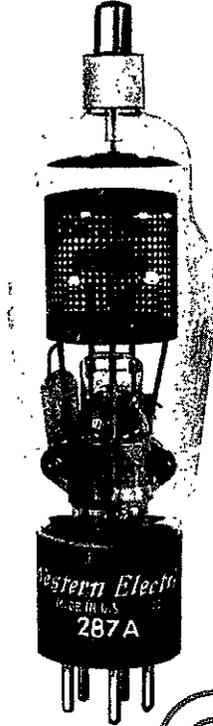

ELECTRON TUBE DATA SHEET
WESTERN ELECTRIC 287A ELECTRON TUBE



ONLY

DESCRIPTION

The 287A is a three-electrode mercury-vapor thyatron with a negative control characteristic. This tube is designed for regulated or controlled rectifiers.

MAXIMUM RATINGS

Peak Anode Voltage	1250	2500 volts
Average Cathode Current	1.5	0.64 amperes

FILE: THYRATRON SECTION

MAXIMUM RATINGS, Absolute Values

Peak Anode Voltage		
Inverse	1250	2500 volts
Forward	1250	2500 volts
Cathode Current		
Peak	6.0	2.5 amperes
Average	1.5	0.64 amperes
Surge (maximum duration 0.1 second)	60	25 amperes
Averaging Time	5	5 seconds
Negative Grid Voltage		
Before Conduction	500	500 volts
During Conduction	10	10 volts
Positive Grid Current, Average (averaging time = one cycle)		
	.010	.010 ampere
Condensed Mercury Temperature Limits		
	+ 30 to +80 centigrade	

ELECTRICAL DATA

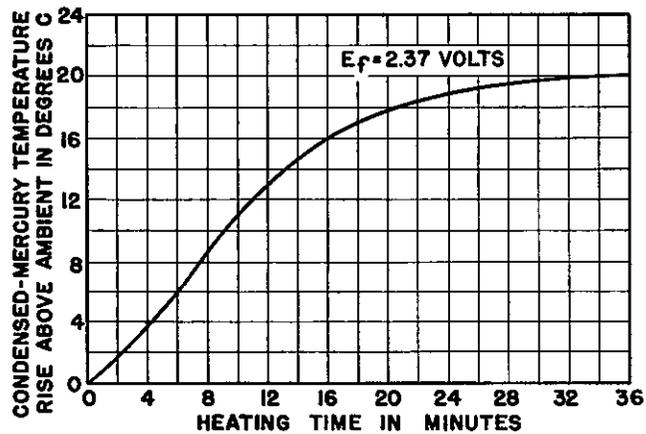
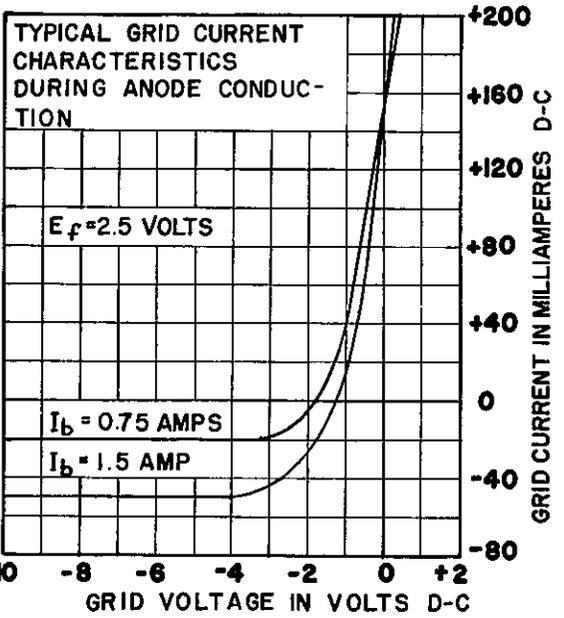
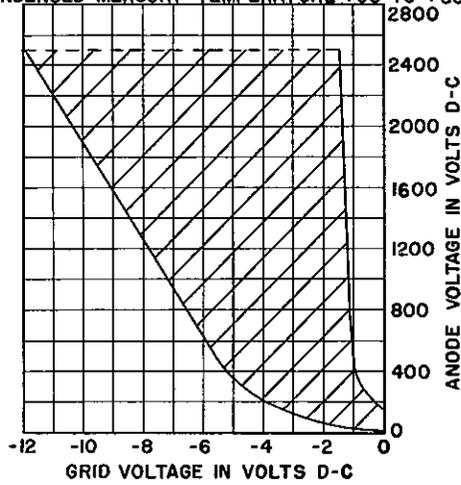
	Min.	Bogey	Max.
Filament Voltage	2.37	2.5	2.62 volts
Filament Current at 2.5 volts	---	7.0	7.75 amperes
Filament Heating Time Required	15	---	--- seconds
Anode to Grid Capacitance	---	1.8	--- uuf.
Grid to Filament Capacitance	---	5.0	--- uuf.
Deionization Time, Approximate ¹			
E _{bb} =2500 volts; I _b =2.5 amperes;			
E _{cc} =-18 volts; THg=80C; Rg=20000 ohms	---	1000	--- microseconds
Ionization Time, Approximate ²			
E _{bb} =100 volts; THg=40C; Grid C _{ver} voltage=5 volts	---	150	--- microseconds
E _{bb} =100 volts; THg=80C; Grid C _{ver} voltage=25 volts	---	1	--- microsecond
Anode Voltage Drop	---	15	--- volts
Critical Grid Current at 220 Anode Volts	---	---	5 microamperes

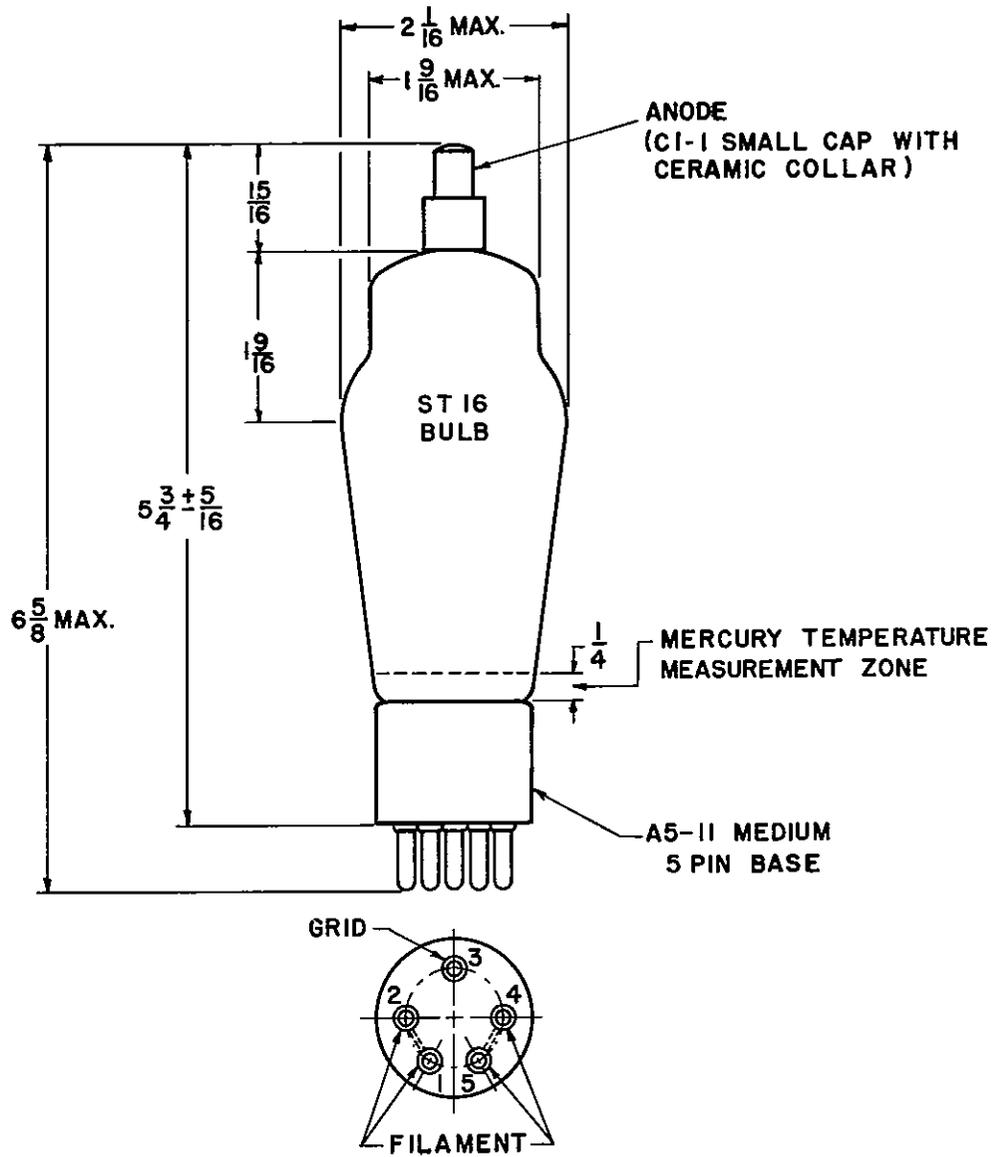
MECHANICAL DATA

Type of Cooling	Convection
Equilibrium Condensed Mercury Temperature	
Rise Above Ambient, Approximate	
At Full Load	30 centigrade
At No Load	20 centigrade
Mounting Position	Vertical-base down
Net Weight, Approximate	3 ounces
Dimensions and pin connections shown in outline drawing on Page 4.	

1. Deionization time decreases with an increase in negative grid voltage or with a decrease in (a) condensed mercury temperature (THg), (b) grid resistance or (c) anode current immediately preceding the end of conduction.
2. Ionization time decreases with an increase in (a) anode voltage, (b) condensed mercury temperature (THg) or (c) grid overvoltage. Grid overvoltage is defined as the magnitude by which the applied voltage exceeds, in a positive direction, the critical grid voltage value. Critical grid voltage is the instantaneous value of grid voltage at the time when anode current starts to flow.

TYPICAL CONTROL CHARACTERISTICS.
 SHADED AREA SHOWS RANGE OF CHARACTERISTICS,
 CONDENSED-MERCURY TEMPERATURE +30° TO +80°C.





A development of Bell Telephone Laboratories, the research laboratories of the American Telephone and Telegraph Company and the Western Electric Company.