



MOTOROLA

Global Telecom Solutions Sector

FCC ID: IHET5BR1

SECTION C

Spurious & Harmonic Emissions Radiated

Radiated RF Measurements

Worst Case Radiated RF Spur Levels for SC4812ETL @ 800 MHz

Radiated Data			Substituted Power				Spec	Result
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 22 MAX LIMIT (dBm)	Pass/Fail
777	7922.818	H	44.2	-51.028	-60.6	-52.05	-13	Pass
777	7922.818	V	44.2	-51.028	-59.3	-50.75	-13	Pass
1013	9536.905	H	45	-50.228	-59.1	-49.25	-13	Pass
1013	9536.905	V	45	-50.228	-59	-49.15	-13	Pass

Notes:

1. Converting dBuV/M to dBm at 3 meters:
 $(\text{dBuV/M}) + 9.542 - 104.77 = \text{dBm}$
 Converting dBuV/M to dBm at 10 meters:
 $(\text{dBuV/M}) + 20 - 104.77 = \text{dBm}$
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

Date 9/17/01

Terry Schwenk



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SECTION D

Spurious & Harmonic Emissions Conducted



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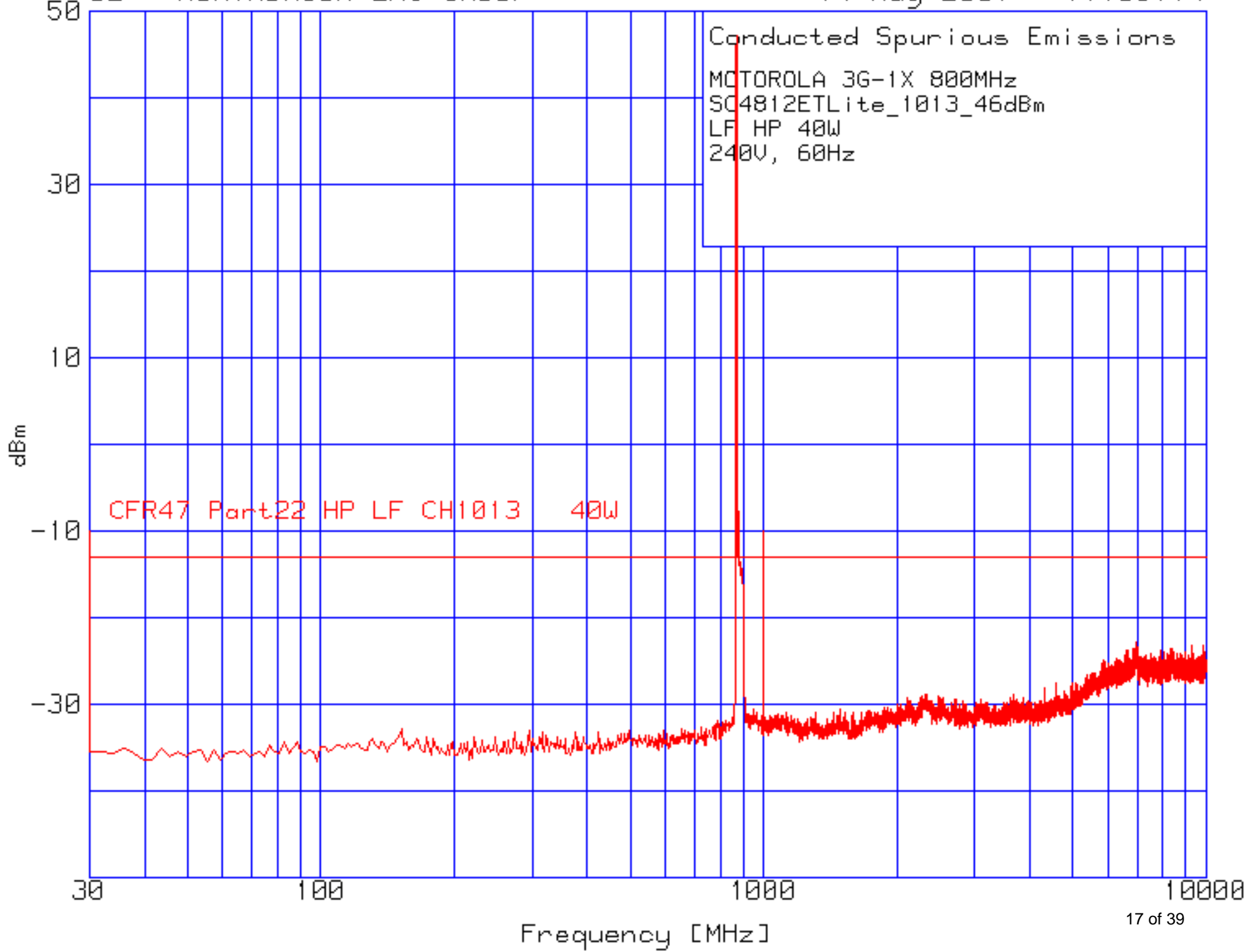
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SPURIOUS & HARMONIC EMISSIONS CONDUCTED

CDMA Transmitter Channel 25

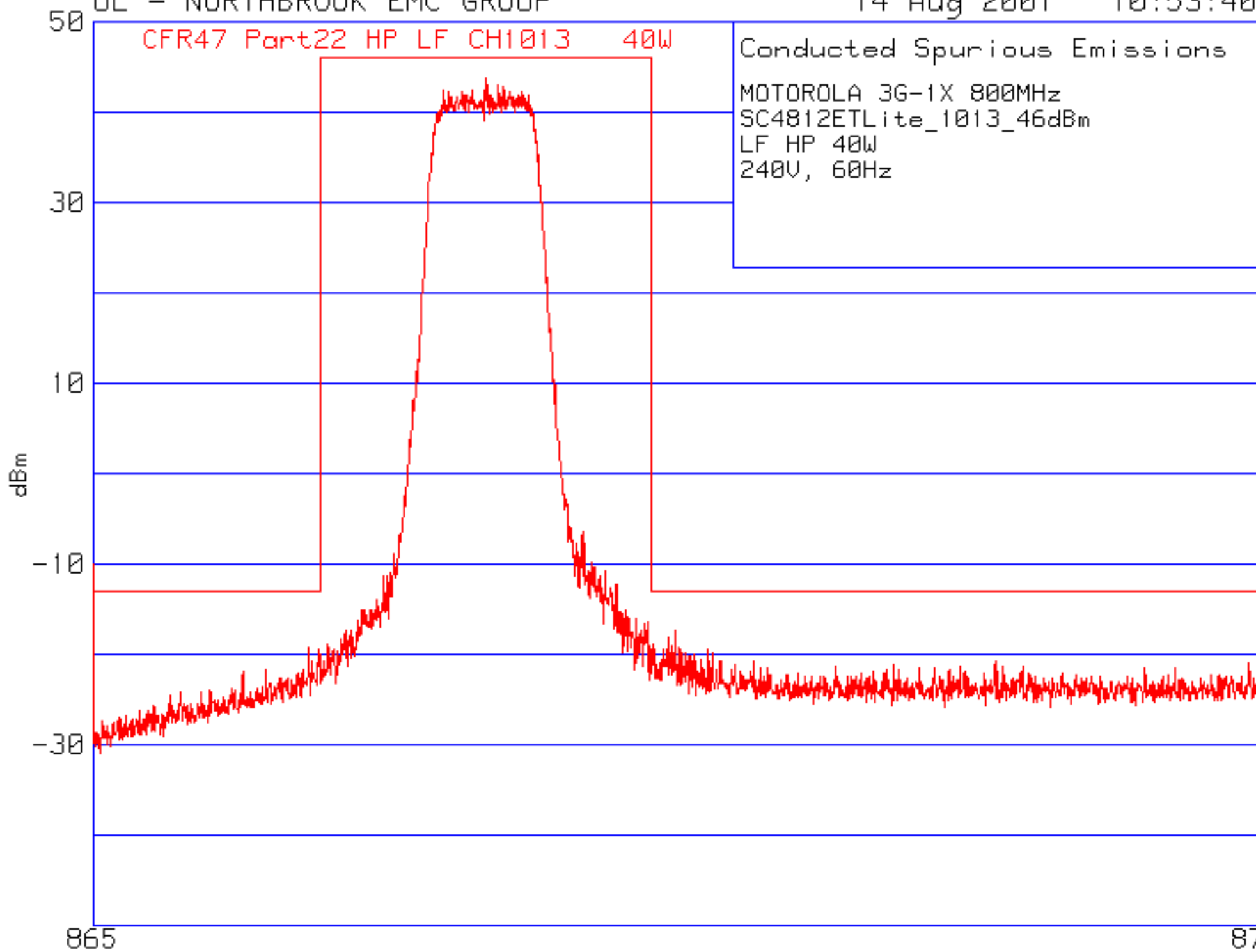
Maximum Power



CFR47 Part22 HP LF CH1013 40W

Conducted Spurious Emissions

MOTOROLA 3G-1X 800MHz
SC4812ETLite_1013_46dBm
LF HP 40W
240V, 60Hz





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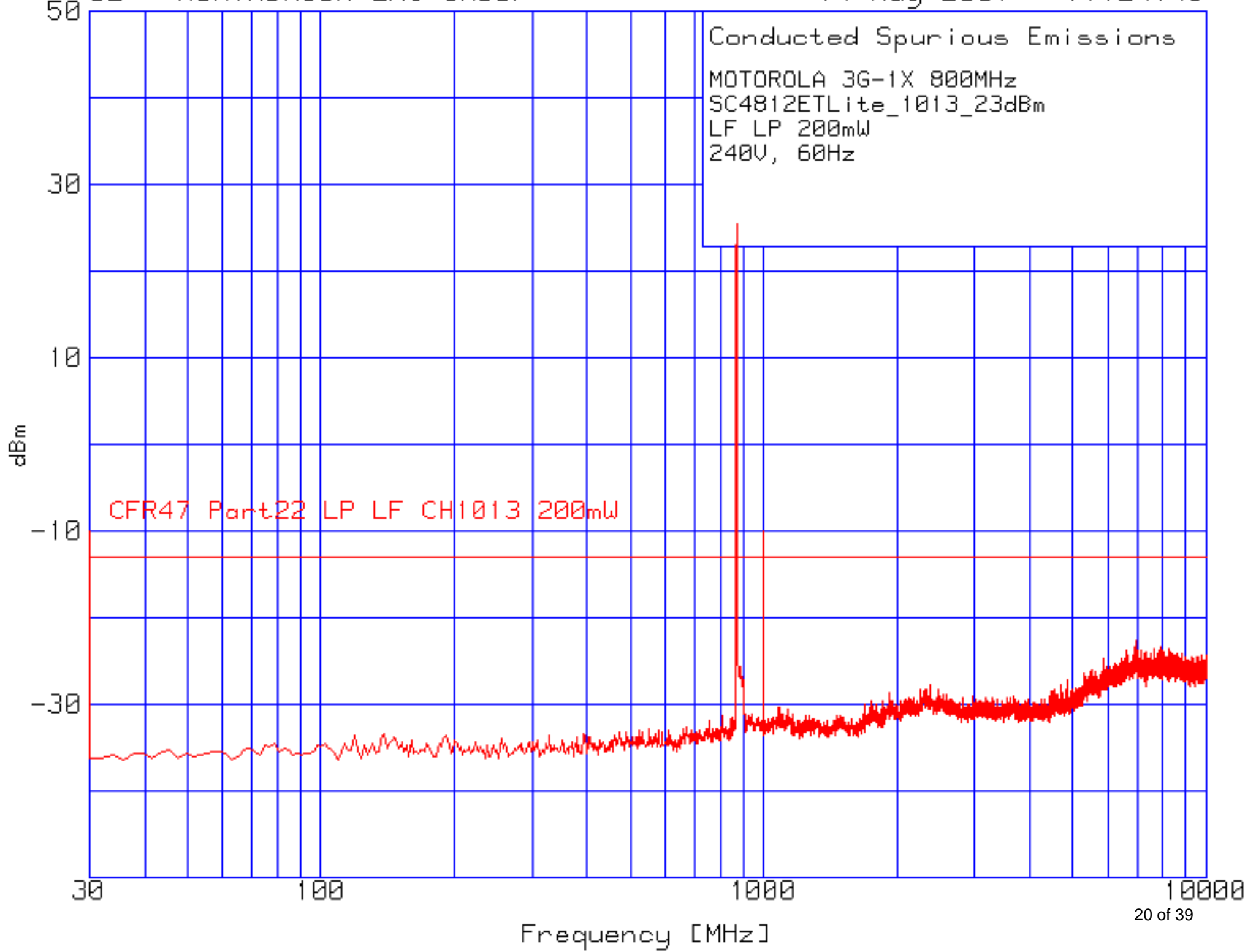
Global Telecom Solutions Sector

FCC ID: IHET5BR1

SPURIOUS & HARMONIC EMISSIONS CONDUCTED

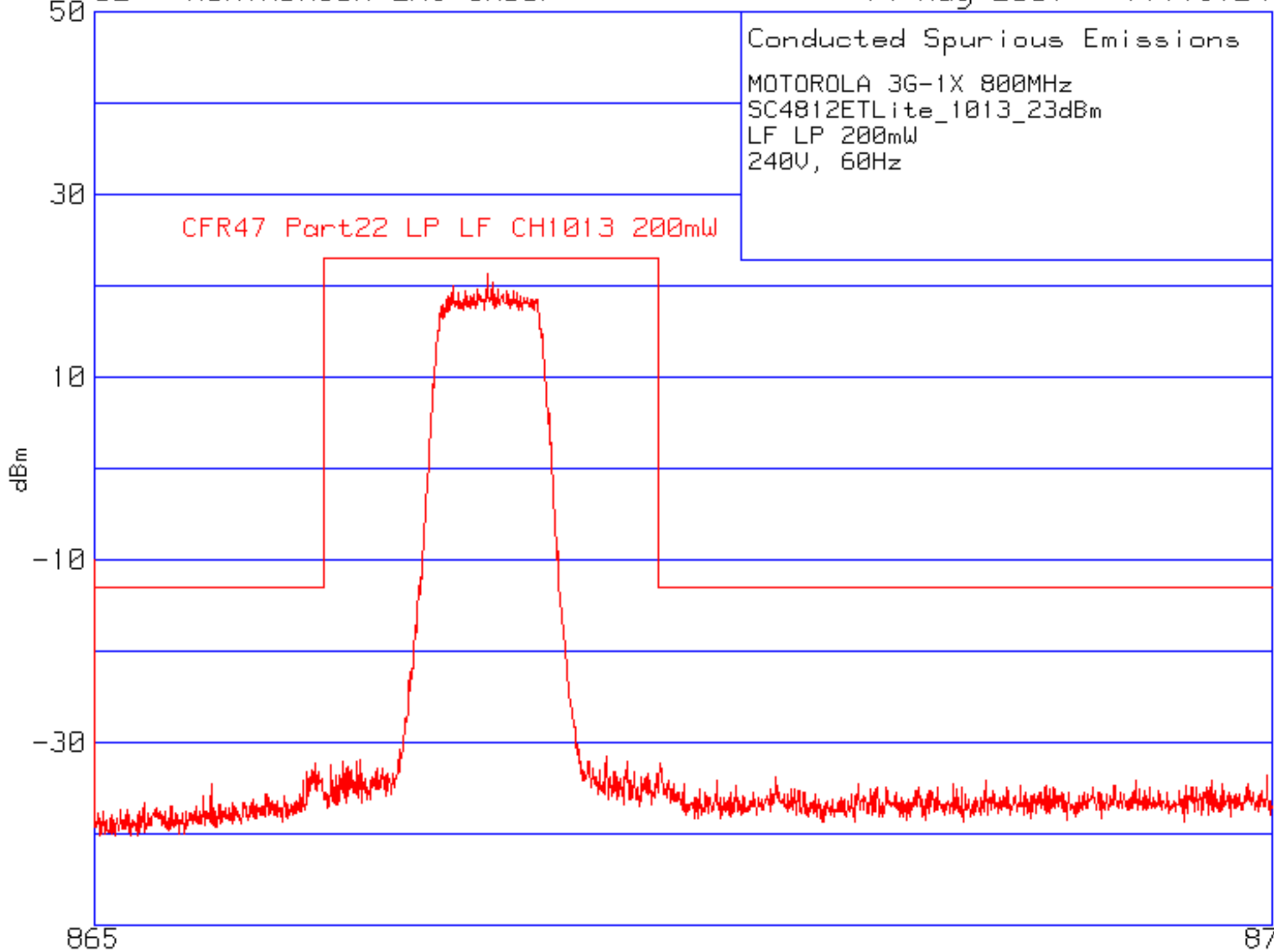
CDMA Transmitter Channel 25

Minimum Power



Conducted Spurious Emissions
MOTOROLA 3G-1X 800MHz
SC4812ETLite_1013_23dBm
LF LP 200mW
240V, 60Hz

CFR47 Part22 LP LF CH1013 200mW



Frequency [MHz]



MOTOROLA

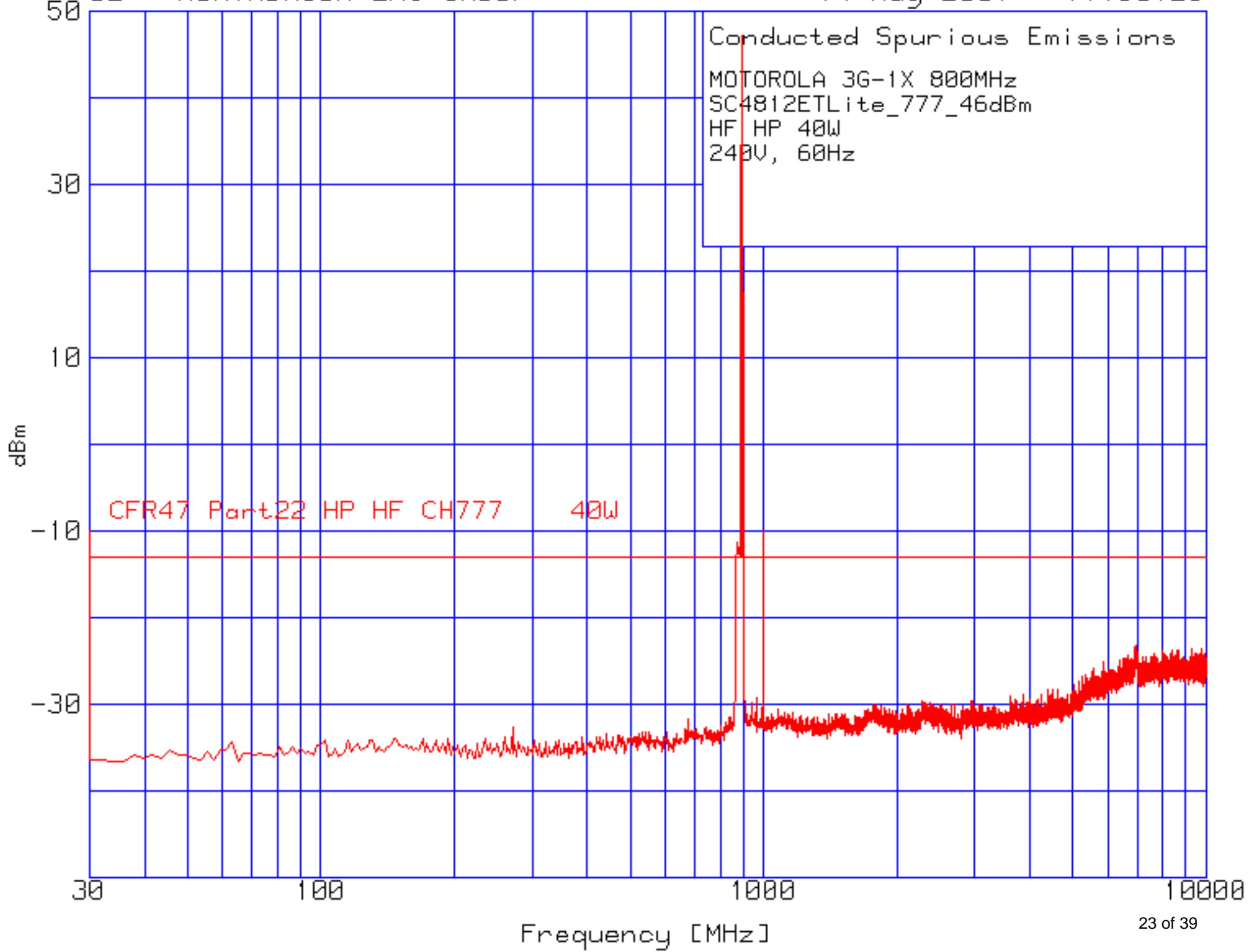
*Network Systems Group
CDMA Systems Division*

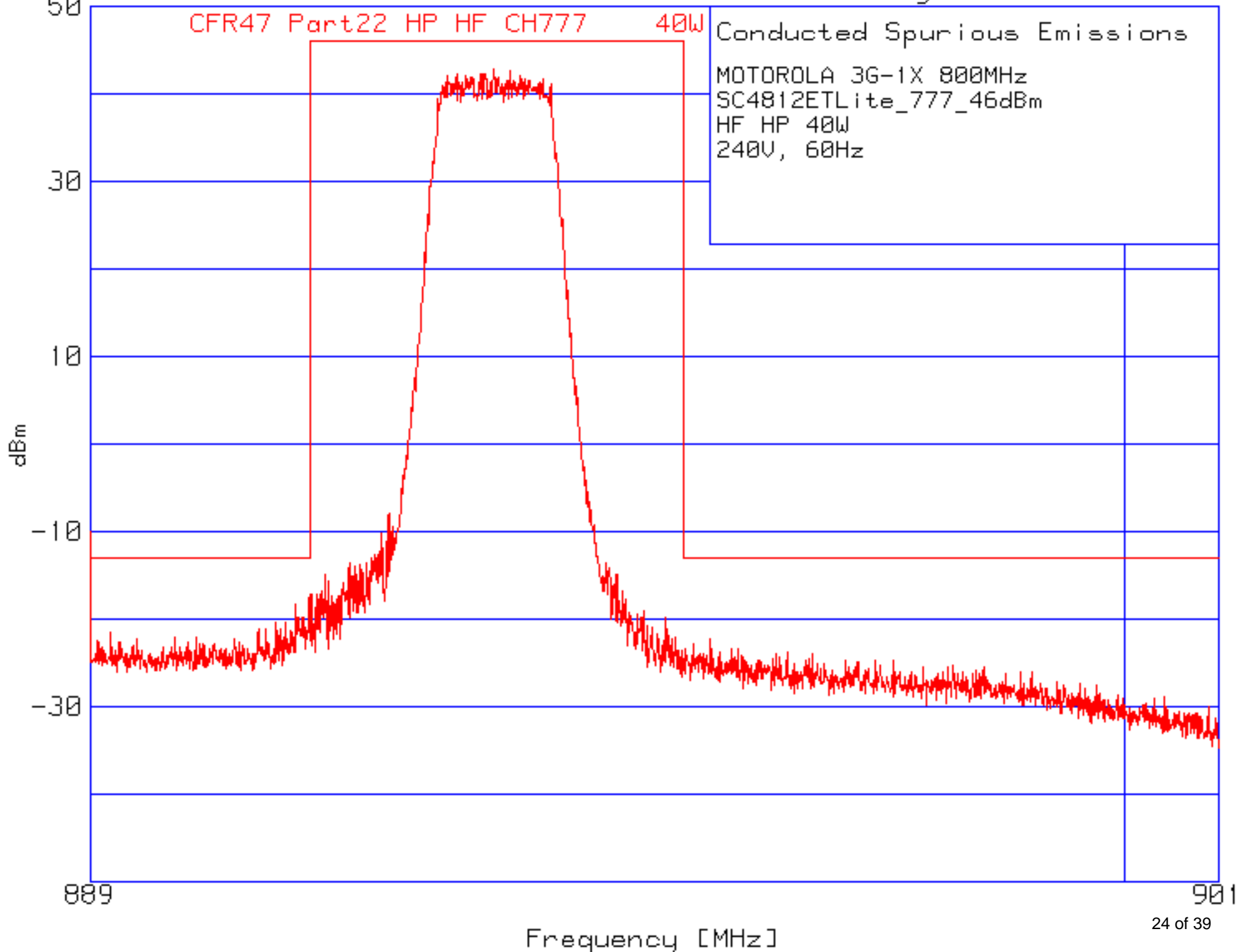
FCC ID: IHET5BR1

SPURIOUS & HARMONIC EMISSIONS CONDUCTED

CDMA Transmitter Channel 1175

Maximum Power







MOTOROLA

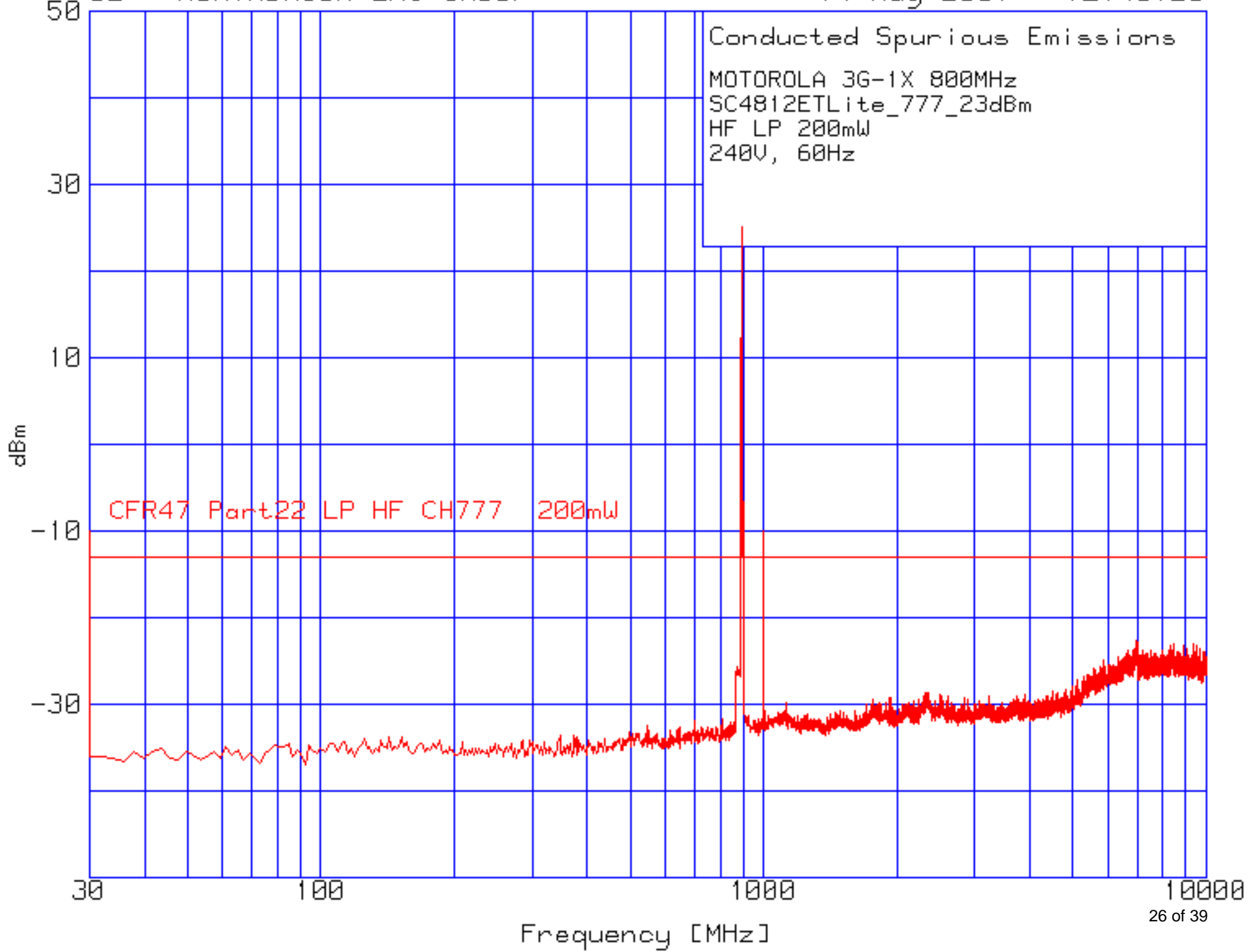
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FCC ID: IHET5BR1

SPURIOUS & HARMONIC EMISSIONS CONDUCTED

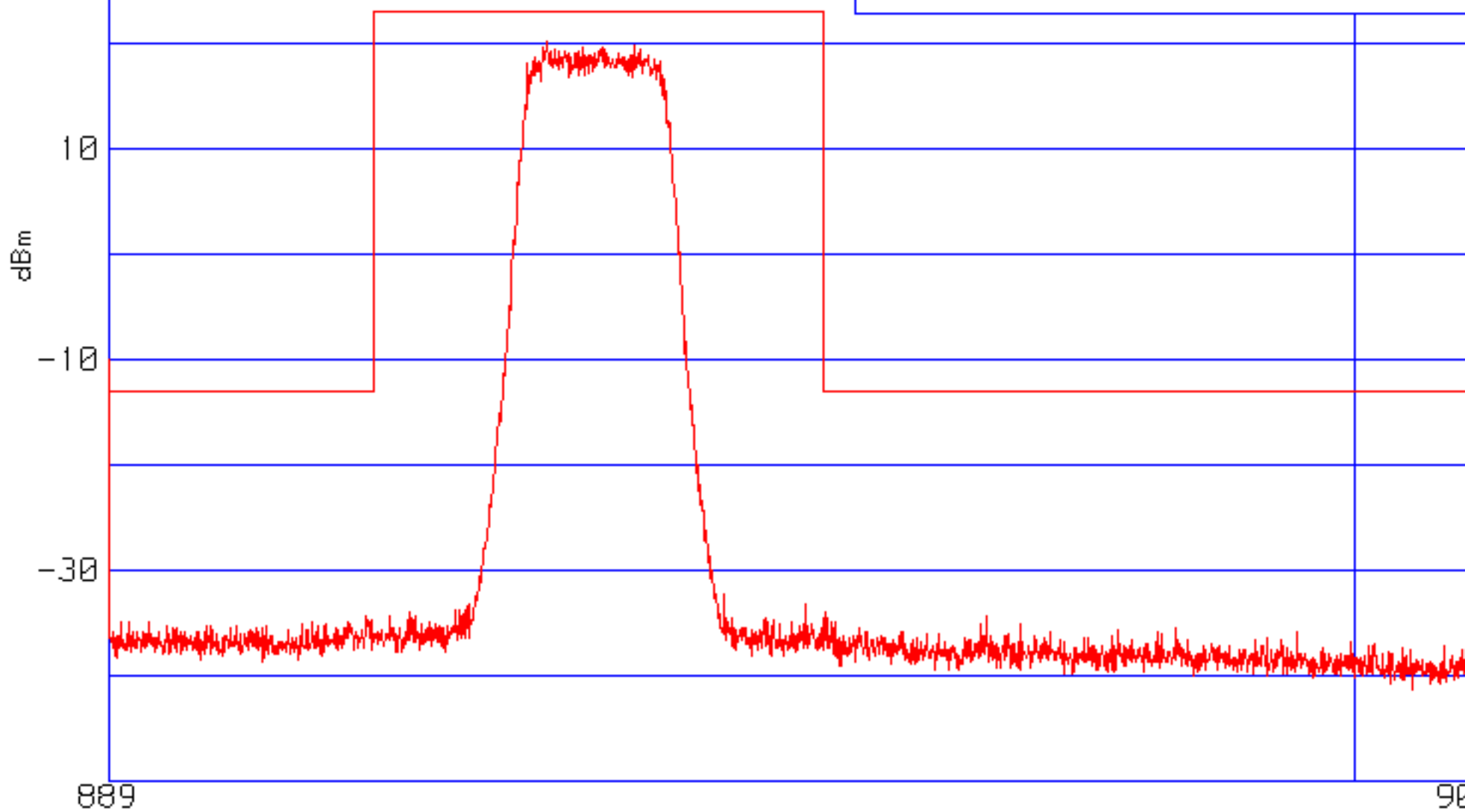
CDMA Transmitter Channel 1175

Minimum Power



Conducted Spurious Emissions
MOTOROLA 3G-1X 800MHz
SC4812ETLite_777_23dBm
HF LP 200mW
240V, 60Hz

CFR47 Part22 LP HF CH777 200mW



Frequency [MHz]



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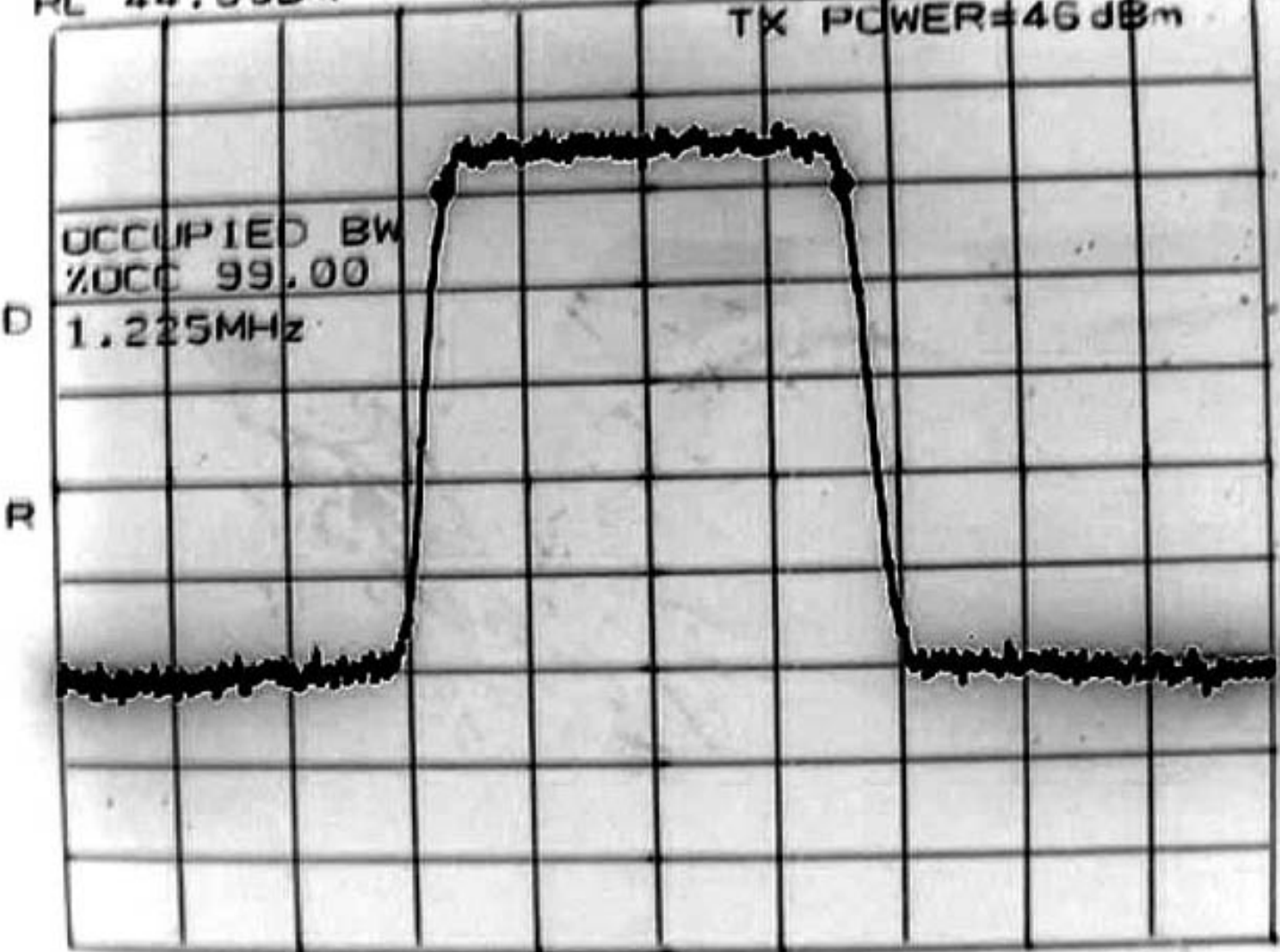
FCC ID: IHET5BR1

Occupied Bandwidth

Maximum Power

+ATTEN 40dB VAVG 200 ΔMKR -.50dB
RL 44.0dBm 10dB/ 1.225MHz
TX POWER=46dBm

MEASURE



SINGLE MEASURE

CONT MEASURE

CHANNEL PWR MENU

CHAN UP >>>>

CHAN DN <<<<

PREV MENU

CENTER 893.310MHz SPAN 3.750MHz
RBW 30kHz VBW 30kHz SWP 50.0ms

+ATTEN 40dB
RL 44.0dBm

VAVG 200
10dB/

ΔMKR .67dB
1.213MHz

TX POWER=46dBm

MEASURE

SINGLE
MEASURE

CONT
MEASURE

CHANNEL
PWR MENU

CHAN UP
>>>>

CHAN DN
<<<<

PREV
MENU



CENTER 869.700MHz

SPAN 3.750MHz

RBW 30kHz

VBW 30kHz

SWP 50.0ms



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FCC ID: IHET5BR1

Occupied Bandwidth

Minimum Power

+ATTEN 10dB
RL 24.0dBm

VAVG 200
10dB/

ΔMKR 1.16dB
1.225MHz

TX POWER=23dBm

MEASURE

SINGLE
MEASURE

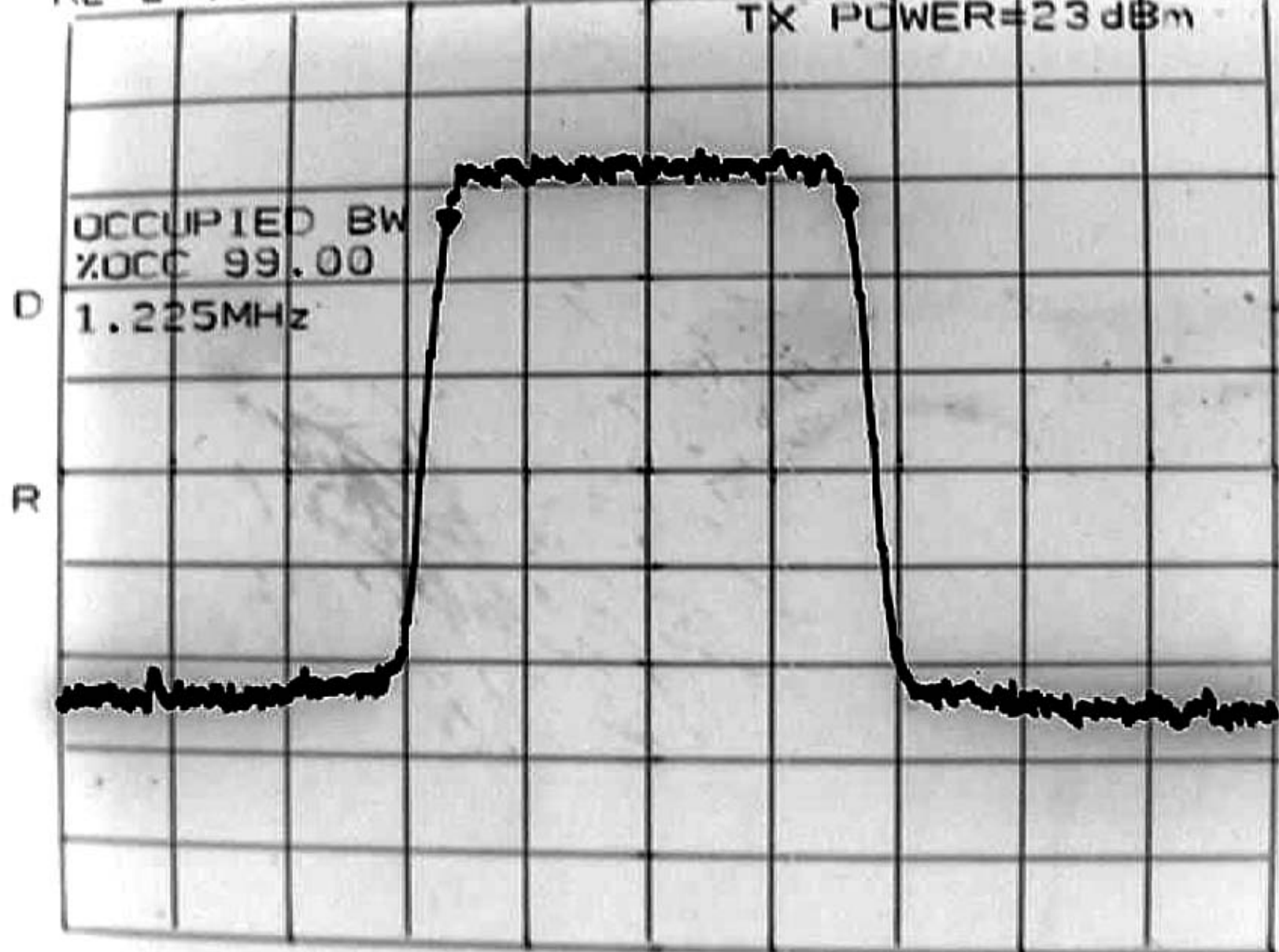
CONT
MEASURE

CHANNEL
PWR MENU

CHAN UP
>>>>

CHAN DN
<<<<

PREV
MENU



OCCUPIED BW
%OCC 99.00
1.225MHz

CENTER 893.310MHz

RBW 30kHz

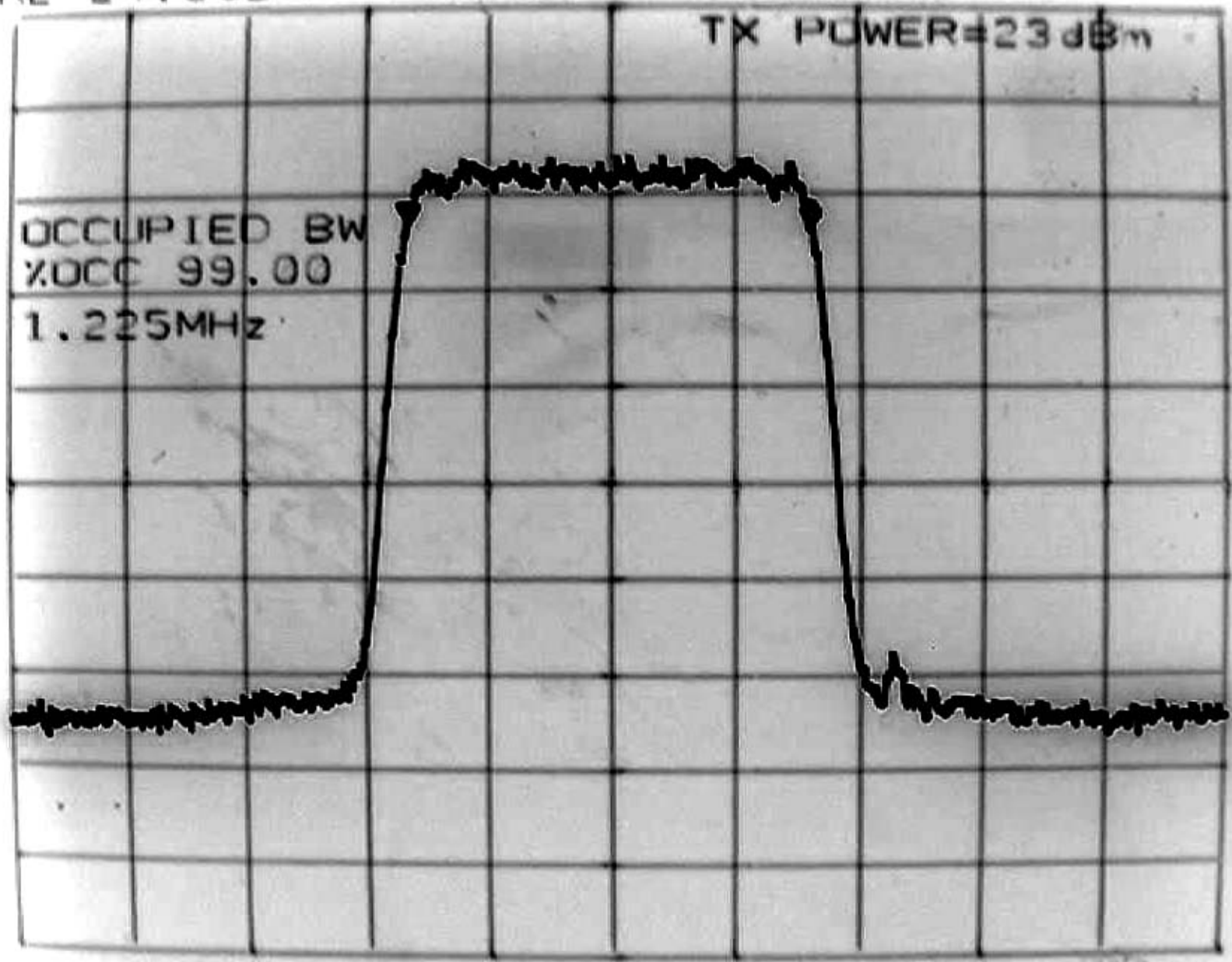
VBW 30kHz

SPAN 3.750MHz

SWP 50.0ms

+ATTEN 10dB VAVG 200 ΔMKR -.50dB
RL 24.0dBm 10dB/ 1.225MHz
TX POWER=23dBm

MEASURE



SINGLE MEASURE

CONT MEASURE

CHANNEL PWR MENU

CHAN UP >>>>

CHAN DN <<<<

PREV MENU

CENTER 869.700MHz SPAN 3.750MHz
RBW 30kHz VBW 30kHz SWP 50.0ms



SECTION F

FREQUENCY STABILITY

SC4812ETL

MODE	27V POWER	WORST CASE Δ PPM	FCC REQUIREMENT	Pass / Fail
CSM1	85-115%	<0.02	+/- 1.5 PPM MAX	Pass
CSM2	85-115%	<0.02	+/- 1.5 PPM MAX	Pass

MODE	TEMPERATURE	WORST CASE Δ PPM	FCC REQUIREMENT	Pass / Fail
CSM1	-30° to +50° C	<0.2	+/- 1.5 PPM MAX	Pass
CSM2	-30° to +50° C	<0.2	+/- 1.5 PPM MAX	Pass



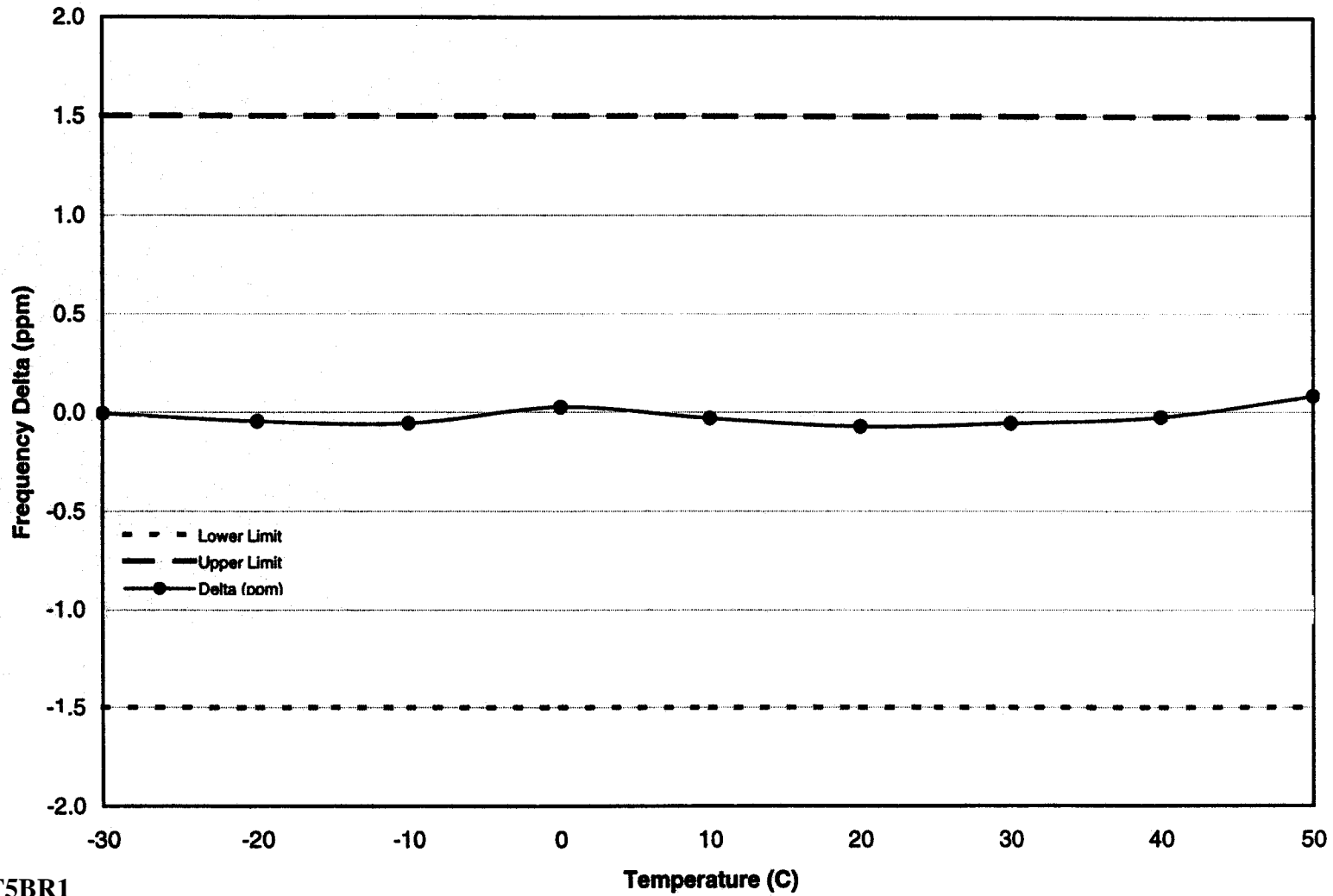
 Engineer

9/4/01

 Date

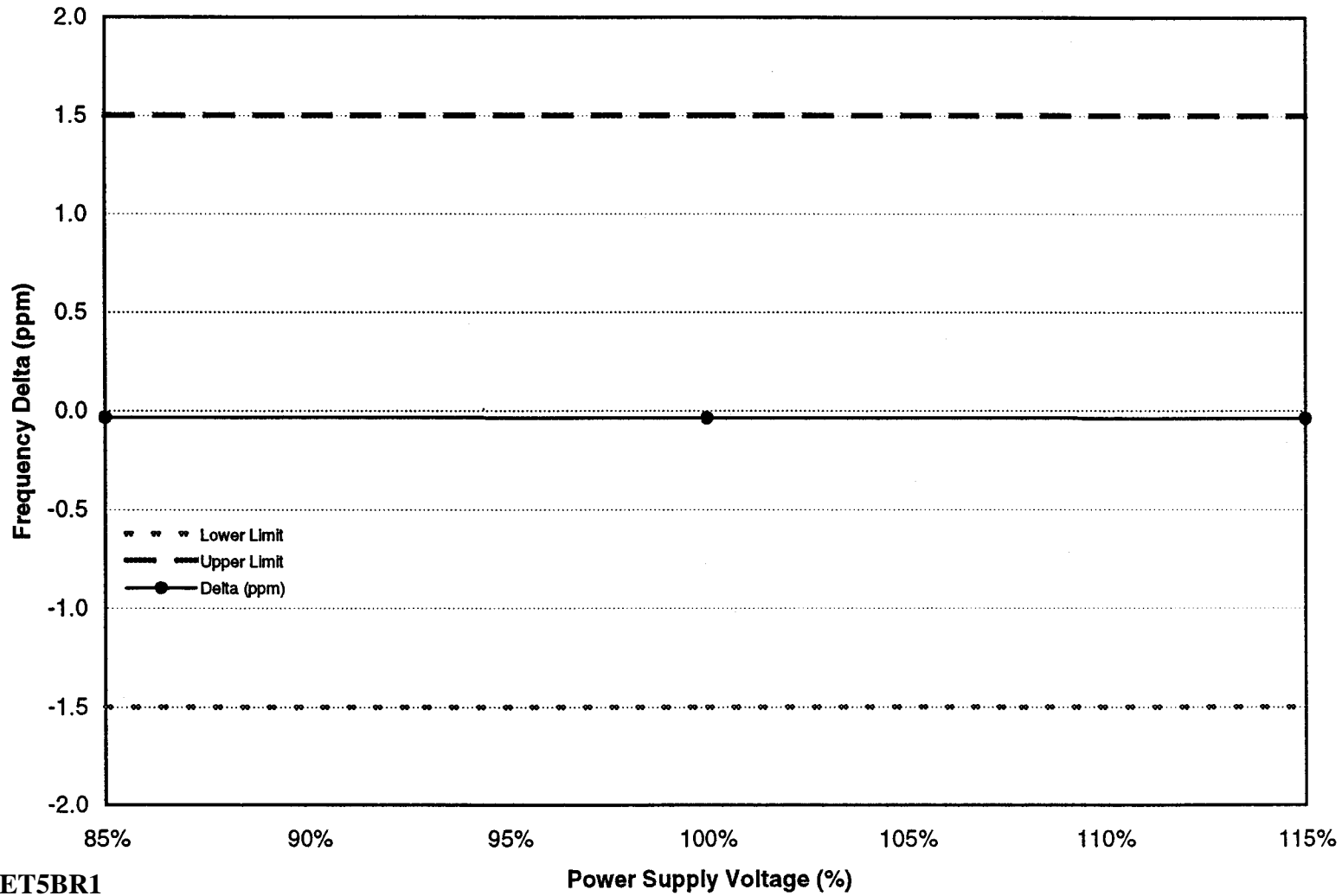
Terry Schwenk

Frequency Stability Over Temperature - CSM1



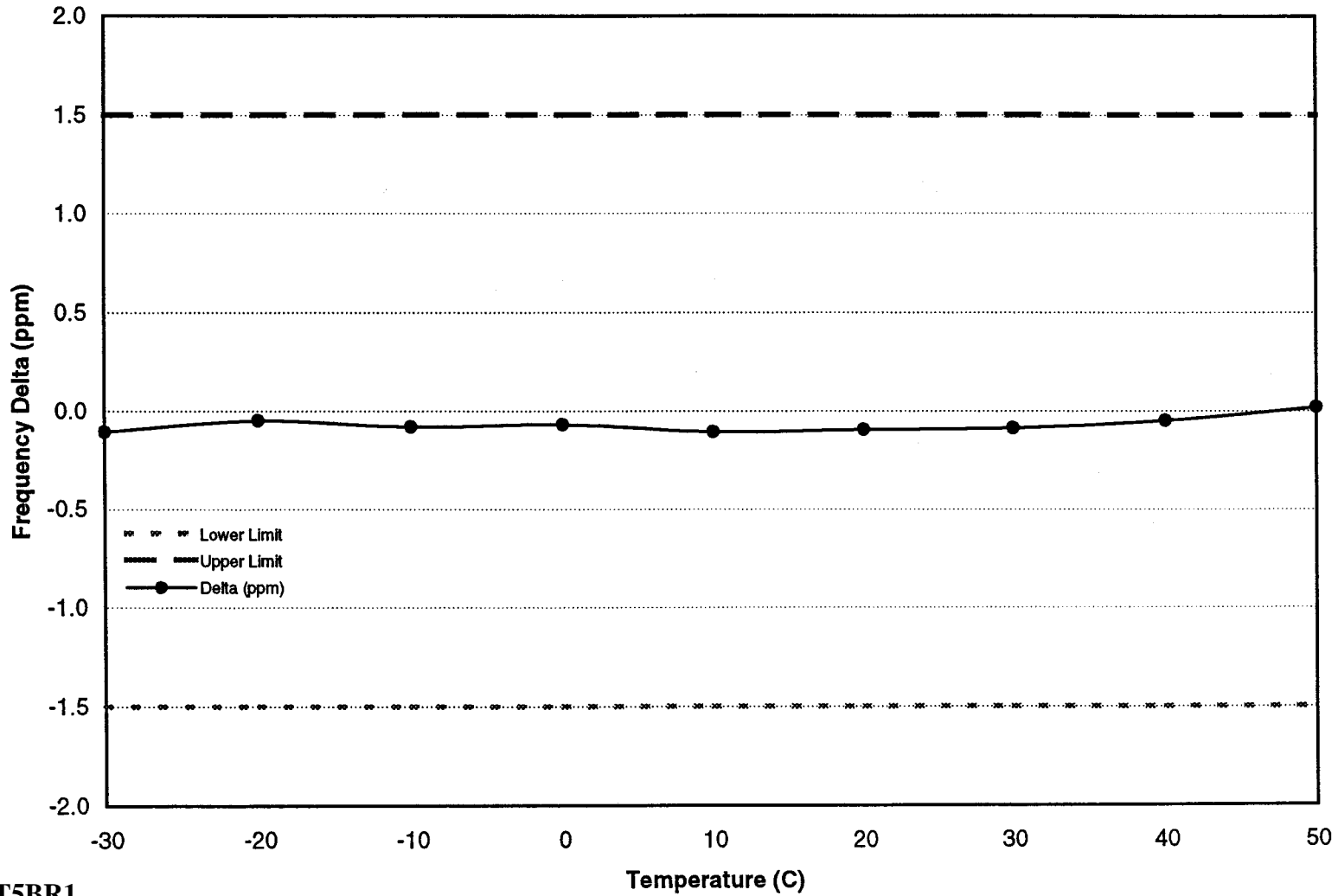
IHET5BR1
SC4812ETL @ 800 MHz
CDMA BTS FRAME

Frequency Stability with Varying Supply Voltage - CSM1



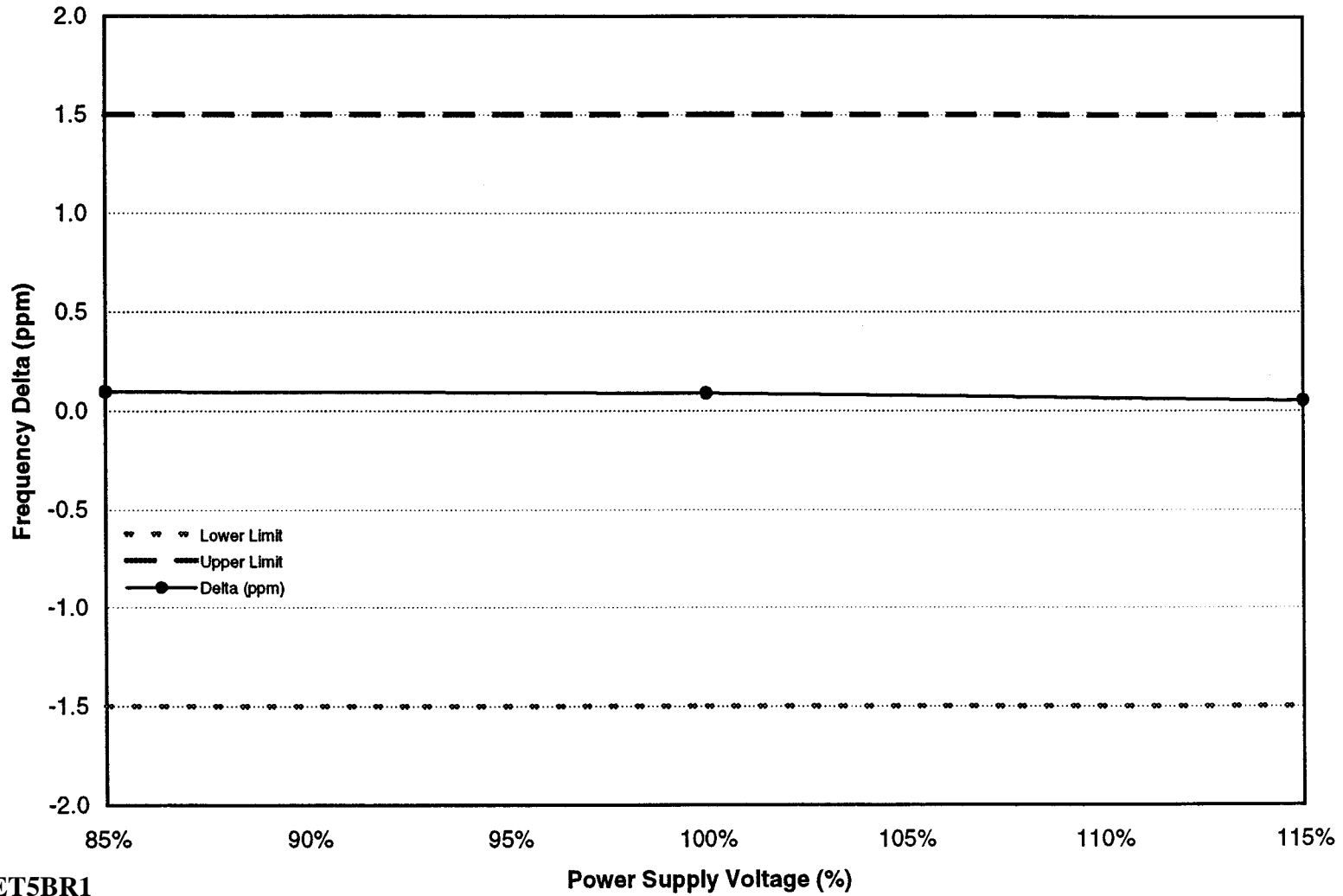
IHET5BR1
SC4812ETL @ 800 MHz
CDMA BTS FRAME

Frequency Stability Over Temperature - CSM2



IHET5BR1
SC4812ETL @ 800 MHz
CDMA BTS FRAME

Frequency Stability with Varying Supply Voltage - CSM2



IHET5BR1
SC4812ETL @ 800 MHz
CDMA BTS FRAME