

EP27122A

INTERNATIONAL RECTIFIER 

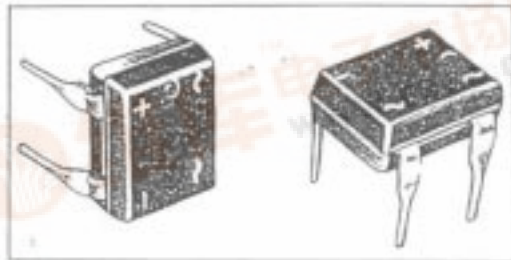
Provisional Data

1BQ SERIES

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

FEATURES

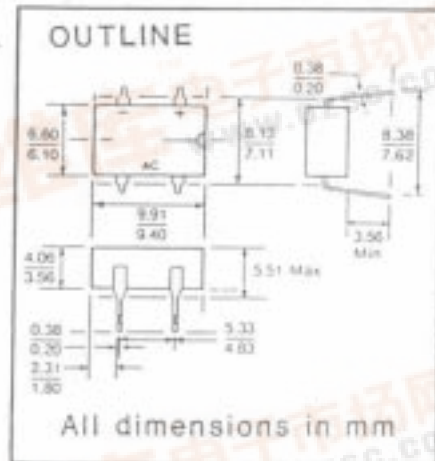
- Convenient DIP case design conforming to standard 0.1 inch lead spacing
- Wide operational and storage temperature ranges from -55°C to +150°C
- 20 volts and 40 volts VRRM
- 0.65 volts V_f @ 1.0 A per diode
- Moisture Resistant Epoxy Case



SPECIFICATIONS

ELECTRICAL RATINGS and CHARACTERISTICS

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



VOLTAGE DATA

Type	V_{RRM} Volts	V_{RRMS} 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.

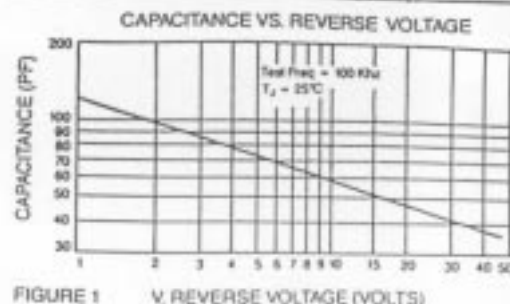


FIGURE 1 V. REVERSE VOLTAGE (VOLTS)

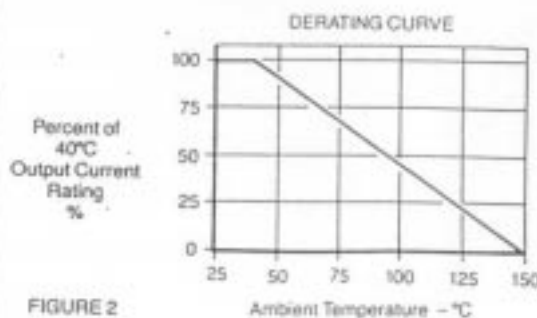


FIGURE 2

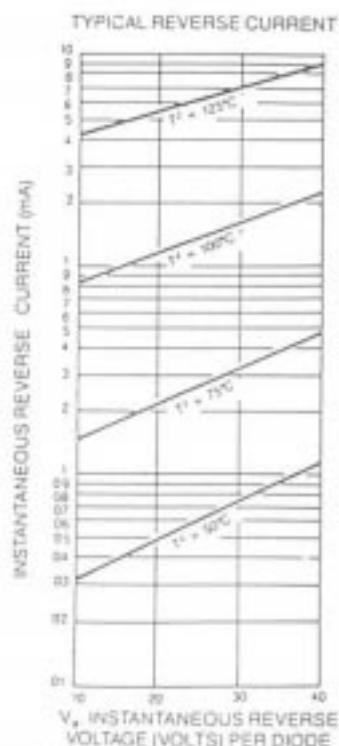


FIGURE 3

INTERNATIONAL RECTIFIER



WORLD HEADQUARTERS: 232 KANLAS BL., EL SEGUNDO, California 90245, USA. Tel: (213) 772-0000. Tlx: 4729403. Fax: (213) 772-9026.
EUROPEAN HEADQUARTERS: Hurst Green, OXTED, Surrey RH8 9BB, UK. Tel: (0883) 713215. Tlx: 95219. Fax: (0883) 714234

CANADA: 801 Bentley St., Markham, ONTARIO L3R 3L1. Tel: (416) 475-1887. Tlx: 06-966-650.
FRANCE: 123 Rue de Petit Vauc, 91360 EPINAY sur ORGE. Tel: (1) 64-54-83-29. Tlx: 609943. Fax: (1) 64-54-83-30.
GERMANY: Saarburgstr. 157, D-6300 BAD HOMBURG. Tel: (61) 72 37065. Tlx: 430404. Fax: (61) 72 37065.
ITALY: Via Liguoria 48, 20071 SUGARCO, Tel: (01) 470 14 84. Tlx: 221257. Fax: (01) 470 42 90.
JAPAN: Via Kaminaka 11, 21054 MILANO. Tel: (02) 34 07 9031 29 48.
SINGAPORE: Via Aurore 1, 40139 BOLOGNA. Tel: (051) 49 33 97.INDIA: 21 Greenacre, 5 Union Park, Khar P.W., BOMBAY 400 052. Tel: (022) 536065/537795-40242. Tlx: 011-71481.

K & H BANG, 2F, 3-30-4 Nishi-Shinjuku, Shinjuku-ku, TOKYO, Japan 171. Tel: (03) 963 0641. Fax: (03) 963 0642.
SINGAPORE: 190 Middle Road, HEX 40-01 Fortune Centre, SINGAPORE 0718. Tel: (65) 336 3822/337 4689/336 6290.
Fax: (65) 337 4680.
SWEDEN: Box 98, S-462 12 Västerås, STOCKHOLM. Tel: (08) 870025. Tlx: 12184. Fax: (08) 874242.

U.S.A.: 2401 Plum Grove Rd., Suite 111, PALATKA, IL 60067. Tel: (312) 297 0002. Fax: (312) 297 0114.
CENTRAL ZONE: 71 Grand Ave., PALISADES PARK, NJ 07650. Tel: (201) 943-4554. Tlx: 12-5477. Fax: (201) 943-5754.
EASTERN ZONE:

Sales Offices, Agents, and Distributors in Major Cities throughout the World.

In the event of a change of ownership, INTERNATIONAL RECTIFIER reserves the right to change specifications at any time without notice.