



MOTOROLA

Global Telecom Solutions Sector

FCC ID: IHET6BM1

SECTION C

Spurious & Harmonic Emissions Radiated

Radiated RF Measurements

Worst Case Radiated RF Spur Levels for SC4812ET @ 1.9GHz

<i>Radiated Data</i>			<i>Substituted Power</i>				<i>Spec</i>	<i>Result</i>
TX Channel	Spurious Frequency (MHz)	Antenna Polarity	Measured Radiated Field Strength (dBuV/M)	Measured Radiated Field Strength (dBm) (Note 1)	TX Antenna Terminal Voltage (dBm) (Note 2)	EDRP (dBm) (Note 3)	FCC Part 24 MAX LIMIT (dBm)	Pass/Fail
25	3862.4981	H	43.53	-51.69	-60.83	-55.25	- 13	Pass
25	3861.913	V	43.55	-51.67	-59.73	-54.18	- 13	Pass
1175	5966.1448	H	43.43	-51.79	-66.3	-59.65	- 13	Pass
1175	5966.2796	V	46.8	-48.42	-60.3	-53.65	- 13	Pass

Notes:

1. Converting dBuV/M to dBm at 3 meters
 $(\text{dBuV/M}) + 9.542 - 104.77 \text{dB} = \text{dBm}$
 Converting dBuV/M to dBm at 10 meters
 $(\text{dBuV/M}) + 20 - 104.77 \text{dB} = \text{dBm}$
2. The same horn antenna and measurement system was used for EUT scan and during substitution method. After maximizing the receive antenna and adjusting signal generator power level to measure the same emission level with the spectrum analyzer as with the EUT. Signal generator output level was recorded for each of the spurious frequencies. Test cable was then disconnected from the transmit horn and was connected to the input of the S/A measuring the voltage at the terminals of the antenna.
3. This value was obtained by converting the Equivalent Isotropic Radiated Power (EIRP) to ideal half-wave dipole reference power - (Equivalent Di-Pole Radiated Power - EDRP) per (TIA-603, 2.2.12.2(i)(m))


 Radiated Engineer

6/21/01
 Date



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FCC ID: IHET6BM1

SECTION D

Spurious & Harmonic Emissions Conducted

APPLICANT: MOTOROLA

TRANSCEIVER TYPE: IHET6BM1

Conducted RF Measurements

SC4812ET @1.9GHz

FCC Part 24 at 46 dBm output (Max power)

CHANNEL	FREQUENCY (MHz)	SPUR LEVEL MEASURED (dB μ V)	SPUR LEVEL MEASURED (dBm)	FCC MAX LIMIT dBm
25	5794.495	84.7	-22.3	-13
1175	5966.271	89.35	-17.65	-13

FCC Max. Limit Per 47 CFR:

- “ =Transmitted Power ($10 \log_{10} (P_{\text{watt}})$) - ($43 + 10 \log_{10} (P_{\text{watt}})$)dBW
- “ = $10 \log_{10} (P_{\text{watt}})$ - ($43 + 10 \log_{10} (P_{\text{watt}})$)dBW
- “ =-43 dBW
- “ =-13 dBm

dBuV-107 = dBm

Engineer: _____



6/24/01
Date



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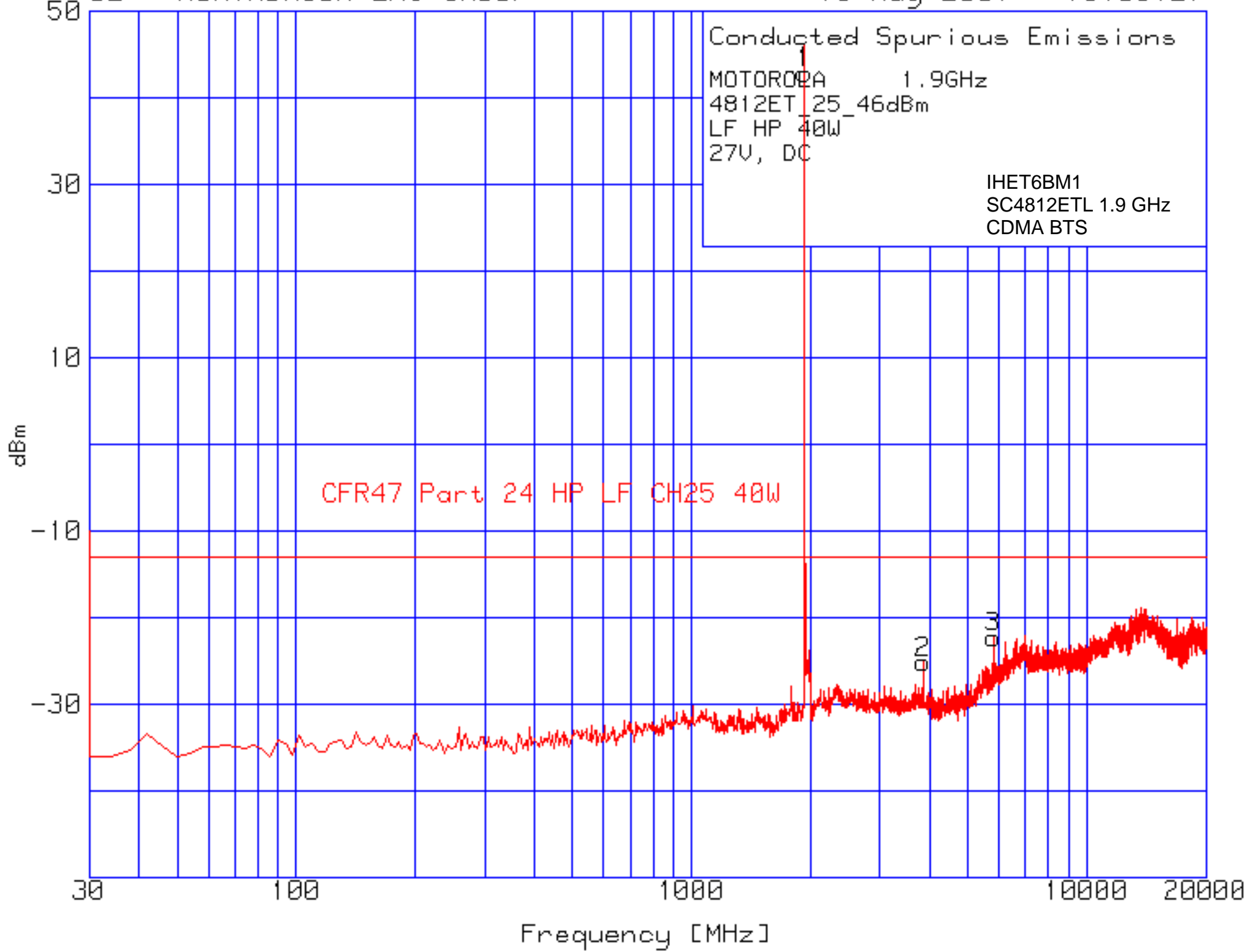
Global Telecom Solutions Sector

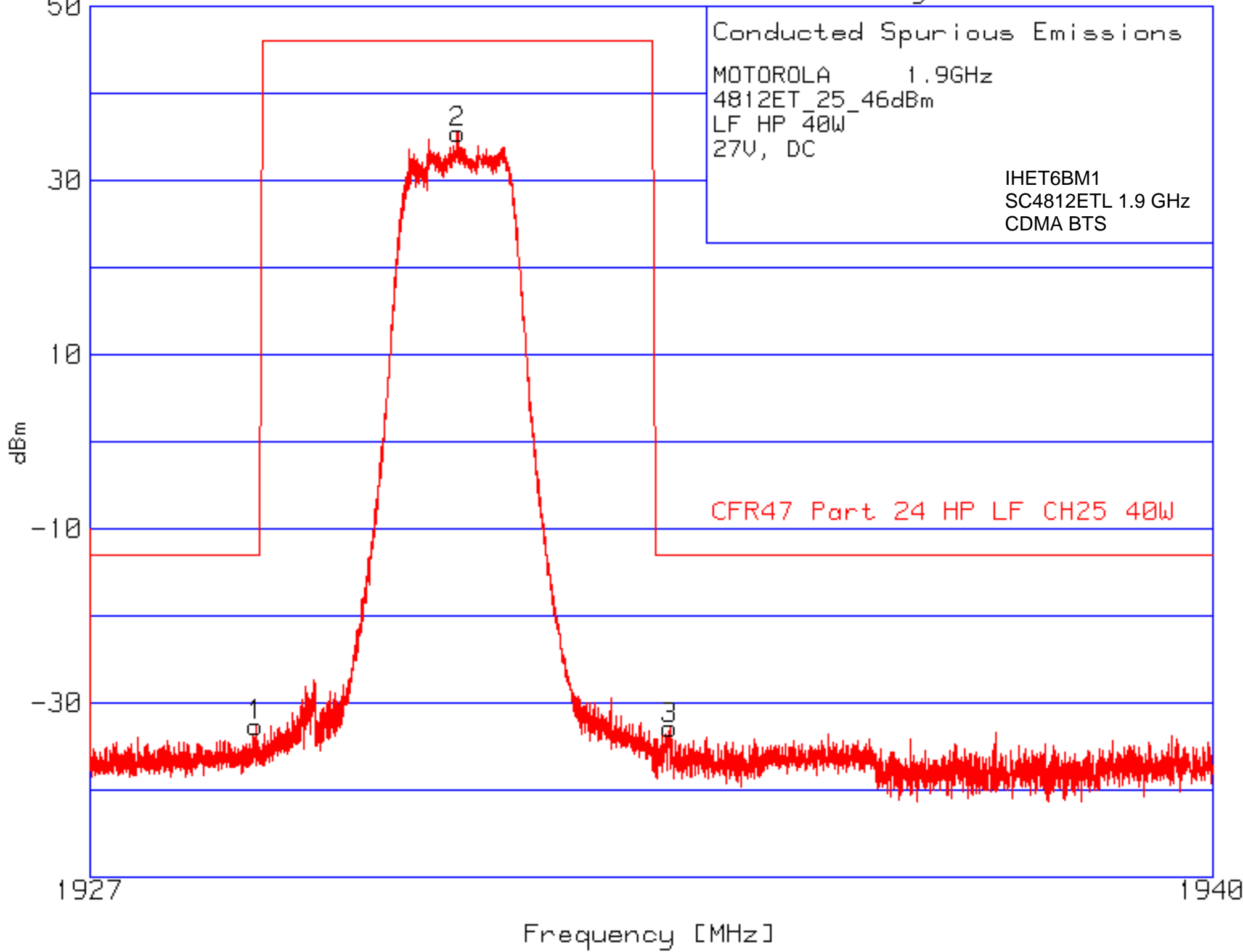
FCC ID: IHET6BM1

SPURIOUS & HARMONIC EMISSIONS CONDUCTED

CDMA Transmitter Channel 25

Maximum Power







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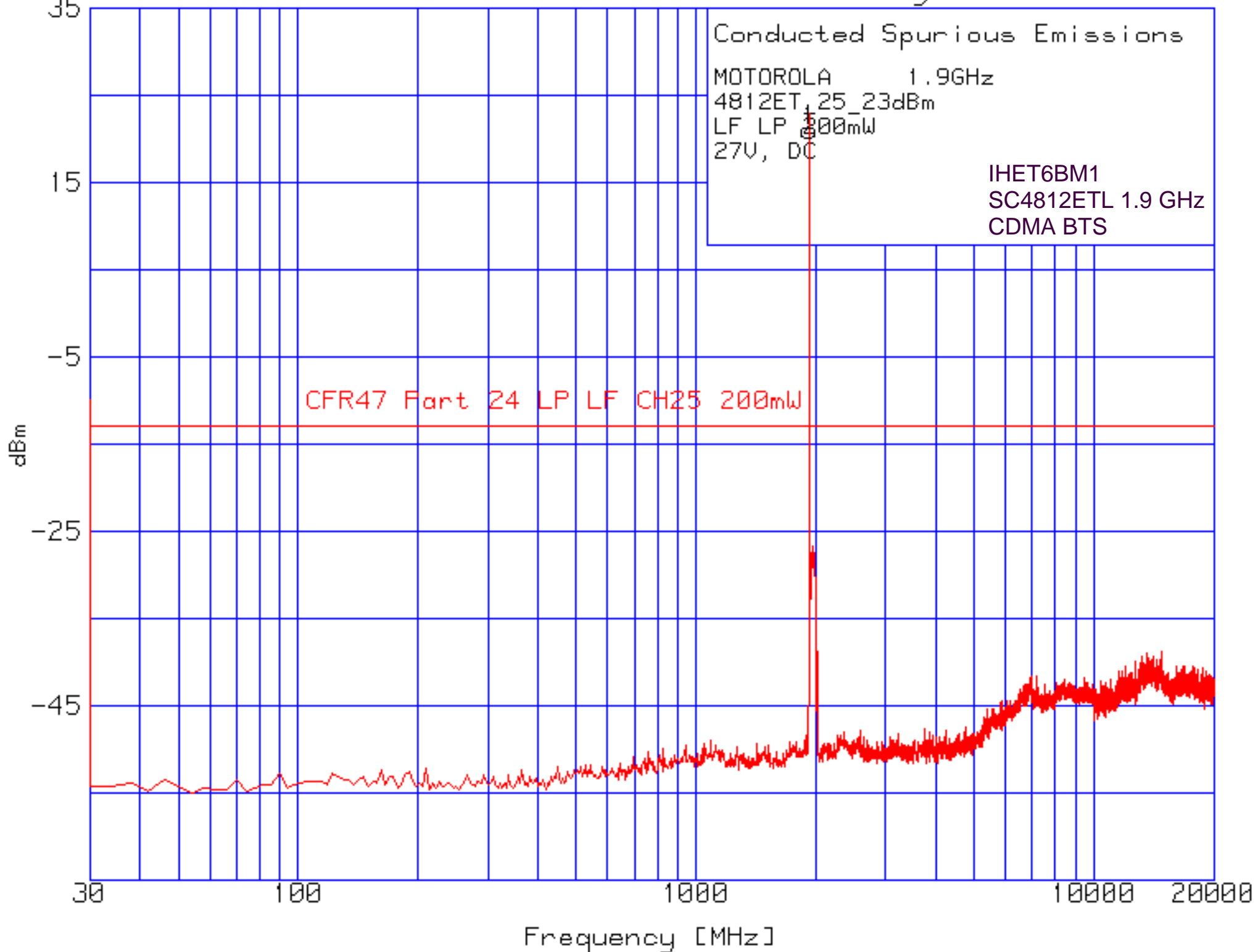
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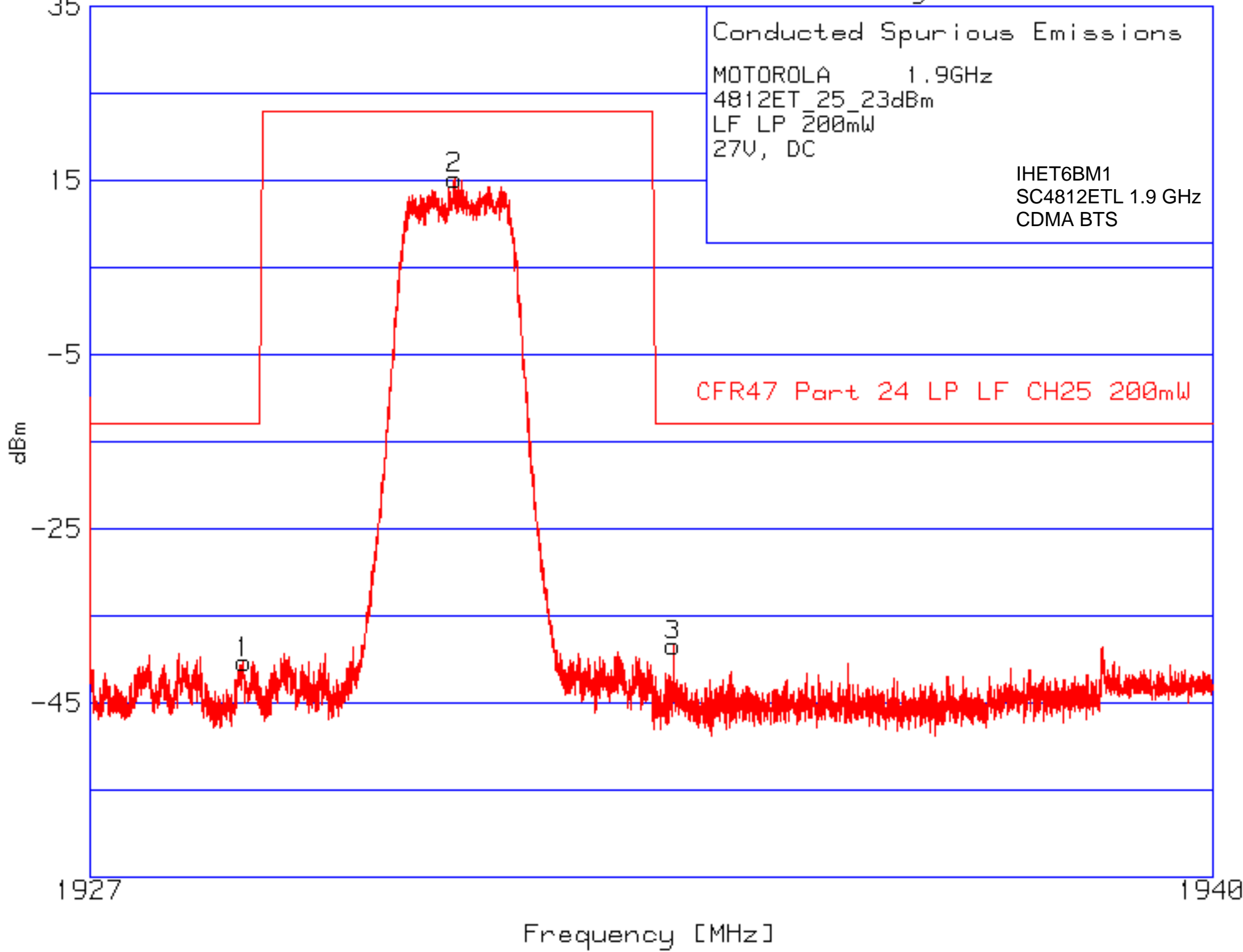
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SPURIOUS & HARMONIC EMISSIONS CONDUCTED

CDMA Transmitter Channel 25

Minimum Power







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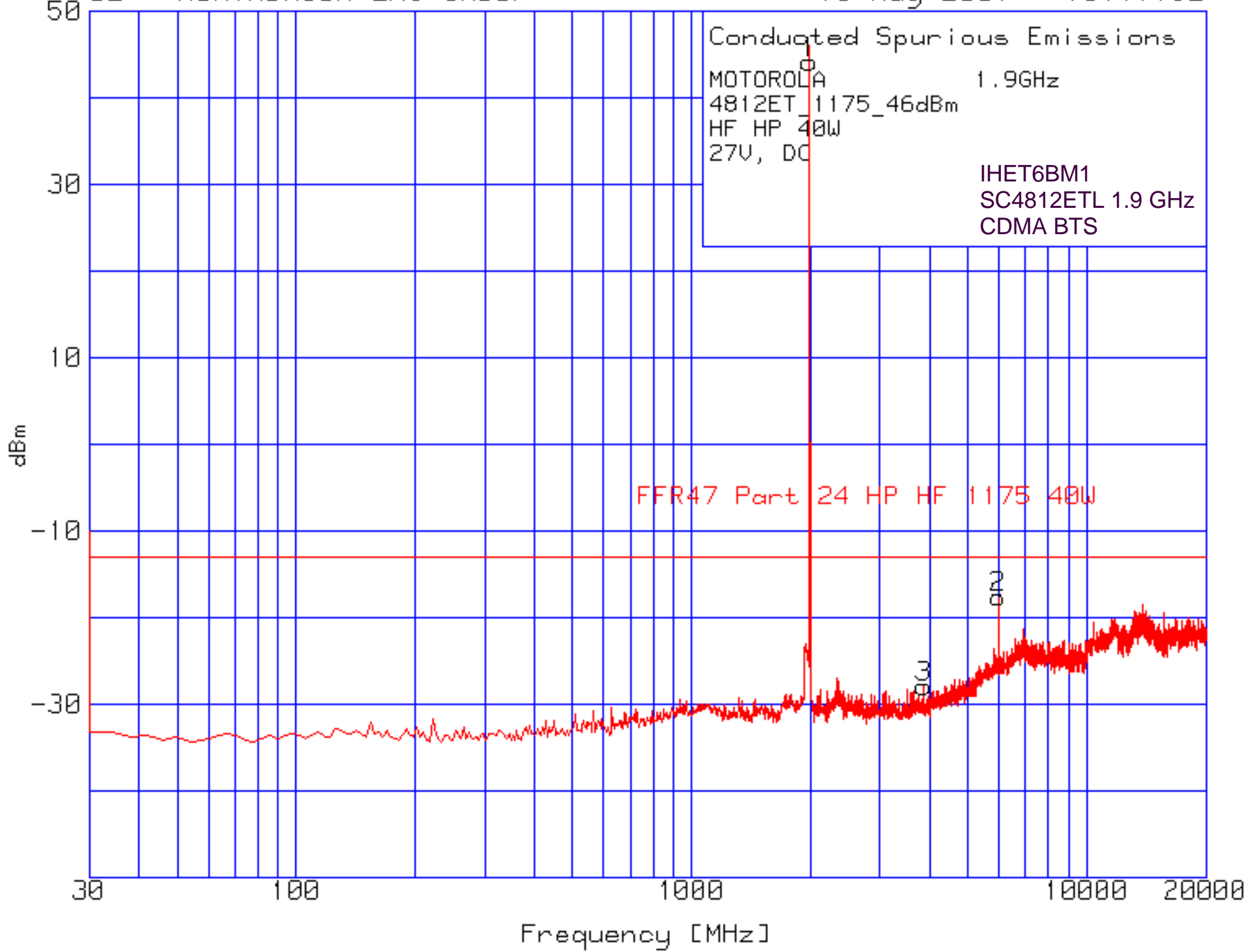
*Network Systems Group
CDMA Systems Division*

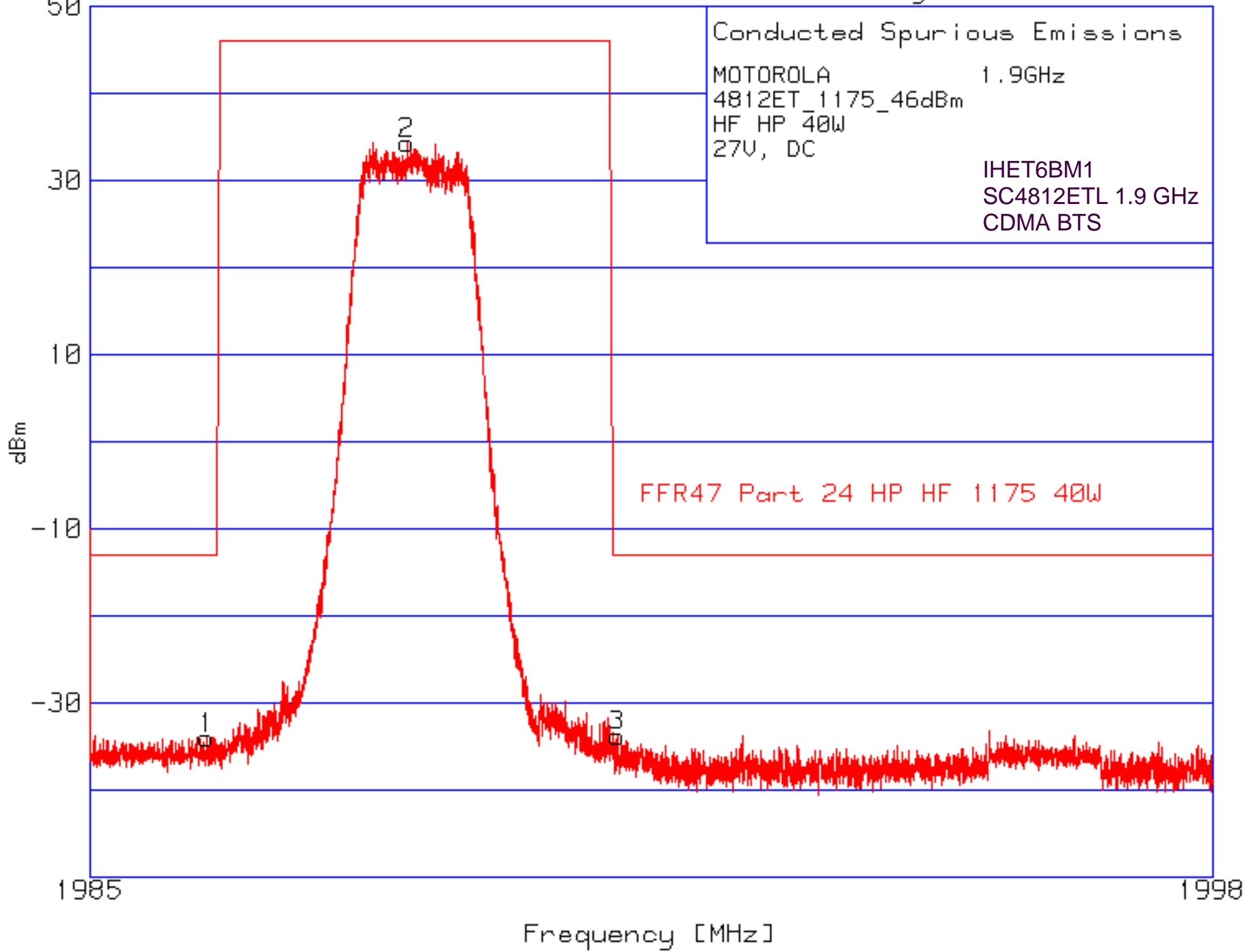
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SPURIOUS & HARMONIC EMISSIONS CONDUCTED

CDMA Transmitter Channel 1175

Maximum Power







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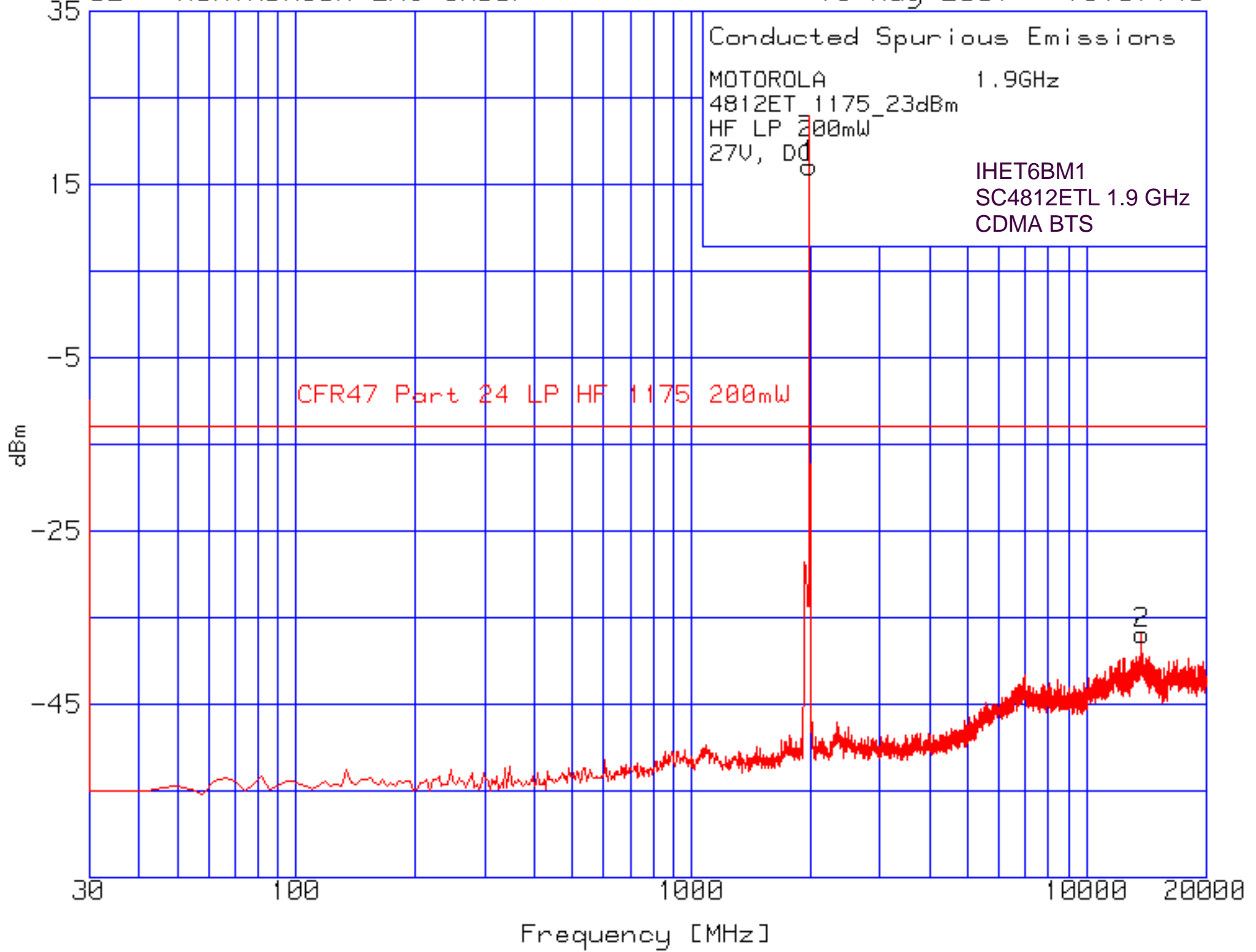
Global Telecom Solutions Sector

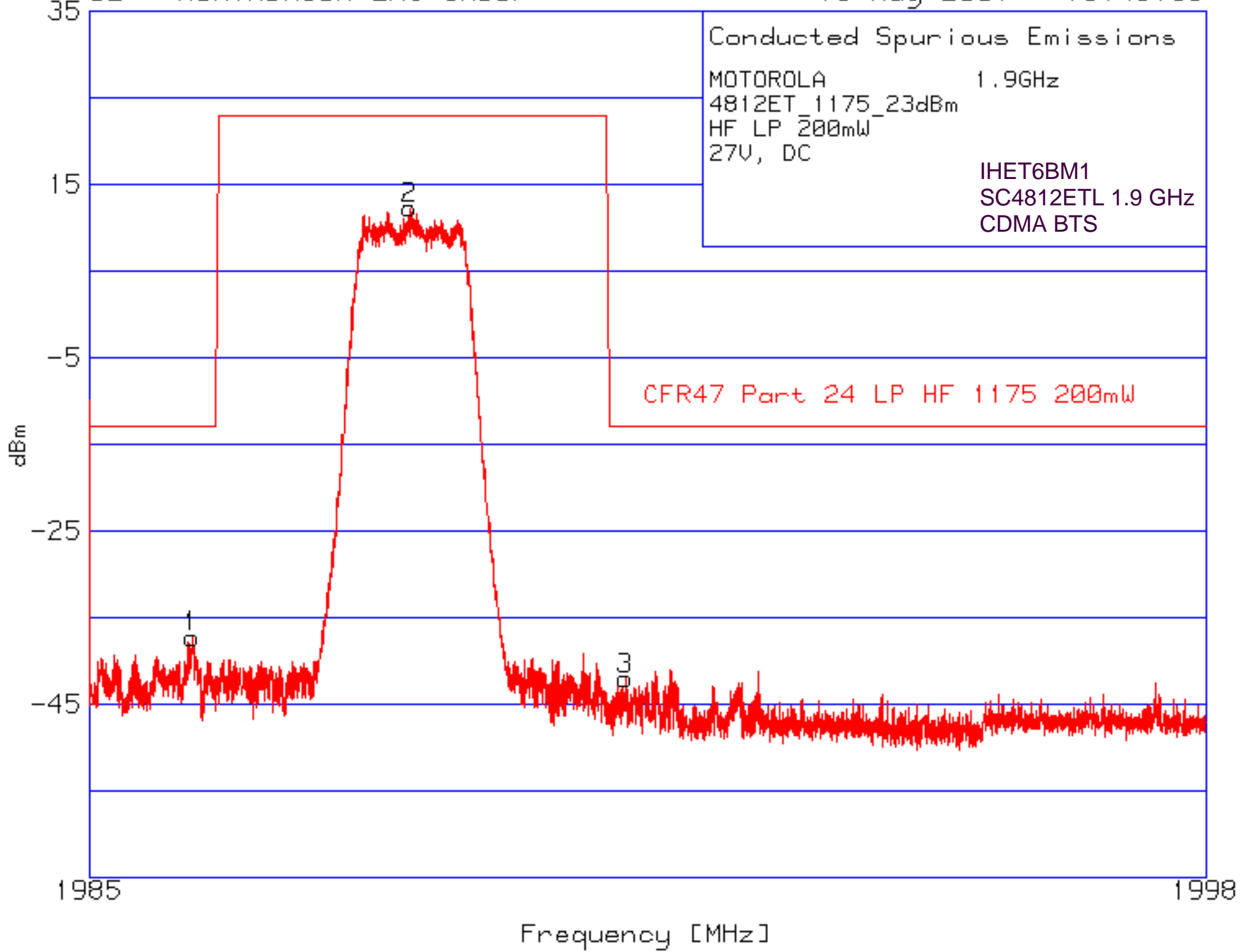
FCC ID: IHET6BM1

SPURIOUS & HARMONIC EMISSIONS CONDUCTED

CDMA Transmitter Channel 1175

Minimum Power





Conducted Spurious Emissions
MOTOROLA 4812ET_1175_23dBm
HF LP 200mW
27V, DC
1.9GHz
IHET6BM1
SC4812ETL 1.9 GHz
CDMA BTS

CFR47 Part 24 LP HF 1175 200mW

dBm

Frequency [MHz]

1985

1998



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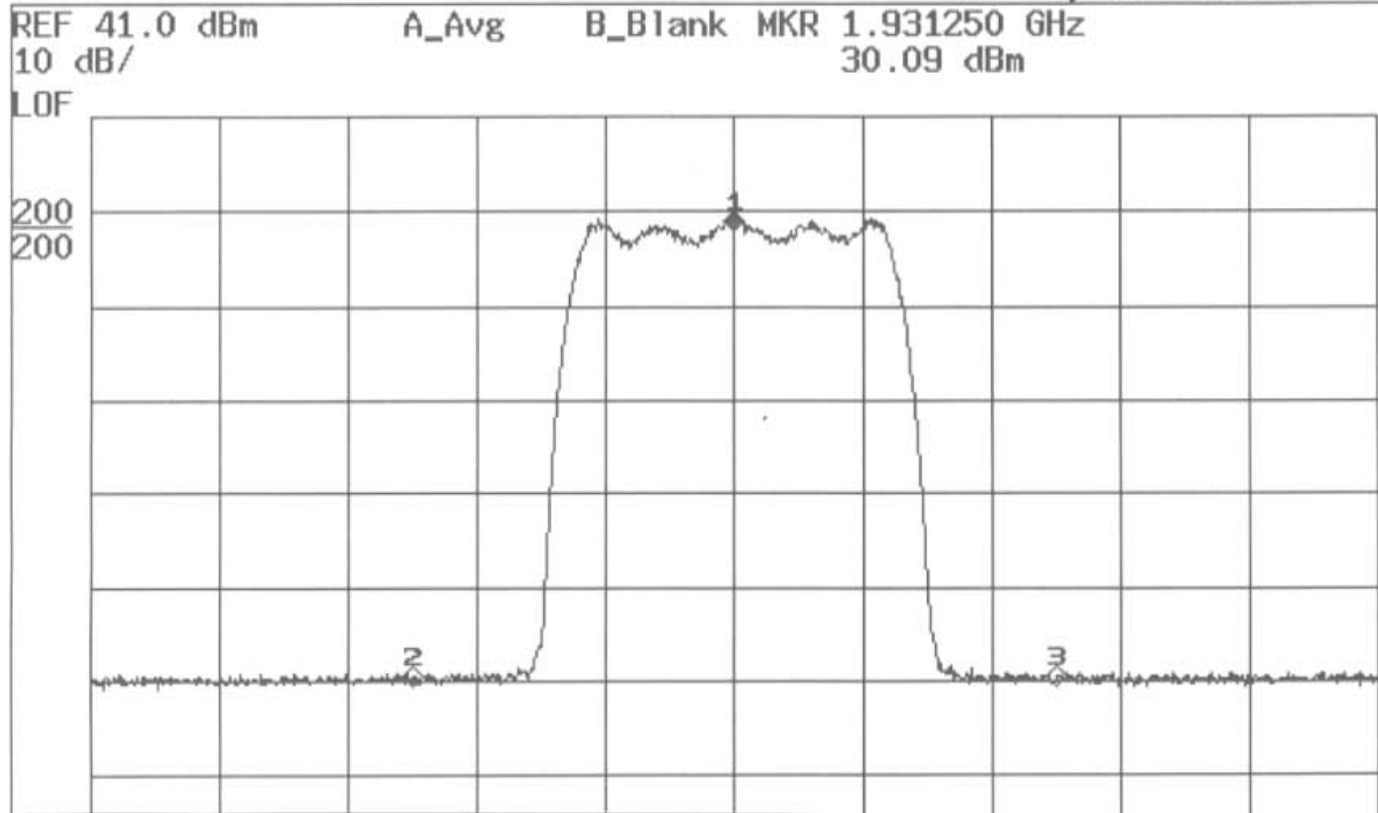
SECTION E

Occupied Bandwidth
Maximum Power

Fri May 25 2001 15:17

Channel 25
Maximum Power

IHET6BM1
SC4812ET 1.9 GHz
CDMA BTS
3G-1X



Multi Marker List

1:	1.931250 GHz	30.09 dBm
2:	1.930000 GHz	-18.51 dBm
3:	1.932500 GHz	-18.75 dBm
4:		

CENTER 1.931250 GHz SPAN 5.00 MHz
*RBW 30 kHz *VBW 100 kHz SWP 50 ms *ATT 40 dB

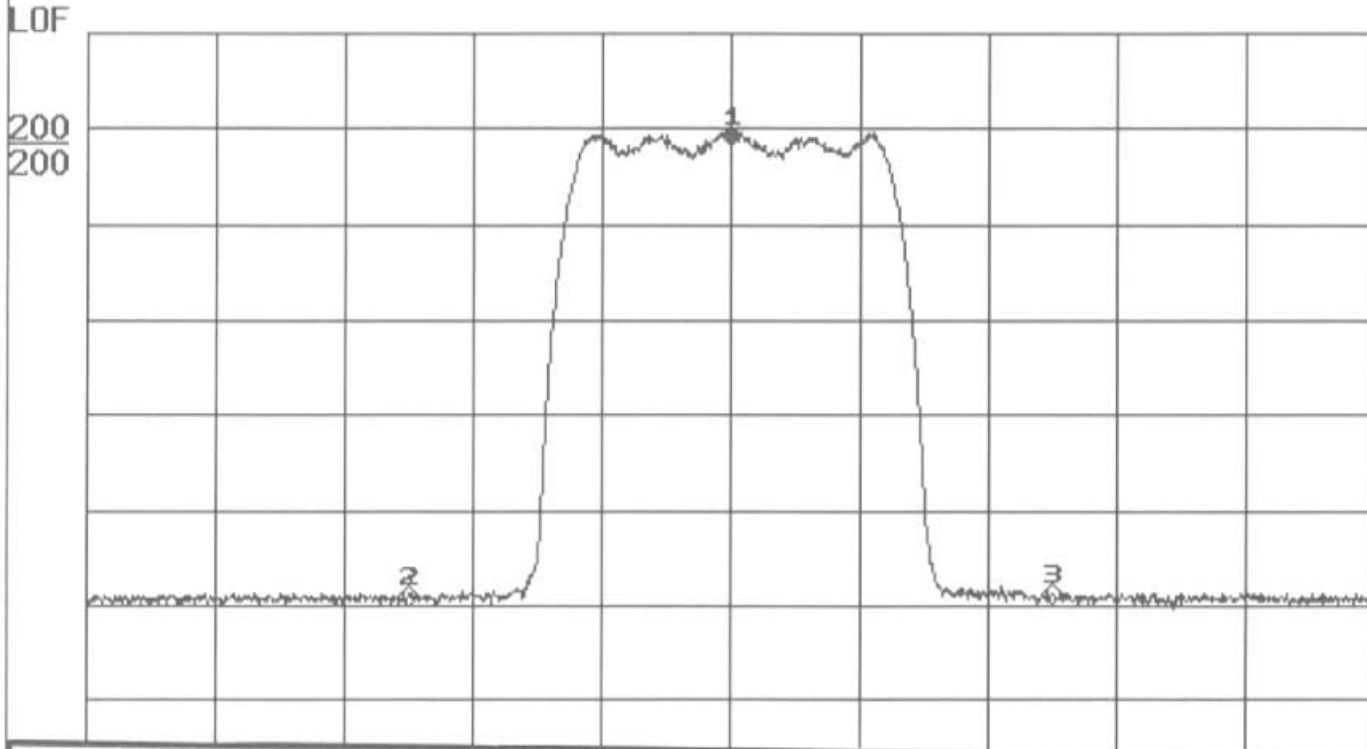
OK...

Fri May 25 2001 16:54

REF 41.0 dBm A_Avg B_Blank MKR 1.988750 GHz
10 dB/ 30.42 dBm

Channel 1175
Maximum Power

IHET6BM1
SC4812ET 1.9 GHz
CDMA BTS
3G-1X



Multi Marker List

1:	1.988750 GHz	30.42 dBm
2:	1.987500 GHz	-17.96 dBm
3:	1.990000 GHz	-17.64 dBm
4:		

CENTER 1.988750 GHz SPAN 5.00 MHz
*RBW 30 kHz *VBW 100 kHz SWP 50 ms *ATT 40 dB

OK...



MOTOROLA

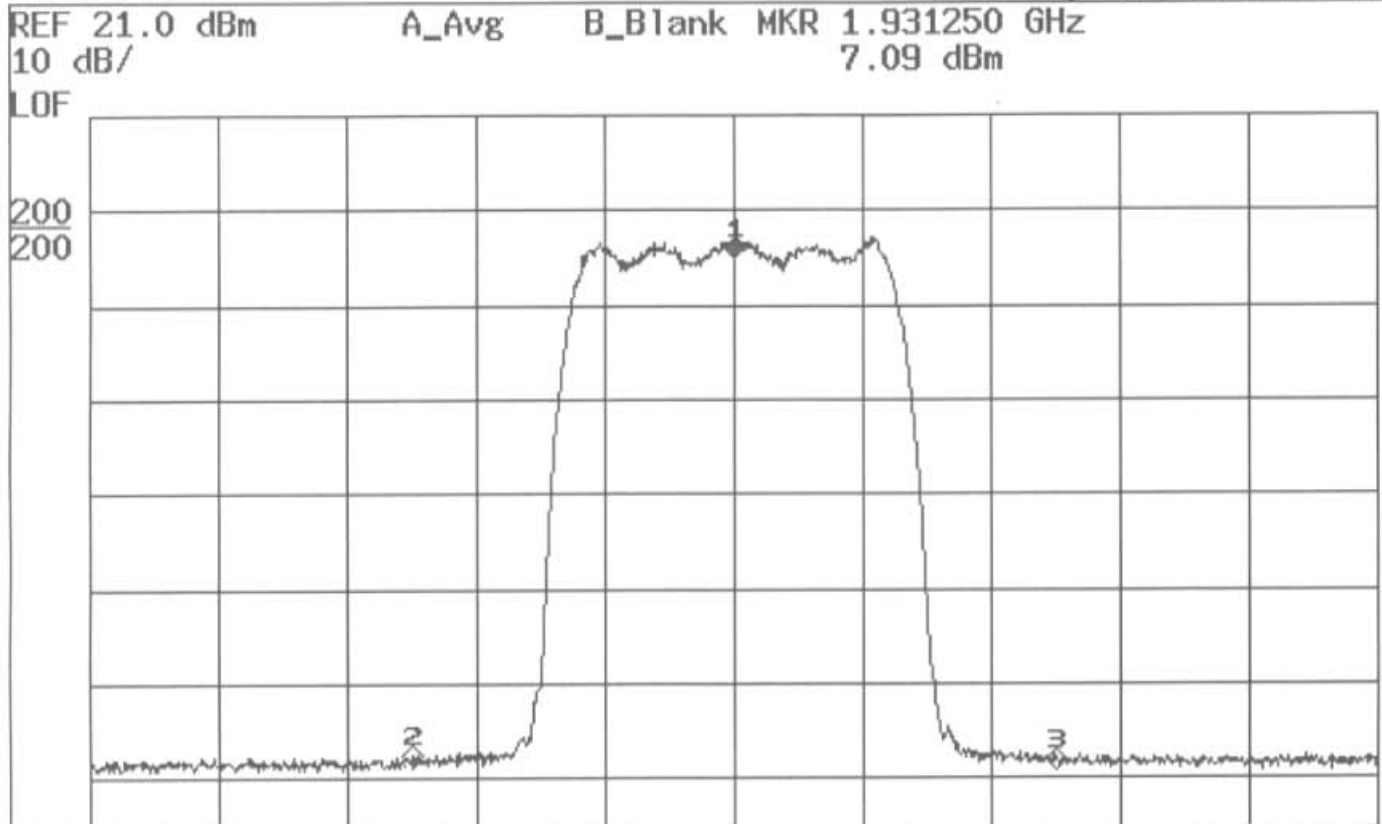
Global Telecom Solutions Sector

FCC ID: IHET6BM1

Occupied Bandwidth

Minimum Power

Fri May 25 2001 16:05



Channel 25
Minimum Power

IHET6BM1
SC4812ET 1.9 GHz
CDMA BTS
3G-1X

Multi Marker List

1:	1.931250 GHz	7.09 dBm
2:	1.930000 GHz	-46.60 dBm
3:	1.932500 GHz	-47.04 dBm
4:		

CENTER 1.931250 GHz SPAN 5.00 MHz
*RBW 30 kHz *VBW 100 kHz SWP 50 ms *ATT 10 dB

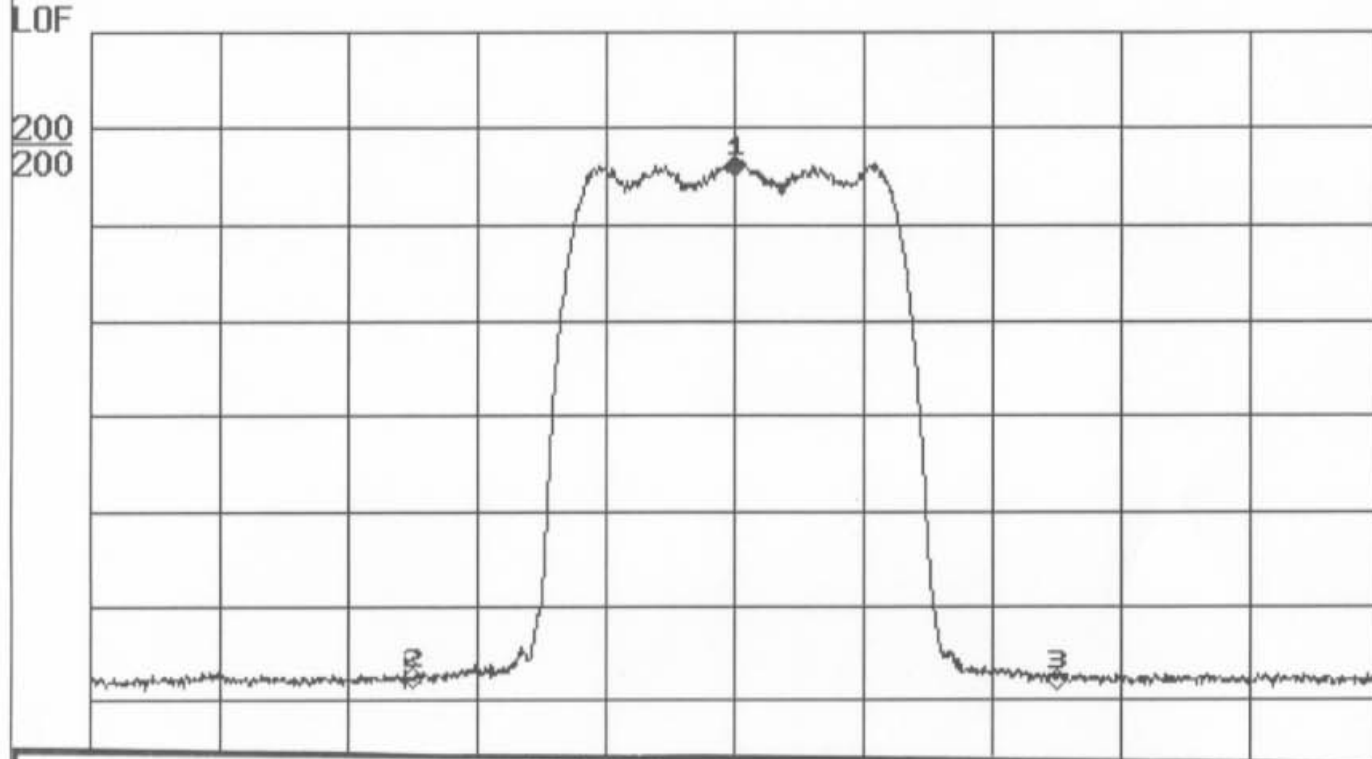
OK...

Fri May 25 2001 16:32

REF 21.0 dBm A_Avg B_Blank MKR 1.988750 GHz
10 dB/ 7.04 dBm

Channel 1175
Minimum Power

IHET6BM1
SC4812ET 1.9 GHz
CDMA BTS
3G-1X



Multi Marker List

1:	1.988750 GHz	7.04 dBm
2:	1.987500 GHz	-46.63 dBm
3:	1.990000 GHz	-46.75 dBm
4:		

CENTER 1.988750 GHz SPAN 5.00 MHz
*RBW 30 kHz *VBW 100 kHz SWP 50 ms *ATT 10 dB

OK...



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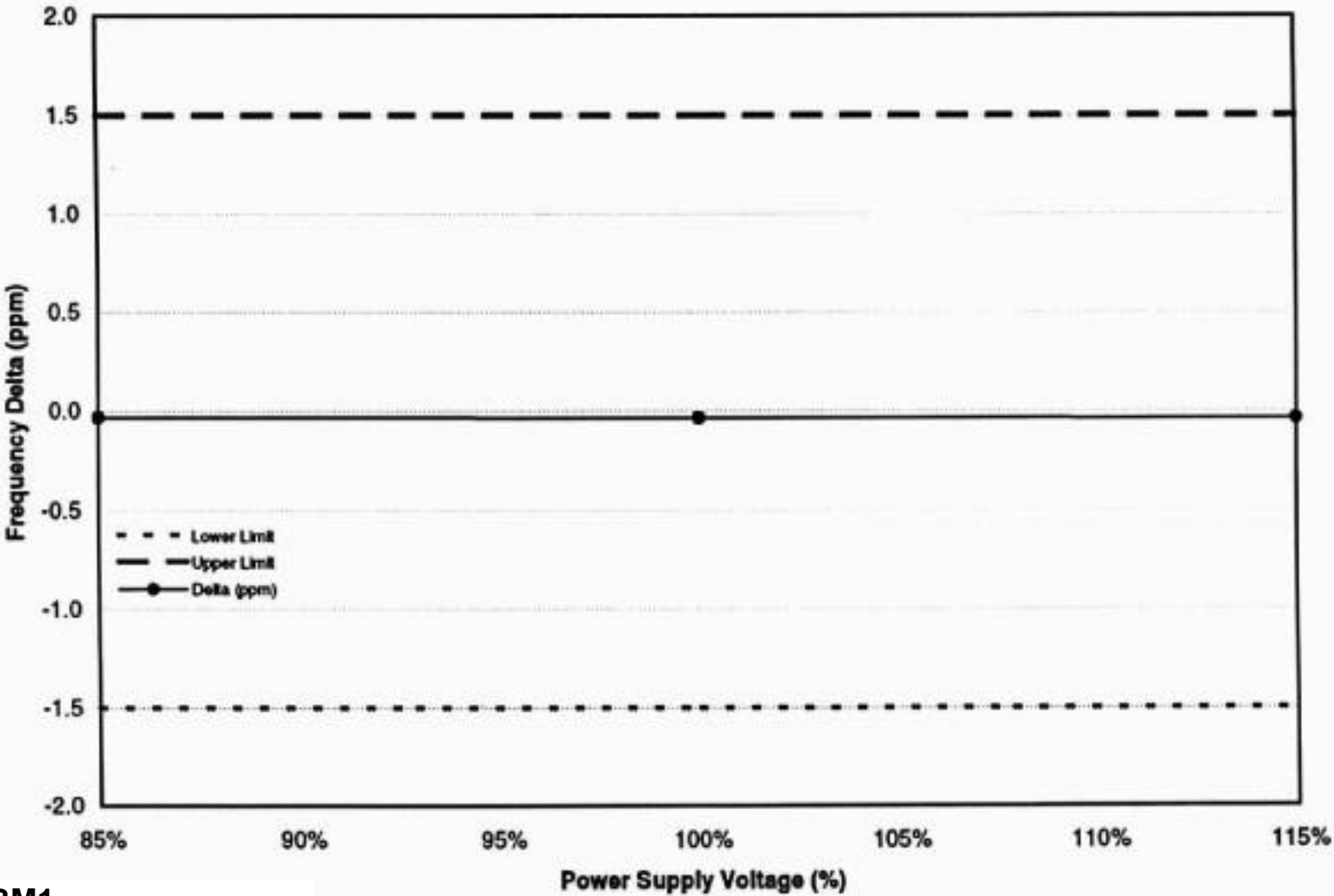
Global Telecom Solutions Sector

FCC ID: IHET6BM1

SECTION F

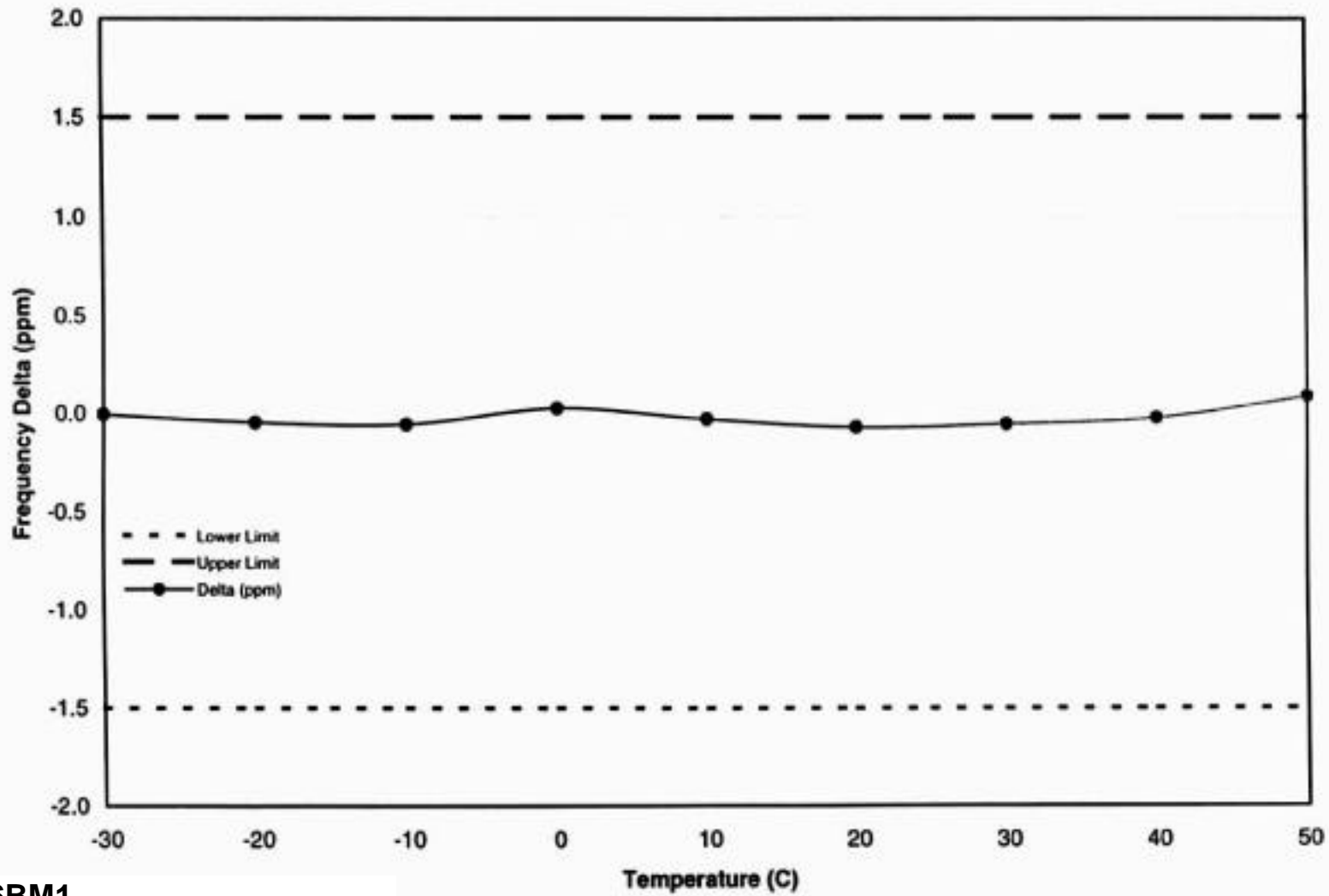
Frequency Stability

Frequency Stability with Varying Supply Voltage - CSM1



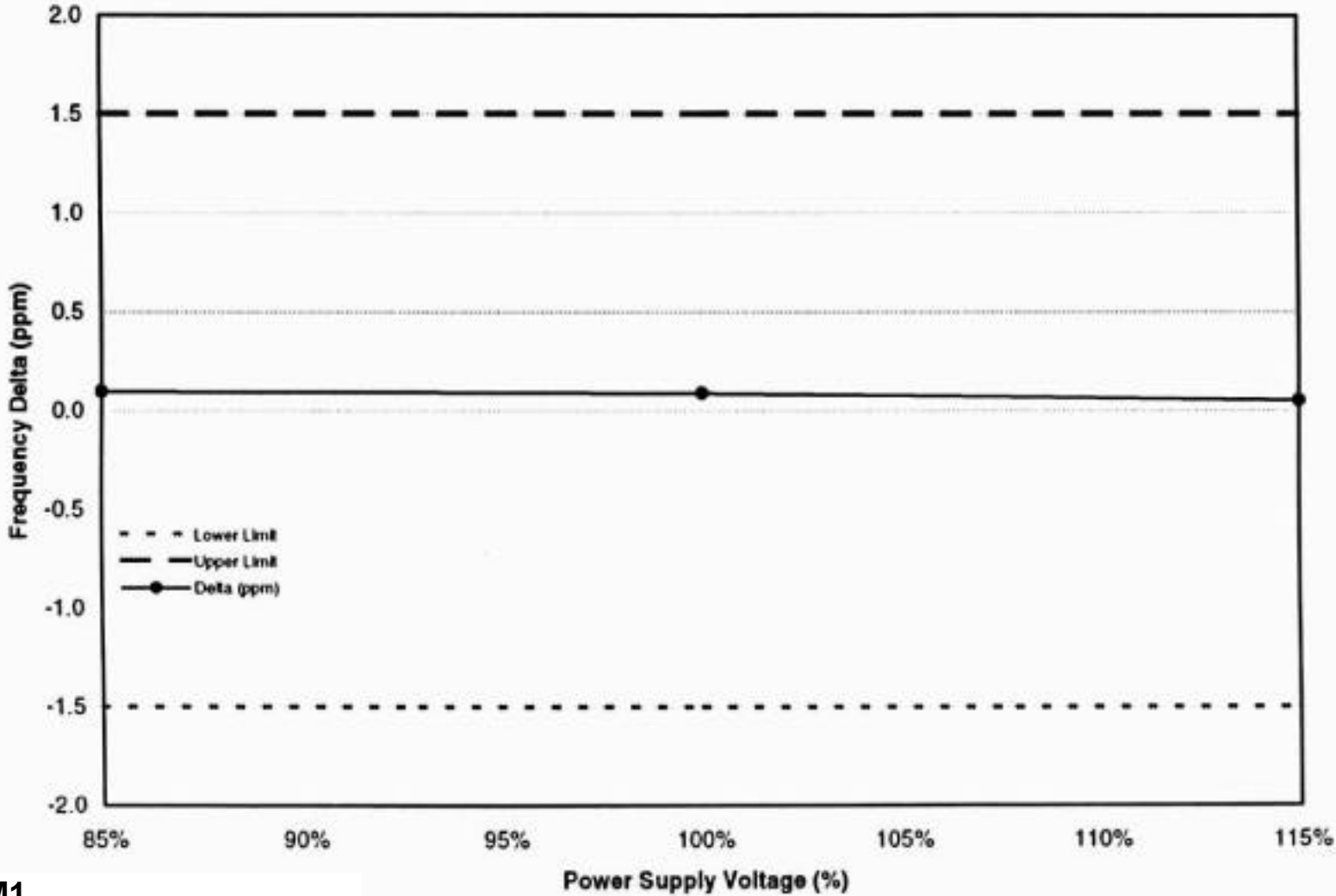
IHET6BM1
SC4812ET 1.9GHz
CDMA BTS

Frequency Stability Over Temperature - CSM1



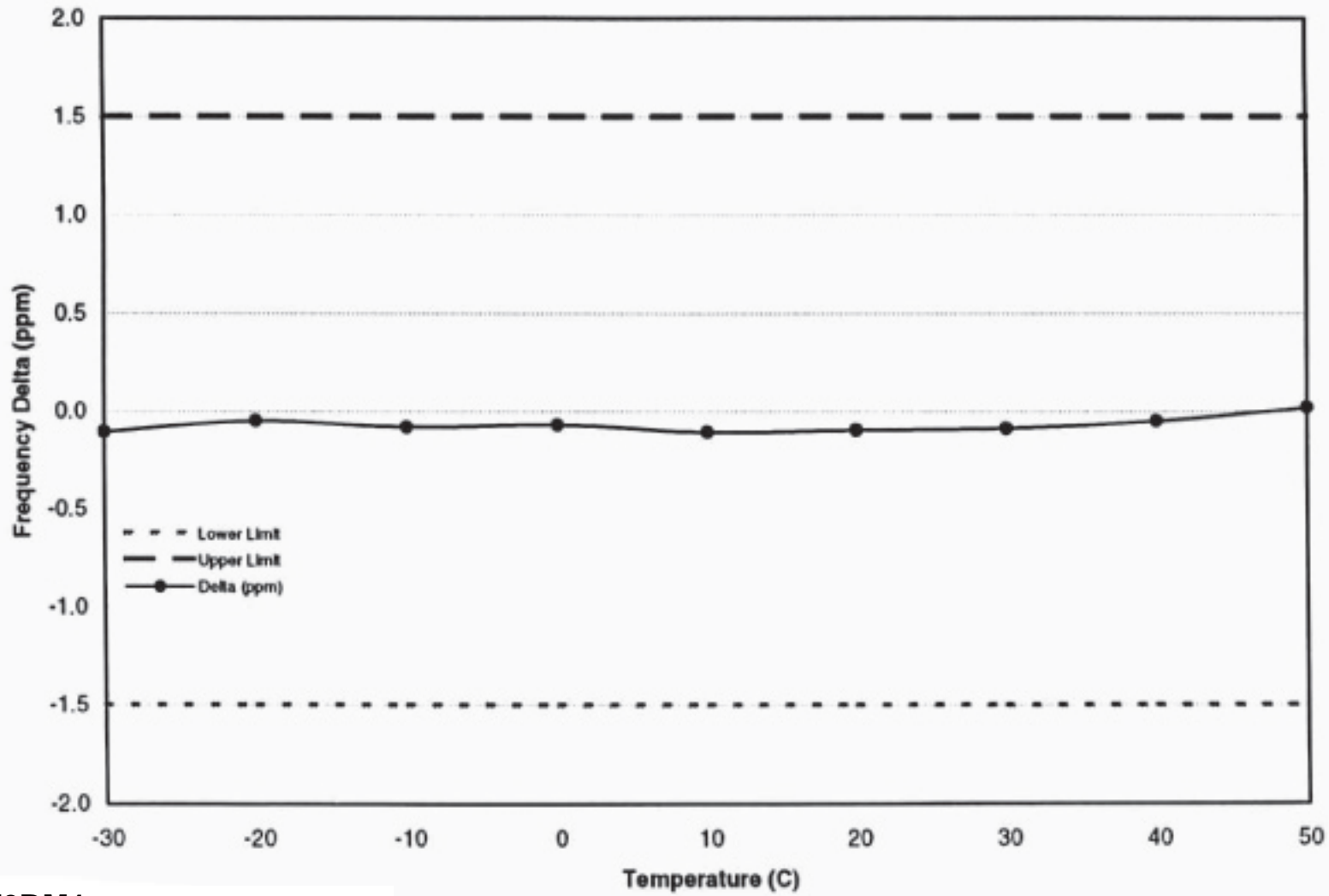
IHET6BM1
SC4812ET 1.9GHz
CDMA BTS

Frequency Stability with Varying Supply Voltage - CSM2



IHET6BM1
SC4812ET 1.9GHz
CDMA BTS

Frequency Stability Over Temperature - CSM2



IHET6BM1
SC4812ET 1.9GHz
CDMA BTS