

# TMC SPECIFICATION

NO. 5757

REV:

COMPILED:

CHECKED: LB

APPD: RB

SHEET 1

OF

TITLE:

TECHNICAL MATERIEL CORPORATION  
MAMARONECK, NEW YORK

## TRC-20K TEST DATA SHEET

SERIAL NO. \_\_\_\_\_

MFG. NO. \_\_\_\_\_

1. MECHANICAL INSP. \_\_\_\_\_

2. ELECTRICAL INSP. \_\_\_\_\_

POWER TEST AT 1KW MIN. RF OUTPUT INTO 600 OHM BALANCED LOAD

BAL. \_\_\_\_\_

4 MHZ \_\_\_\_\_

8 MHZ \_\_\_\_\_

16 MHZ \_\_\_\_\_

26 MHZ \_\_\_\_\_

OPEN CKT TEST \_\_\_\_\_

SHORT CKT TEST \_\_\_\_\_

DATE \_\_\_\_\_

TESTER \_\_\_\_\_

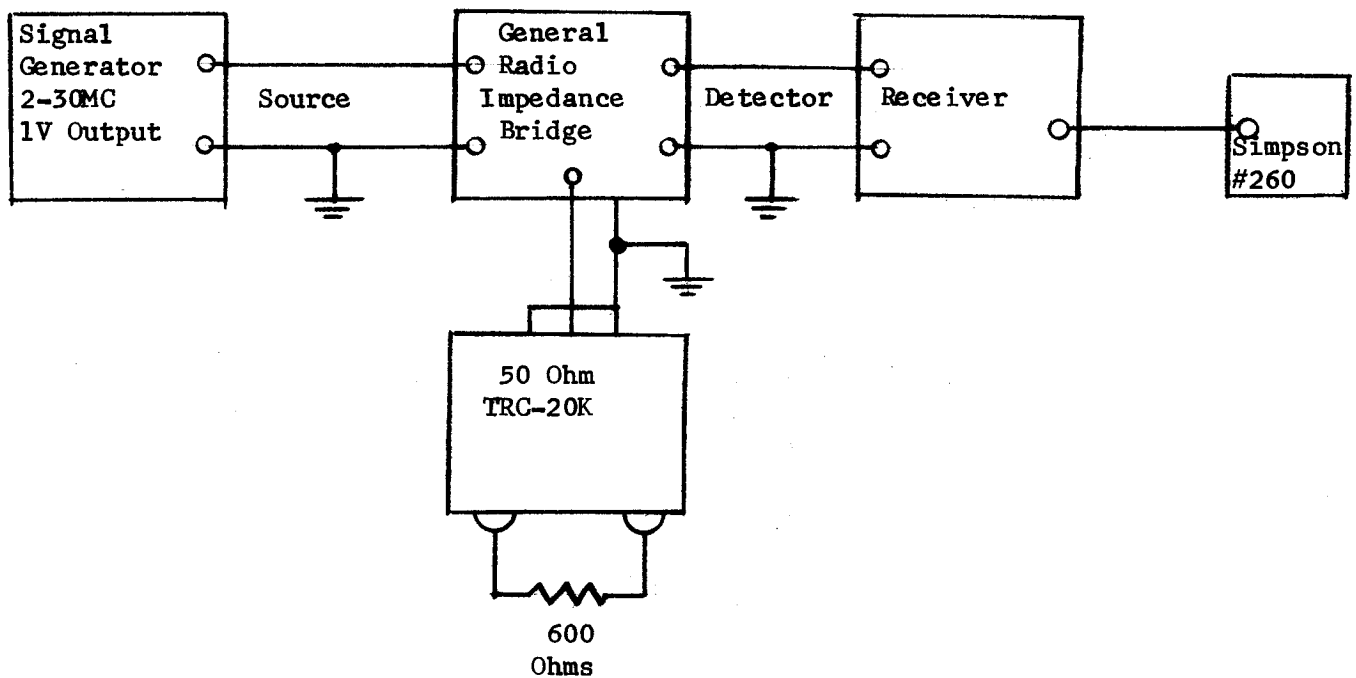
COMPILED      CHECKED

TITLE: TEST PROCEDURE: TRC-20K-50U/600B

APPROVED

2. Impedance Measurements

TEST SET-UP



EXAMPLE TEST DATA

F MCS	R	X
4.0	45.0	+16.5
20.0	63.0	- 7.2
26.0	88.0	- 5.4

The above R and X values should be within  
 2:1 SWR per graph derived from "Smith" chart and  
 values obtained.

DATE 2/13/64  
SHEET 3 OF 5

# TMC SPECIFICATION NO. S-618

G

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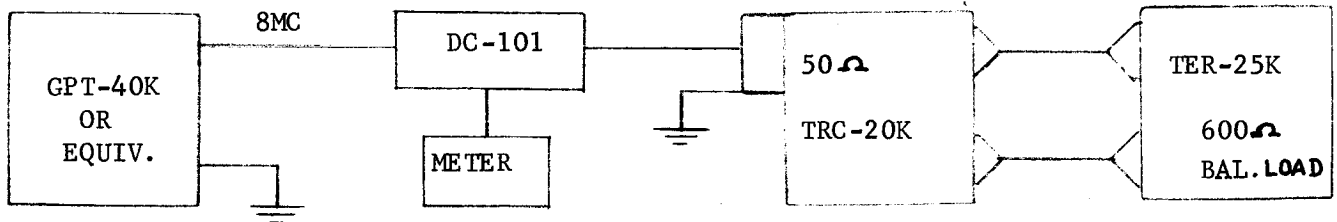
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TITLE: TEST PROCEDURE TRC-20K-50U/600B

APPROVED

### 3. POWER TESTS:

The purpose of these tests will be to insure that the TRC-20K is able to withstand normal operation under its maximum rating, 20KW, loss of its 600 ohm termination and shorting of its 600 ohm termination.



#### A. ENDURANCE TEST:

Connect transmitter and unit under test as per sketch above. Connect TER25K Balance load to 600 ohm side of TRC-20K.

Tune transmitter to 8 MCS and adjust RF drive, carrier only, until DC-101 meter reads 20 KW. Operate in this condition for 5 minutes. Note reading of 1st AMP  $E_p$  RF on driver for reference only. Observe unit under test for breakdown.

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## TMC SPECIFICATION NO. S-618

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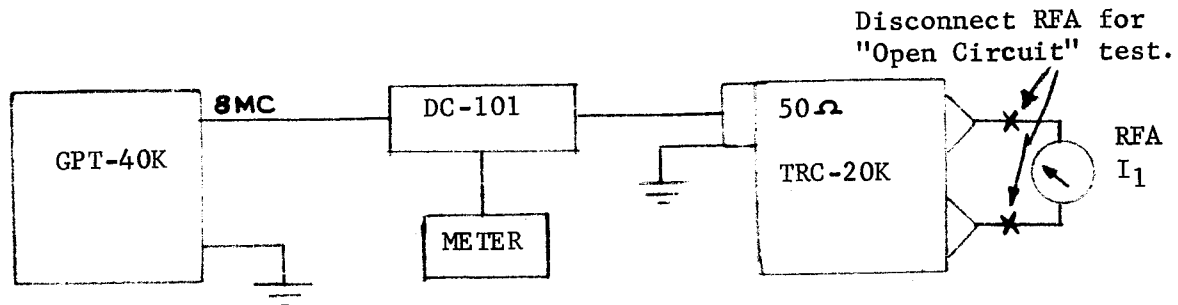
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TITLE: TEST PROCEDURE TRC-20K-50U/600B

APPROVED

## 3. Power Test Cont'd

B. OPEN CIRCUIT TEST:

With transmitter tuning controls in same position as para A above, shut down transmitter and disconnect 600 ohm load from TRC-20K. Bring transmitter up. Do not retune adjust drive until 1st AMP Ep RF reads same as in test A. The 40K output meter, DC-101, should read approximately 9KW, the SWR meter approximately 2.5 to 1. The 40K plate RF meter will now read abnormally high and retune overload may kick out. This is to be expected under conditions where the 600 ohm load to the TRC-20K is lost. Operate for about 1 minute, resetting the retune overload as necessary. Observe unit under test for breakdown. Also carefully watch transmitter for possible overheating or arcing.

C. SHORT CIRCUIT TEST:

With transmitter controls in same position as Para A above, shut down transmitter and make connections of RFA to 600 ohm side of TRC-20K as per sketch sheet 4 of 5 in S-618. Bring transmitter up, do not retune. Adjust drive until 40K output meter, DC-101, reads same value as in test B above. The short circuit current on the RFA should read 8 to 10 amperes. The 40K SWR will read about 2 to 1. Other meter indicators on the 40K will read abnormal, which is to be expected when the TRC-20K 600 ohm terminals are short circuited. Operate for about 1 minute, carefully observing TRC-20K for overheating or other abnormal conditions.

DATE 2/13/64  
SHEET 5 OF 5

# TMC SPECIFICATION NO. S-618

G

COMPILED

CHECKED

TITLE: TEST PROCEDURE TRC-20K-50U/600B

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THE TECHNICAL MATERIEL CORPORATION  
MAMARONECK, NEW YORK

## TRC-20K TEST DATA SHEET

SERIAL NO. \_\_\_\_\_

MFG. NO. \_\_\_\_\_

### 1. FREQUENCY RESPONSE

FMCS	V1	V2	V3	V4	REQ: 10% MAX % UNBALANCE
4.0	1.0				
20.0	1.0				
26.0	1.0				

### 2. IMPEDANCE MEASUREMENTS

FMC	R	X
4.0		
20.0		
26.0		

REQ: Recorded values of R and X should be within 2:1 SWR as obtained from graph derived from "Smith" charts.

### 3A. ENDURANCE TEST, FOR BREAKDOWN

OUTPUT	CHECK
20KW AV.	

### 3B. OPEN CIRCUIT TEST, FOR BREAKDOWN

OUTPUT	CHECK
20KW	

DATE \_\_\_\_\_

TESTER \_\_\_\_\_

### 3C. SHORT CIRCUIT TEST, FOR BREAKDOWN

OUTPUT	CHECK
20KW	

(8-10AMPS)

