



RADIO MANUFACTURERS ASSOCIATION
ENGINEERING DEPARTMENT

Release No. 462

January 5, 1946

sponsor:
General Electric Co.

RMA TYPE
5J30
Magnetron
(External Magnet Required)

GENERAL CHARACTERISTICS

Electrical

Filament - Tungsten	
Filament Voltage *	2.1 Volts
Filament Current maximum	40 Amperes
Frequency	10-375 Megacycles
Field Strength	1500 Gauss

Mechanical

Dimensions (see outline)

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 will 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 #	1500	1750	2500	Volts
Plate Dissipation			400	Watts
Plate Input			600	Watts
D-c Plate Current	330	280	450	Milliamperes
Conversion Efficiency	20	40		Per Cent
Power Output	100	200		Watts
Frequency	10	375		Megacycles
Duty	CW	CW		CW

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

The plate supply should have sufficient regulation or series resistance to permit stable operation and to 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.

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