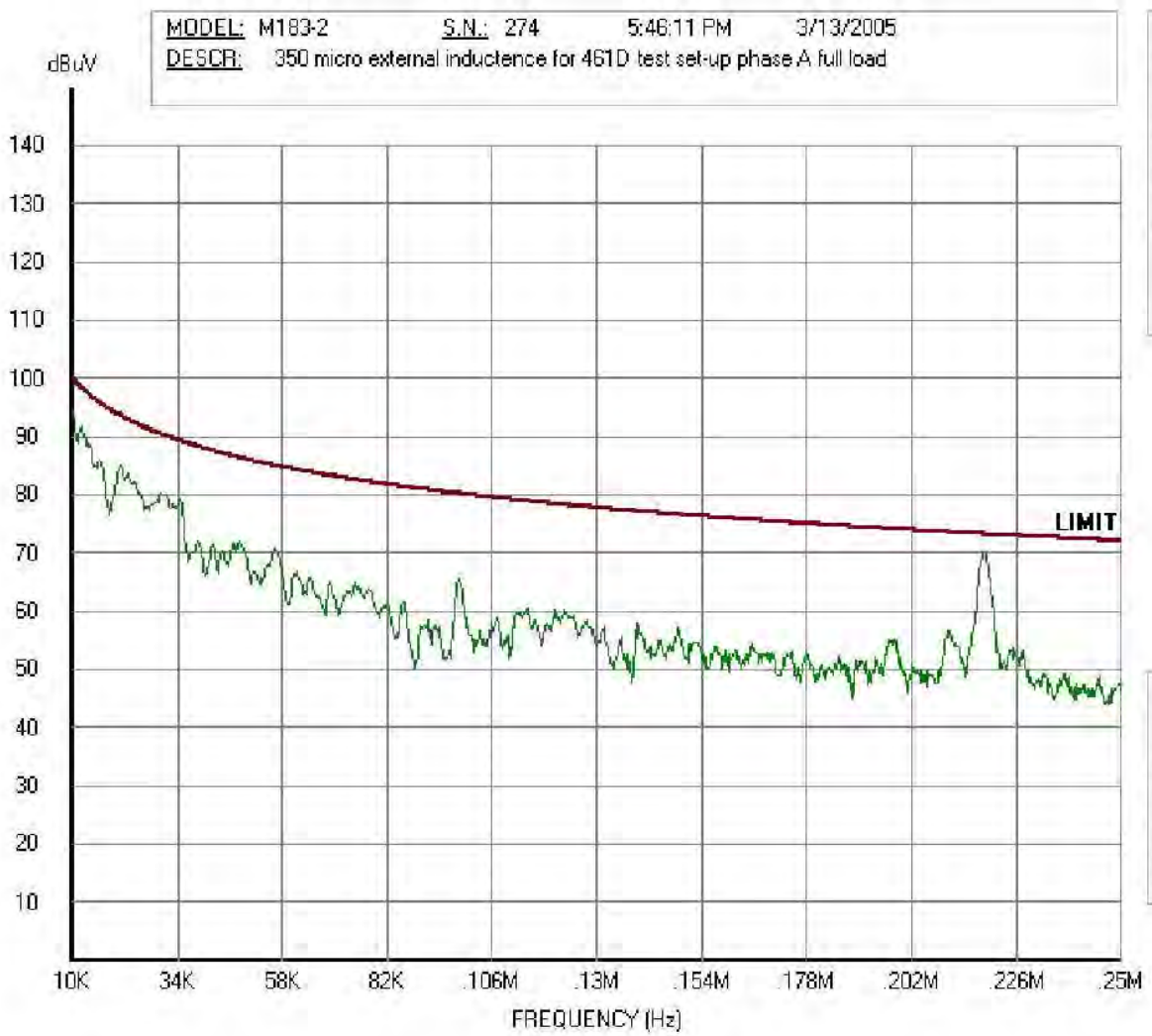
M183-2 Power Supply

Scanned Spectrum Analyzer Results
Requirements fulfillment
for the control of electromagnetic
interference emissions and susceptibility,
according to:

MIL-STD-461D (CE101, CE102)



LIMIT

MIL-STD-461D

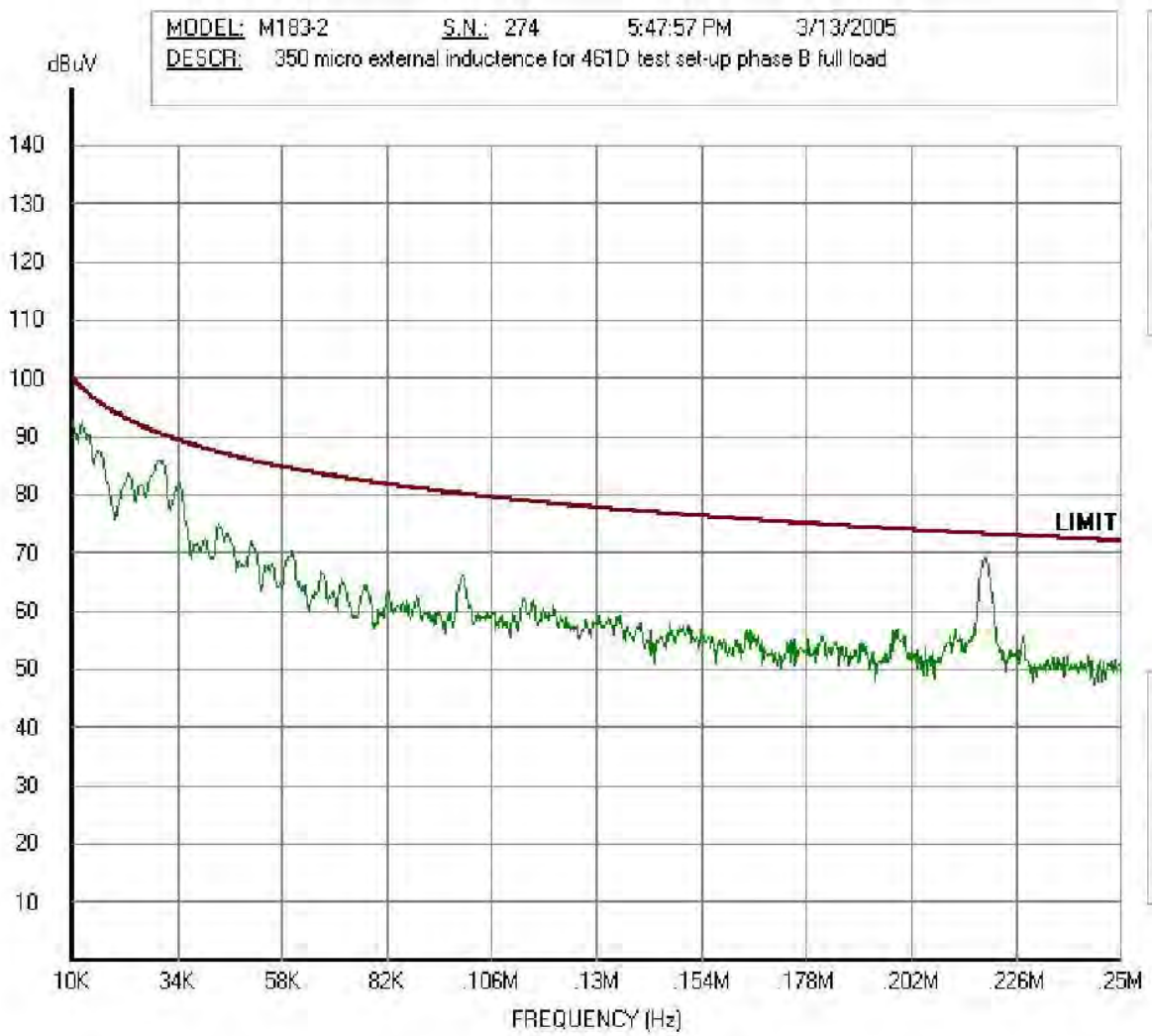
FIGURE CE102-1
CE102 LIMIT (EUT POWER LEADS,AC AND DC) FOR ALL APPLICATIONS.

06.00db RELAXATION

HP3585A SETTING

REF 15.0 DBM
10 DB/DIV
RANGE 15.0 DBM
RBW 1 KHZ
VBW 3 KHZ
ST 19.2 SEC

RESULTS INCLUDE LISN CORRECTION



LIMIT

MIL-STD-461D

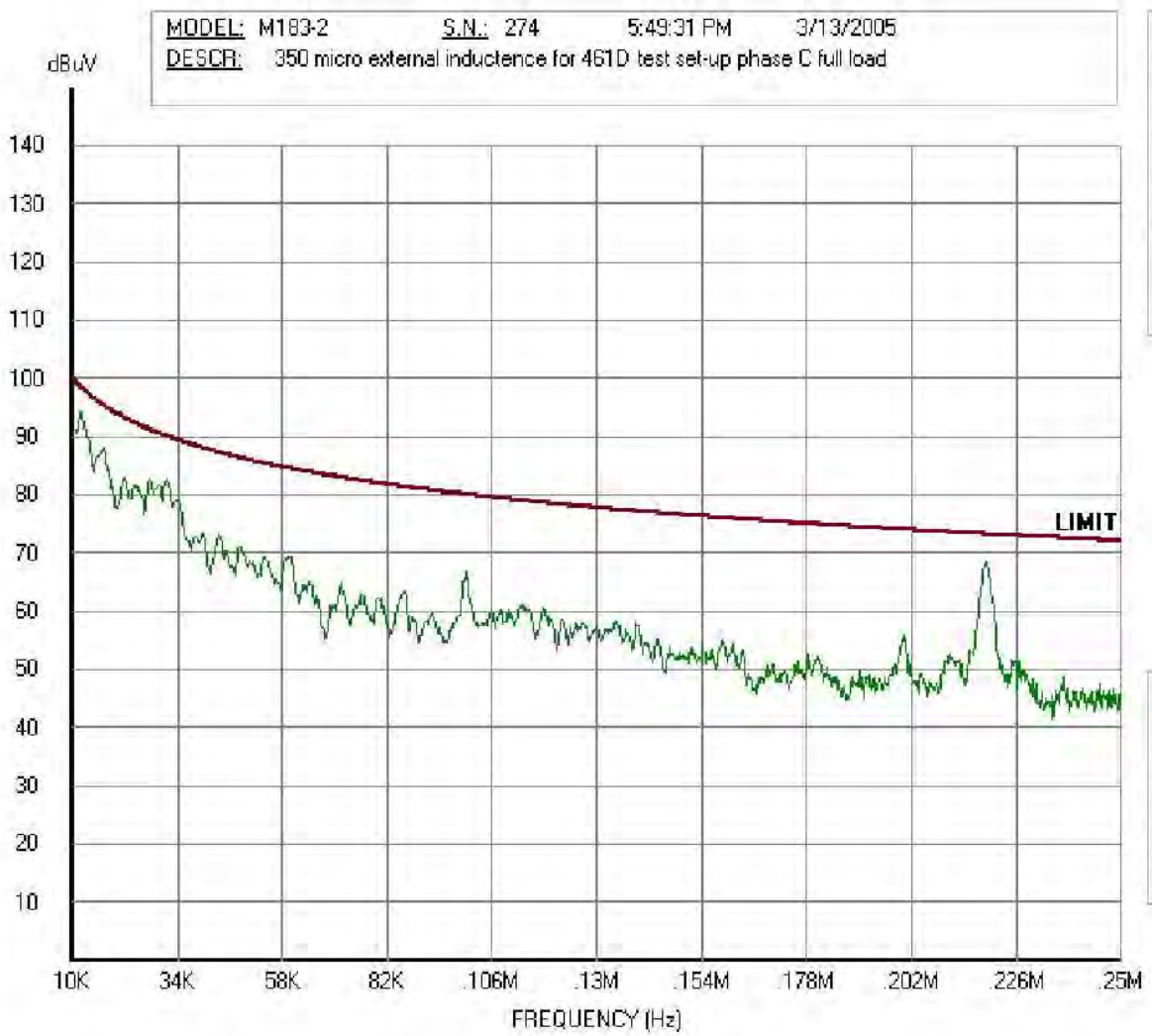
FIGURE CE102-1
CE102 LIMIT (EUT POWER LEADS,AC AND DC) FOR ALL APPLICATIONS.

06.00db RELAXATION

HP3585A SETTING

REF 15.0 DBM
10 DB/DIV
RANGE 15.0 DBM
RBW 1 KHZ
VBW 3 KHZ
ST 19.2 SEC

RESULTS INCLUDE LISN CORRECTION



LIMIT

MIL-STD-461D

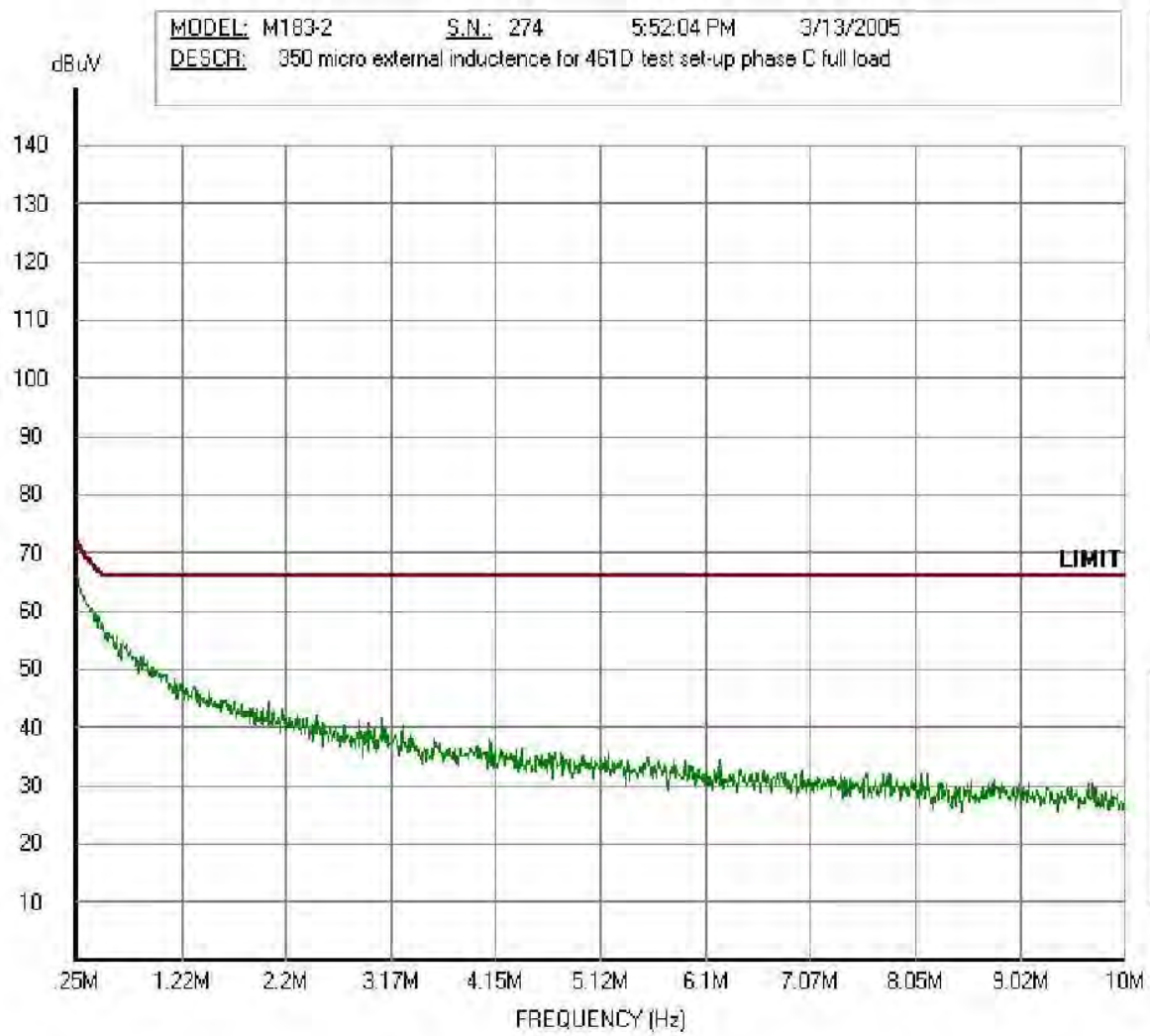
FIGURE CE102-1
CE102 LIMIT (EUT POWER LEADS,AC AND DC) FOR ALL APPLICATIONS.

06.00db RELAXATION

HP3585A SETTING

REF 15.0 DBM
10 DB/DIV
RANGE 15.0 DBM
RBW 1 KHZ
VBW 3 KHZ
ST 19.2 SEC

RESULTS INCLUDE LISN CORRECTION



LIMIT

MIL-STD-461D

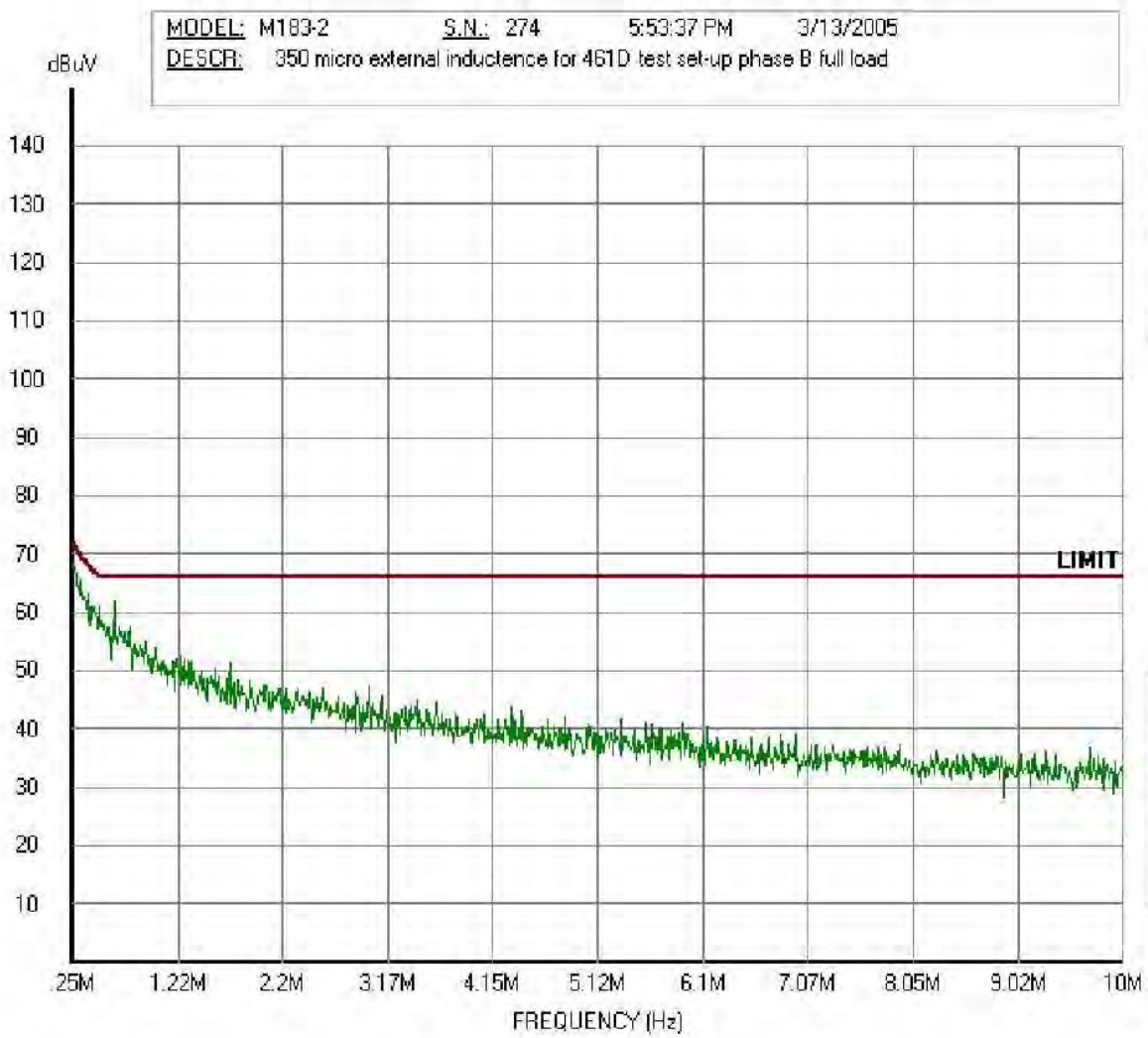
FIGURE CE102-1
CE102 LIMIT (EUT POWER LEADS,AC AND DC) FOR ALL APPLICATIONS.

06.00db RELAXATION

HP3585A SETTING

REF -20.0 DBM
10 DB/DIV
RANGE -20.0 DBM
RBW 10 KHZ
VBW 30 KHZ
ST 25.6 SEC

RESULTS INCLUDE LISN CORRECTION



LIMIT

MIL-STD-461D

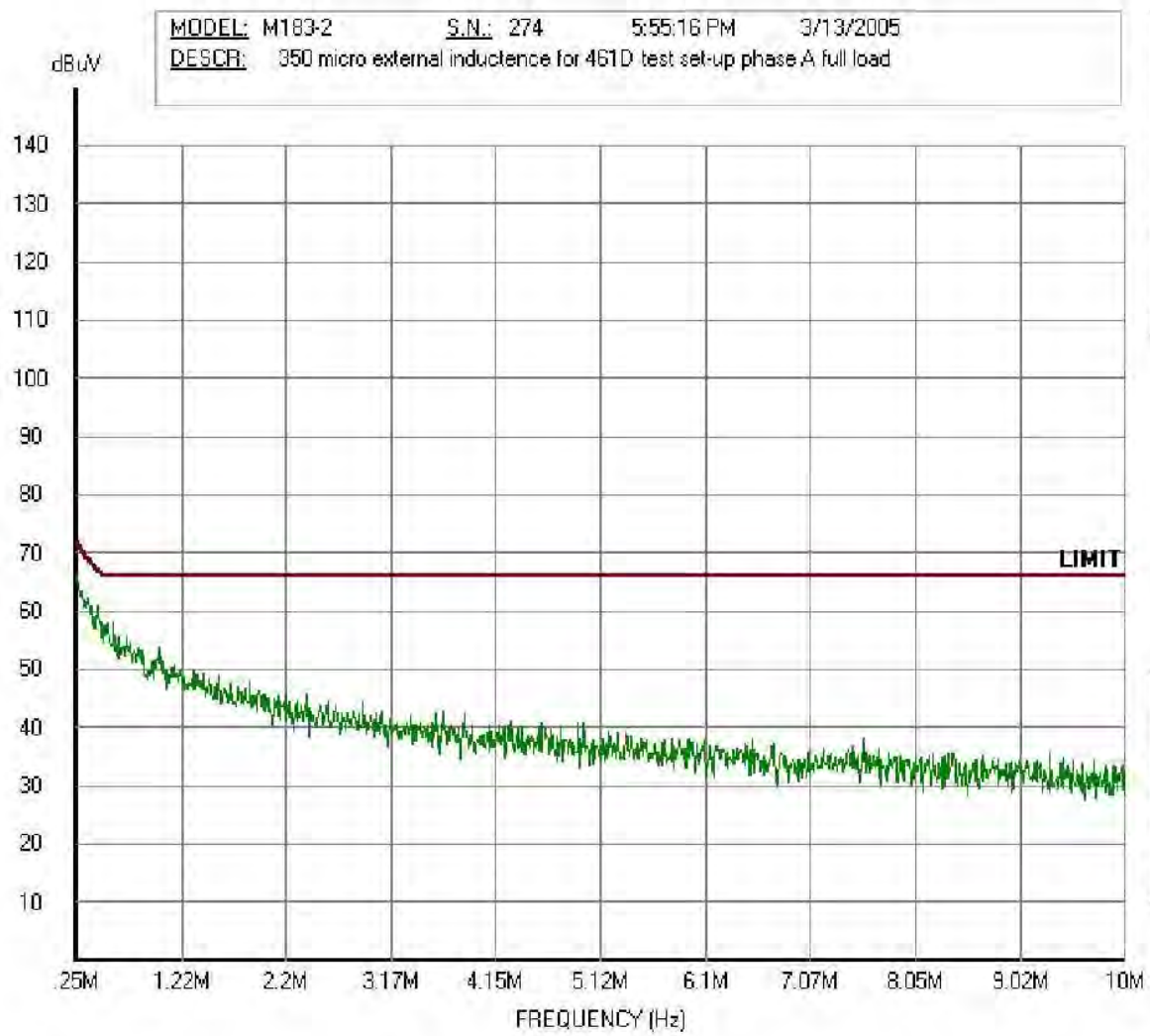
FIGURE CE102-1
CE102 LIMIT (EUT POWER LEADS,AC AND DC) FOR ALL APPLICATIONS.

06.00db RELAXATION

HP3585A SETTING

REF -20.0 DBM
10 DB/DIV
RANGE -20.0 DBM
RBW 10 KHZ
VBW 30 KHZ
ST 25.6 SEC

RESULTS INCLUDE LISN CORRECTION



LIMIT

MIL-STD-461D

FIGURE CE102-1
CE102 LIMIT (EUT POWER LEADS,AC AND DC) FOR ALL APPLICATIONS.

06.00db RELAXATION

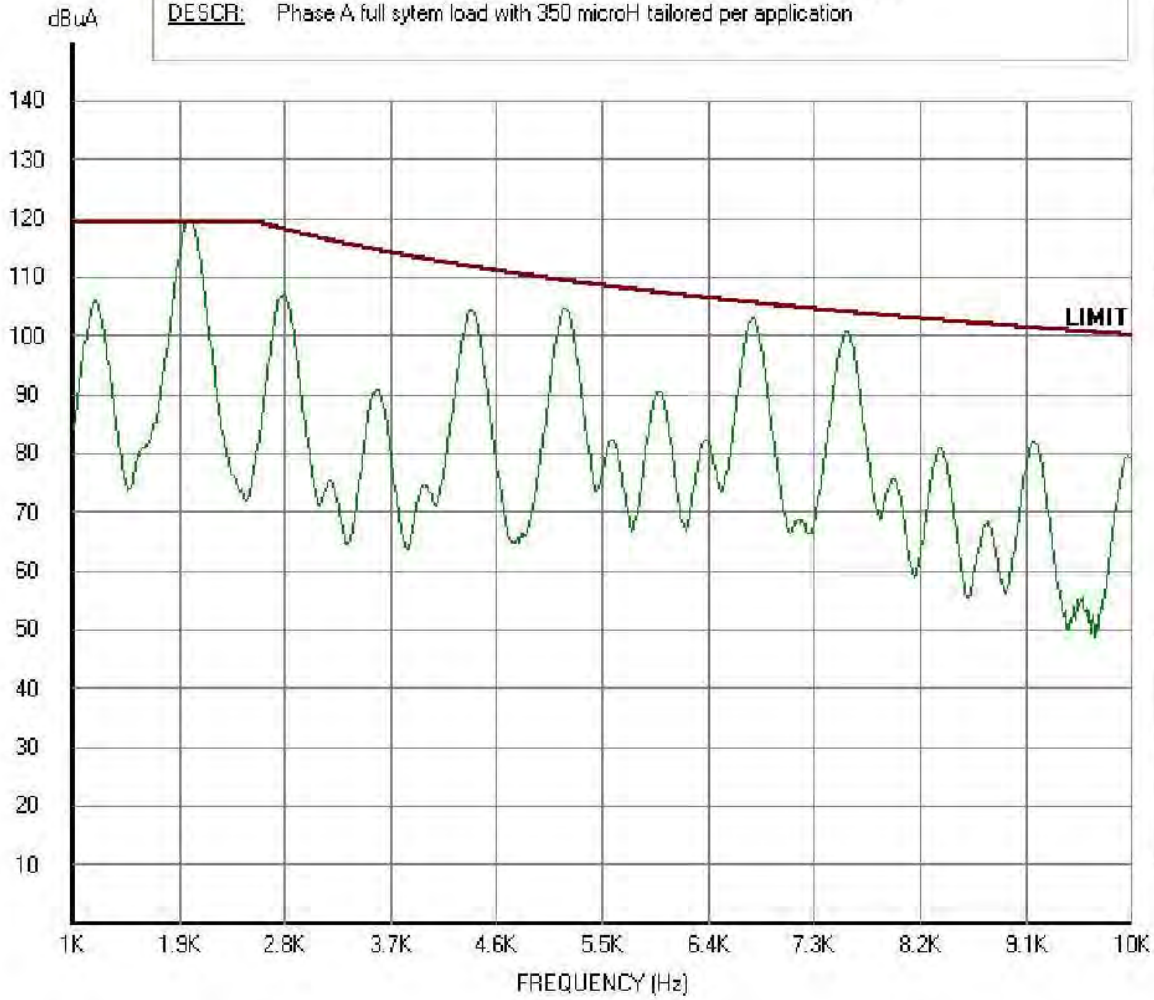
HP3585A SETTING

REF -20.0 DBM
10 DB/DIV
RANGE -20.0 DBM
RBW 10 KHZ
VBW 30 KHZ
ST 25.6 SEC

RESULTS INCLUDE LISN CORRECTION

MODEL: 183-2 S.N.: 274 9:00:09 AM 3/14/2005

DESCR: Phase A full sytem load with 350 microH tailored per application



LIMIT

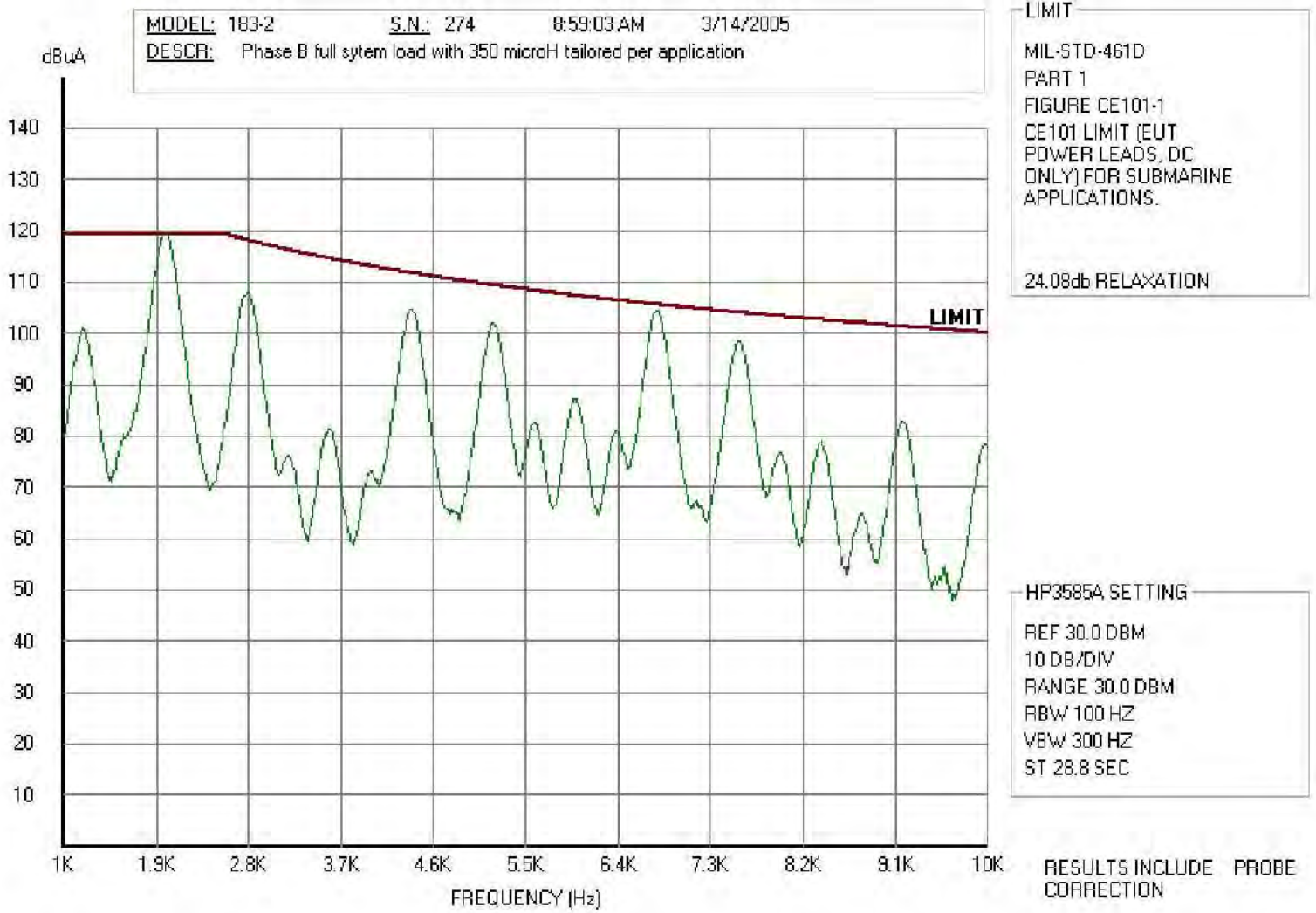
MIL-STD-461D
PART 1
FIGURE CE101-1
CE101 LIMIT (EUT POWER LEADS, DC ONLY) FOR SUBMARINE APPLICATIONS.

24.08db RELAXATION

HP3585A SETTING

REF 30.0 DBM
10 DB/DIV
RANGE 30.0 DBM
RBW 100 HZ
VBW 300 HZ
ST 28.8 SEC

RESULTS INCLUDE PROBE CORRECTION



LIMIT

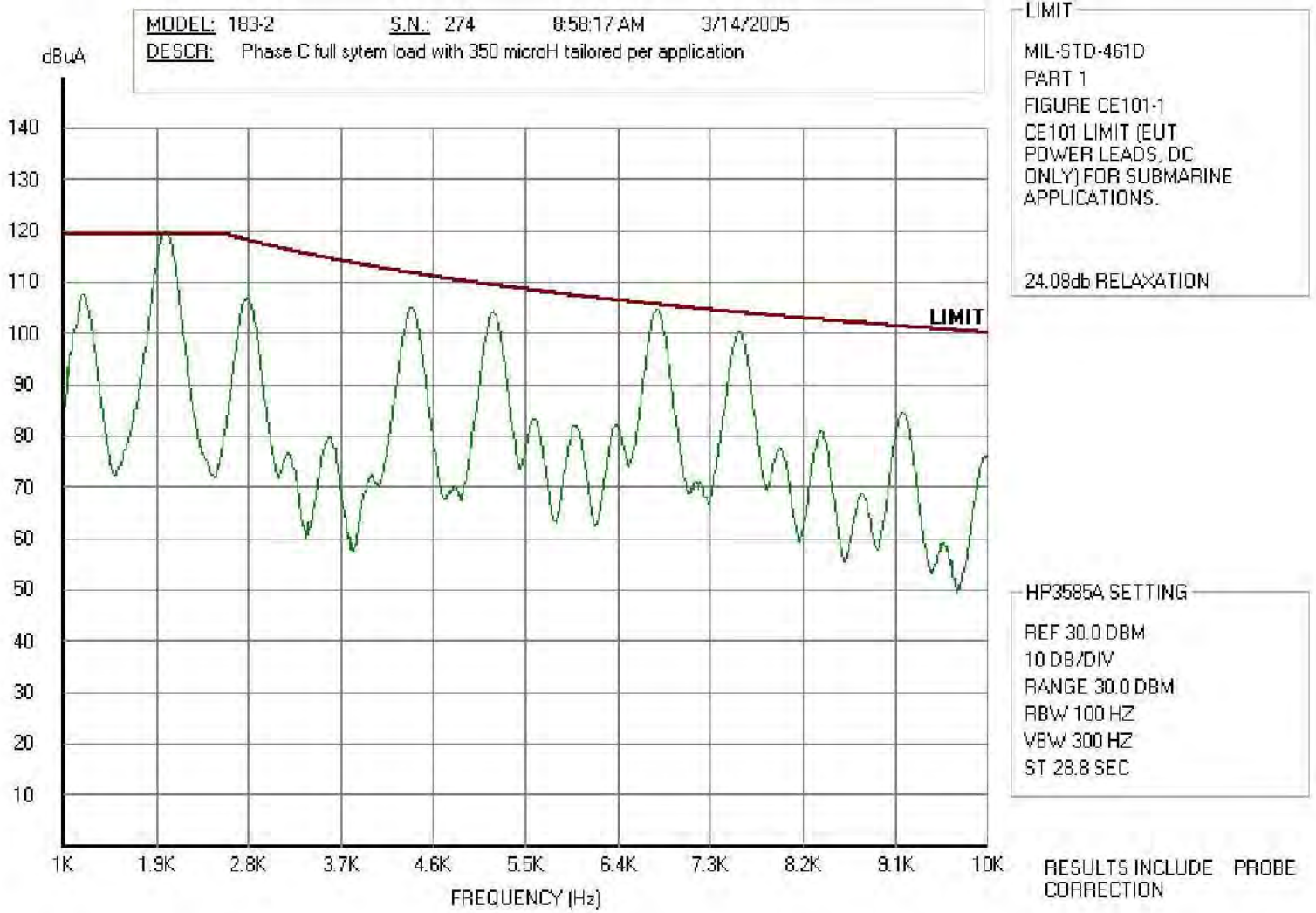
MIL-STD-461D
PART 1
FIGURE CE101-1
CE101 LIMIT (EUT POWER LEADS, DC ONLY) FOR SUBMARINE APPLICATIONS.

24.08db RELAXATION

HP3585A SETTING

REF 30.0 DBM
10 DB/DIV
RANGE 30.0 DBM
RBW 100 HZ
VBW 300 HZ
ST 28.8 SEC

RESULTS INCLUDE PROBE CORRECTION



LIMIT

MIL-STD-461D
PART 1
FIGURE CE101-1
CE101 LIMIT (EUT POWER LEADS, DC ONLY) FOR SUBMARINE APPLICATIONS.

24.08db RELAXATION

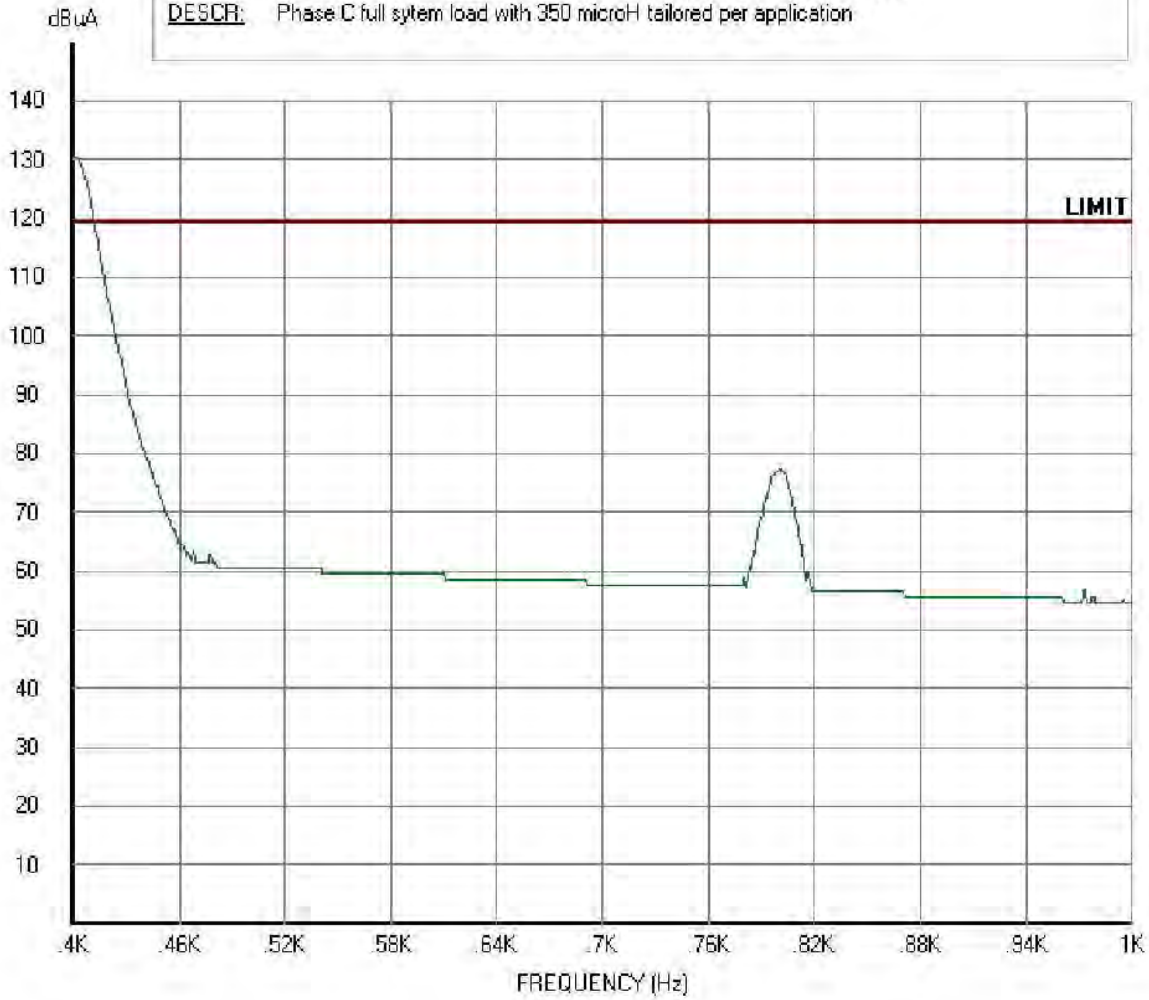
HP3585A SETTING

REF 30.0 DBM
10 DB/DIV
RANGE 30.0 DBM
RBW 100 HZ
VBW 300 HZ
ST 28.8 SEC

RESULTS INCLUDE PROBE CORRECTION

MODEL: 183-2 S.N.: 274 8:56:26 AM 3/14/2005

DESCR: Phase C full sytem load with 350 microH tailored per application



LIMIT

MIL-STD-461D
PART 1
FIGURE CE101-1
CE101 LIMIT (EUT POWER LEADS, DC ONLY) FOR SUBMARINE APPLICATIONS.

24.08db RELAXATION

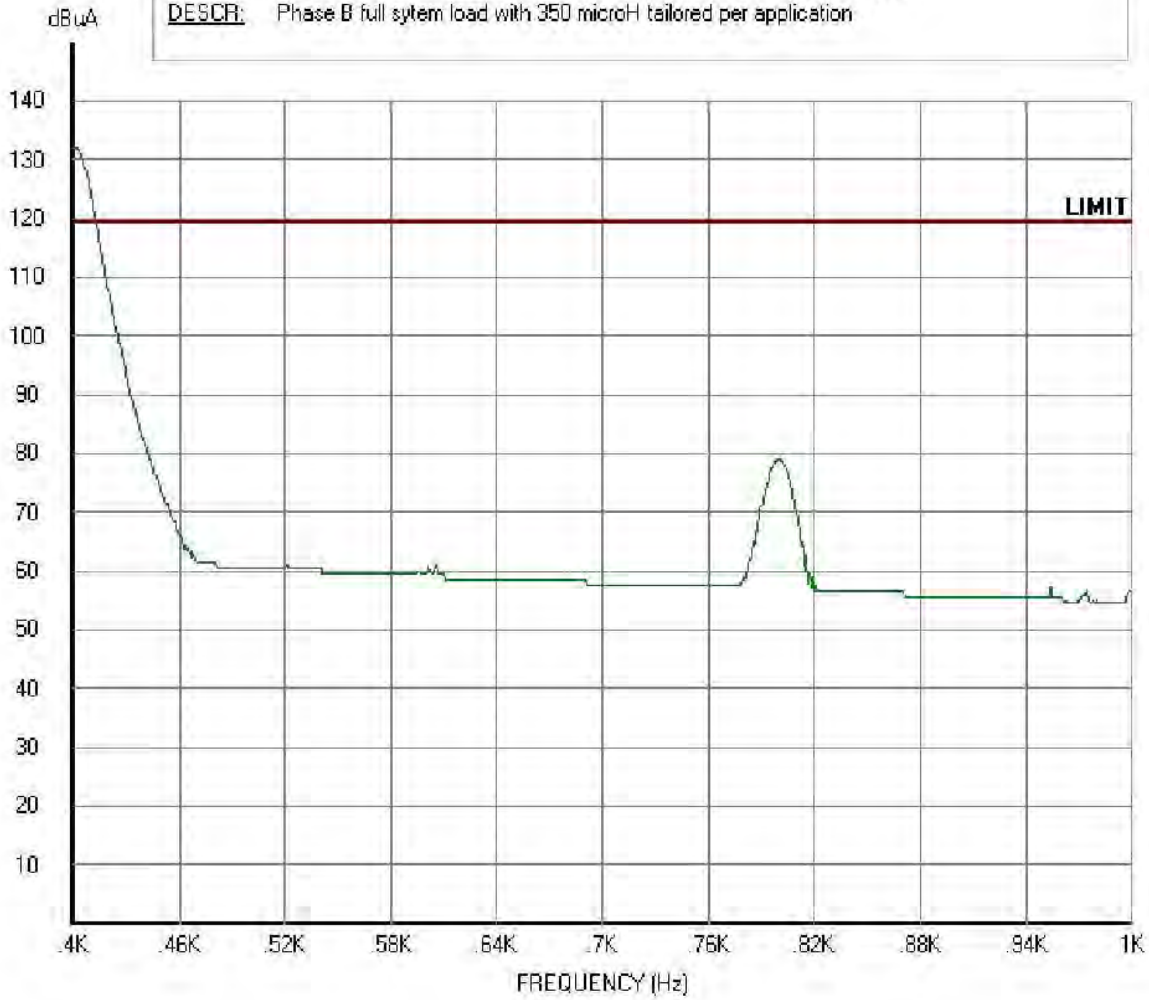
HP3585A SETTING

REF 30.0 DBM
10 DB/DIV
RANGE 30.0 DBM
RBW 10 HZ
VBW 30 HZ
ST 24.0 SEC

RESULTS INCLUDE PROBE CORRECTION

MODEL: 183-2 S.N.: 274 8:55:17 AM 3/14/2005

DESCR: Phase B full sytem load with 350 microH tailored per application



LIMIT

MIL-STD-461D
PART 1
FIGURE CE101-1
CE101 LIMIT (EUT POWER LEADS, DC ONLY) FOR SUBMARINE APPLICATIONS.

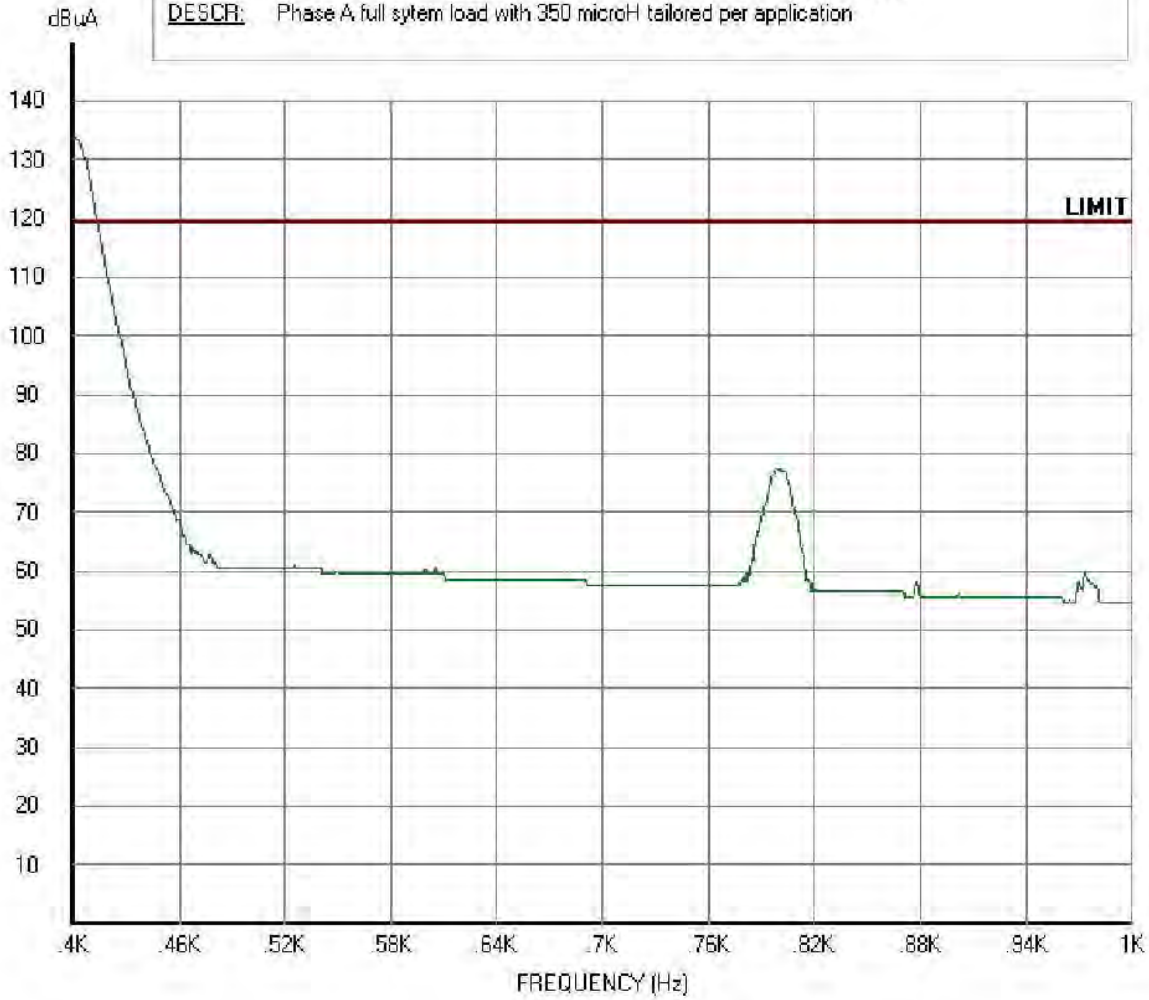
24.08db RELAXATION

HP3585A SETTING

REF 30.0 DBM
10 DB/DIV
RANGE 30.0 DBM
RBW 10 HZ
VBW 30 HZ
ST 24.0 SEC

RESULTS INCLUDE PROBE CORRECTION

MODEL: 183-2 S.N.: 274 8:52:34 AM 3/14/2005
DESCR: Phase A full sytem load with 350 microH tailored per application



LIMIT

MIL-STD-461D
PART 1
FIGURE CE101-1
CE101 LIMIT (EUT POWER LEADS, DC ONLY) FOR SUBMARINE APPLICATIONS.

24.08db RELAXATION

HP3585A SETTING

REF 30.0 DBM
10 DB/DIV
RANGE 30.0 DBM
RBW 10 HZ
VBW 30 HZ
ST 24.0 SEC

RESULTS INCLUDE PROBE CORRECTION

Input EMI Definitions

For Power Supplies Models:**M183** and **M115:** The harmonics currents of the 400Hz input line frequency, between 10KHz (the 25th harmonic) to 30KHz (the 75th harmonic) may exceed the limit of MIL-STD-461D, Method CE102.

The emission level for each of the harmonics between the 25th to 50th shall be lower than two times the **Input Current Rating** of the Power Supply, divide by the harmonic's order. The emission level for each of harmonics between 51th to 75th shall be lower than the **Input Current Rating** of the Power Supply, divide by the harmonic's order.

For the M183 the Input Current Rating is: 4Amp
For the M115 the Input Current Rating is: 2.5Amp

The expected voltage emission level may be calculated by multiplying the harmonic current by the LISN's impedance at the specific frequency.

Example: for the M183 the emission at 14KHz (the 35th harmonic of 400Hz) may reach:

(2 x 4Amp) / 35 = 0.228Amp

The expected conducted voltage emission on a standard MIL-STD-461D LISN may reach:

0.228Amp x 6 Ω= 1.268V (= 122dBμV)

(Where 6Ω is the LISN's impedance at 14KHz.)