TR-6000 Final Test Results

Date:_____ S/N:_____

Freq:_____KHz Cust:_____

TIS ___ Non TIS ___ Power:_____W

Measurements:

RF Power:_____W H/P Out _____

Pwr Mtr Cal _____ Mon Audio _____

Modulation:_____% Switched Mon Audio ___

VU Mtr Cal _____ Pwr Ctrl Relay _____

Distortion: _____% TIS Filter _____

Noise:_____dB DUTY CYCLE

Frequency:_____ U17(7212):_____%

Spurs _____ U18(7202):_____%

U13-6(4069):_____Vpp

NOTES:

Technician:_____

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TR-6000 RF OUTPUT POWER MEASUREMENTS

FINAL FET VOLTAGE, CURRENT, POWER AND EFFICIENCY

VDD VDC	POWER 1700KHz OUT	AMPS	EFF.	VDD VDC	POWER 1110KHz OUT	AMPS	EFF.
21.3V	30W	1.92A	73%	17.6V	30W	2.27A	75%
19.5V	25W	1.76A	73%	16.2V	25W	2.07A	75%
17.7V	20W	1.60A	71%	14.8V	20W	1.89A	72%
15.0V	15W	1.37A	73%	12.4V	15W	1.61A	75%
12.2V	10W	1.13A	73%	10.2V	10W	1.33A	74%
8.6V	5W	0.82A	71%	7.1V	5W	0.95A	74%
2.6V	0.5W	0.28A	69%	2.2V	0.5W	0.31A	73%

VDD VDC	POWER 530KHz OUT	AMPS	EFF
17.9V	30W	2.31A	73%
16.1V	25W	2.08A	75%
14.5V	20W	1.89A	73%
12.2V	15W	1.61A	76%
9.9V	10W	1.31A	77%
6.9V	5W	0.93A	78%
2.1V	0.5W	0.29A	82%

SYSTEMS

RF LOAD

RESISTANCE: 50.0 OHMS

RETURN LOSS:-38dB

Test performed by:T.E.M. TEM Date:8-31-98

EXHIBIT-E
B7MTR-6000TIS-WB
1

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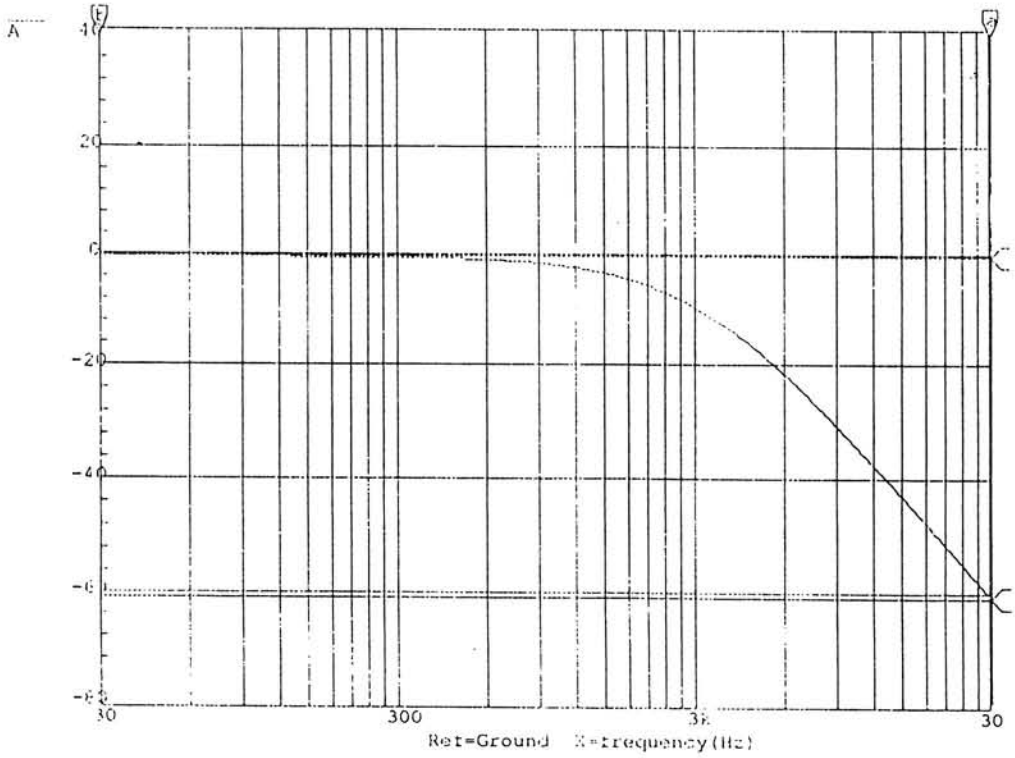
SYSTEMS

TR-6000 MODULATION FREQUENCY RESPONSE

RELATIVE FREQUENCY RESPONSE AT 90% MOULATION

MODULATING FREQUENCY Hz	RELATIVE RESPONSE dB
20	-0.3
100	+0.9
200	+0.6
500	+0.5
1000	-0-
2000	-2.8
3000	-6.0
4000	-10
5000	-15

Audio Low-Pass Filter Response Curve



Test performed by:T.E.M. TEM Date:9-9-98

EXHIBIT-F

B7MTR-6000TIS-WB

1

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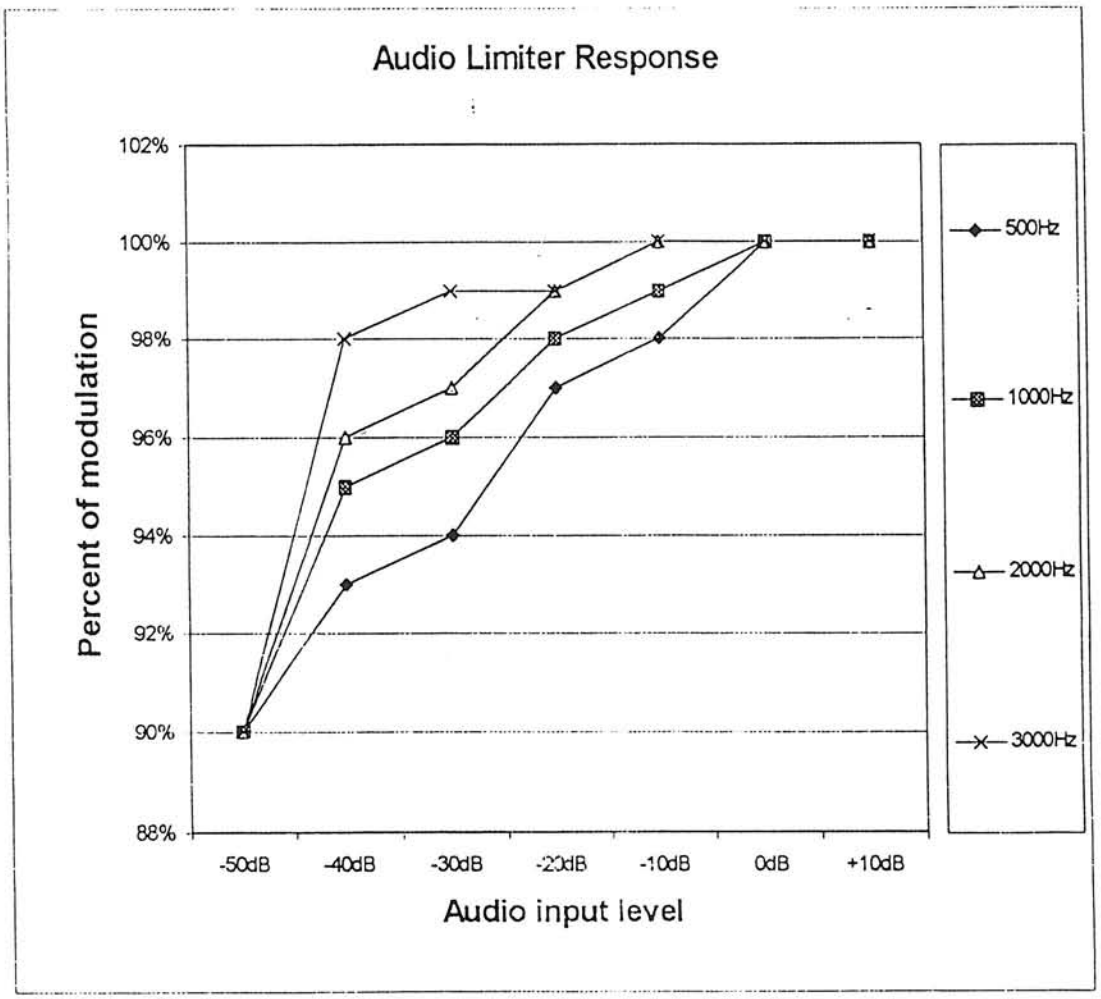
SYSTEMS

AUDIO LIMITER RESPONSE

	500Hz	1000Hz	2000Hz	3000Hz
-50dB	90%	90%	90%	90%
-40dB	93%	95%	96%	98%
-30dB	94%	96%	97%	99%
-20dB	97%	98%	99%	99%
-10dB	98%	99%	100%	100%
0dB	100%	100%	100%	100%
+10dB	100%	100%	100%	100%



Test performed by:T.E.M. Date:9-9-98

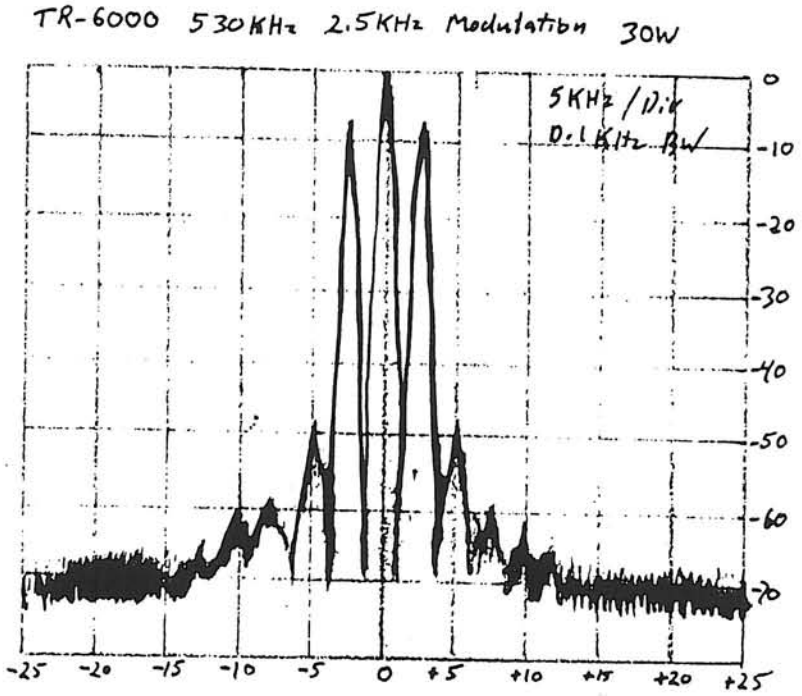
EXHIBIT-F

B7MTR-6000TIS-WB

TR-6000 OCCUPIED BANDWIDTH

Transmitter modulated with 2500Hz at 16dB above 50% modulation at the frequency of maxim response.

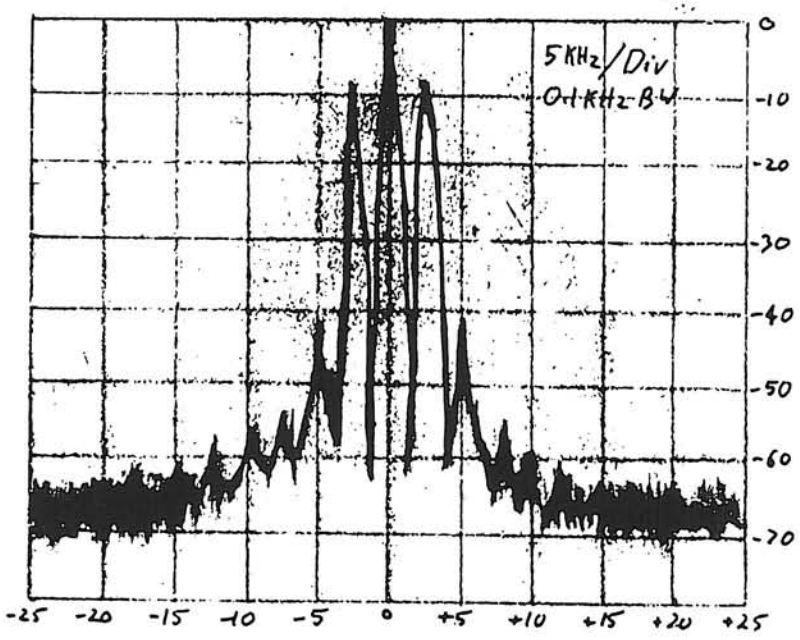
Carrier Frequency:
530KHz



Test performed by:T.E.M Date:8-31-98
EXHIBIT-G
B7MTR-6000TIS-WB
1

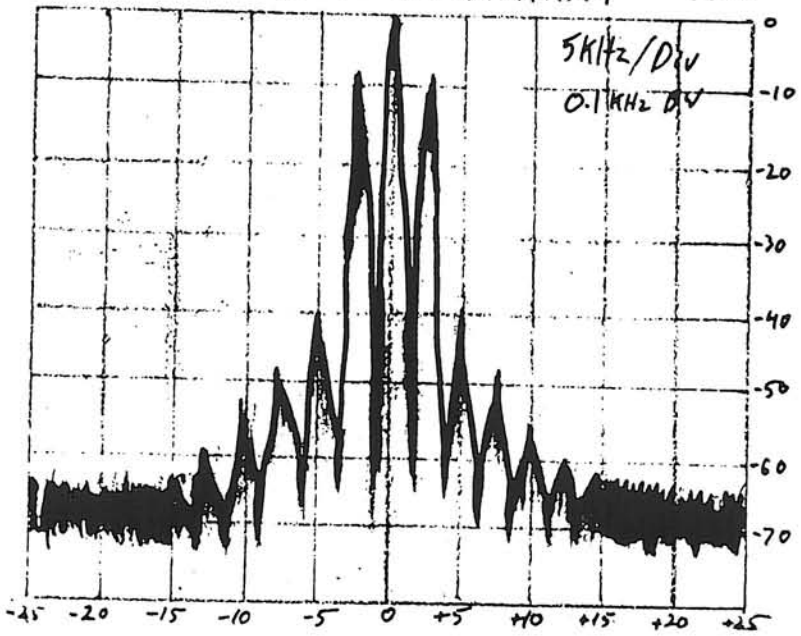
Carrier Frequency:
1110KHz

TR-6000 1110KHz 2.5KHz Modulation 30W

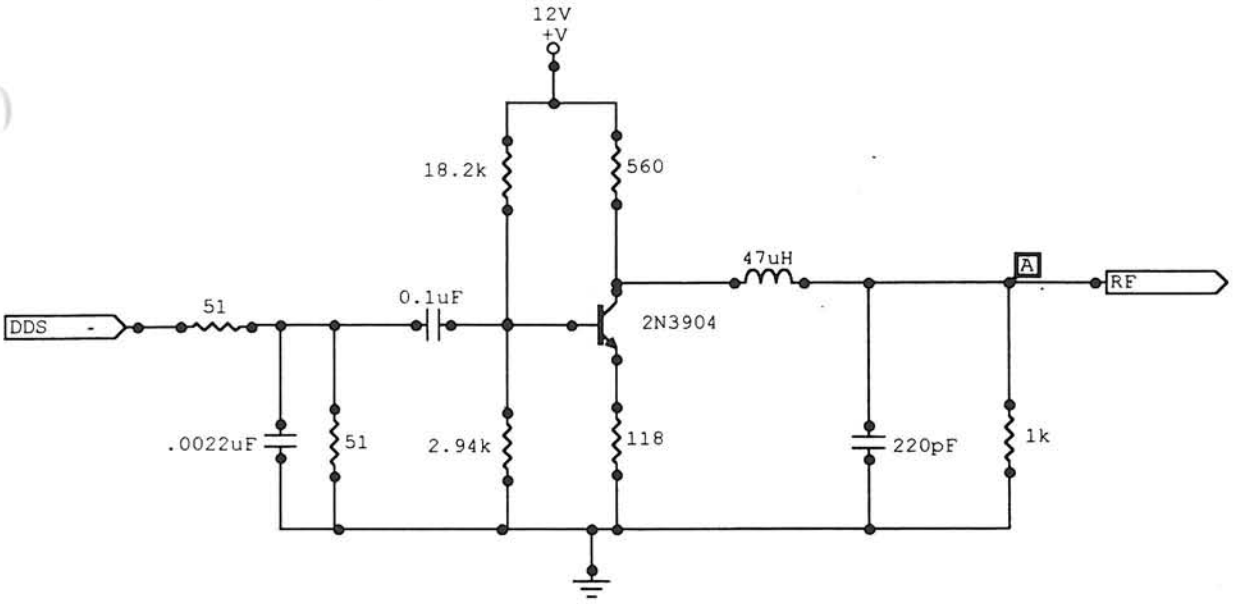


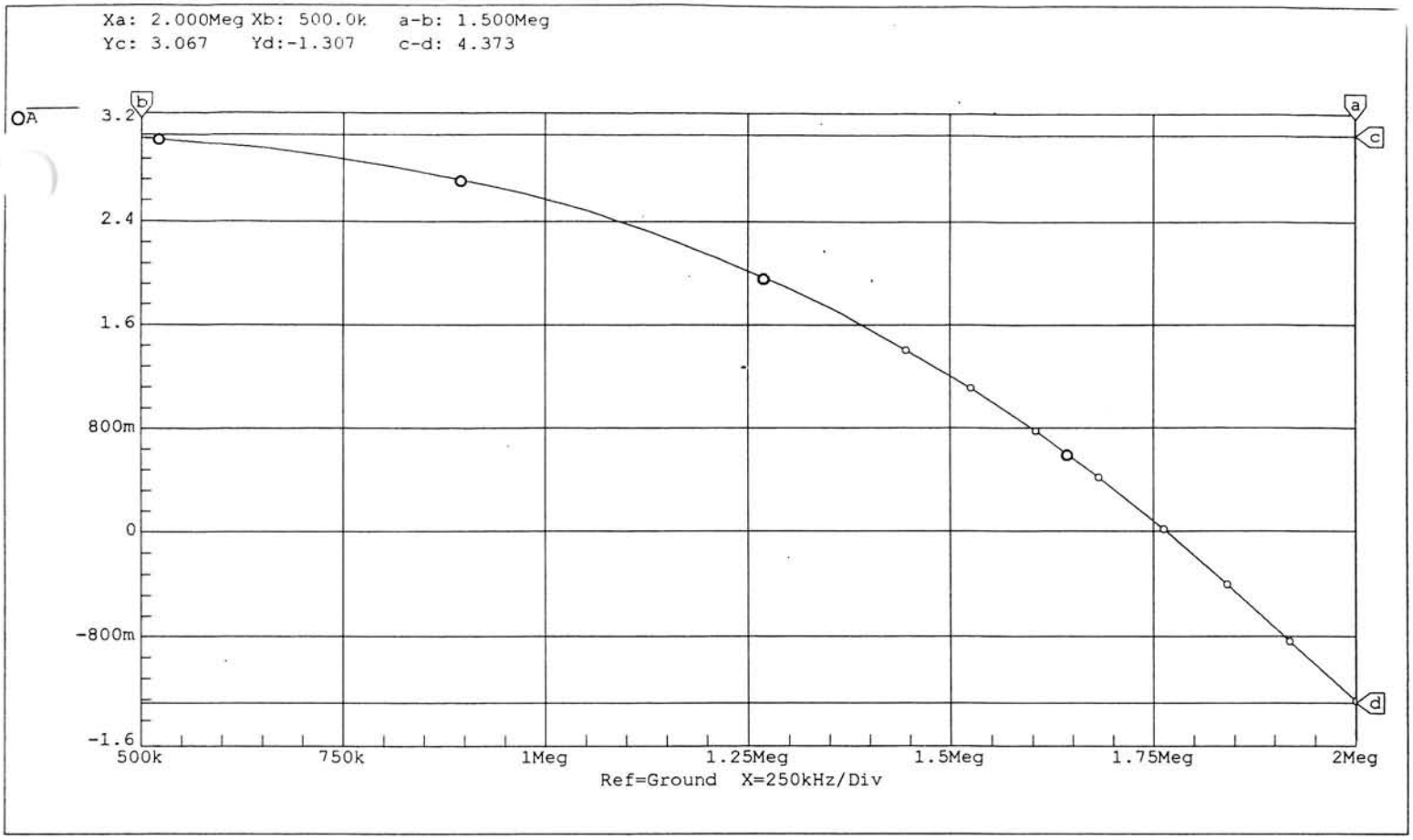
Carrier Frequency:
1700KHz

TR-6000 1700KHz 2.5KHz Modulation 30W

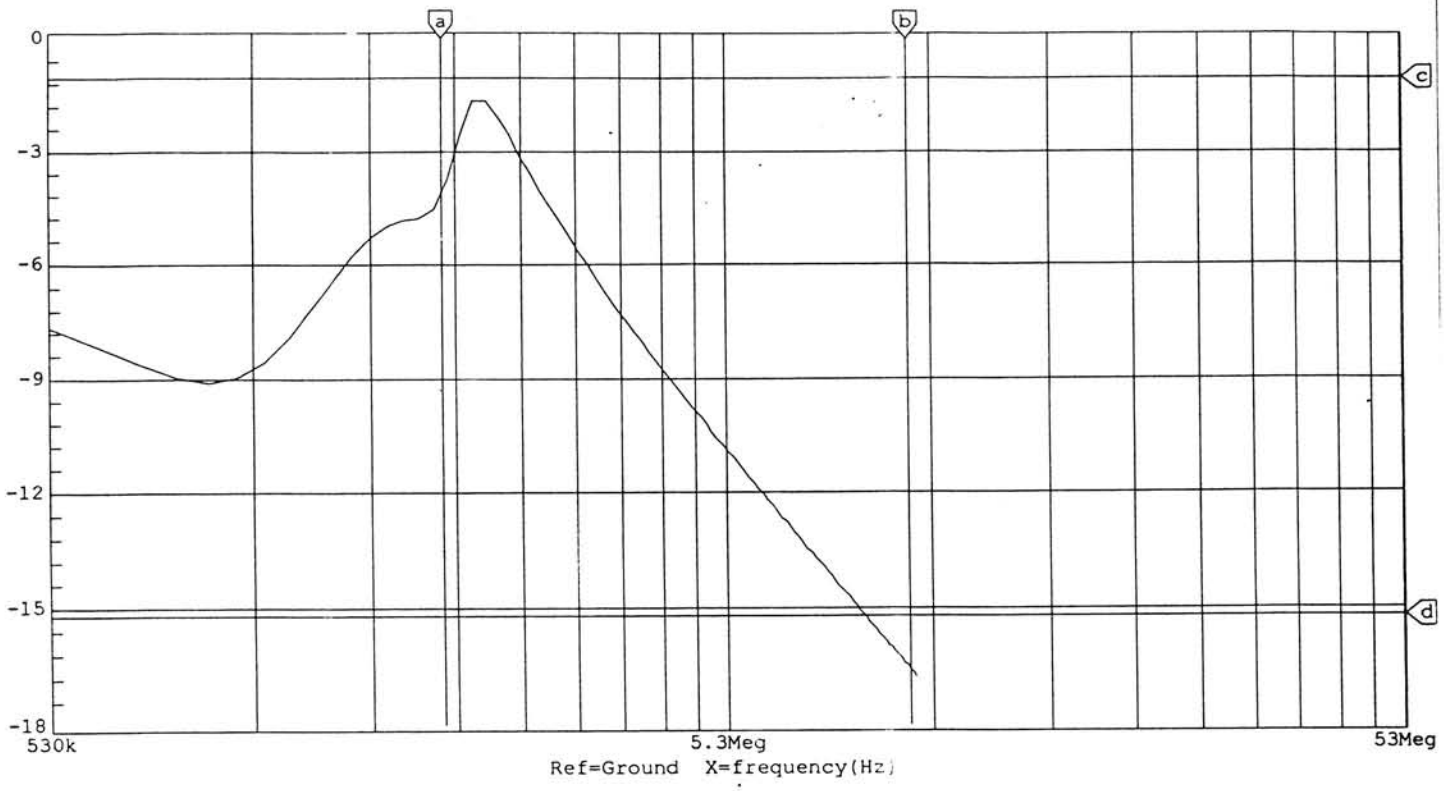


Test performed by:T.E.M Date:8-31-98
EXHIBIT-G
B7MTR-6000TIS-WB

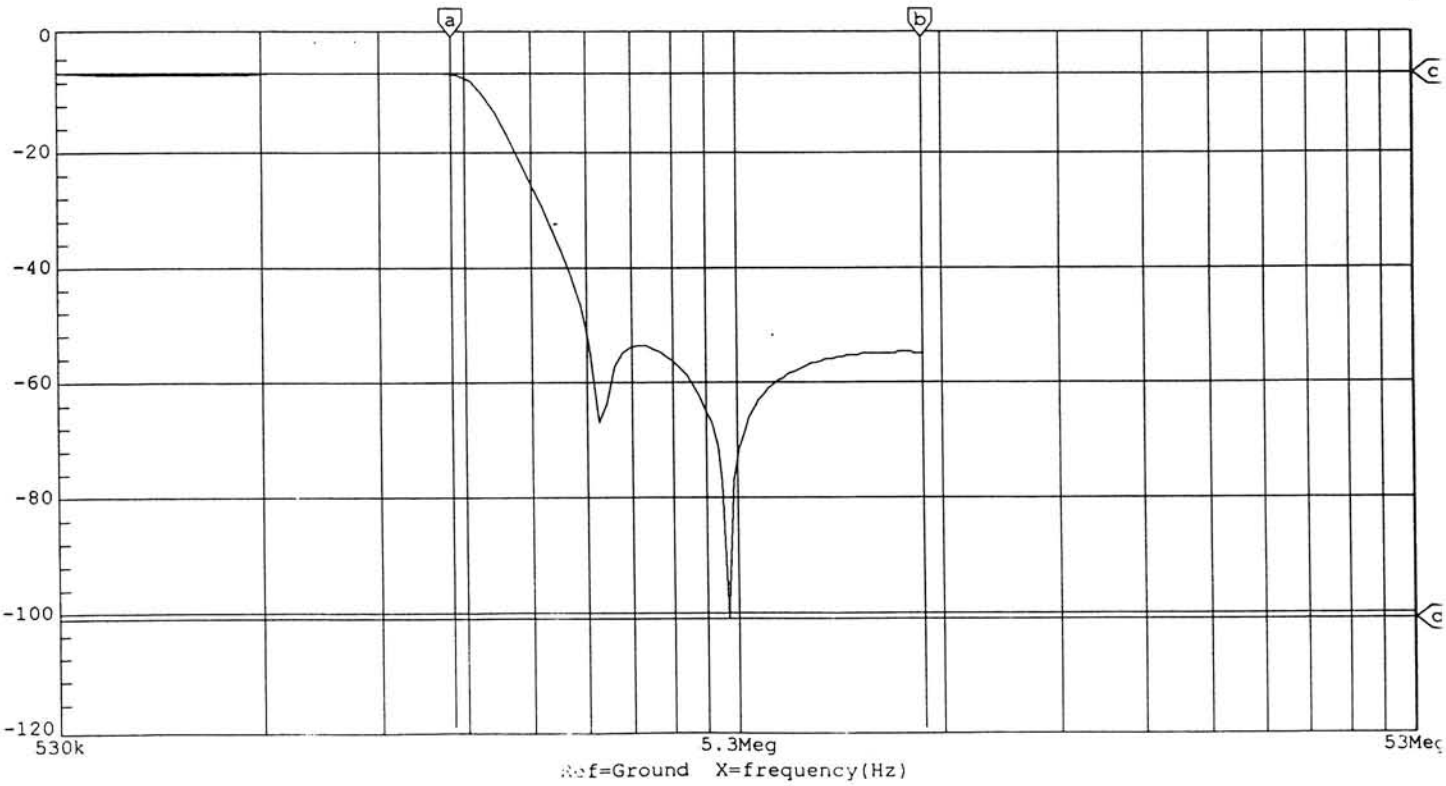

12V
+V
18.2k
560
47uH
A
RF
DDS
51
0.1uF
2N3904
.0022uF
51
2.94k
118
220pF
1k


Xa: 2.000Meg Xb: 500.0k a-b: 1.500Meg
Yc: 3.067 Yd:-1.307 c-d: 4.373
A
b
a
c
d
3.2
2.4
1.6
800m
0
-800m
-1.6
500k
750k
1Meg
1.25Meg
1.5Meg
1.75Meg
2Meg
Ref=Ground X=250kHz/Div

Xa: 2.015Meg Xb: 9.772Meg a-b:-7.757Meg
Yc:-1.050 Yd:-15.15 c-d: 14.10

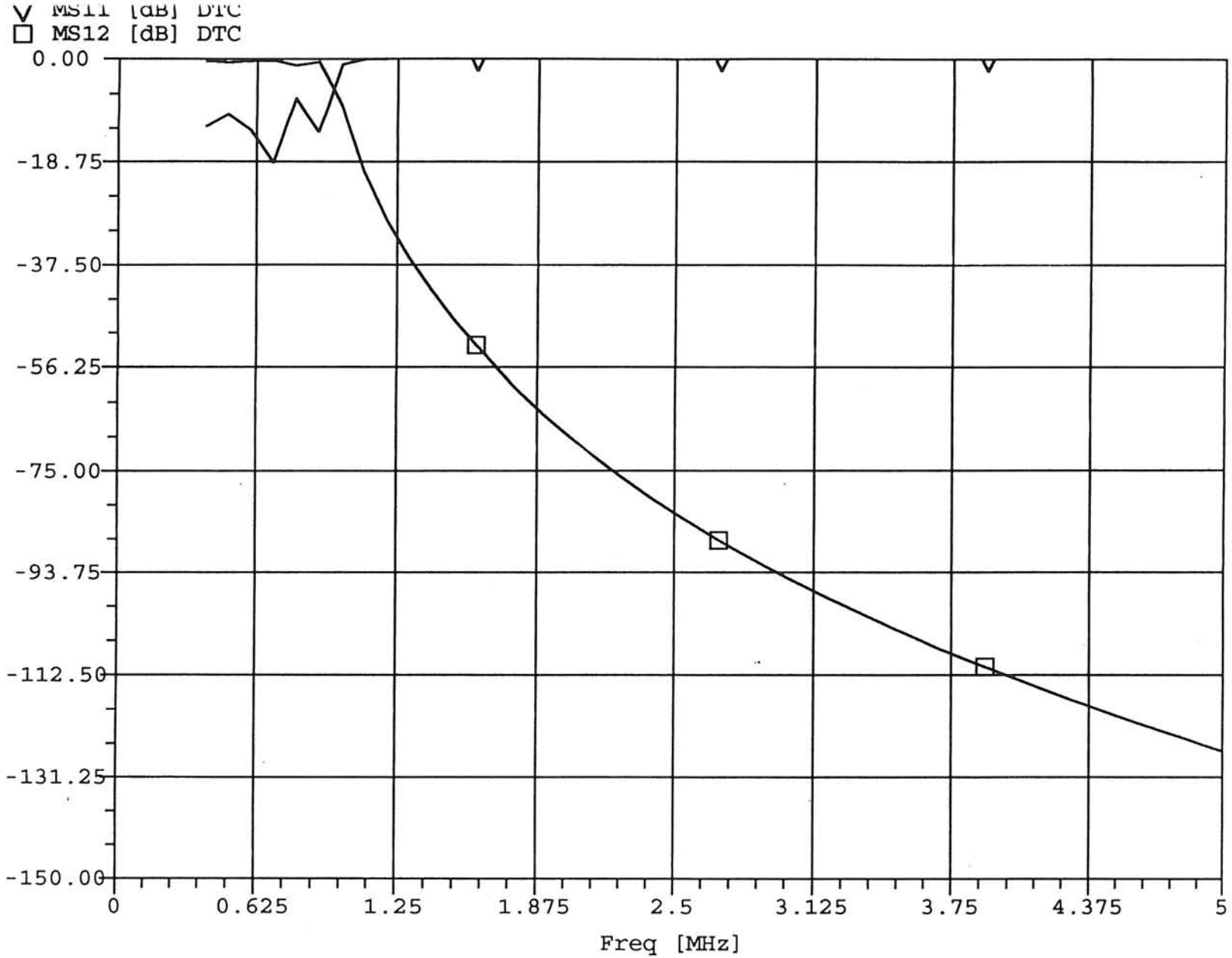


Xa: 2.015Meg Xb: 9.902Meg a-b:-7.887Meg
Yc:-6.333 Yd:-100.7 c-d: 94.33

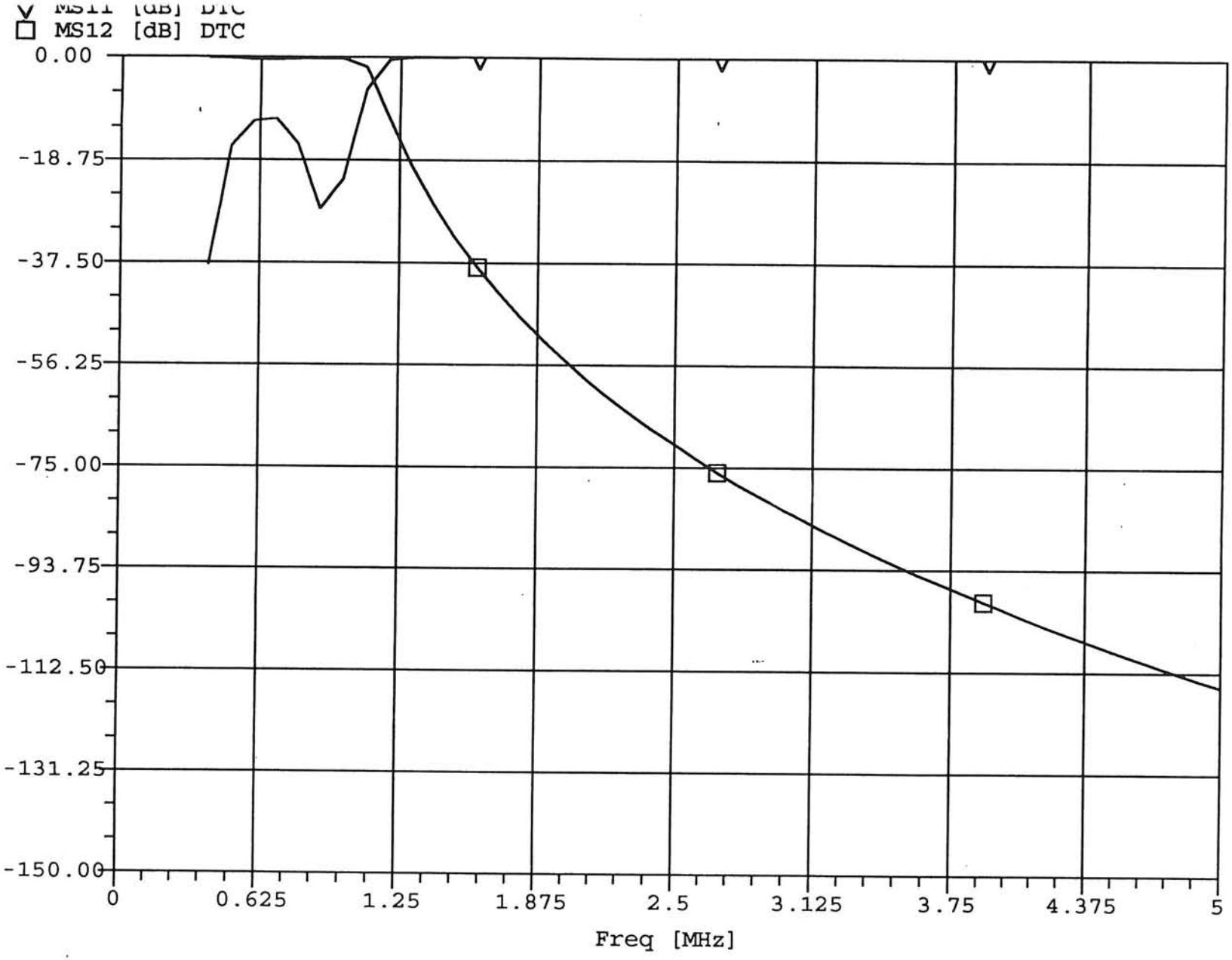


TR-6000 Output Filter

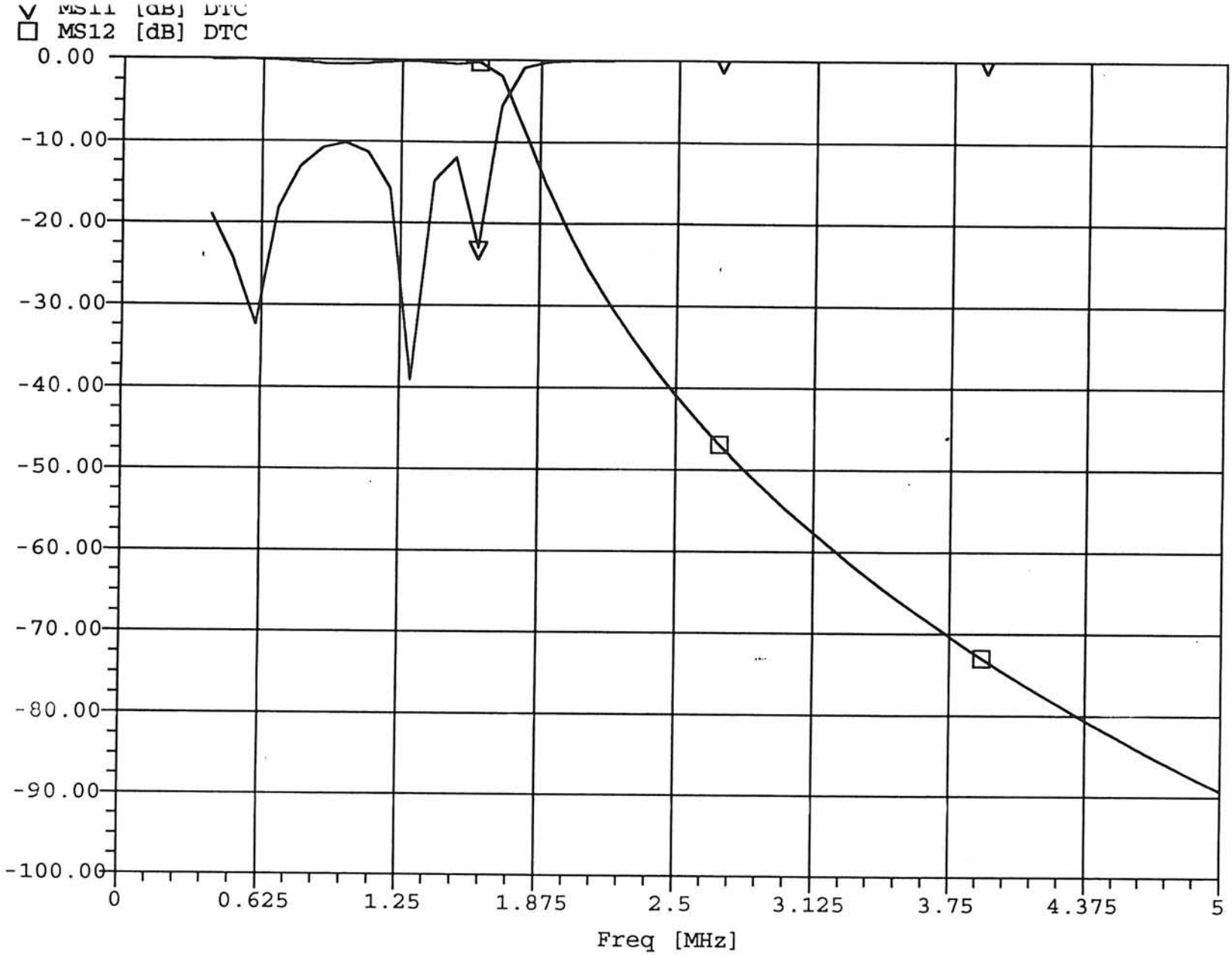
```
BLK
*IND 1 2 L=220UH Q1=200 F=1MHZ #UD 14%#
*CAP 2 3 C=410PF #UD 5%#
CAP 3 0 C=4700PF #UD 5%#
IND 3 4 L=14.7UH Q1=200 F=1MHZ #UD 14%#
CAP 4 0 C=6100PF #UD 5%#
IND 4 5 L=16.5UH Q1=200 F=1MHZ #UD 14%#
CAP 5 0 C=6100PF #UD 5%#
IND 5 6 L=14.7UH Q1=200 F=1MHZ #UD 14%#
CAP 6 0 C=4700PF #UD 5%#
DTC:2POR 3 6
END
FREQ
STEP 400KHZ 5MHZ 100KHZ
END
*STAT
*DTC R1=50 R2=50
```


MS11 [dB] DTC
MS12 [dB] DTC
0.00
-18.75
-37.50
-56.25
-75.00
-93.75
-112.50
-131.25
-150.00
0
0.625
1.25
1.875
2.5
3.125
3.75
4.375
5
Freq [MHz]

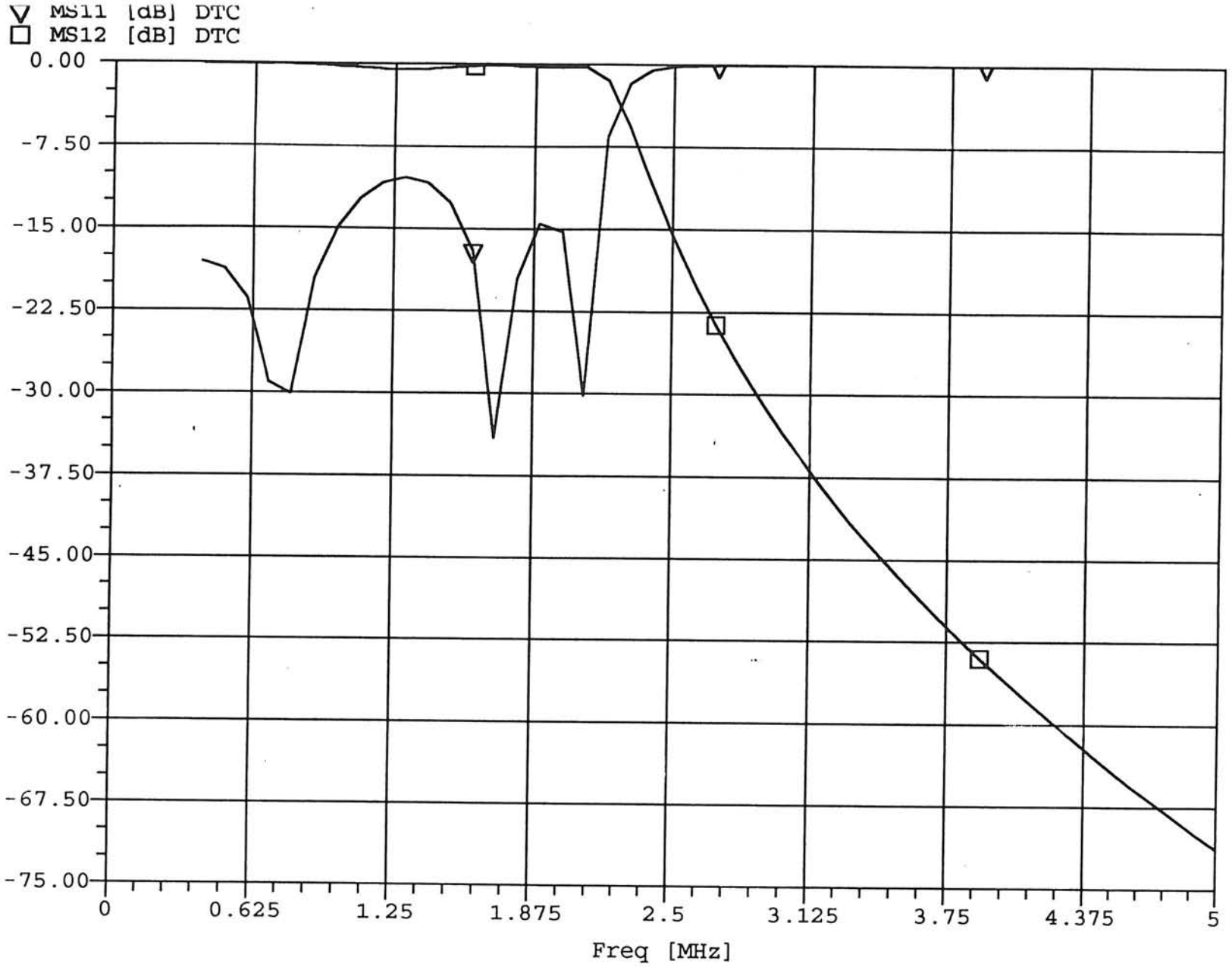
```
BLK
*IND 1 2 L=220UH Q1=200 F=1MHZ #UD 14%#
*CAP 2 3 C=410PF #UD 5%#
CAP 3 0 C=3880PF #UD 5%#
IND 3 4 L=10.6UH Q1=200 F=1MHZ #UD 14%#
CAP 4 0 C=6110PF #UD 5%#
IND 4 5 L=13UH Q1=200 F=1MHZ #UD 14%#
CAP 5 0 C=6110PF #UD 5%#
IND 5 6 L=10.6UH Q1=200 F=1MHZ #UD 14%#
CAP 6 0 C=3880PF #UD 5%#
DTC:2POR 3 6
END
FREQ
STEP 400KHZ 5MHZ 100KHZ
END
*STAT
*DTC R1=50 R2=50
```


MS11 [dB] DTC
MS12 [dB] DTC
0.00
-18.75
-37.50
-56.25
-75.00
-93.75
-112.50
-131.25
-150.00
0
0.625
1.25
1.875
2.5
3.125
3.75
4.375
5
Freq [MHz]

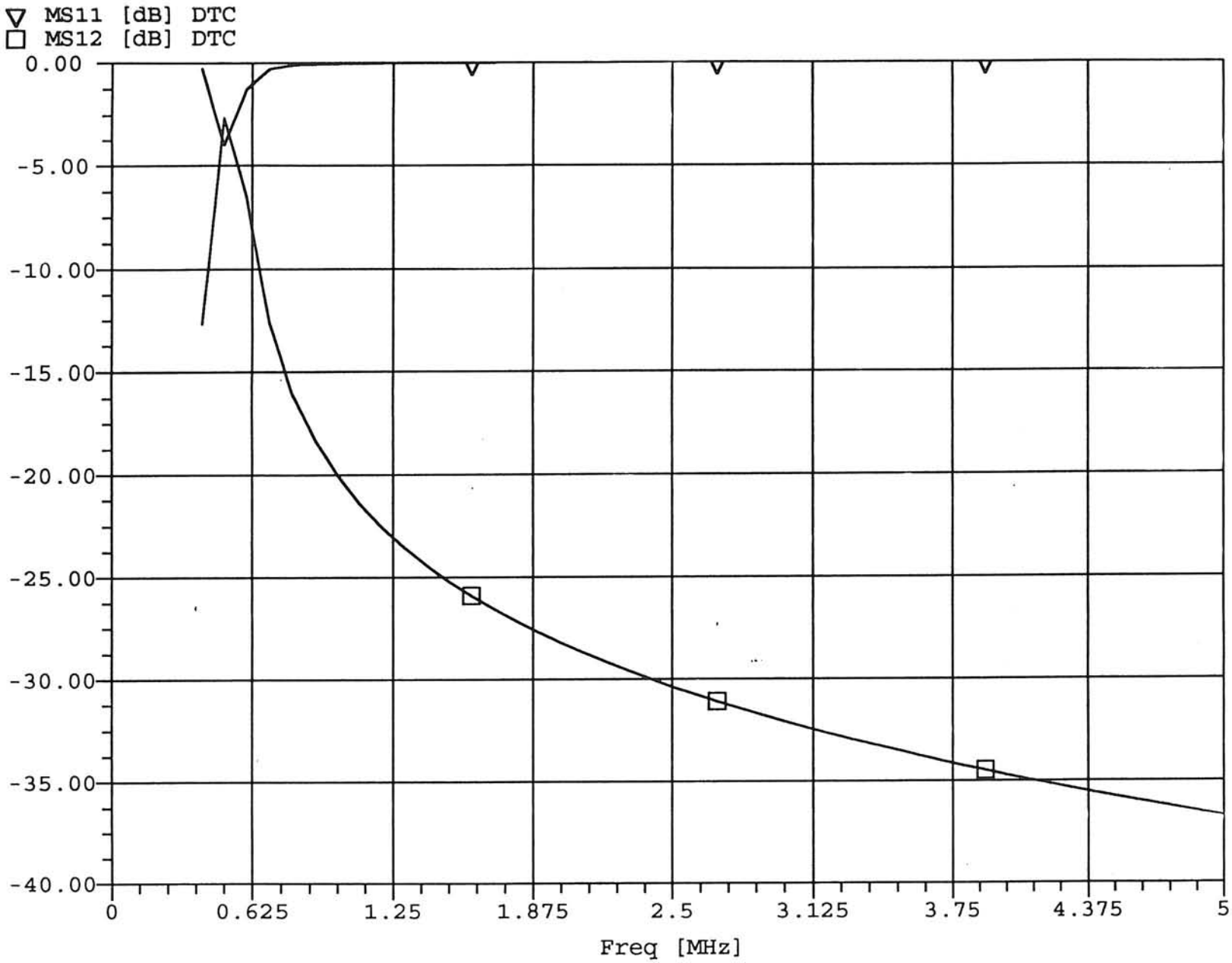
```
BLK
*IND 1 2 L=220UH Q1=200 F=1MHZ #UD 14%#
*CAP 2 3 C=410PF #UD 5%#
CAP 3 0 C=2680PF #UD 5%#
IND 3 4 L=7.1UH Q1=200 F=1MHZ #UD 14%#
CAP 4 0 C=3910PF #UD 5%#
IND 4 5 L=8.4UH Q1=200 F=1MHZ #UD 14%#
CAP 5 0 C=3910PF #UD 5%#
IND 5 6 L=7.1UH Q1=200 F=1MHZ #UD 14%#
CAP 6 0 C=2680PF #UD 5%#
DTC:2POR 3 6
END
FREQ
STEP 400KHZ 5MHZ 100KHZ
END
*STAT
*DTC R1=50 R2=50
```


MS11 [dB] DTC
MS12 [dB] DTC
0.00
-10.00
-20.00
-30.00
-40.00
-50.00
-60.00
-70.00
-80.00
-90.00
-100.00
0
0.625
1.25
1.875
2.5
3.125
3.75
4.375
5
Freq [MHz]

```
BLK
*IND 1 2 L=220UH Q1=200 F=1MHZ #UD 14%#
*CAP 2 3 C=410PF #UD 5%#
CAP 3 0 C=2000PF #UD 5%#
IND 3 4 L=5.4UH Q1=200 F=1MHZ #UD 14%#
CAP 4 0 C=3000PF #UD 5%#
IND 4 5 L=6.5UH Q1=200 F=1MHZ #UD 14%#
CAP 5 0 C=3000PF #UD 5%#
IND 5 6 L=5.4UH Q1=200 F=1MHZ #UD 14%#
CAP 6 0 C=2000PF #UD 5%#
DTC:2POR 3 6
END
FREQ
STEP 400KHZ 5MHZ 100KHZ
END
*STAT
*DTC R1=50 R2=50
```


MS11 [dB] DTC
MS12 [dB] DTC
0.00
-7.50
-15.00
-22.50
-30.00
-37.50
-45.00
-52.50
-60.00
-67.50
-75.00
0
0.625
1.25
1.875
2.5
3.125
3.75
4.375
5
Freq [MHz]

```
BLK
IND 1 2 L=220UH Q1=200 F=1MHZ #UD 14%#
CAP 2 3 C=410PF #UD 5%#
*CAP 3 0 C=3900PF #UD 5%#
*IND 3 4 L=11UH Q1=200 F=1MHZ #UD 14%#
*CAP 4 0 C=6200PF #UD 5%#
*IND 4 5 L=11UH Q1=200 F=1MHZ #UD 14%#
*CAP 5 0 C=3900PF #UD 5%#
DTC:2POR 1 3
END
FREQ
STEP 400KHZ 5MHZ 100KHZ
END
*STAT
*DTC R1=50 R2=50
```


MS11 [dB] DTC
MS12 [dB] DTC
0.00
-5.00
-10.00
-15.00
-20.00
-25.00
-30.00
-35.00
-40.00
0
0.625
1.25
1.875
2.5
3.125
3.75
4.375
5
Freq [MHz]