

Central ELECTRONIC

MANUFACTURERS

DENVILLE, NEW JERSEY

**PULSE
MODULATOR
TRIODE
TYPE
6544**
Anode Dissipation
1 Kw

HIGH VOLTAGE PULSE MODULATOR TRIODE

DESCRIPTION

The CENTRAL tube type 6544 is a forced-air-cooled high vacuum tube, specifically designed for radar pulse modulation applications. The tube can capably provide 1 megawatt output pulses with 8 kilowatts peak driving power. The tube design features a beamed oxide coated cathode structure, a squirrel cage control grid, a shield grid internally connected to the cathode and a forced air cooled anode capable of dissipating 1 kilowatt continuously.

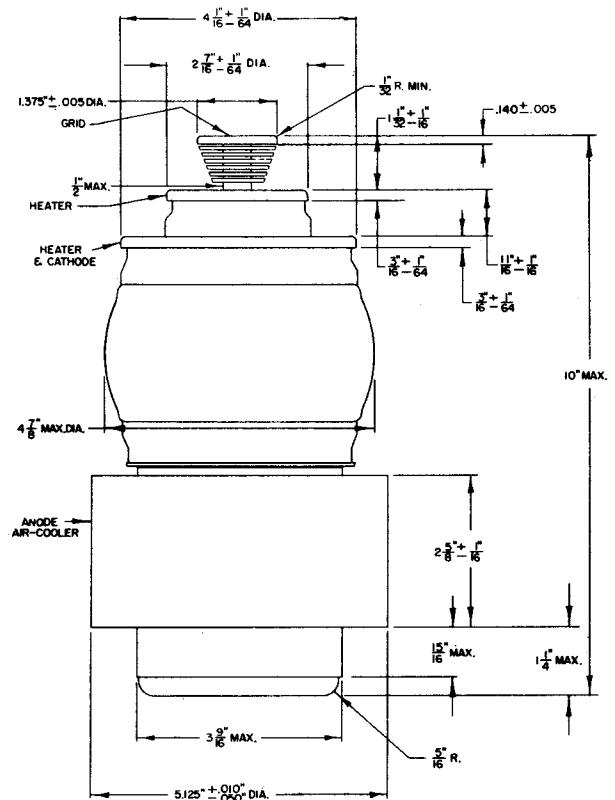
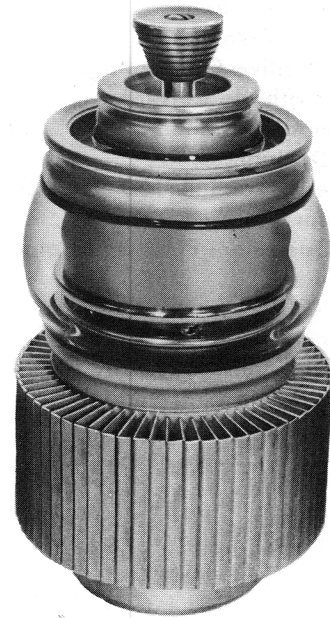
SPECIFICATIONS

MECHANICAL

Mounting Position (support tube by anode radiator only) Any
 Type of Cooling Forced-air (1)
 Air flow on anode (at 75°C and 14.7 psi ambient atmospheric pressure) 150 cfm (2)
 Static pressure, inches of water 0.8
 Air flow on grid radiator, minimum 5 cfm
 Maximum incoming air temperature 75°C
 Maximum Glass Temperature 175°C (1)
 Net Weight, approximate 12 pounds

ELECTRICAL

Heater Voltage 6.0 ± 5% volts
 Heater Current 60 amperes
 Heater Starting Current, maximum 300 amperes
 Cathode Warm-Up Time (3) 10 minutes
 Amplification Factor 90
 Interelectrode Capacitances:
 Grid-Anode, maximum 4 uuf
 Grid-Cathode 250 uuf
 Anode-Cathode 40 uuf



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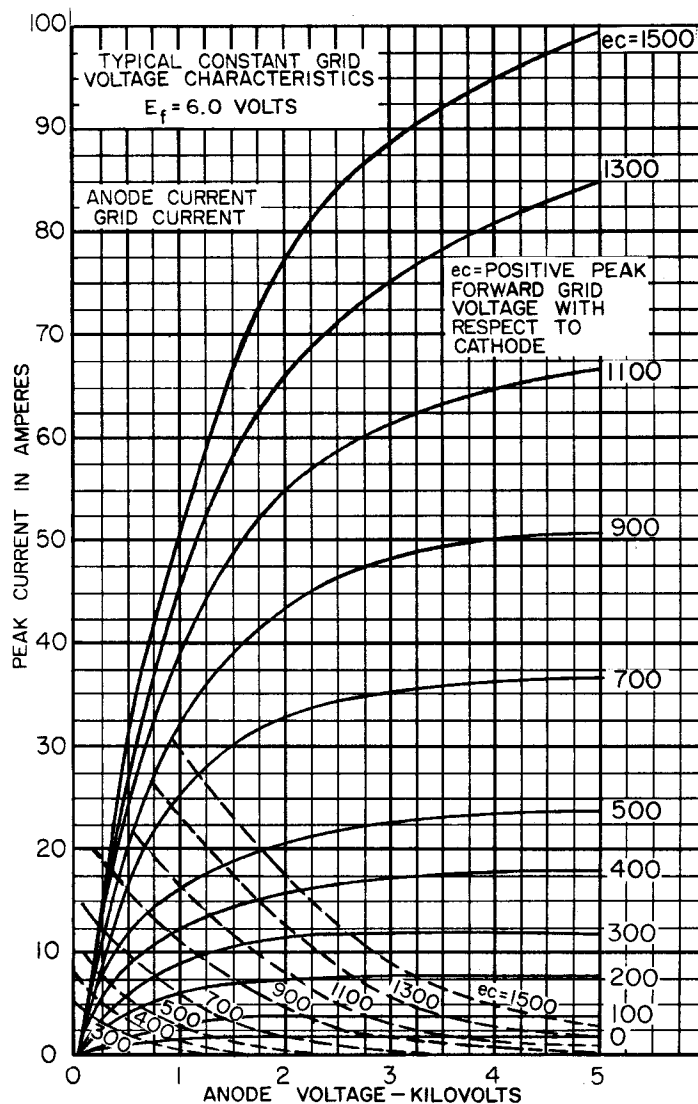
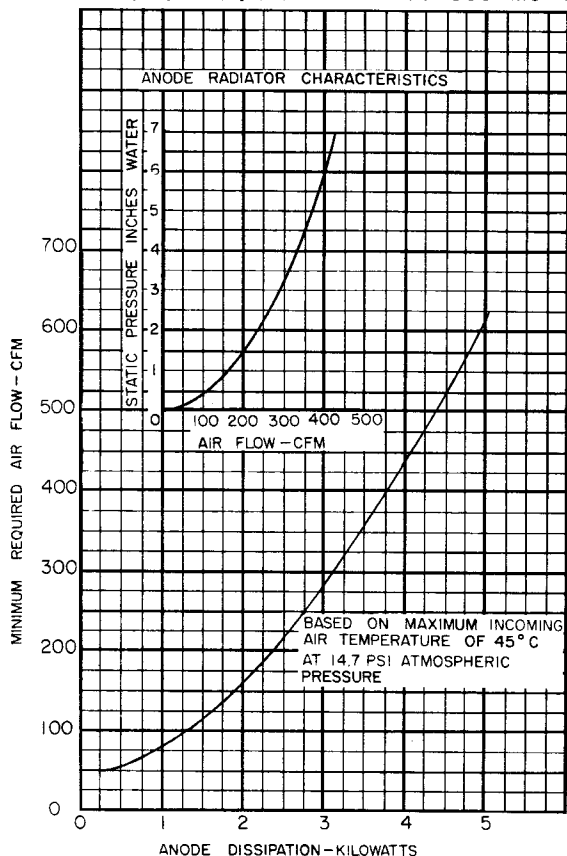
MAXIMUM RATINGS

Maximum Ratings, Absolute Values

Pulse Width (4 & 5)	6 microseconds
Duty Factor	.03
Peak Anode Voltage	25 kilovolts
DC Anode Voltage	20 kilovolts
DC Grid Voltage	-600 volts
Peak Positive Grid Voltage	1500 volts
Peak Cathode Current	70 amperes
DC Anode Current	250 milliamperes
Grid Dissipation	.75 watts
Anode Dissipation (150 cfm @ 0.8" water)	1000 watts

Typical Operation: Pulse Modulator or Amplifier

Class C (5)	
DC Anode Voltage	18 kilovolts
DC Grid Voltage	-500 volts
Pulse Positive Grid Voltage	1200 volts
Pulse Anode Current	65 amperes
Pulse Grid Current	5 amperes
Load Resistance	225 ohms
Duty Factor	.0015
Pulse Power Input	12 kilowatts
Pulse Power Output	1000 kilowatts



- (1) Sufficient air cooling must be provided to keep glass seal temperatures at less than 175°C under all conditions of operation.
- (2) For air-flow requirements at other temperatures and pressures, consult the Central Engineering Department.
- (3) For accelerated cathode warm-up, the heater may be energized at 7 volts for 5 minutes and then reduced to 6 volts for high-voltage operation. If a heater stand-by voltage of 5 volts is used, the minimum cathode warm-up time is 1 minute at 6 volts.
- (4) Under certain conditions of operation, longer pulses may be possible.
- (5) For information concerning specific tube problems or applications not covered, consult the Central Engineering Department.