



**ELECTRONIC
INNOVATIONS**
IN ACTION

TUBES

OBJECTIVE Technical Information

These ratings represent the design objective for this product. Refer to the preliminary Technical Information sheet for ratings currently achieved in the progression towards design objectives. If PTI sheets do not exist, consult your local Tube Products Department Regional Sales Office.

**DEVELOPMENTAL
TYPE**

ZM-6287
OTI-218
12-70

This technical information is proprietary and is furnished only as a service to customers.

ZM-6287

INDUSTRIAL HEATING MAGNETRON

**918 Megahertz
Forced-Air Cooled**

**1000 Watts Output Power
Integral Series Field Coils**

The ZM-6287 is a low-voltage CW magnetron assembly for use in the 915-MHz ISM Band for microwave heating applications. It is designed for operation from a low cost, voltage doubler circuit, connected to a 240-volt a-c line. Approximately 50 volts a-c boost from an autotransformer is needed to achieve the 1000-watt output(Fig. 1). It contains an integral electromagnet energized by the voltage doubler output(series connection). The r-f output line contains a d-c bypass arrangement which allows the body of the tube to run off ground.

GENERAL

Mechanical

Mounting Position — Tube axis vertical

Weight 17 Pounds

Thermal

Forced-Air Cooled 100 Cu. ft/min.

Thermostat Temperature 230° F

MAXIMUM RATINGS (Absolute Values)

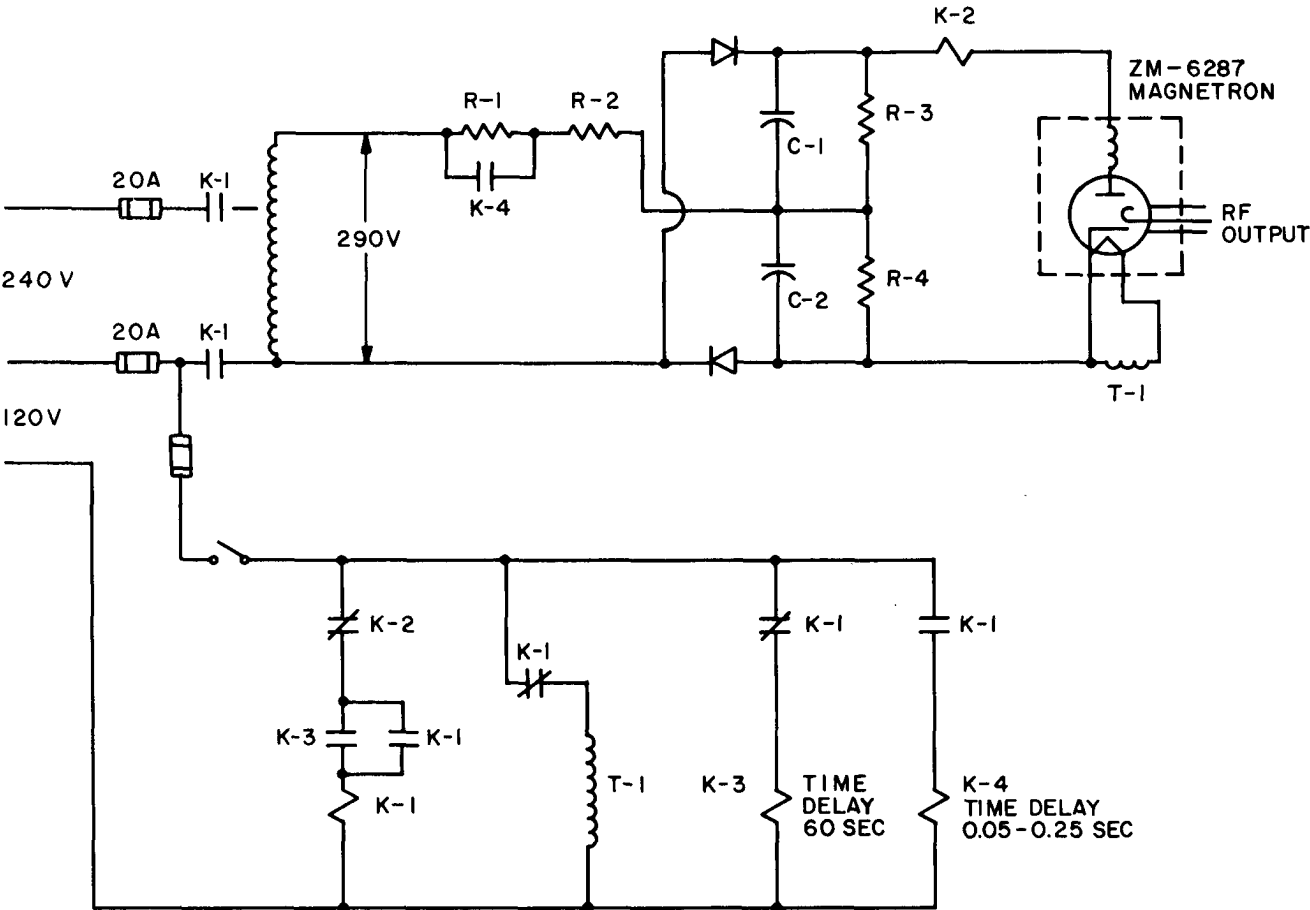
Electrical

Filament	Min.	Max.
Voltage		
Starting	-	6.3 Volts
Standby	-	5.5 Volts
Operating(650 watt level)	1.0	1.5 Volts
Operating(1000 watt level)	0	0 Volts
Current		
Starting		
Surge	-	75 Amperes
Stabilized (1 min.)	-	18 Amperes
Standby	-	15 Amperes
Operating (650 watt)	8	5 Amperes
Operating (1000 watt)	0	0 Amperes

Preheat Time	Min. 50	Max. Seconds
Plate Voltage		725 Volts DC
Plate Current		3.5 Amperes DC
Load VSWR		
Opposite Sink		3/1 VSWR
In Sink		2/1 VSWR
A-C Input Voltage to Doubler		300 V AC
Power Output (300 V AC Matched Load)	1000	Watts
Frequency, Matched Load	913	923 MHz

TYPICAL OPERATING CONDITIONS

Input to Doubler	290 V AC
Output Power (Matched)	Figure 2
Output Power (Mismatch)	Figure 3



K-1	Main Contactor	R-1	25Ω, 25W
K-2	DC Overload (4A)	R-2	.5Ω, 100W (Open coil of Nichrome or equiv.)
K-3	Time Delay Relay (Thermal Type)	R-3, 4	20,000Ω, 25W
K-4	Short Time Delay Relay	T-1	Filament Transformers (6.3V, 18A)
C-1, 2	500 μf, 500V		

FIGURE 1

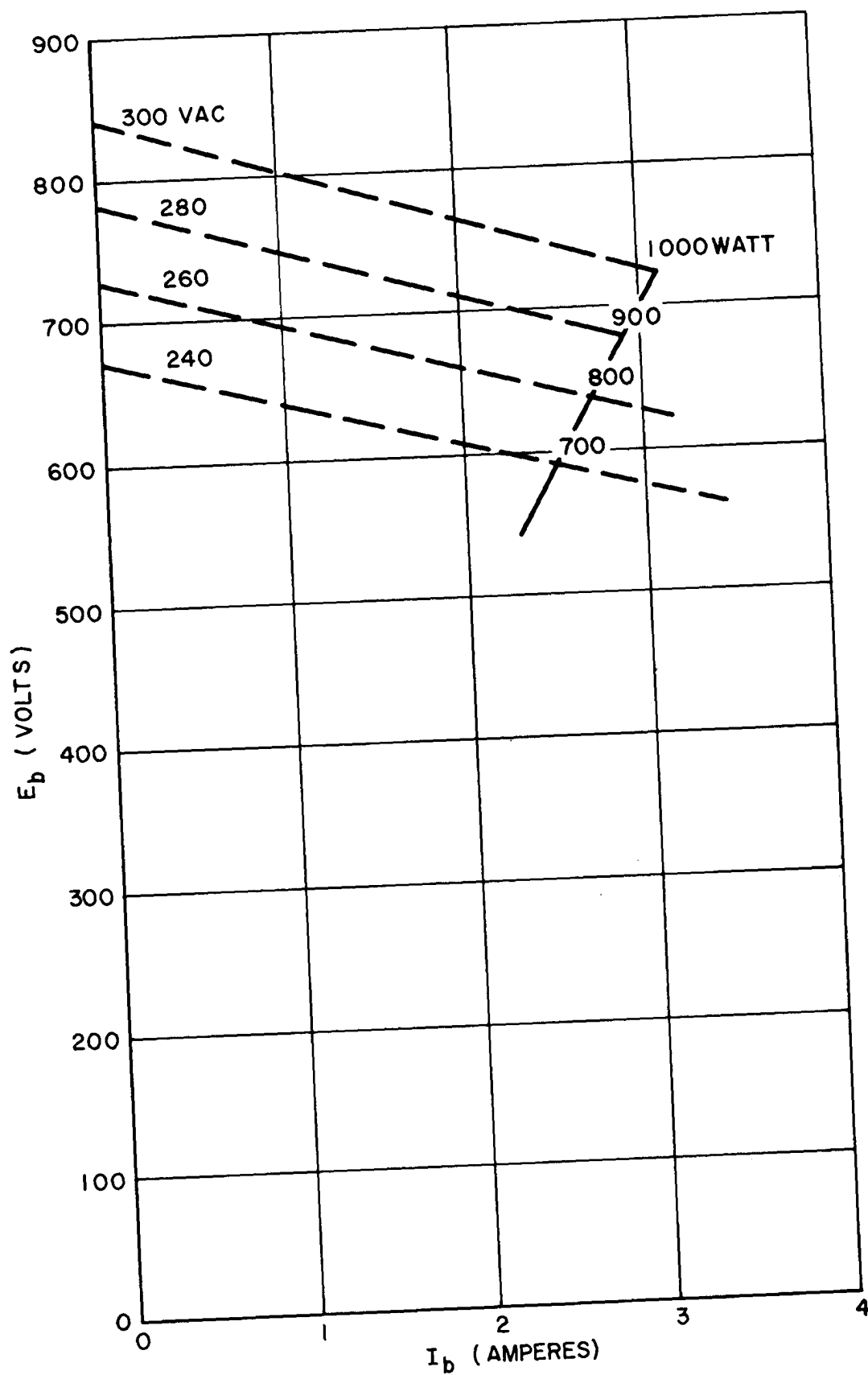


FIGURE 2

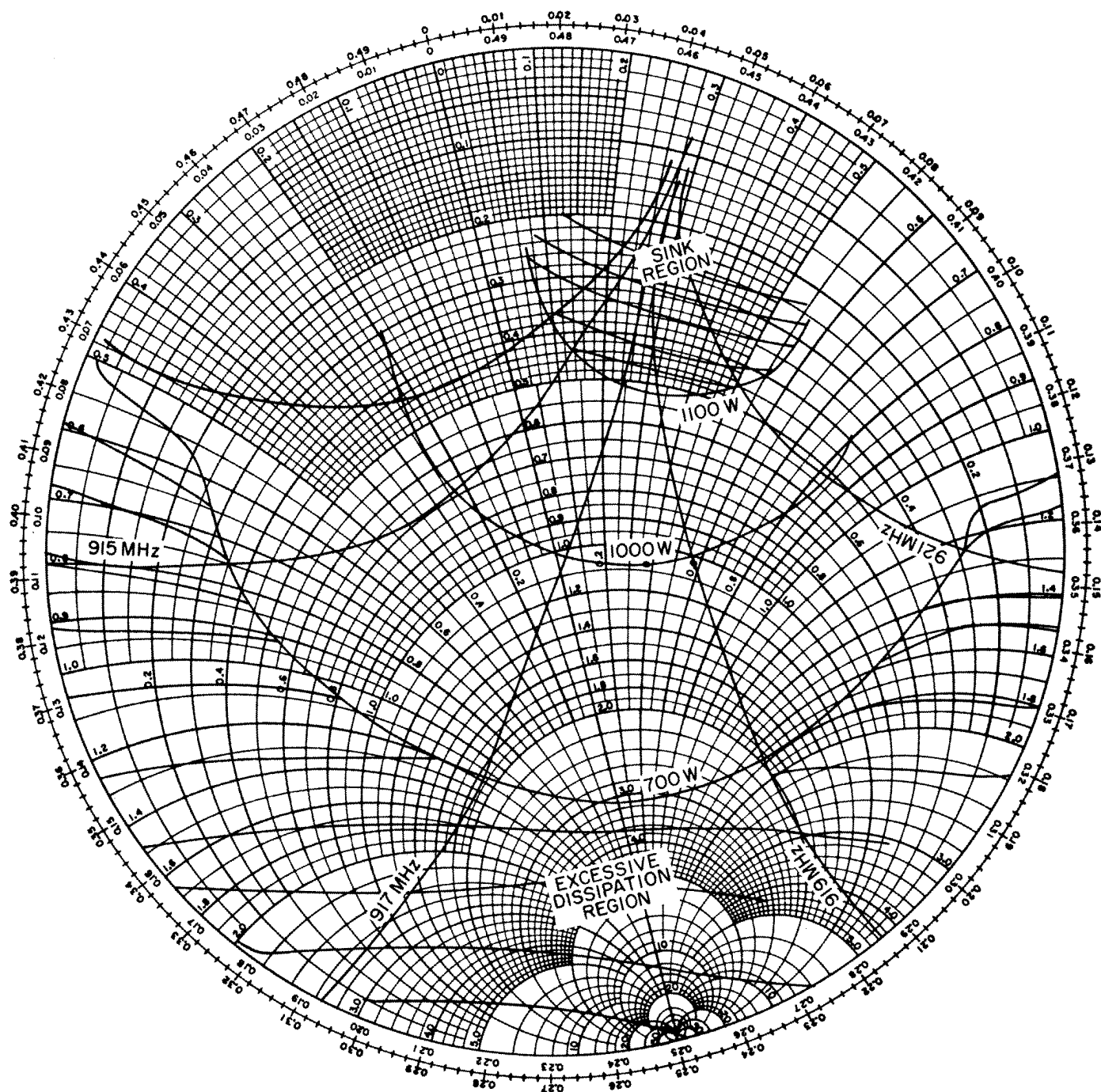


FIGURE 3

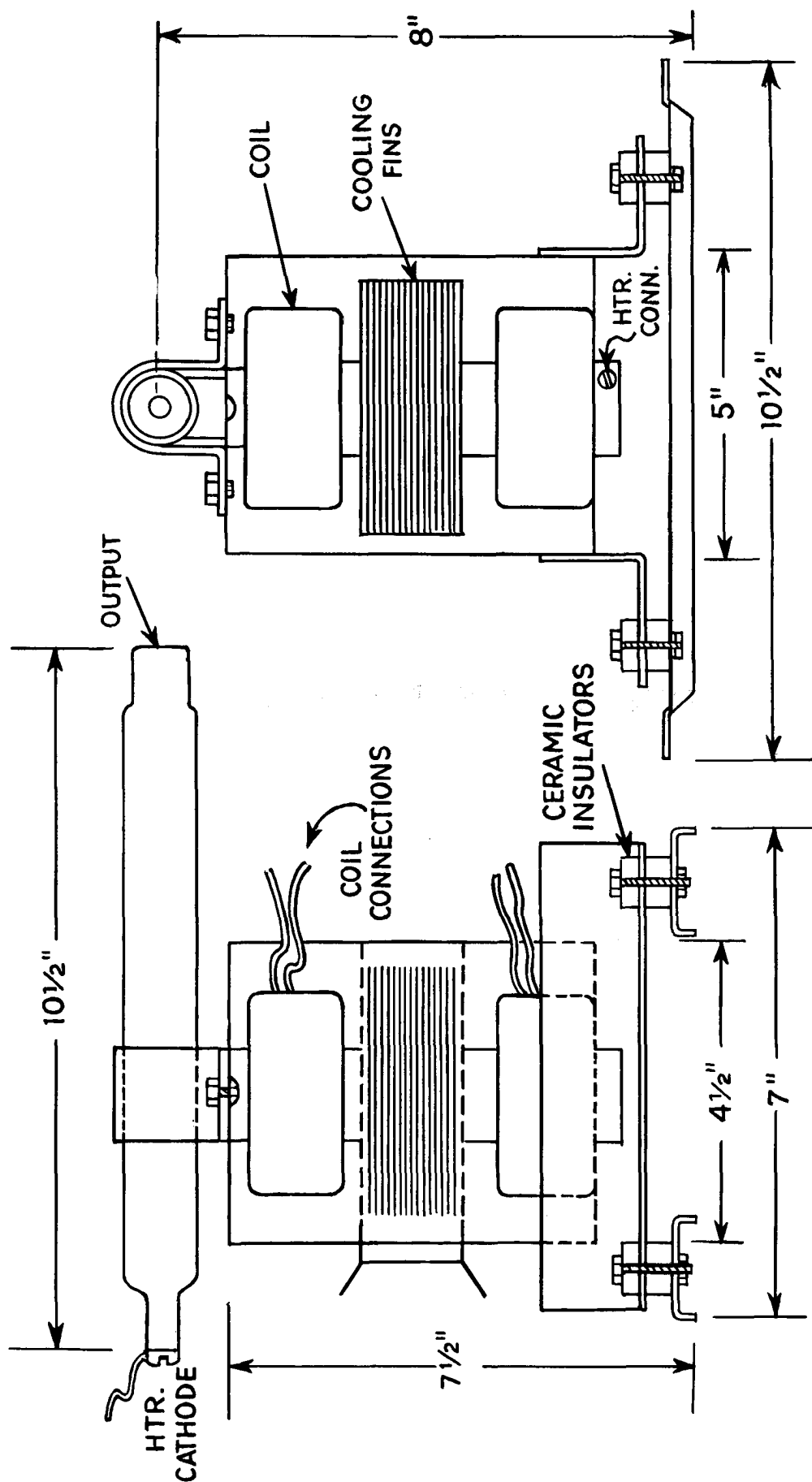


FIGURE 4

GENERAL  ELECTRIC
TUBE DEPARTMENT
Schenectady, N. Y. 12305