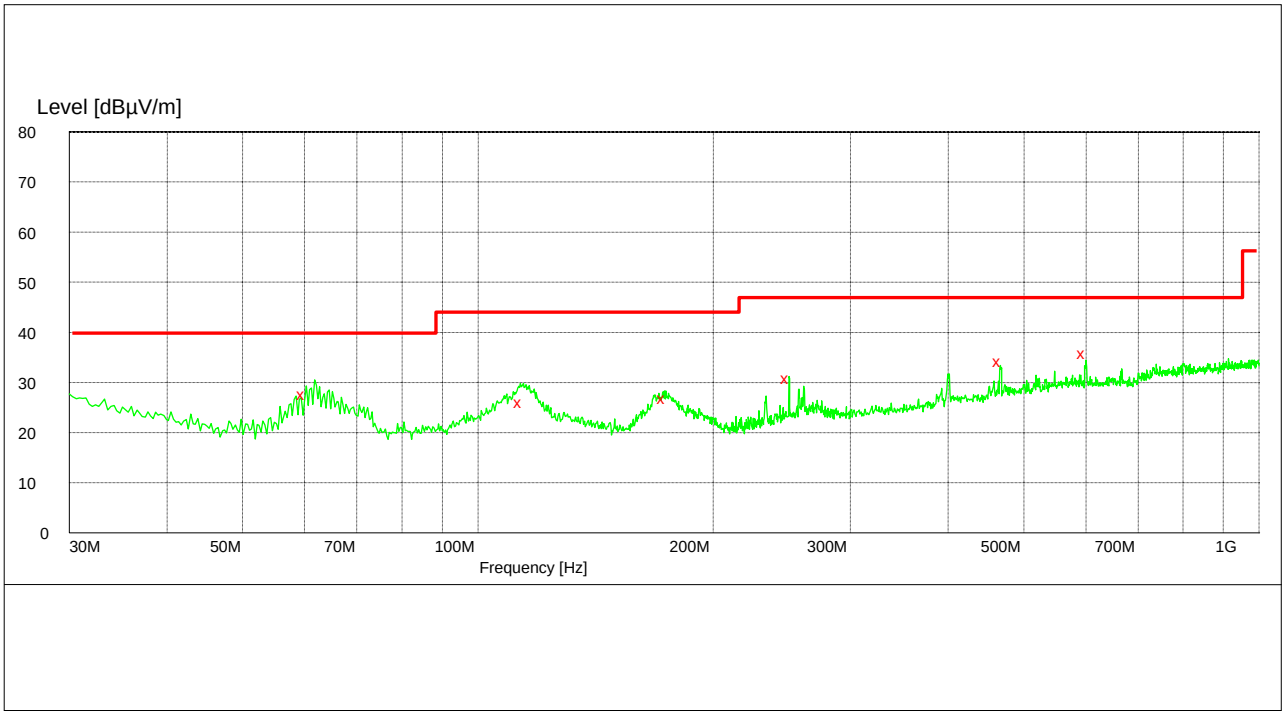
IDLE Mode (12GHz-20GHz)



Appendix G

Radiated Emission of Enclosure in Idle Mode

According to FCC Part 15.109



MEASUREMENT RESULT: QP DECTER

Frequency (MHz)	Level (dBµV/m)	Transd (dB)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Azimuth (deg)	Polarisation
59.980000	27.90	-17.1	40.0	12.1	109.0	0.00	VERTICAL
113.700000	26.20	-10.2	43.5	17.3	262.0	0.00	HORZONTAL
173.400000	27.00	-12.1	43.5	16.5	165.0	0.00	HORZONTAL
249.960000	31.00	-8.2	46.0	15.0	161.0	260.00	VERTICAL
466.320000	34.50	-3.6	46.0	11.5	100.0	0.00	VERTICAL
598.140000	36.10	-1.7	46.0	9.9	100.0	0.00	VERTICAL

Appendix H

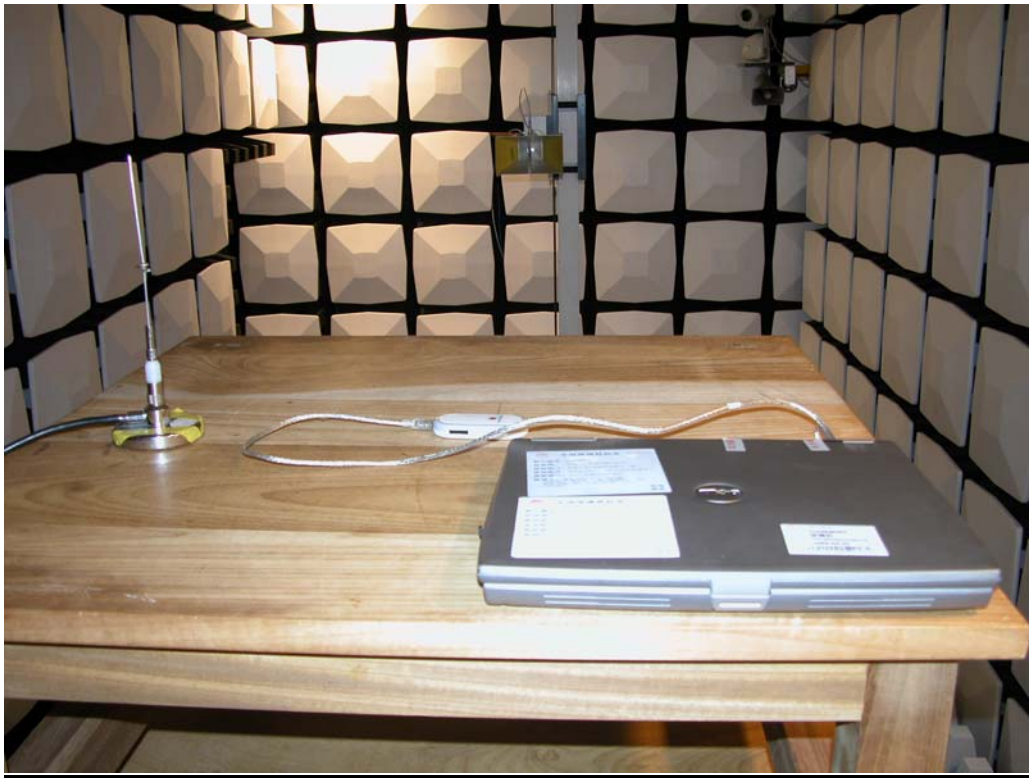
Photos of Test Setup

2 Radiated Emissions

Radiated Disturbance

3 Radiated Spurious Emissions

Radiated Spurious Emission (below 1GHz)



Radiated Spurious Emission (above 1GHz)

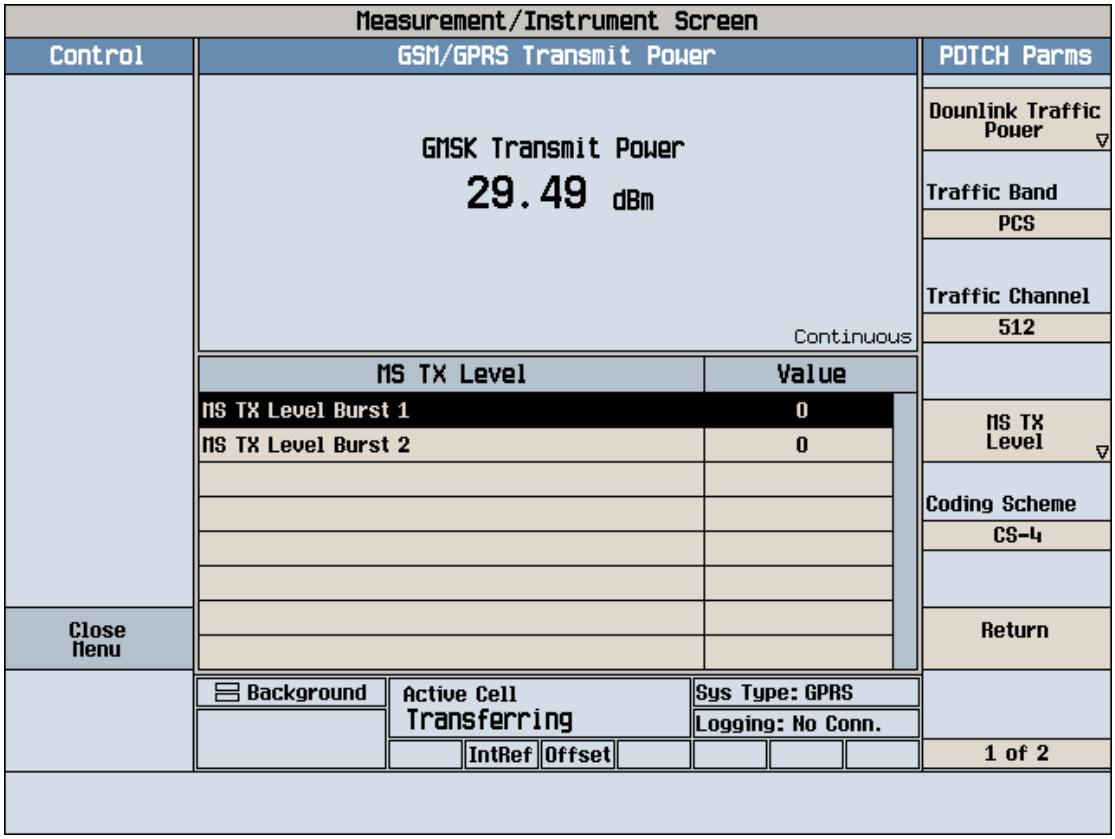
Appendix I

Measurement Results
Maximum Conducted Output Power

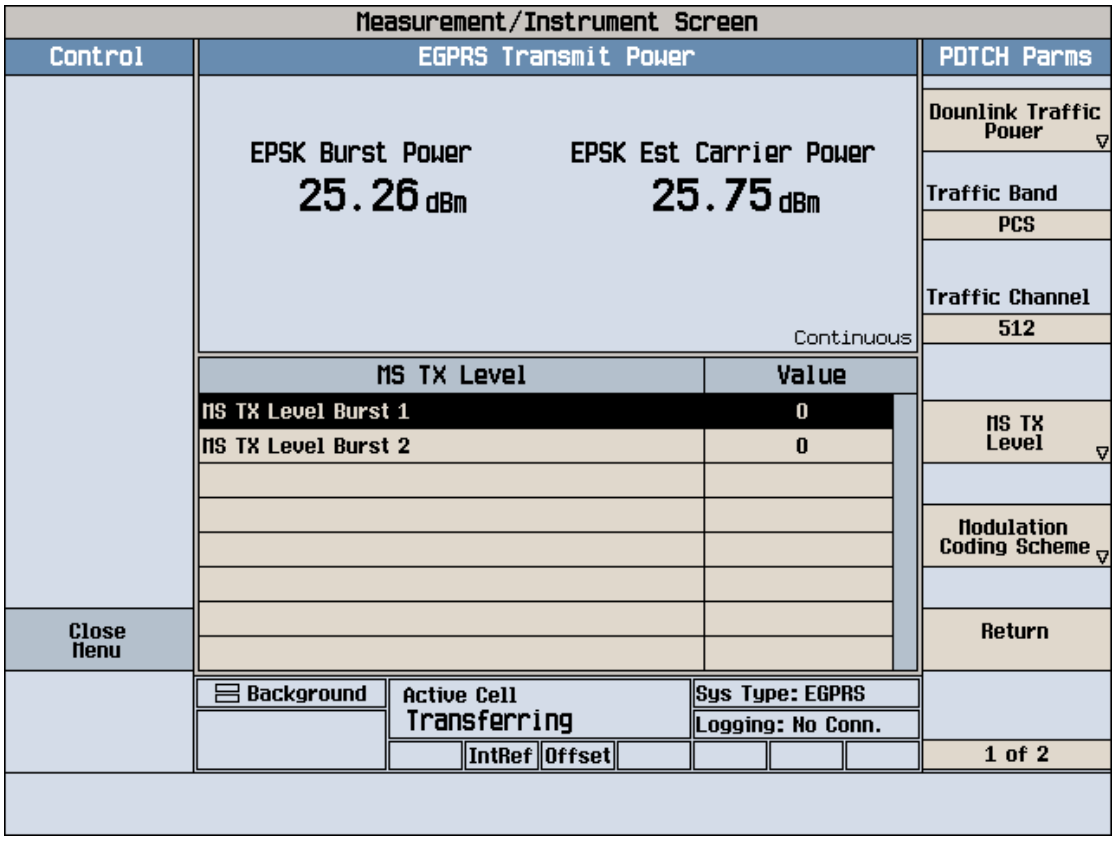
Maximum conducted power at 1st minute (dBm)			
Channel	512	661	810
GPRS	29.49	29.53	29.60
EGPRS	25.26	25.64	26.02
Maximum conducted power at 20th minute (dBm)			
Channel	512	661	810
GPRS	29.49	29.56	29.61
EGPRS	25.82	25.30	25.78
Maximum conducted power at 40th minute (dBm)			
Channel	512	661	810
GPRS	29.49	29.55	29.63
EGPRS	25.60	25.78	25.88

Channel 512

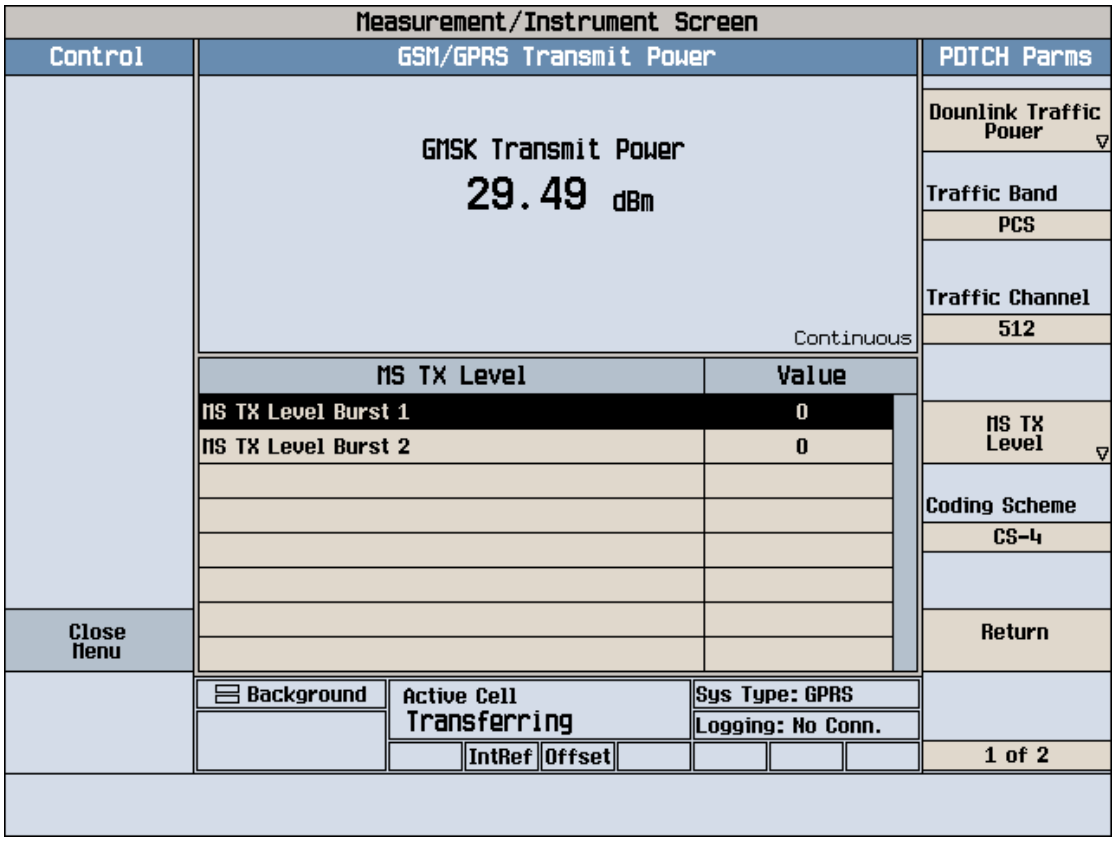
1st minute
GPRS



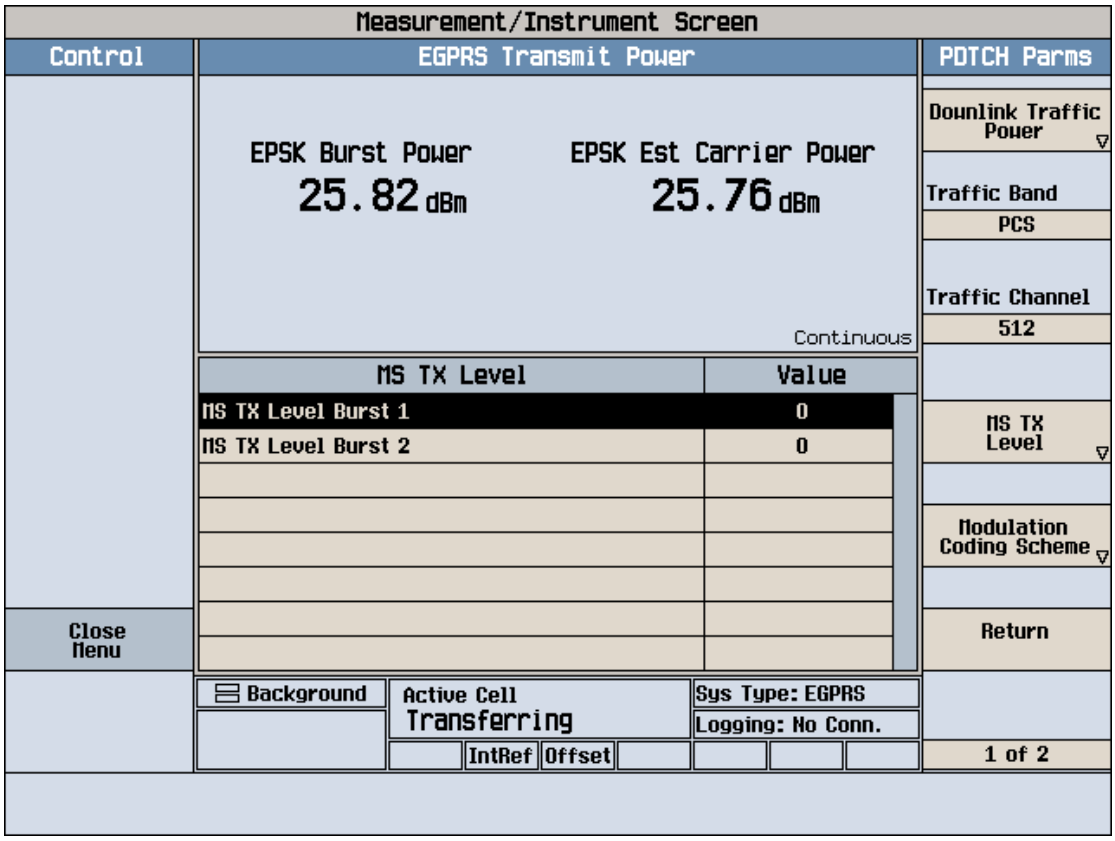
EGPRS


Measurement/Instrument Screen
Control
EGPRS Transmit Power
PDTCH Parms
EPSK Burst Power
25.26 dBm
EPSK Est Carrier Power
25.75 dBm
Continuous
Dounlink Traffic Power
Traffic Band
PCS
Traffic Channel
512
MS TX Level
Value
MS TX Level Burst 1
0
MS TX Level Burst 2
0
MS TX Level
Modulation Coding Scheme
Close Menu
Return
Background
Active Cell
Transferring
Sys Type: EGPRS
Logging: No Conn.
IntRef
Offset
1 of 2

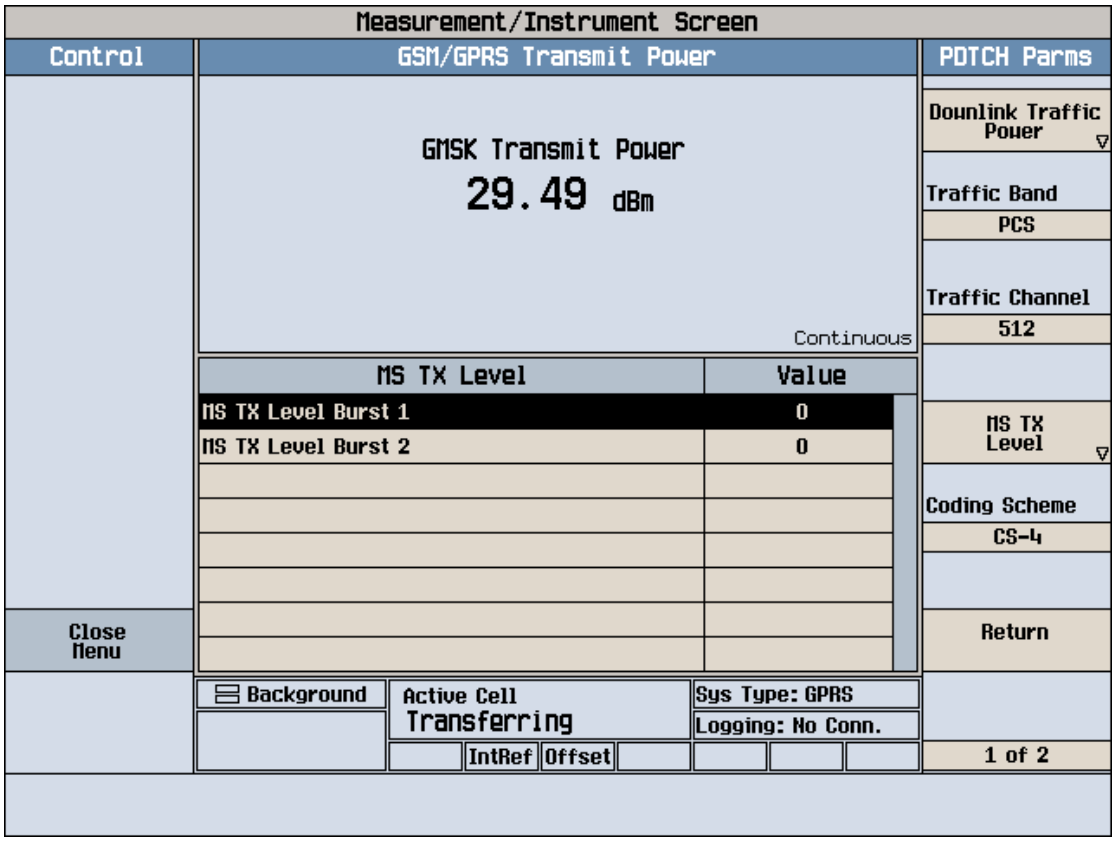
20th minute
GPRS



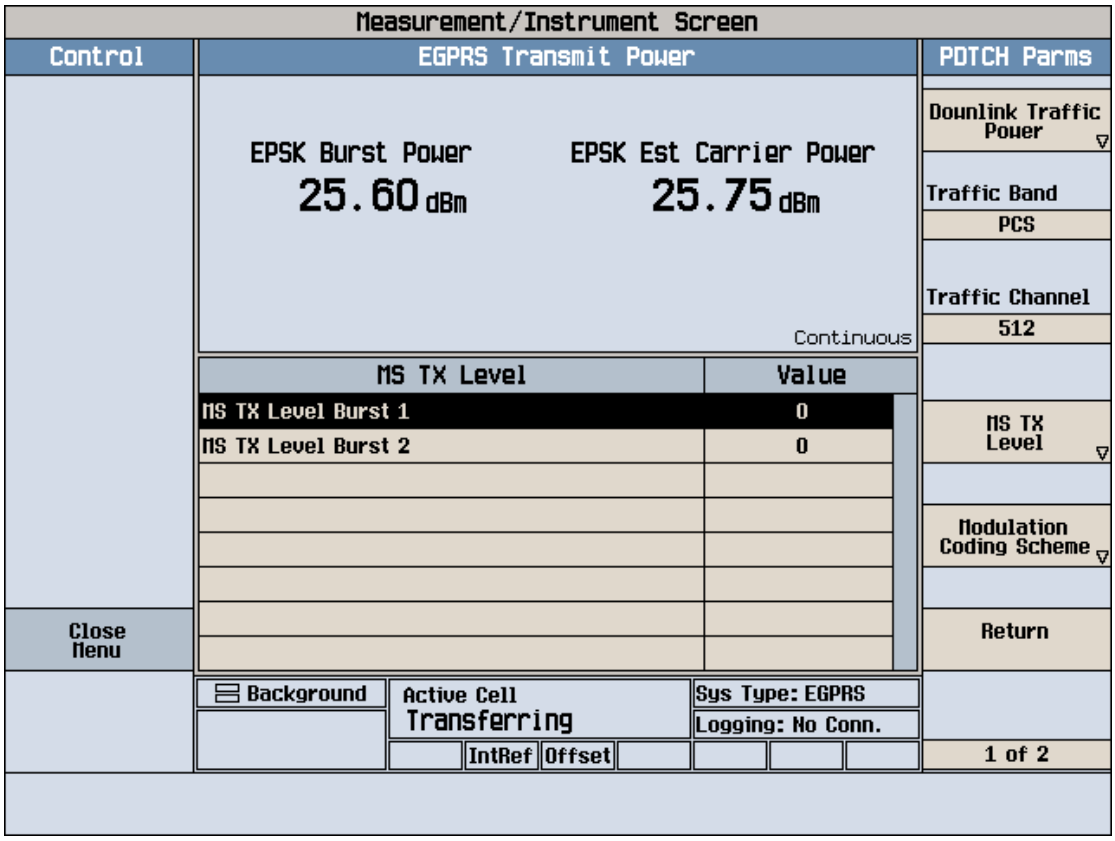
EGPRS


Measurement/Instrument Screen
Control
EGPRS Transmit Power
PDTCH Parms
EPSK Burst Power
25.82 dBm
EPSK Est Carrier Power
25.76 dBm
Continuous
Dounlink Traffic Power
Traffic Band
PCS
Traffic Channel
512
MS TX Level
Value
MS TX Level Burst 1
0
MS TX Level Burst 2
0
MS TX Level
Modulation Coding Scheme
Close Menu
Return
Background
Active Cell
Transferring
Sys Type: EGPRS
Logging: No Conn.
IntRef
Offset
1 of 2

40th minute
GPRS

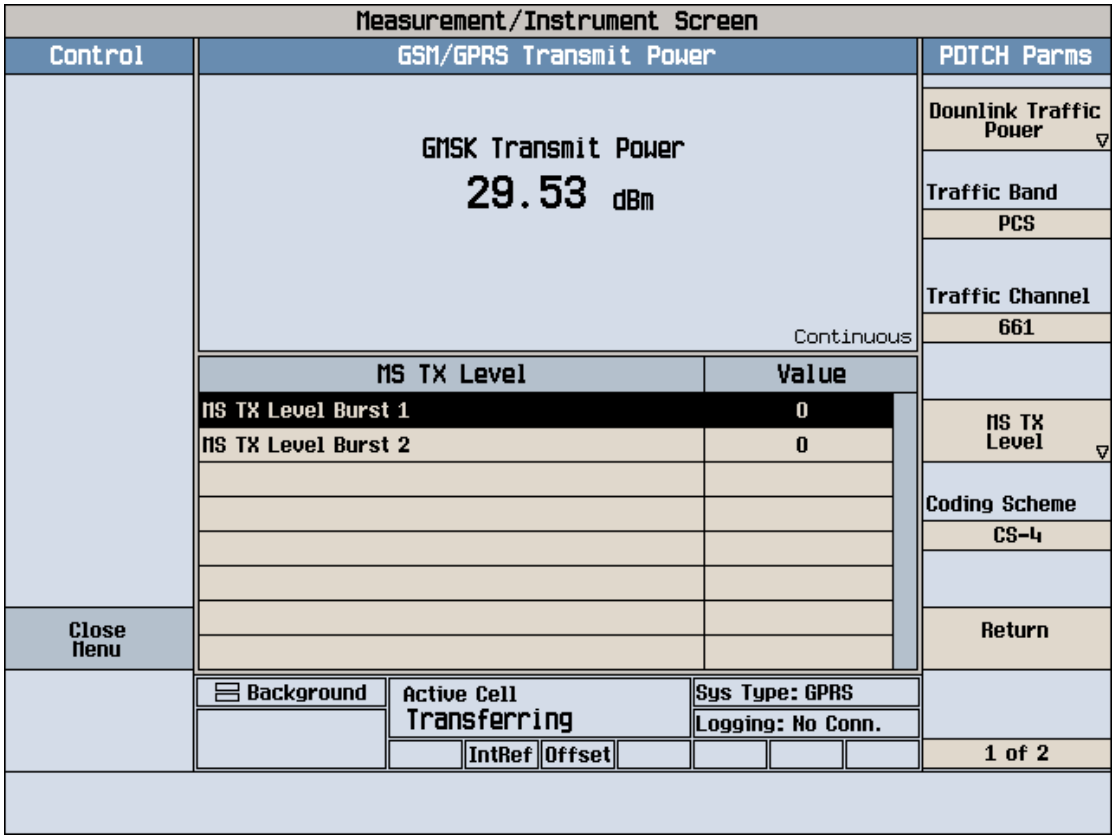


EGPRS

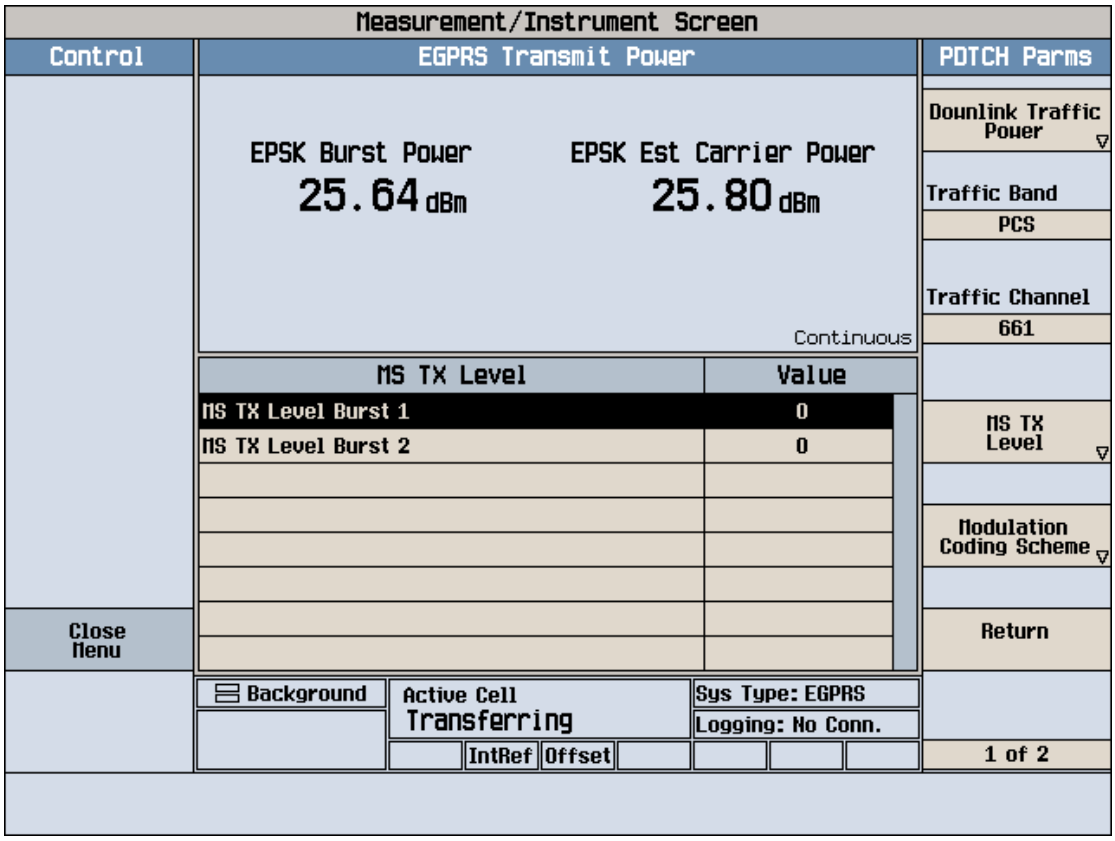

Measurement/Instrument Screen
Control
EGPRS Transmit Power
PDTCH Parms
EPSK Burst Power
25.60 dBm
EPSK Est Carrier Power
25.75 dBm
Continuous
Dounlink Traffic Power
Traffic Band
PCS
Traffic Channel
512
MS TX Level
Value
MS TX Level Burst 1
0
MS TX Level Burst 2
0
MS TX Level
Modulation Coding Scheme
Close Menu
Return
Background
Active Cell
Transferring
Sys Type: EGPRS
Logging: No Conn.
IntRef
Offset
1 of 2

Channel 661

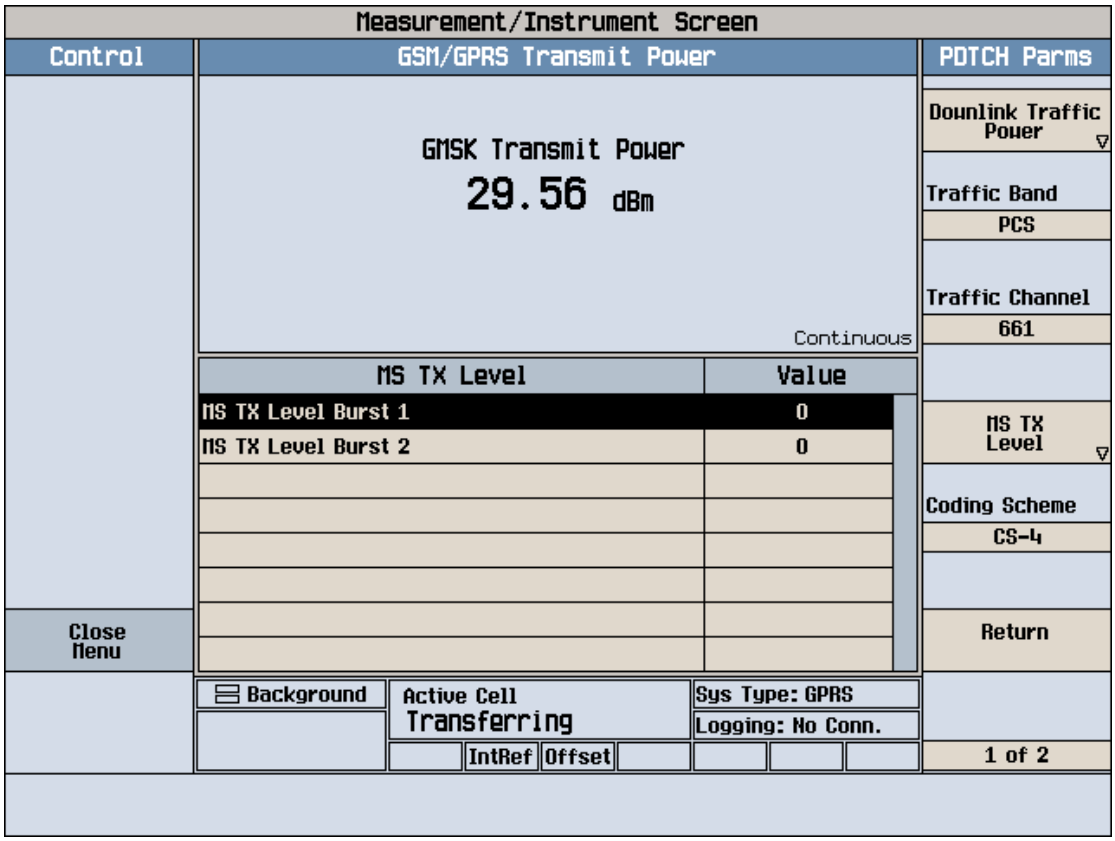
1st minute
GPRS



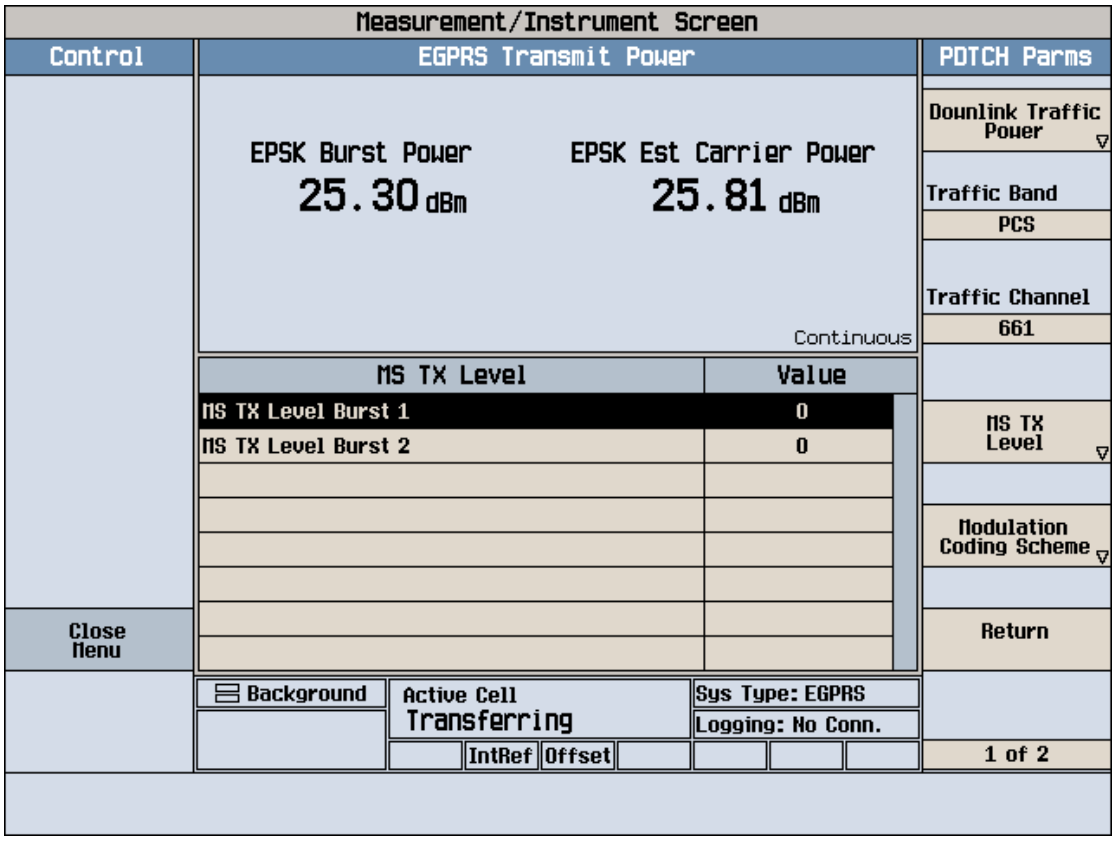
EGPRS


Measurement/Instrument Screen
Control
EGPRS Transmit Power
PDTCH Parms
EPSK Burst Power
25.64 dBm
EPSK Est Carrier Power
25.80 dBm
Continuous
Dounlink Traffic Power
Traffic Band
PCS
Traffic Channel
661
MS TX Level
Value
MS TX Level Burst 1
0
MS TX Level Burst 2
0
MS TX Level
Modulation Coding Scheme
Close Menu
Return
Background
Active Cell
Transferring
Sys Type: EGPRS
Logging: No Conn.
IntRef
Offset
1 of 2

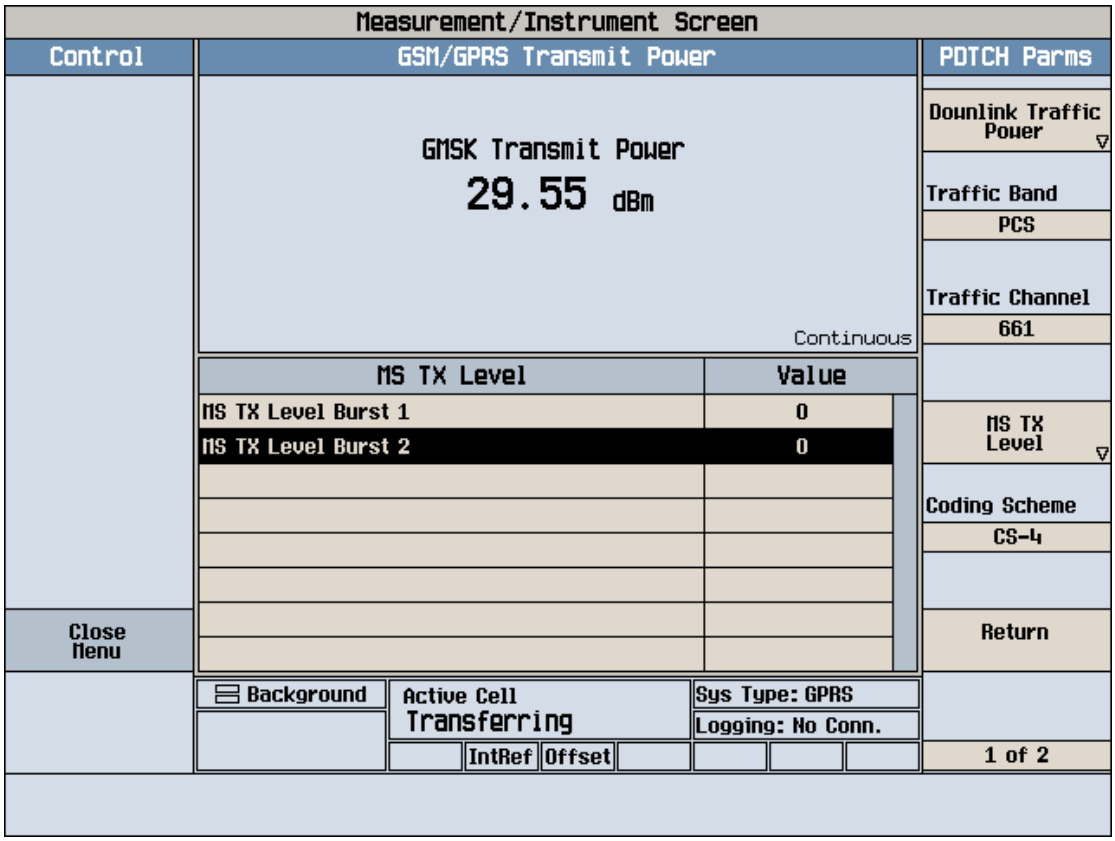
20th minute
GPRS



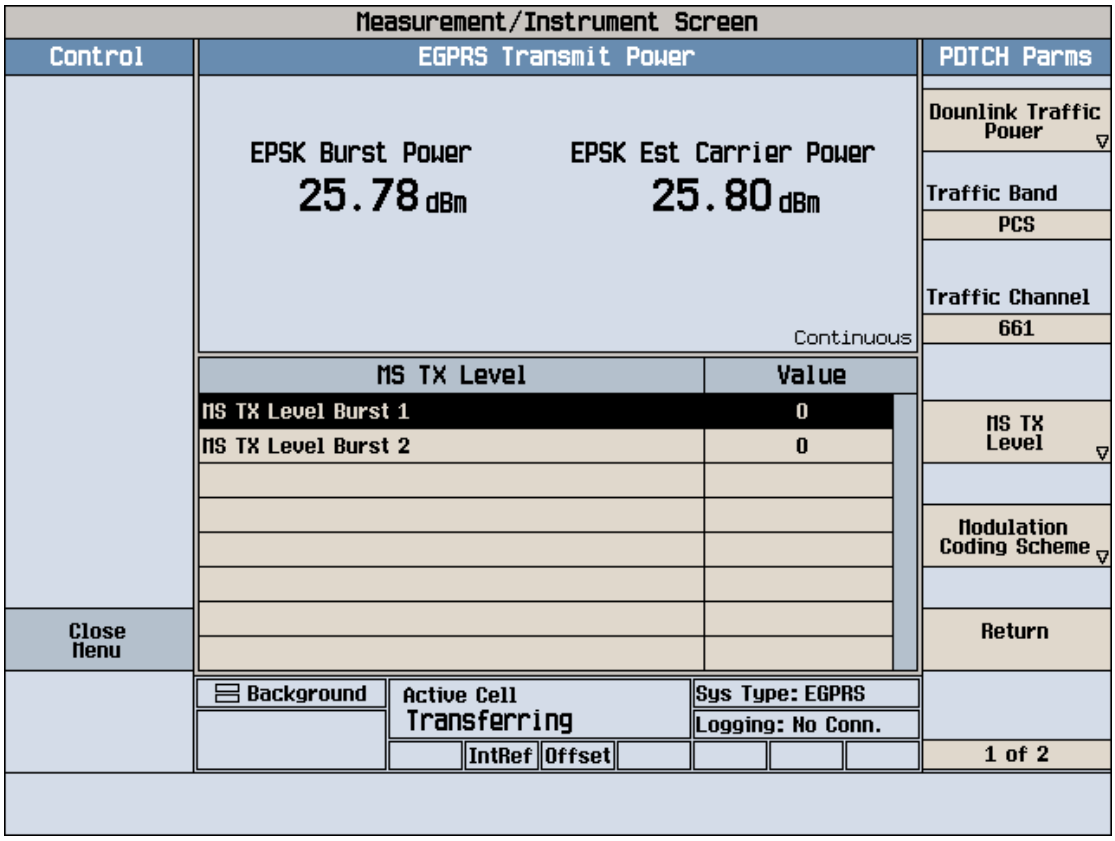
EGPRS


Measurement/Instrument Screen
Control
EGPRS Transmit Power
PDTCH Parms
EPSK Burst Power
25.30 dBm
EPSK Est Carrier Power
25.81 dBm
Continuous
Dounlink Traffic Power
Traffic Band
PCS
Traffic Channel
661
MS TX Level
Value
MS TX Level Burst 1
0
MS TX Level Burst 2
0
MS TX Level
Modulation Coding Scheme
Close Menu
Return
Background
Active Cell
Transferring
Sys Type: EGPRS
Logging: No Conn.
IntRef
Offset
1 of 2

40th minute
GPRS

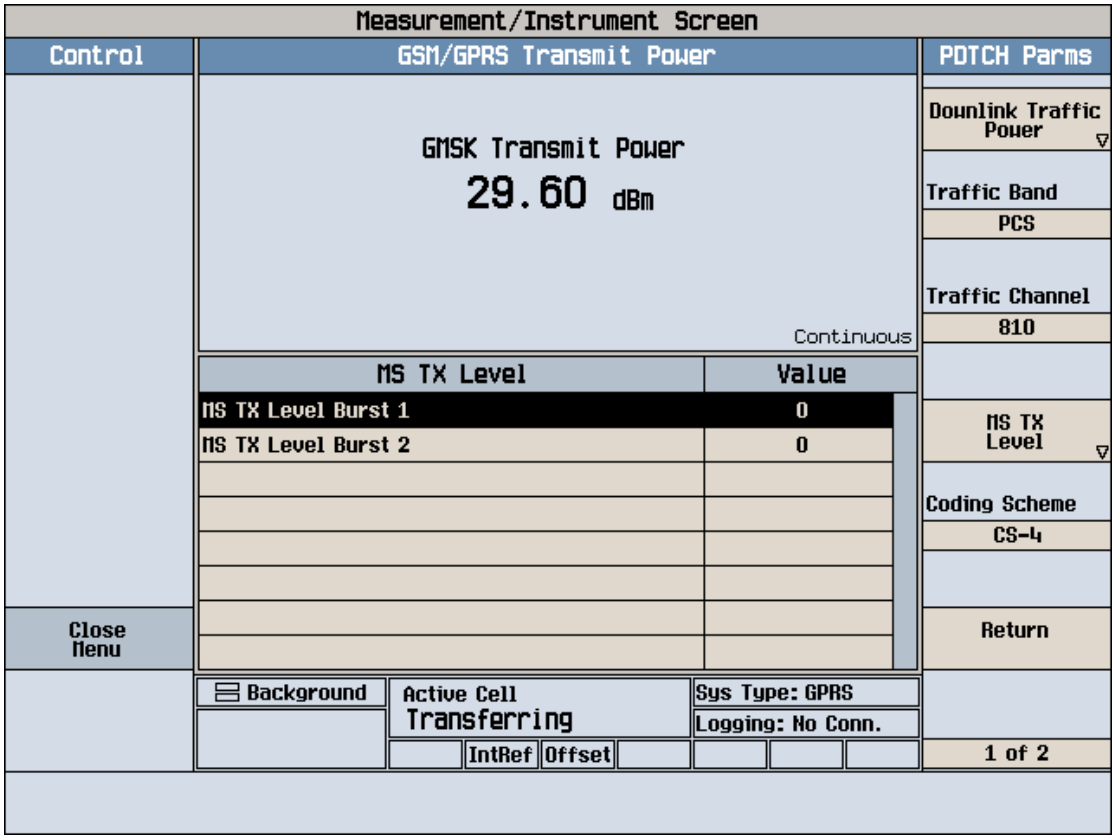


EGPRS

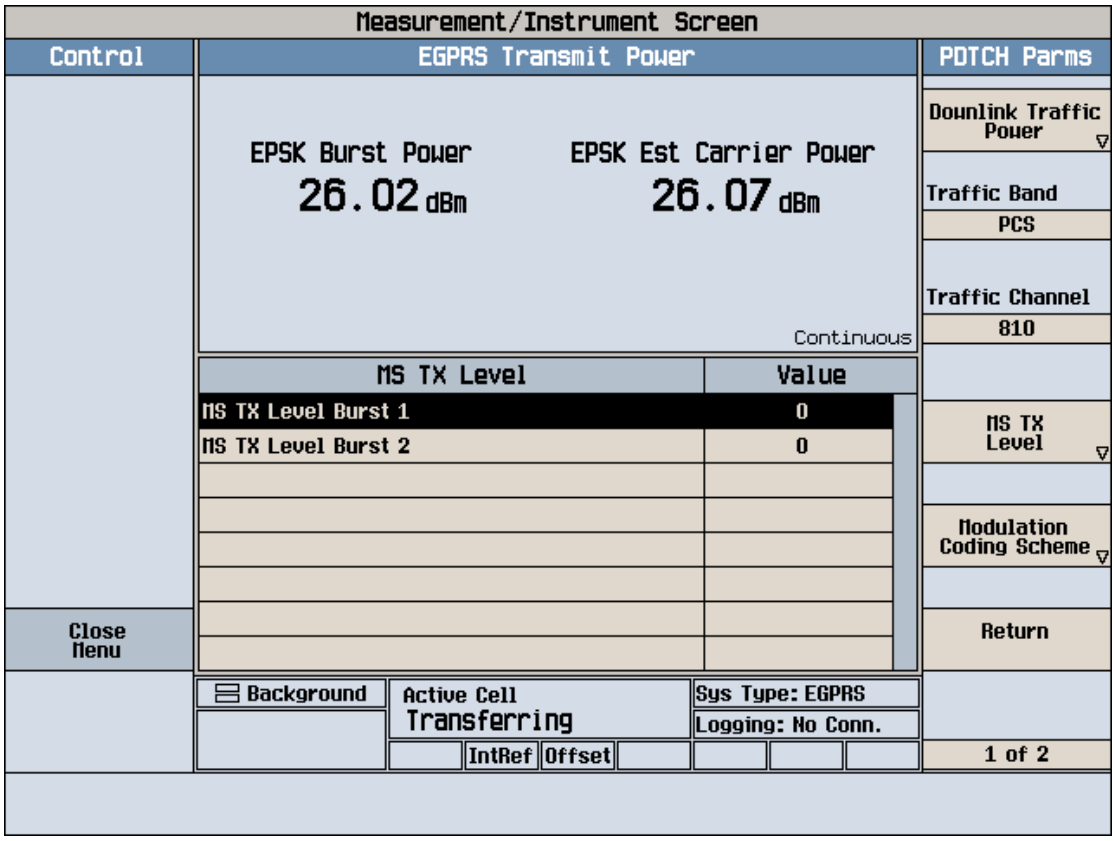

Measurement/Instrument Screen
Control
EGPRS Transmit Power
PDTCH Parms
EPSK Burst Power
25.78 dBm
EPSK Est Carrier Power
25.80 dBm
Continuous
Dounlink Traffic Power
Traffic Band
PCS
Traffic Channel
661
MS TX Level
Value
MS TX Level Burst 1
0
MS TX Level Burst 2
0
MS TX Level
Modulation Coding Scheme
Close Menu
Return
Background
Active Cell
Transferring
Sys Type: EGPRS
Logging: No Conn.
IntRef
Offset
1 of 2

Channel 810

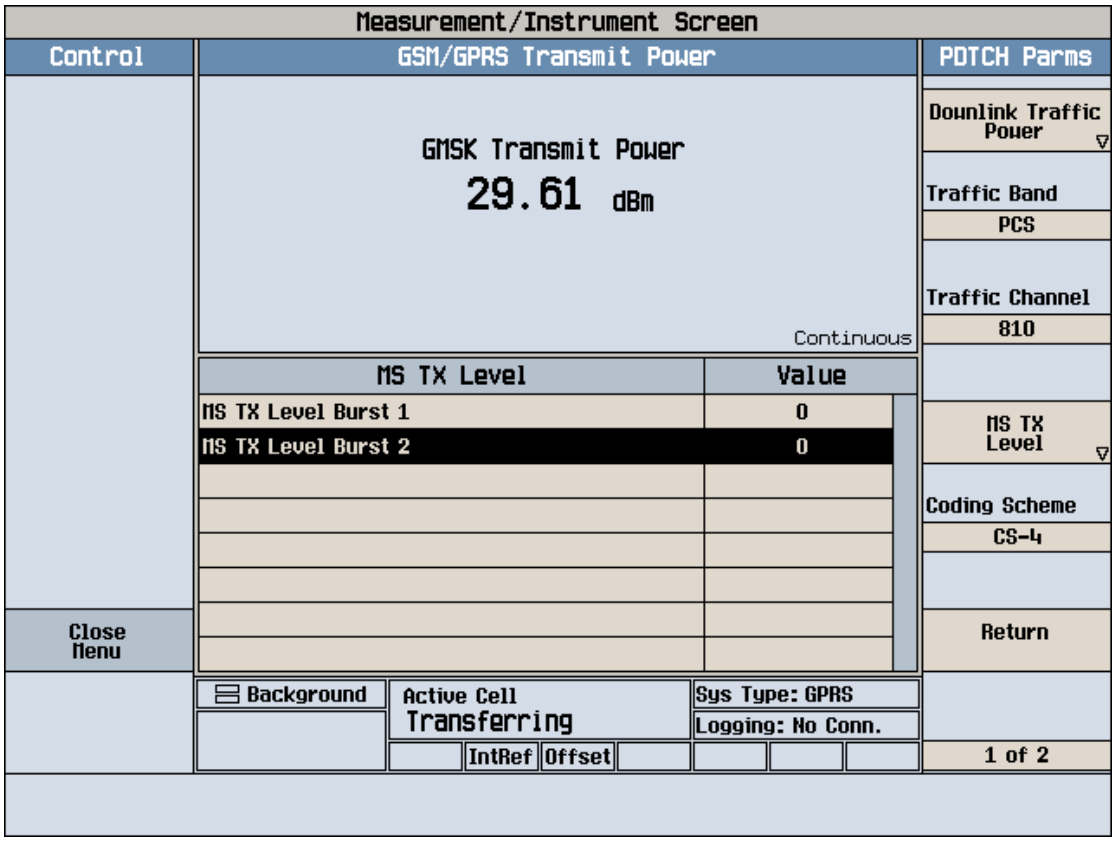
1st minute
GPRS



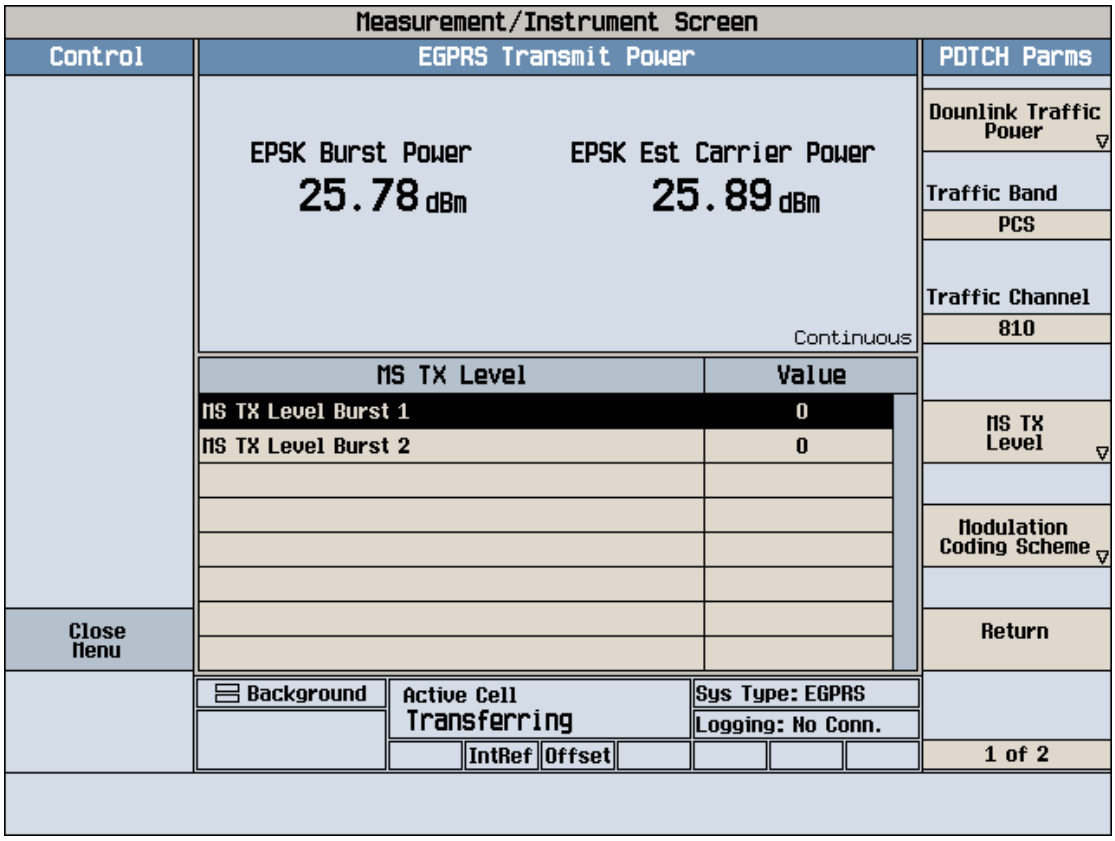
EGPRS


Measurement/Instrument Screen
Control
EGPRS Transmit Power
PDTCH Parms
EPSK Burst Power
26.02 dBm
EPSK Est Carrier Power
26.07 dBm
Continuous
Dounlink Traffic Power
Traffic Band
PCS
Traffic Channel
810
MS TX Level
Value
MS TX Level Burst 1
0
MS TX Level Burst 2
0
MS TX Level
Modulation Coding Scheme
Close Menu
Return
Background
Active Cell
Transferring
Sys Type: EGPRS
Logging: No Conn.
IntRef
Offset
1 of 2

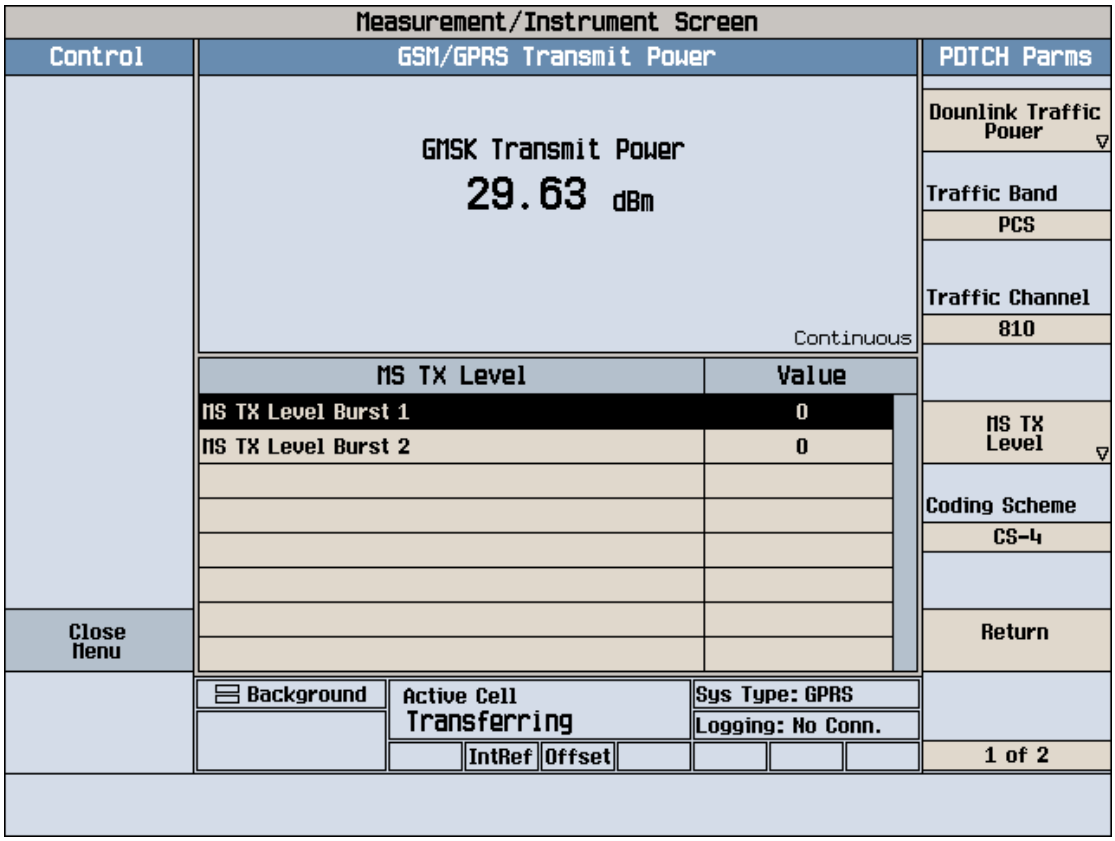
20th minute
GPRS



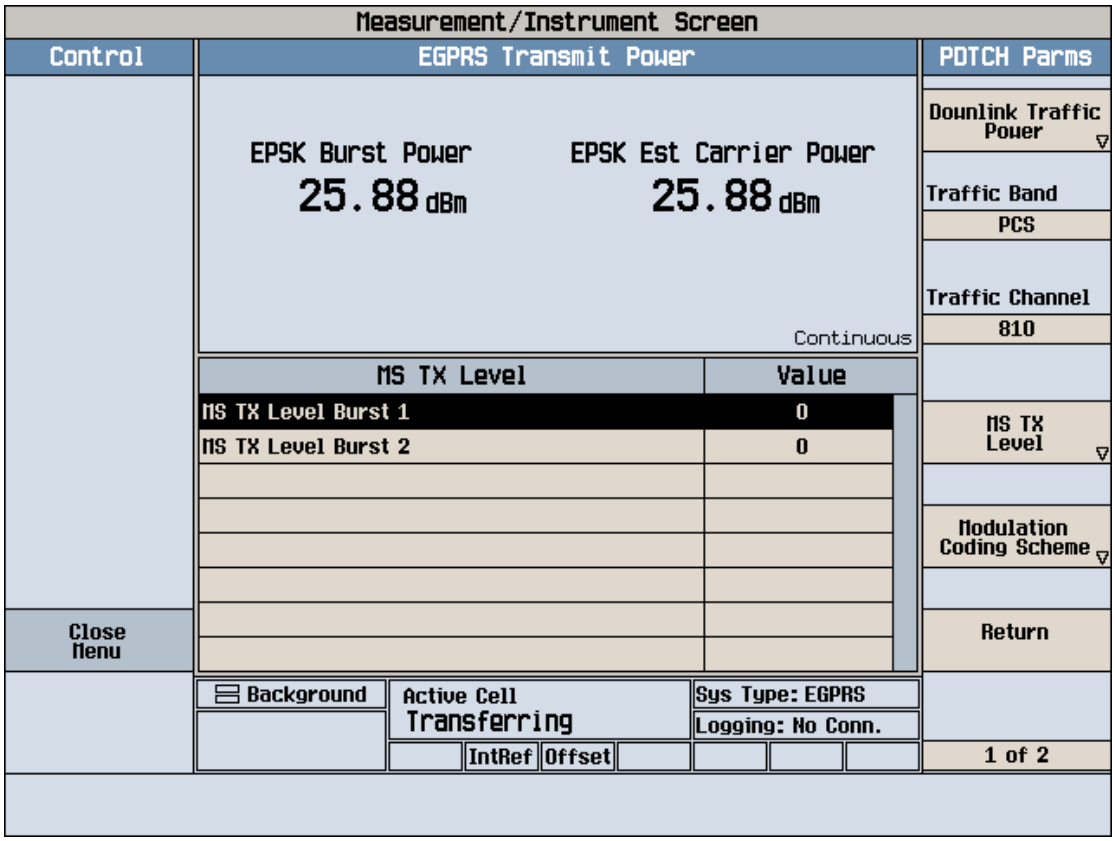
EGPRS


Measurement/Instrument Screen
Control
EGPRS Transmit Power
PDTCH Parms
EPSK Burst Power
25.78 dBm
EPSK Est Carrier Power
25.89 dBm
Continuous
Dounlink Traffic Power
Traffic Band
PCS
Traffic Channel
810
MS TX Level
Value
MS TX Level Burst 1
0
MS TX Level Burst 2
0
MS TX Level
Modulation Coding Scheme
Close Menu
Return
Background
Active Cell
Transferring
Sys Type: EGPRS
Logging: No Conn.
IntRef
Offset
1 of 2

40th minute
GPRS



EGPRS


Measurement/Instrument Screen
Control
EGPRS Transmit Power
PDTCH Parms
EPSK Burst Power
25.88 dBm
EPSK Est Carrier Power
25.88 dBm
Continuous
MS TX Level
Value
MS TX Level Burst 1
0
MS TX Level Burst 2
0
Dounlink Traffic Power
Traffic Band
PCS
Traffic Channel
810
MS TX Level
Modulation Coding Scheme
Close Menu
Return
Background
Active Cell
Transferring
Sys Type: EGPRS
Logging: No Conn.
IntRef
Offset
1 of 2