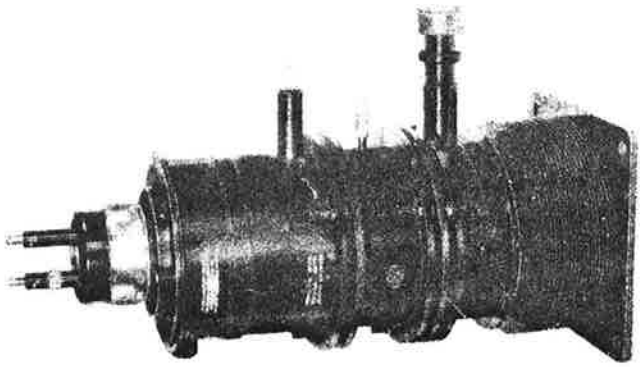
960-1215 MC

SAL-39
CASCADE AMPLIFIER KLYSTRON

DESCRIPTION - Pulsed klystron amplifier with output power of 20 kw (peak) at 960 to 1215 mc.

APPLICATIONS - Designed for pulsed microwave service including navigational aids, distance measuring equipment, beacons and pulsed communications systems with duty cycles of 12% or less.

FEATURES - Integral resonant cavities and tuners; BNC r-f input and monitor fittings; 7/8-inch coaxial r-f output coupling; thermally compensated for changes in ambient temperature and duty cycle.



GENERAL CHARACTERISTICS

Frequency Range	960 to 1215 mc
Heater Voltage (a-c or d-c)	5 v
Heating Time	5 minutes
Heater Current	43 amp
Heater Starting Current[1] (max.)	70 amp
Cathode Gun Capacity (approx.)	30 μμf
Half-Power Bandwidth (Optimum Drive)	1 %
Half-Power Bandwidth (Underdriven)	0.6 %

GUARANTEED SPECIFICATIONS

Beam Voltage	20 kv
Duty Cycle	1 %
R-F Input Power (max.)	120 w
R-F Output Power (min.)	17.6 kw

TYPICAL PULSE OPERATION

Frequency	1100	1100	mc
Beam Voltage	10	17	kv
Beam Current	3	6.6	amp
Heater Voltage (a-c or d-c)	5	5	v
Heater Current	43	43	amp
R-F Input Power	40	100	w
R-F Output Power	9	21	kw
Duty Cycle	6	1	%
Pulse Length	2.5	2.5	μsec
Cooling (forced air)	300	220	cfm

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Note 1: The heater starting current must be limited by some means such as a high reactance transformer.

MAXIMUM PULSE RATINGS

Pulse Length	10	μsec
Duty Cycle[2]	12	%
Beam Voltage (peak)[3]	20	kv
Beam Current (peak)	8.5	amp
Average Beam Power	2400	w
Average R-F Output Power	300	w
Operating Temperature		
Tube Body	100	°C
Cooling Fin Assembly	125	°C

MECHANICAL SPECIFICATIONS

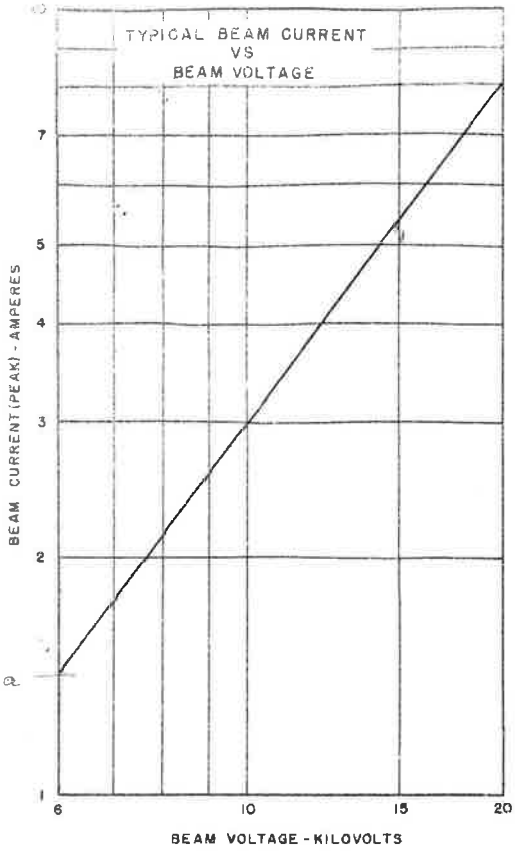
Cathode Type	Oxide coated, unipotential
Physical Dimensions	See outline drawing
Base Connections	See outline drawing
Mounting Position	Any
Weight (approx.)	30 pounds
R-F Connections	
Input and middle cavity	BNC type, bayonet to accommodate jack UG-88/U fitting
Output cavity	Coupling for 7/8-inch coaxial, RTMA, 50-ohm line
Cooling	For operation at the maximum ratings of the tube, forced air cooling of at least 220 cfm is recommended. In any case, sufficient air cooling should be provided to keep the envelope temperature below 100° Centigrade.

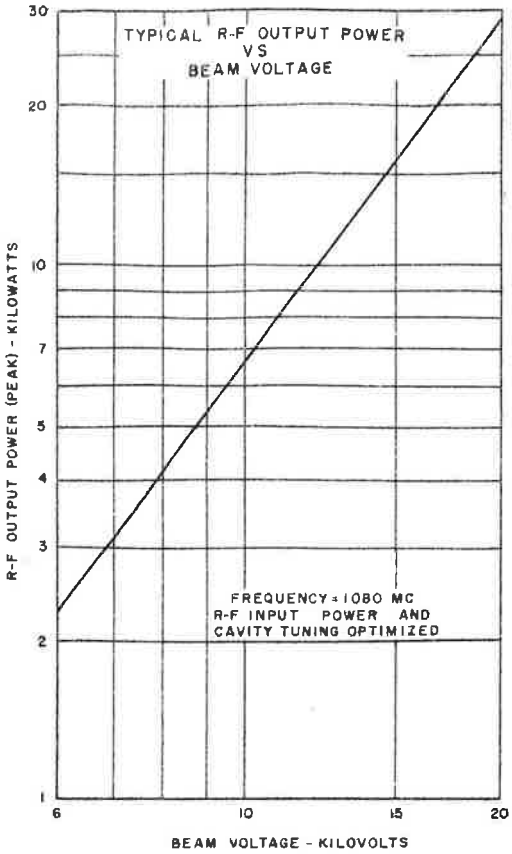
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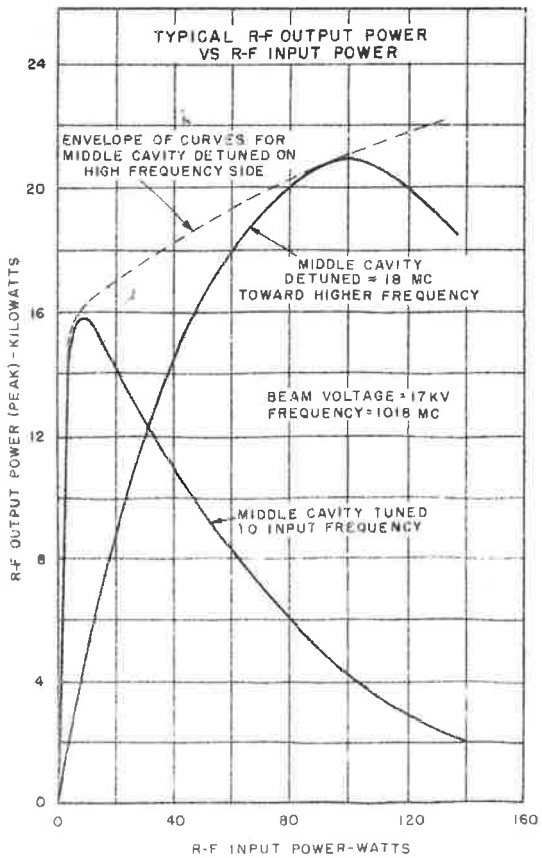
Note 2: Short time (1 millisecond) duty cycle may equal 40%.

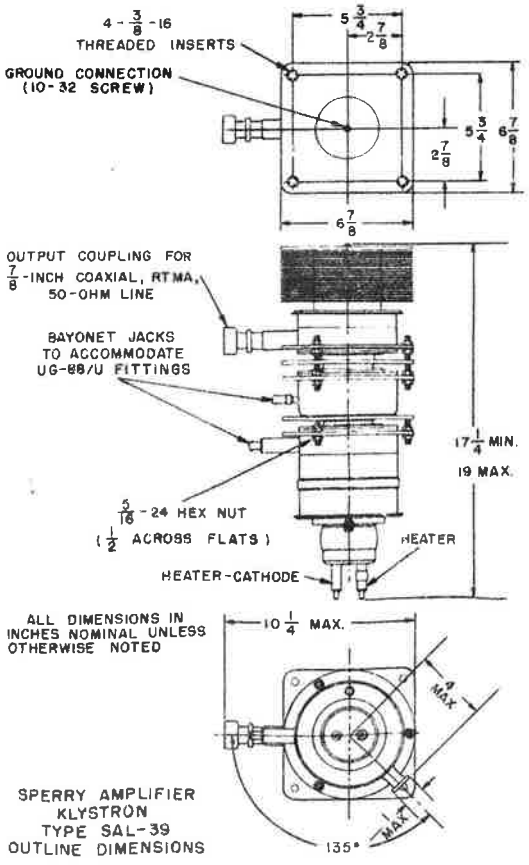
Note 3: Maximum average beam power must not be exceeded.

TYPE SAL-39 KLYSTRON









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