



Excellence in Electronics

TYPE CK802

The CK802 is a hermetically sealed point contact germanium diode designed for applications in computer circuitry where the reverse transient characteristic is of primary importance. The CK802 has very high back resistance, at least 1 megohm; small size, low shunt capacitance, and is resistant to changes in humidity and temperature. * Operable at temperatures up to 100°C, it can be heated as high as 125°C with no irreversible change in characteristics. Each diode is dynamically tested for hysteresis, drift, and flutter. The CK802 has extremely uniform electrical characteristics and reliable mechanical stability.

MECHANICAL DATA

TERMINALS: Dumet wire, Tinned to within 1/8" of barrel Diameter: 0.017" max. Length: 1" min.

TERMINAL CONNECTIONS: White Band at Cathode Terminal

MOUNTING POSITION: Any

ELECTRICAL DATA

RATINGS - ABSOLUTE MAXIMUM VALUES: (at 25°C)

Inverse Voltage	80 volts
Average Rectified Current	50 ma.
Peak Rectified Current	150 ma.
Surge Current (1 second)	500 ma.
Ambient Temperature Range	- 50 to + 100 °C
Dissipations at:	
25°C	80 mw.
50°C	65 mw.
75°C	50 mw.
100°C	30 mw.

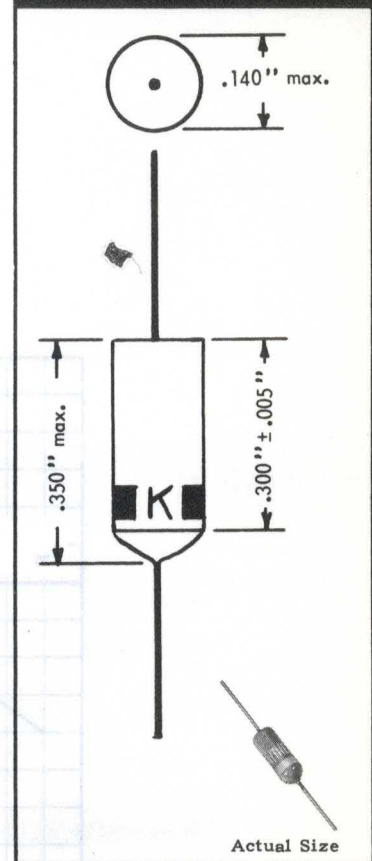
CHARACTERISTICS: (at 25°C)

Maximum Inverse Current at - 50 volts	100 µa.
Minimum Forward Current at + 1 volt	7.5 ma.
Shunt Capacitance	1.0 µµfd.
Minimum Reverse Voltage for Zero Dynamic Resistance	100 volts

RECOVERY TIME CHARACTERISTICS: (at 25°C)

Reverse recovery time is measured as the time required for the diode to recover to a given reverse resistance when the operating voltage necessary to give 30 mA. forward conduction is switched to - 35 volts with a rise time less than 0.1 µsec. and a diode loop resistance of 2000 ohms. The CK802 recovers to the following resistances: 50,000 ohms (or 700 µA.) in less than 0.3 µ sec.

* Each diode receives repeated humidity cycling, and additional temperature cycling ranging from - 25°C to 130°C.



Tentative Data

RAYTHEON MANUFACTURING COMPANY

RECEIVING AND CATHODE RAY TUBE OPERATIONS



GERMANIUM POINT CONTACT DIODE

The CK802 is a junctionless point contact germanium diode designed for applications in which the diode must have the lowest possible forward voltage drop and the lowest reverse current. The CK802 has very high peak efficiency, low forward resistance, and is suitable for use in low current applications. It can be used in applications where the diode is subjected to temperatures up to 100°C. It will not be affected by temperature changes in operation. Each diode is individually tested for forward, reverse, and leakage characteristics and is guaranteed to meet the following specifications:

MECHANICAL DATA

Forward current: 20 mA, reverse current: 100 μA, reverse voltage: 70 V, peak inverse voltage: 100 V, junction temperature: 100°C, mounting: through hole, lead length: 1.5 inches, lead diameter: 0.015 inches, weight: 0.001 grams.

ELECTRICAL DATA

TYPICAL STATIC CHARACTERISTICS (at 25°C)

