EP27122A

INTERNATIONAL RECTIFIER IOR

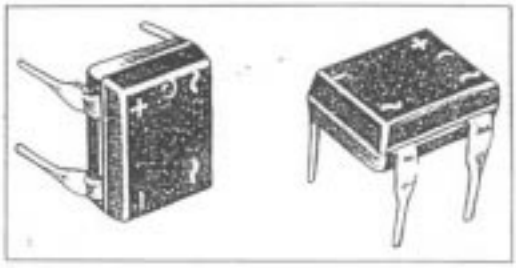
Provisional Data

1BQ SERIES

1A single phase D.I.L. Schottky bridge

FEATURES

- Convenient DIP case design conforming to standard 0.1 inch lead spacing
- Wide operational and storage temperature ranges from −55°C to +150°C
- 20 volts and 40 volts VRRM
- 0.65 volts V_F @ 1.0 A per diode
- Moisture Resistant Expoxy Case

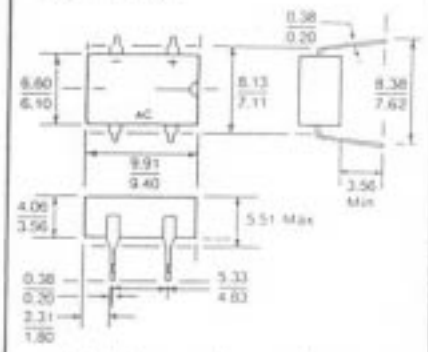


SPECIFICATIONS

ELECTRICAL RATINGS and CHARACTERISTICS

$I_{O(AV)}$	Maximum average output current T_{amb} = 45°C	1 A
I_{FSM}	Maximum, peak one cycle, non repetitive forward current 10ms	30 A.
V_{FM}	Maximum peak forward voltage drop per diode, IFM = 1.0 A.	0.65 V
I_{RM}	Typical peak reverse current per diode at rated V_{RRM}	
	T_A = 25°C	2.0 mA
	T_A = 100°C	5.0 mA

OUTLINE



All dimensions in mm

VOLTAGE DATA

Type	V_{RRM} Volts	V_{RMS} Volts.
1BQ 20	20	14
1BQ 40	40	28

The current flow in a Schottky barrier rectifier is due to majority carrier conduction and is not affected by reverse transients due to stored charge and minority carrier injection as in conventional PN diodes. The Schottky barrier rectifier may be considered for purposes of circuit analysis, as an ideal diode in parallel with a variable capacitance equal in value to the junction capacitance. See Figure 1

THERMAL CONSIDERATIONS:

The derating curve of figure 2 may be used for initial design work.

Thermal runaway is entirely possible on marginal designs due to the inherently large reverse leakage of Schottky barrier rectifiers and the fact that reverse power multiplies about 1.32 times for each 5°C of junction temperature increase.

It is recommended that all designs be verified at an ambient temperature at least 10°C above the maximum at which the equipment will ever have to operate.

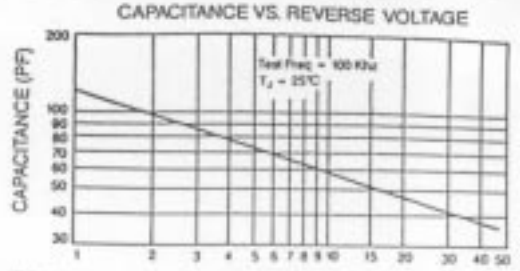


FIGURE 1

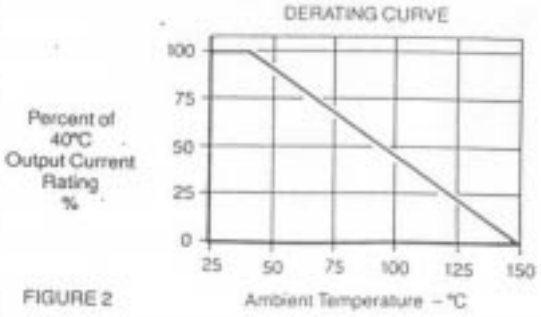


FIGURE 2

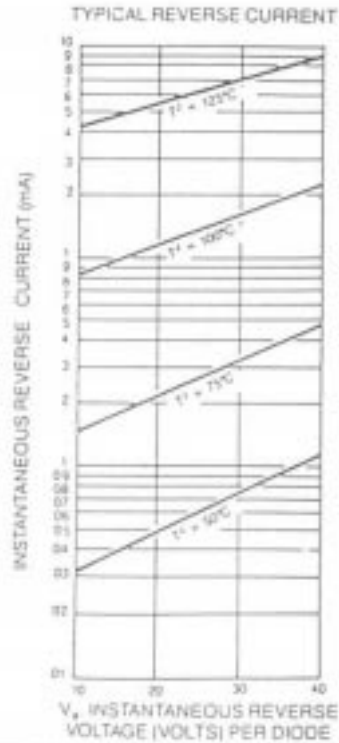


FIGURE 3

INTERNATIONAL RECTIFIER

IOR

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