

March 18, 1957

High-Vacuum Rectifier Type WL-6898

The WL-6898 is a forced-air cooled diode designed for service in air-borne radar equipment. This tube performs three distinct functions in radar modulators: a power rectifier to obtain the necessary high DC voltage; a charging-diode to couple the DC power to the pulse-forming network; and a clipper diode to absorb the reflected wave from the output magnetron.

The WL-6898 combines low heater power in a unipotential cathode, small size and light weight with higher maximum ratings than previous designs. This tube also incorporates structural and process features resulting in reliable performance in the adverse environment encountered in air-borne operation.

GENERAL DATA

ELECTRICAL:

Cathode	.....	
Voltage	.....	5.0
Current	.....	8.0
Number of Electrodes	.....	2

Coated Unipotential
Volts
Amperes

MECHANICAL:

Outline Dimensions	.....	
Mounting	.....	
Pin Connections	.....	
Cooling *	.....	
Rate	.....	5
Static Pressure	.....	0.16
Ambient Temperature	.....	-55 to 100
Altitude	.....	
Cathode Heating Time	.....	120
Net Weight	.....	7.5
Maximum Radiator Temperature *	.....	160

See Drawing
Tube supported by Radiator
Flexible Leads with Clamps
Forced Air
CFM
Inch Water
C
Sea Level
Seconds
Ounces
°C

MAXIMUM RATINGS
Absolute Maximum Values

As CLIPPER DIODE:

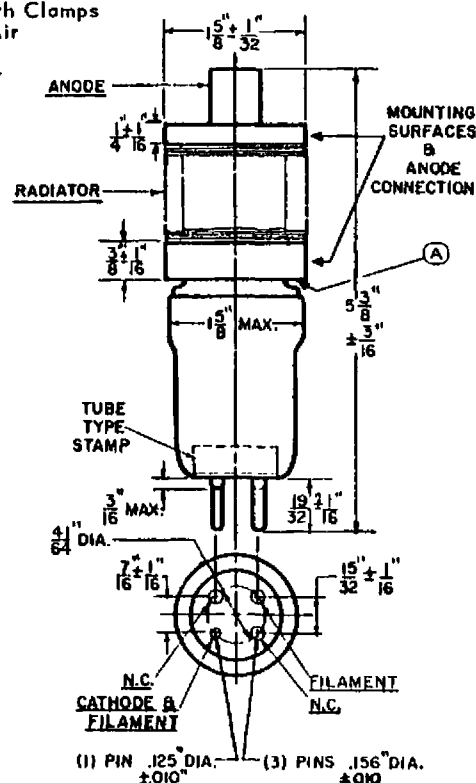
Peak Inverse Voltage	.....	16000 max.	Volts
Peak Current (Continual)▲	.....	20 max.	Amperes
Average Current (Continual)	.....	20 max.	Ma.
Peak Current (Intermittent)⊗	.....	30 max.	Ma.
Average Current (Intermittent)□	.....	80 max.	Amperes

As CHARGING DIODE:

Peak Inverse Voltage	.....	16000 max.	Volts
Peak Current	.....	600 max.	Ma.
Average Current	.....	200 max.	Ma.

As HALF-WAVE RECTIFIER:

Peak Inverse Voltage	.....	16000 max.	Volts
Peak Current	.....	630 max.	Ma.
Average Current	.....	200 max.	Ma.



NOTES

▲ An air flow of 5 CFM through the radiator must precede the application of any voltages and must continue until all voltages are removed. The direction of flow must be parallel to the radiator fins.

□ For maximum of 5 seconds

▲ For maximum pulse duration of 5 microseconds.

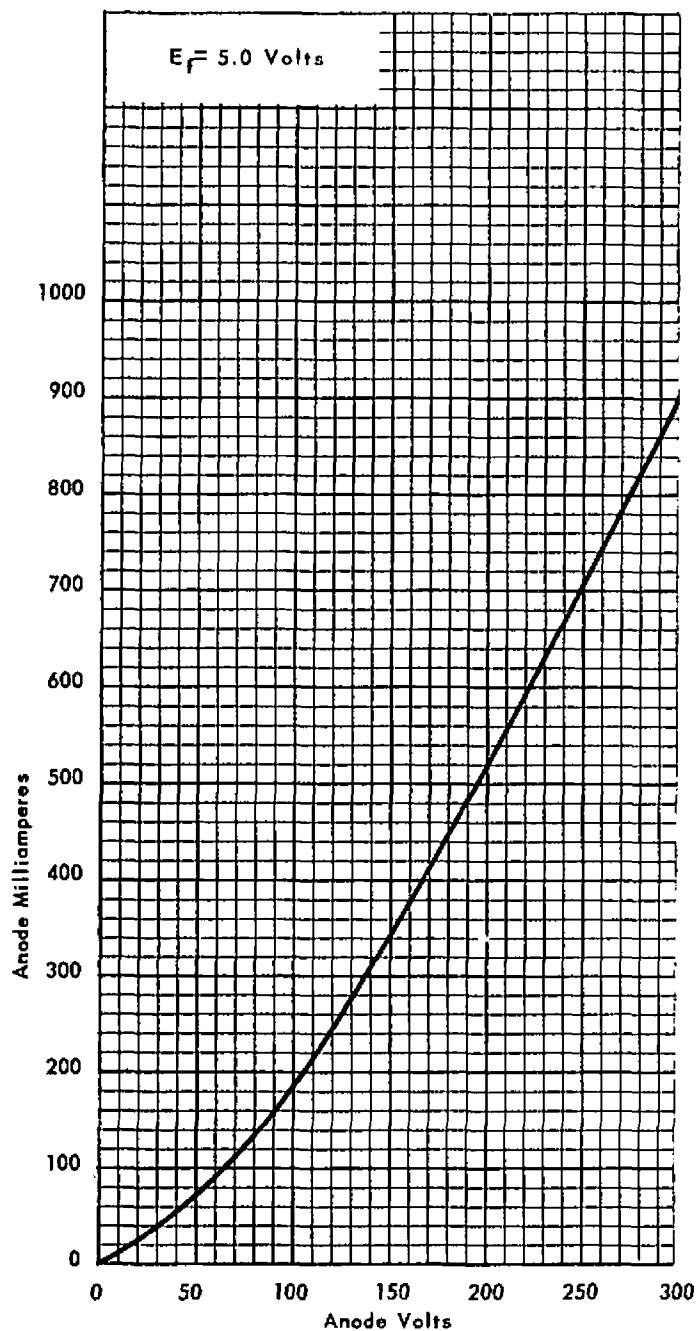
⊗ For maximum pulse duration of 5 microseconds repeatable during total time interval not to exceed 5 seconds.

* Measured at point A, on outline drawing, with temperature sensitive paint.

CE-A 1287

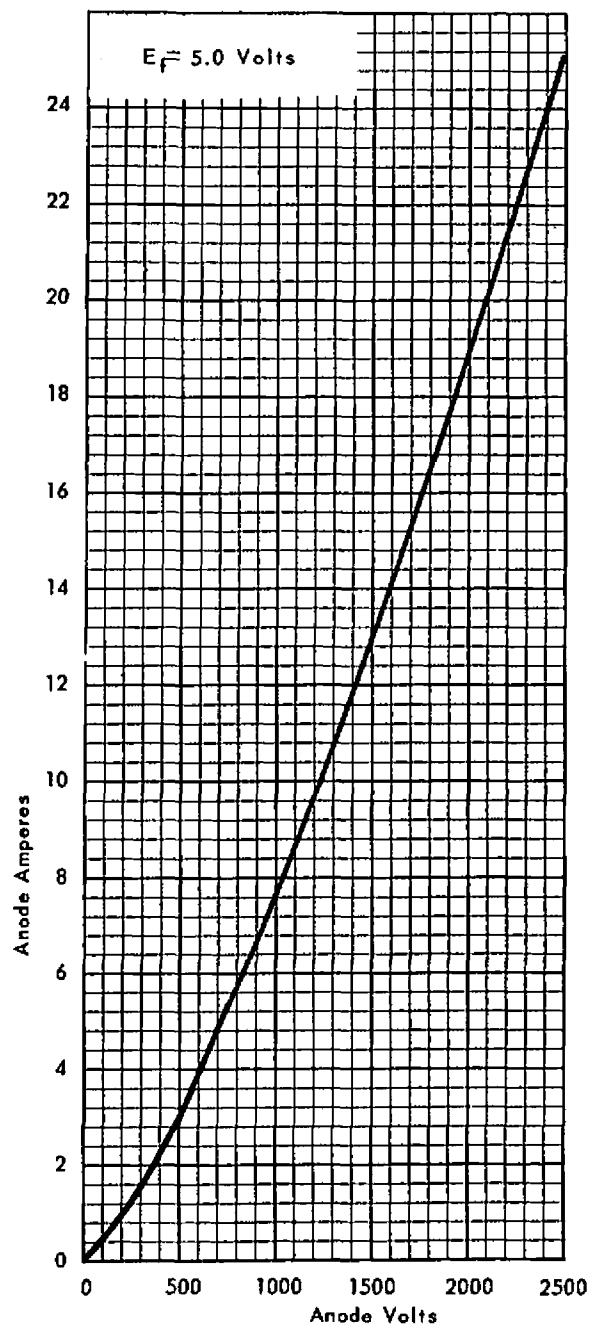
High-Vacuum Rectifier Section

AVERAGE PLATE CHARACTERISTIC



CE-A1167

PULSE DIODE CHARACTERISTIC



CE-A1219