

Toshiba

TECHNICAL DATA

2M51

The Toshiba 2M51 is a fixed frequency continuous wave magnetron, designed to operate on an commercial alternating wave anode supply, in the 2425 to 2475MHz frequency range with an average power output of 200 watts.

- The tube is integral magnet type and required forced air cooling, able to be heat conduction colling when the tube is used under low power operating condition.

The output fitting is designed for connecting with coaxial line.

The tube is intended for use in medical applications.

GENERAL DATA

Electrical:

Frequency	2450 $\pm$ 25 MHz
Filament voltage	4 V
Filament current	10 A
Cathode preheating time	10 sec

Mechanical:

Physical dimensions	See outline drawing
Base and electrical connection	See outline drawing
Mounting position	Any
RF coupling	See attached drawing
Magnetic field	Integral
Cooling	Heat conduction or forced air.
Net weight	2.4 kg approx.
Type of cathode	Thoriated tungsten direct heating



TECHNICAL DATA

MAXIMUM RATINGS

	Minimum	Maximum	
Filament voltage	3.7	4.3	V
Cathode preheating time	8	-	sec
Peak anode voltage	-	1900	V
Peak anode current	-	1400	mA
Average anode current	-	230	mA _{dc}
Average anode power input	-	400	W
Load VSWR	1 -	2	
Anode temperature (See outline drawing measuring point)	-	125	°C
Cathode bushing temperature (See outline drawing measuring point)	-	250	°C

TYPICAL OPERATION

Frequency	2450	2450	MHz
Filament voltage (Operation)	4	4	V
Peak anode voltage	1800	1600	V
Peak anode current	1.2	0.5	A
Average anode current	200	100	mA _{dc}
Average power output	200	80	W
Pulling factor (load VSWR)	10	10	MHz
Cooling system	Forced air, Heat conduction (800 l/m)		

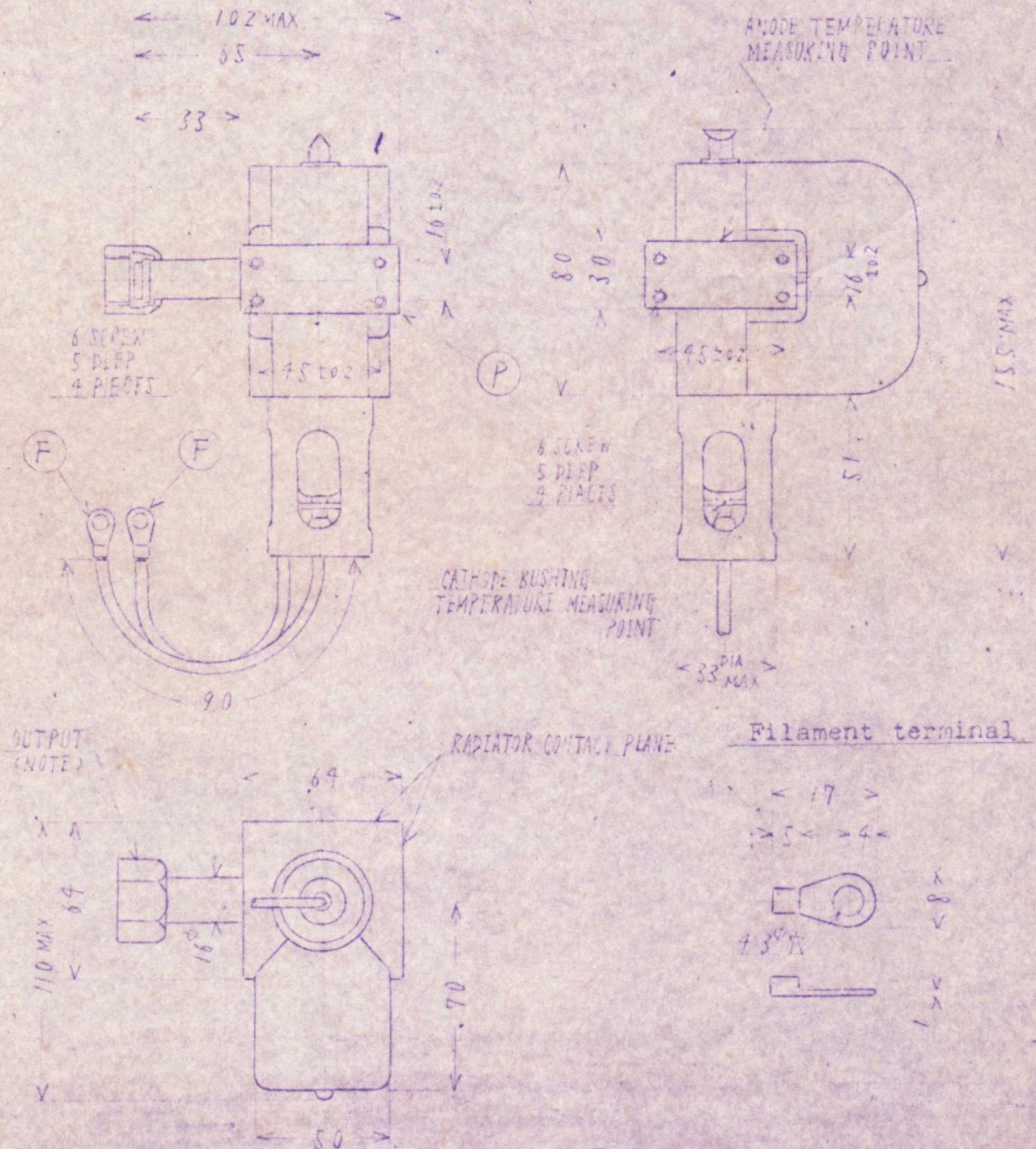
Toshiba

TECHNICAL DATA

2M51

OUTLINE DRAWING

Unit mm



Note : See Enlarged View.

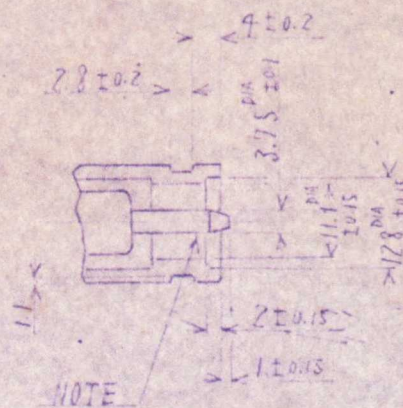
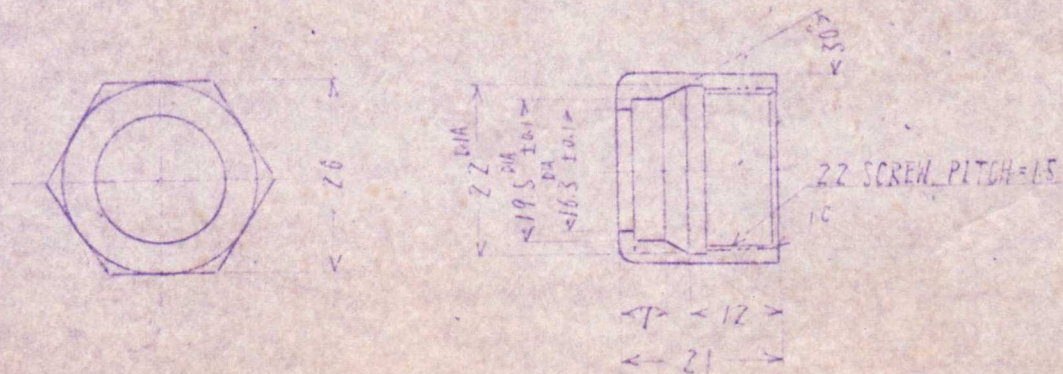
TOKYO SHIBAURA ELECTRIC CO., LTD.

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TECHNICAL DATA

ENLARGED VIEW OF OUTPUT

Unit mm



Note: Output Inner Conductor to be Concentric with Inside Dia of Outer Conductor within 0.013mm .

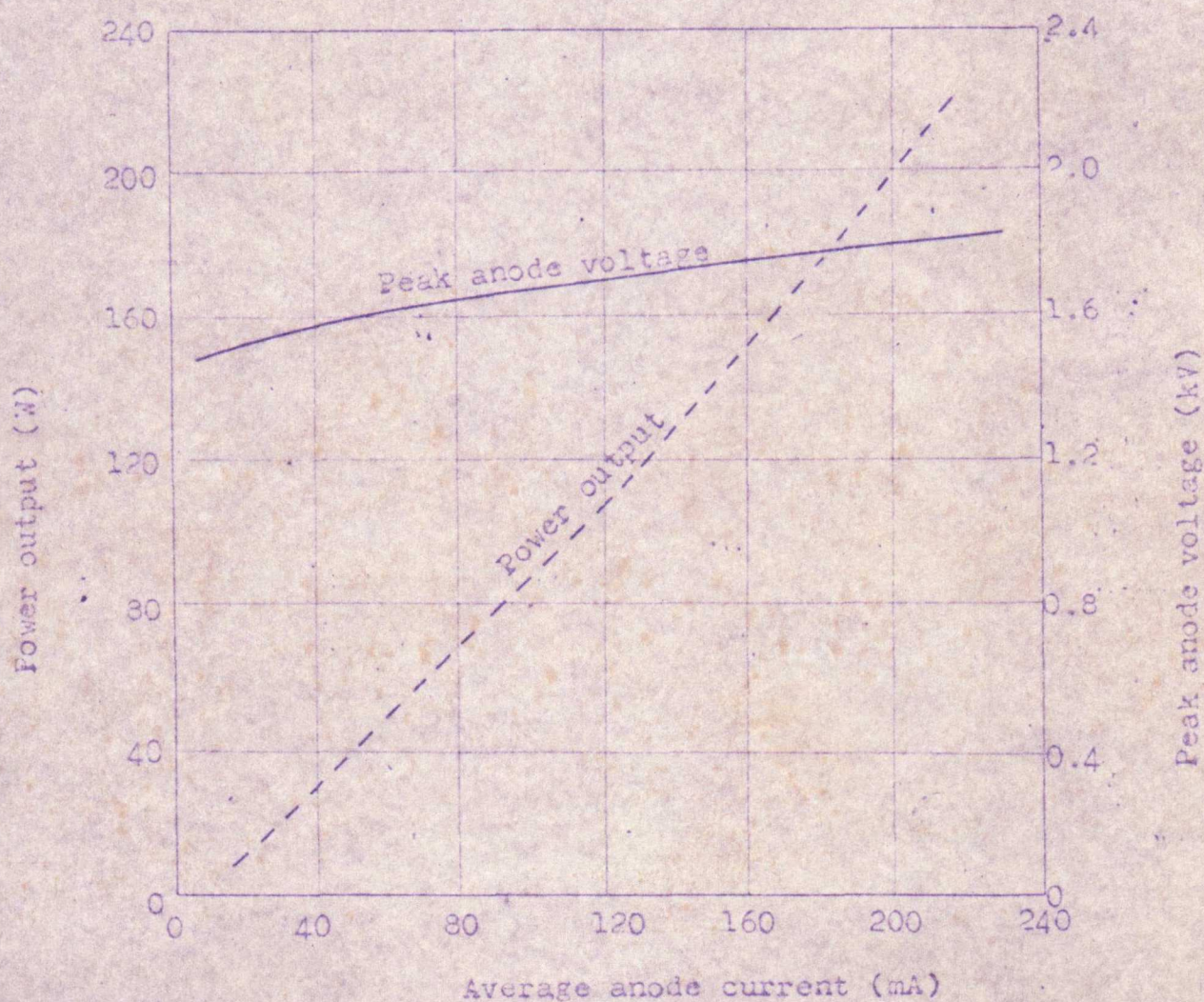
OPERATING CHARACTERISTICS

Operating Condition

Filament voltage: 4V

Commercial alternating
wave

Load VSWR: 1.1Max

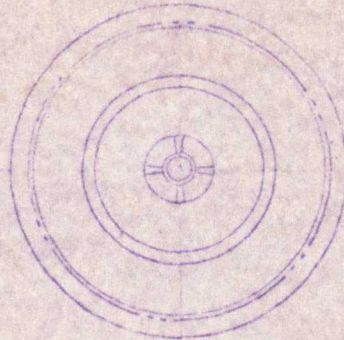


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R.F. COUPLER

Unit mm



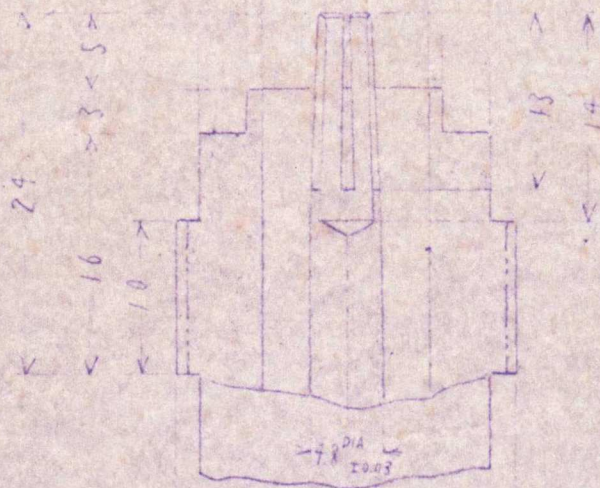
14 DIA

12.0 DIA 0.1

11.1 DIA 10.1

8.85 DIA 10.03

0.3 WIDE SLOTS (4 EQUALLY SPACED)



22 SCREW PITCH=1.5