



RADIO MANUFACTURERS ASSOCIATION
ENGINEERING DEPARTMENT

Release No. 462

January 5, 1946

sponsor:
General Electric Co.

RMA TYPE
5J29
Magnetron
(External Magnet Required)

GENERAL CHARACTERISTICS

Electrical

Filament - Tungsten	
Filament Voltage *	2.1 Volts
Filament Current maximum	40 Amperes
Frequency	350-770 Megacycles
Field Strength	1500 Gauss

Mechanical

Dimensions (see outline K-8639335)

Type of Cooling	Liquid and Forced-air
Anode, liquid cooling	1 Quart Per Minute
Maximum Outlet Temperature	70 C

Seals

Forced-air cooling shall be provided so that the maximum seal temperature shall not exceed 150 C.

Mounting Position - Any

MAXIMUM RATINGS AND TYPICAL OPERATING CONDITIONS

	<u>Typical Operation</u>		<u>Maximum Ratings</u>	
D-c Plate Voltage $\neq$	1400	1800	2500	Volts
Plate Dissipation			500	Watts
Plate Input	500	500	600	Watts
D-c Plate Current	360	280	450	Milliamperes
Conversion Efficiency, approximate	33	20		Per Cent
Power Output	165	100		Watts
Frequency	350	770		Megacycles
Duty	CW	CW		CW

* The filament supply should provide 0 to 2.5 volts, continuously variable, at 40 amperes. In operation E_f should be adjusted to the lowest value consistent with optimum operation, then maintained accurately. During starting I_f should never exceed 60 amperes.

$\neq$ The plate supply should have sufficiently poor regulation or series resistance to permit stable operation and prevent excessive plate dissipation. The tube should be operated with optimum loading at all times. Either overloading or insufficient loading may result in undesirable operation or damage to the tube due to excessive radio-frequency voltage across the seals.

APPROX. 9° TAPER, APPROX. $\frac{1}{8}$ " LONG WITH A PERCEPTIBLE FLAT AT TUBE ENDS

COOLING TUBE $1\frac{13}{16}$ " MIN. INSIDE STRAIGHT

ANODE TERMINAL

$.250 \pm .005$ " DIA.

$.438 \pm .005$ " DIA.

$\frac{3}{64}$ " R. APPROX.

$\frac{15}{64}$ " MAX.

$\frac{1}{64}$ " MIN.

$\frac{23}{64}$ " MAX. $.230$ " MIN.

$.500 \pm .010$ " DIA.

NOTE 1

$.375 \pm .020$ "

$\frac{7}{8} \pm \frac{1}{16}$ "

$\frac{31}{132}$ " NOM.

$6\frac{1}{4} \pm \frac{1}{4}$ "

$2 \pm \frac{3}{32}$ "

$\frac{1}{2}$ " MAX.

$\frac{3}{4}$ " MAX. DIA.

$1\frac{21}{64} \pm \frac{1}{32}$ " DIA.

$1.093 \pm .010$ " DIA.

AXIS OF MAGNETIC FIELD

FILAMENT TERMINAL

NOTE 1:
 45° CHAMFER $\frac{1}{32}$ " APPROX.