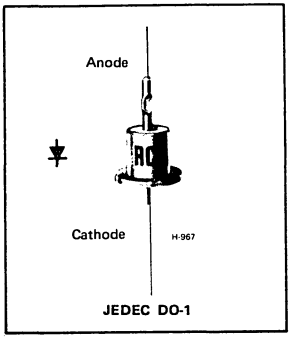
RCA
Solid State
Division

Rectifiers

1N536 1N538 1N540
1N537 1N539 1N547 1N1095



Diffused-Junction Silicon Rectifiers

Flanged-Case, Axial-Lead Types
For Power-Supply Applications

Features:

- **Wide operating-temperature range : -65 to +65°C.**
- **Stringent environmental and mechanical tests to insure dependable performance in industrial and military applications.**
- **Peak reverse voltages from 50 to 600 V.**
- **Max. dc forward current = 250 mA at T_A = 150°C.**
- **Hermetically sealed JEDEC DO-1 package.**

RCA-1N536, 1N537, 1N538, 1N539, 1N540, 1N547, and 1N1095 are hermetically sealed silicon rectifiers of the diffused-junction type. They are specifically designed for use in power supplies of industrial and military equipment capable of operating at dc forward currents up to 750 milliamperes and temperatures ranging from -65° to +165°C.

These silicon rectifiers have peak reverse voltage ratings from 50 to 600 volts, and a maximum reverse current of 5 microamperes at rated peak reverse voltage and ambient temperature of 25°C.

These silicon rectifiers are designed to meet such stringent environmental, mechanical, and life requirements of prime importance in military applications as: (1) sturdy and compact mount structure, (2) axial leads for flexibility of circuit connections, (3) welded hermetic seals, and (4) special temperature cycling tests to assure stable performance over the entire operating temperature range.

RECTIFIER SERVICE, ABSOLUTE-MAXIMUM RATINGS, *for a Supply Frequency of 60 Hz:*

	1N536	1N537	1N538	1N539	1N540	1N1095	1N547	
PEAK REVERSE VOLTAGE	50	100	200	300	400	500	600	V
RMS SUPPLY VOLTAGE For resistive or inductive loads	35	70	140	210	280	350	420	V
DC REVERSE – (BLOCKING) VOLTAGE	50	100	200	300	400	500	400	V
FORWARD CURRENT*: DC, for resistive or inductive loads: T_A = 50°C	750	750	750	750	750	750	750	mA
SURGE, one cycle	15	15	15	15	15	15	15	A
OPERATING FREQUENCY	100	100	100	100	100	100	100	kHz
TEMPERATURE RANGE (Ambient): Operating	←			-65 to +165			→	°C
Storage	←			-65 to +175			→	°C

*For maximum dc forward current values at ambient temperatures other than those specified, see Rating Chart, Fig. 1.

CHARACTERISTICS, at Ambient Temperature (T_A) = 25°C:

	1N536	1N537	1N538	1N539	1N540	1N547	1N1095	
Maximum Forward Voltage Drop (DC) at a load current of 500 mA	1.1	1.1	1.1	1.1	1.1	1.2	1.2	V
Maximum Reverse Current (DC) at maximum peak reverse voltage	5	5	5	5	5	5	5	μA
Maximum Reverse Current (Averaged over 1 complete cycle of supply voltage): at maximum rated PRV, T_A = 150°C	0.4	0.4	0.3	0.3	0.3	0.35	0.3	mA

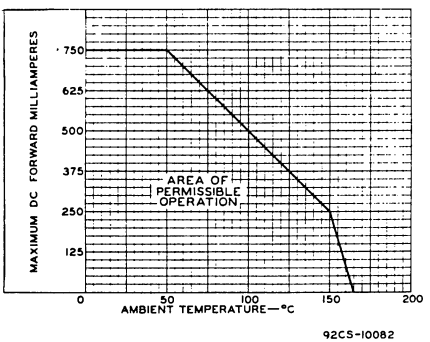


Fig.1— Rating chart.

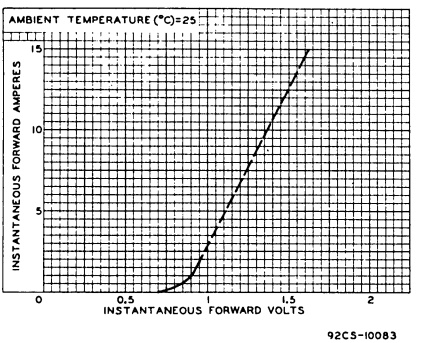


Fig.2— Typical forward voltage and current characteristic.

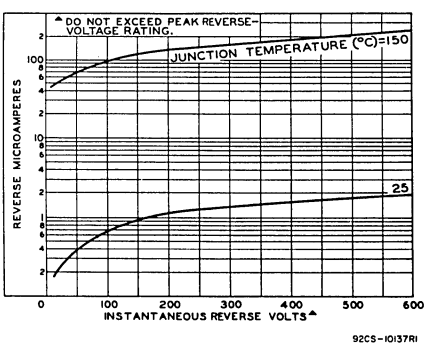


Fig.3— Typical dynamic reverse characteristics.