



Excellence in Electronics

**TYPE
RK-3B29**

The RK3B29 is a heater-cathode, high vacuum type designed for use as a clipper diode or rectifier. It is mechanically rugged and in addition use a hard glass nonex envelope. The plates are gold plated, zirconium coated and radially cooled for better operation at high voltages. The cathode is heliarc welded making the internal connection more rugged and giving better contact. The self supporting anodes eliminate use of mica spacers allowing high temperatures during exhaust thereby obtaining less gas and longer life.

MECHANICAL DATA

ENVELOPE: T-12

BASE: Medium 4-Pin Bayonet, A 4-10, Phenolic

TERMINAL CONNECTIONS:

Pin 1 Heater
Pin 2 NC
Pin 3 NC
Pin 4 Heater and Cathode
Cap Plate

COOLING: Freely Circulating Air

ELECTRICAL DATA

RATINGS - ABSOLUTE MAXIMUM - RECTIFIER:

OPERATION 1

Heater Voltage (ac)	2.5 ± 10 %	volts
Peak Plate Inverse Voltage	16	kv
Peak Plate Current	.25	amp
Average Plate Current (dc)	.64	ma

OPERATION 2

Heater Voltage (ac)	2.5 ± 10 %	volts
Peak Plate Inverse Voltage	7.7	kv
Peak Plate Current	.30	amp
Average Plate Current (dc)	.80	ma

OPERATION 3

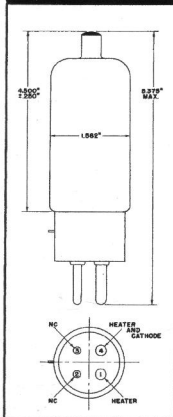
Heater Voltage (ac)	2.5 ± 10 %	volts
Peak Plate Inverse Voltage	5.0	kv
Peak Plate Current	.30	amp
Average Plate Current (dc)	.95	ma

RATINGS - ABSOLUTE MAXIMUM - SHUNT DIODE:

Heater Voltage (ac)	2.5 ± 10 %	volts
Peak Plate Inverse Voltage	10	kv
Peak Plate Current	8.0	amp
Average Plate Current (dc)	.18	ma
Pulse Duration in 100μsec Interval	25	μsec

CHARACTERISTICS AND TYPICAL OPERATION:

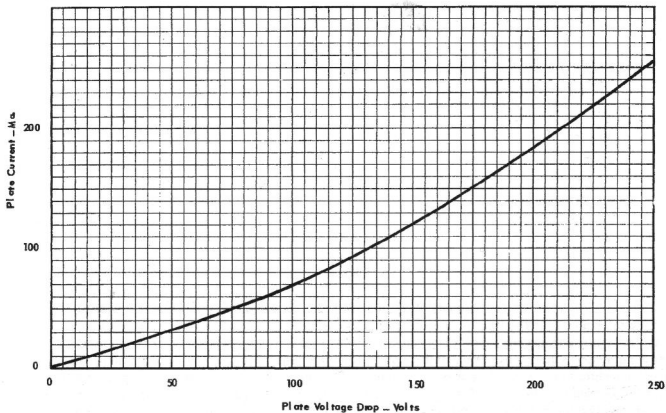
Heater Potential	2.5	volts
Heater Current	4.9	amp
Heating Time	2	minutes
Plate to Cathode Capacitance	2.5	μμf
Plate Current (dc)	90	ma min
Peak Emission (eb=4000 v)	8.0	amp



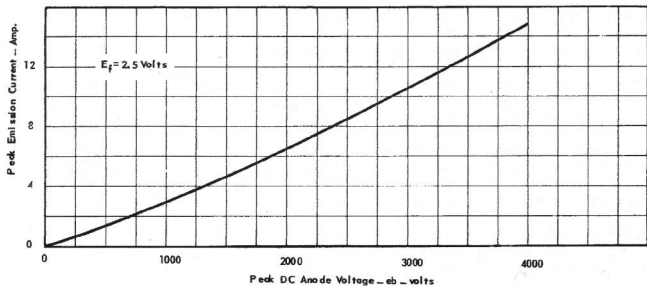


DIODE RECTIFIER

AVERAGE PLATE VOLTAGE DROP



PEAK DC ANODE VOLTAGE VS PEAK EMISSION CURRENT



INDUSTRIAL TUBE DIVISION

RAYTHEON COMPANY