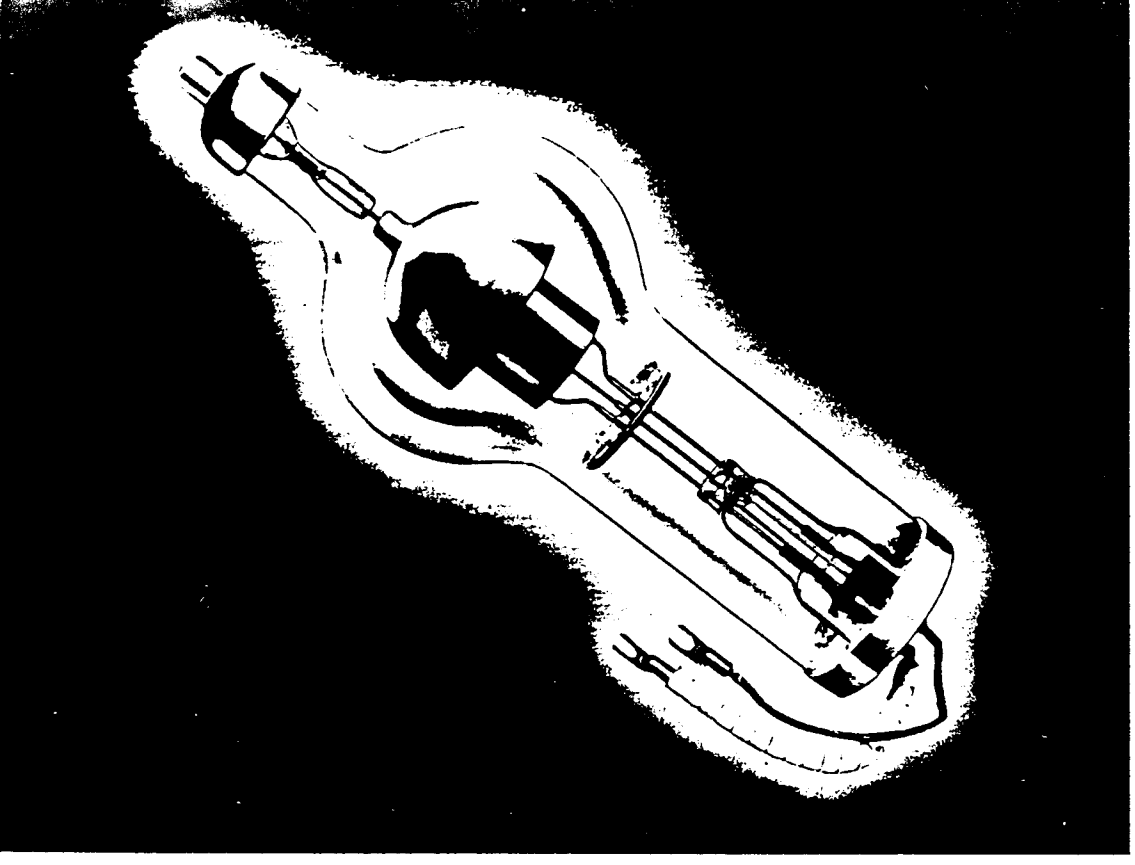


MACHLETT

ML-857B

DESCRIPTION AND RATINGS

DESCRIPTION

The ML-857B is a two-electrode, mercury-vapor tube designed for use as a half-wave rectifier in high-power radio-transmitting and r.f. heating equipment. Unique features, including low internal voltage drop and cathode design permitting in-phase or quadrature filament excitation, contribute to efficient and economical operation. Maximum ratings of 22 PKV inverse anode voltage and 10 amperes average anode current apply at frequencies of 25 to 150 cycles per second.

GENERAL CHARACTERISTICS

Electrical	
Filament Voltage	5 Volts
Filament Current	30 Amperes
Filament Heating Time, Minimum*	1 Minute
Tube Voltage Drop, approximate	15 Volts
Critical Anode Voltage	100 Volts
Mechanical	
Mounting Position	Vertical, Base Down
Type of Cooling	Convection or Forced-Air
Condensed Mercury Temperature Rise to Equilibrium, approximate	
No Load	11.5 °C
Full Load	15 °C
Base	JEDEC No. FO-2
Cap	JEDEC No. C1-10
Net Weight, approximate	3¾ Pounds

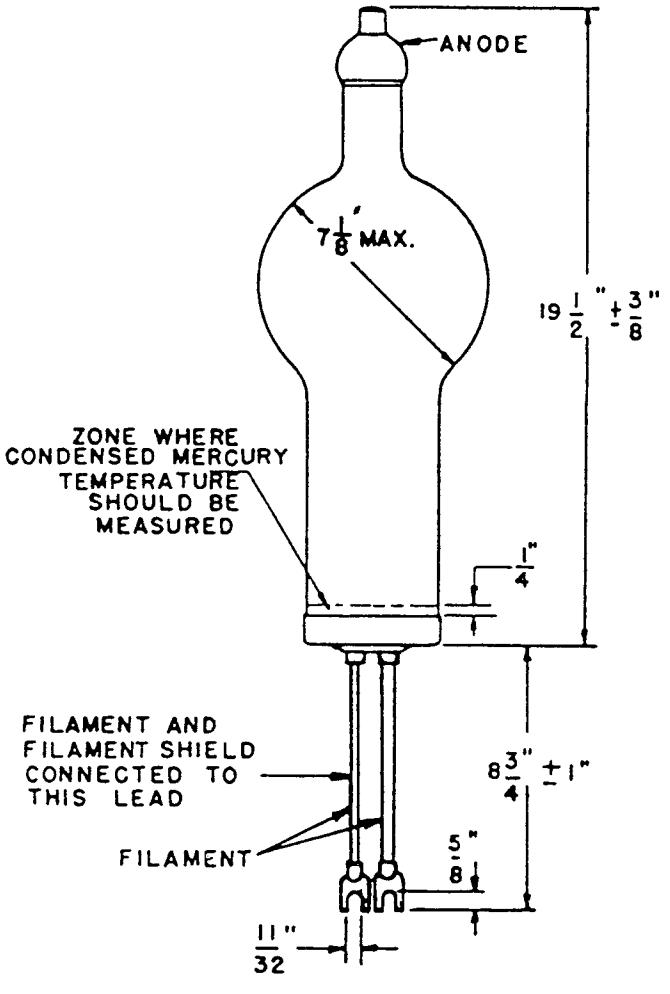
*Before applying anode voltage, sufficient time must be allowed to bring the condensed mercury temperature, measured at top edge of base, within the specified range.

MAXIMUM RATINGS

Maximum Peak Inverse Anode Voltage		
Type of Cooling	Convection	Forced-Air
150 Cycles or Less	10000	22000 Volts
Condensed Mercury Temperature Range	25-60	30-40 °C
Maximum Anode Current		
Instantaneous, 25 to 150 Cycles	40.0 Amperes	
Average, 30 Seconds Averaging Time	10.0 Amperes	
Surge, for Design Only	400.0 Amperes	
Duration of Surge Current	0.2 Second	

NOTE: Tube life will be increased when quadrature filament excitation (filament current 90° out of phase with anode current) is used.

WARNING: Operation of this tube at higher voltages may produce soft x-rays, which constitute a health hazard. Adequate rayproof shielding must therefore be provided in equipment.



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