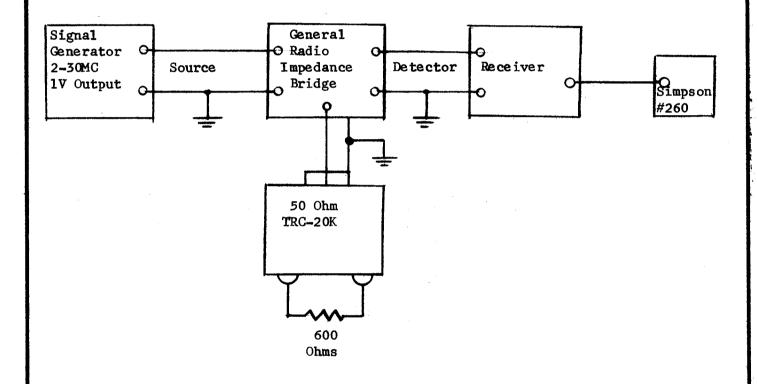
= =:	NC SPI	LCI	FICA	TION			NO.	6 16 F
EV:								
MPILED:	CHECKED): <u></u>	<u> </u>	APPD:	2.0		SHEET	1 01
ITLE:								
								
				RIEL CORPOR	OITAS	1		
	M	AMA R	ONECK,	NEW YORK				
	TRC	-20K	TEST	DATA SHEET				
SEDIAL NO								
SERIAL NO.							•	
MFG. NO.								
1. MECHANICAL	INSP.							
2. ELECTRICAL	INSP.		/					
POWER TEST AT 1	KW MIN.	RF	OUTPUT	INTO 600 O	MH	BALA!	MCED LOA	D
POWER TEST AT 1	KW MIN.	RF	OUTPUT	INTO 600 O	НМ			
POWER TEST AT 1	KW MIN.	RF	OUTPUT	INTO 600 O	НМ		NCED LOA!	
POWER TEST AT 1	KW MIN.	RF	OUTPUT	INTO 600 O	НМ			
4 MHZ	KW MIN.	RF	OUTPUT	INTO 600 O	НМ			
4 MHZ 8 MHZ	KW MIN.	RF	OUTPUT	INTO 600 O	НМ			
4 MHZ 8 MHZ	KW MIN.	RF	OUTPUT	INTO 600 O	НИ			
4 MHZ 8 MHZ 16 MHZ	KW MIN.	RF	OUTPUT		ни			
4 MHZ 8 MHZ 16 MHZ 26 MHZ	KW MIN.	RF	OUTPUT		НМ			
4 MHZ 8 MHZ 16 MHZ	KW MIN.	RF	OUTPUT		НИ			
4 MHZ 8 MHZ 16 MHZ 26 MHZ	KW MIN.	RF	OUTPUT		МН			
4 MHZ 8 MHZ 16 MHZ 26 MHZ OPEN CKT TEST	KW MIN.	RF	OUTPUT		НИ			
4 MHZ 8 MHZ 16 MHZ 26 MHZ OPEN CKT TEST	KW MIN.	RF	OUTPUT		НИ			
4 MHZ 8 MHZ 16 MHZ 26 MHZ OPEN CKT TEST	KW MIN.	RF	OUTPUT		НИ			
4 MHZ 8 MHZ 16 MHZ 26 MHZ OPEN CKT TEST	KW MIN.	RF	OUTPUT		НИ			

TESTER

2. Impedance Measurements

TEST SET-UP



EXAMPLE TEST DATA

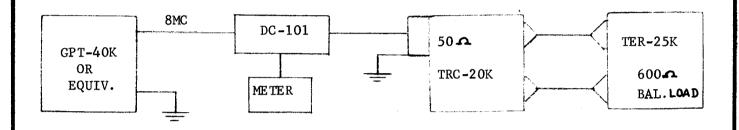
F MCS	R	х
4.0	45.0	+16.5
20.0	63.0	- 7,2
26.0	88.0	- 5.4

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

DATE 2/13 SHEET 3	2		SPECIFICATION NO. S-618	6
COMPILED	CHECKED	TITLE:	TEST PROCEDURE TRC-29K-50U/600B	I
APPR	OVED			

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.

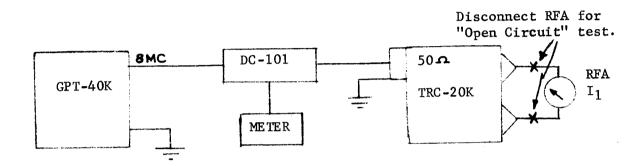


A. ENDURANCE TEST:

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 Ep RF on driver for reference only. Observe unit under test for breakdown.

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. To 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 positon 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.

	13/64		'MC	SDECII	FICATI	ON NO. S	- ₆₁₈
ET5	or5	_ '	IVI C	or Len		ON 140. 5	-618
MPILED	CHECKED	TITLE	: TF	EST PROCEI	URE TRC-2	OK-50U/600B	
APPR	OVED						
		TH		CAL MATER	RIEL CORPO	RATION	
			riar	ARONECK,	NEW TORK		,
			TRC-	20K TEST	DATA SHEE	<u>T</u>	
SERIAL	. NO						
MFG. N	10	 	·				
1. FR	EQUENCY RE	SPONSE				REQ: 10% MAX]
	FMCS	V1	V2	V3	V4	% UNBALANCE	
	4.0	1.0					
	20.0	1.0				· · · · · · · · · · · · · · · · · · ·	†
	26.0	1.0					İ
2. IM	PEDANCE ME	AS UREMEN'	rs				.
Γ	FMC	R		X	7		
_				A	REQ: Re	corded values o	f R and X shoul
-	4.0] be With i	in 2:1 SWR as oberived from "Smi	tained from
+	20.0				- Braph at	orred from Bint	charts.
<u></u>	26.0				_]		
3A. E	NDURANCE TI	EST, FOR	BREAKDO	WN	3B. OPEN	CIRCUIT TEST,	FOR BREAKDOWN
<u></u>	UTPUT	СНЕСК				TPUT CHEC	
	20KW AV.					0KW	
DATE					3C. SHO	RT CIRCUIT TEST	FOR BREAKDOWN
TESTER						оитрит сн	ECK
_						20KW	(8-10AMPS)
					. L		

REVISION SHEET

THE TECHNICAL MATERIEL CORP. MAMARONECK NEW YORK

S-618

DATE REV. PAGE			EMN#	DESCRIPTION	снк.	APP
5/1/62 A 2			6675	Delete sheet 2, and renumber sheets.	7	+ ~ .
		3		Renumber "Power Test" from 3 to 2. Renumber "Open	1	-
			1	Circuit Test" arom 3A to 2A.	+	11/
-		4		Renumber "Short Circuit Test" from 3B to 2B.	>	16
		5		Delete No. 2 "Impedance Measurements" chart. Renumber		
		† - <u></u>				
				"Open Circuit Test" from 3A to 2A. Renumber "Short Circuit Test" from 3B to 2B.		<u> </u>
7/13/62	R	4	695 1		<u> </u>	L
7/20/62		4 all pages	6967	Chg. VSWR chart to include frequencies Chg. total sheets from 4 to 5		10
		1	0907	On Data Chart; Dele. 12.0MC, 1.0V & 24.0MC, 1.0V	+	
		2		Add new sheet 2, Impedance Measurements	-	+
		2-4	 	Chg. old sheet 2 to sheet 3, old Sh. 3 to Sh. 4,	+-	
		<u> </u>		& old Sh. 4 to Sh. 5.	-	+
		3			+	+
				Chg. step 2 & 2A to 3 & 3A	+	11/
		4		Chg. step 2 & 2B to 3 & 3B	\rightarrow	14
		5		On Freq. Response Chart, Dele. 12.0,1.0 & 24.0,1.0		
				Chg. V°s to V1,V2,V3,V4		
				On VSWR Measurement, Chg. title from "VSWR" to		<u> </u>
				Impedance		ļ
				On chart, Dele. 12.0,24.0, VSWR Column, add "R" & "X"		ļ
		<u> </u>		columns		ļ
400 400	· · · · · · · · · · · · · · · · · · ·			Chg. charts 2A & 2B to 3A & 3B	_	
/21/62	D	2	7125	Chg "Test Data" chart to "Example Test Data"	\rightarrow	ļ
11	D	2		Delete "Tolerance" column from chart		1.
11	D	2		Added "B" & "X" readings	\longrightarrow	10
"	<u>D</u>	2		Added "Note" below chart		ļ
	D	5		Revised "Test Data Sheet"	<u> </u>	1, /
.1/4/63	<u>E</u>	ALL		Revised all Sheets per EMN.		1
2/13/64	F	ALL		Revised all Sheets per EMN.		16
/21/64	G		11734	Revised shts. 1,2,3,4,5,per EMN	_	4
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