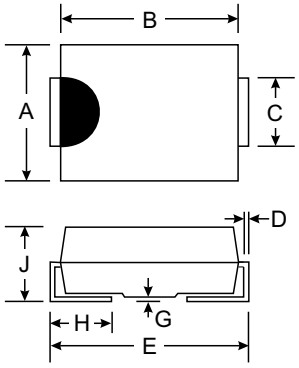
B140N

1.0A SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

ADVANCE INFORMATION

Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- Ideally Suited for Automatic Assembly
- Low Power Loss, High Efficiency
- Surge Overload Rating to 70A Peak
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Application
- Plastic Material - UL Flammability Classification 94V-0



SMA		
Dim	**Min**	**Max**
A	2.29	2.92
B	4.00	4.60
C	1.27	1.63
D	0.15	0.31
E	4.80	5.59
G	0.10	0.20
H	0.76	1.52
J	2.01	2.62
All Dimensions in mm		

Mechanical Data

- Case: Molded Plastic
- Terminals: Solder Plated Terminal - Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band or Cathode Notch
- Approx. Weight: 0.064 grams
- Mounting Position: Any
- Marking: Type Number

Maximum Ratings @ T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	B140N	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	40	V
RMS Reverse Voltage	$V_{R(RMS)}$	28	V
Average Rectified Output Current (Note 3)	I_O	1.0	A
Non-Repetitive Peak Forward Surge Current, single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	70	A
Typical Junction Capacitance (Note 2)	C_j	60	pF
Typical Thermal Resistance Junction to Terminal (Note 1)	$R_{\theta JT}$	20	K/W
Operating and Storage Temperature Range	$T_{j, TSTG}$	-40 to +125	°C

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Typ	Max	Unit	Conditions
Forward Voltage	V_{FM}	0.48	0.55	V	I_F = 1.0A
Peak Reverse Current	I_{RM}	0.005	0.1	mA	V_R = 40V

Notes: 1. Thermal Resistance: Junction to terminal, unit mounted on PC board with 5.0 mm^2 (0.013 mm thick) copper pads as heat sink..
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
3. When mounted on a PC board.

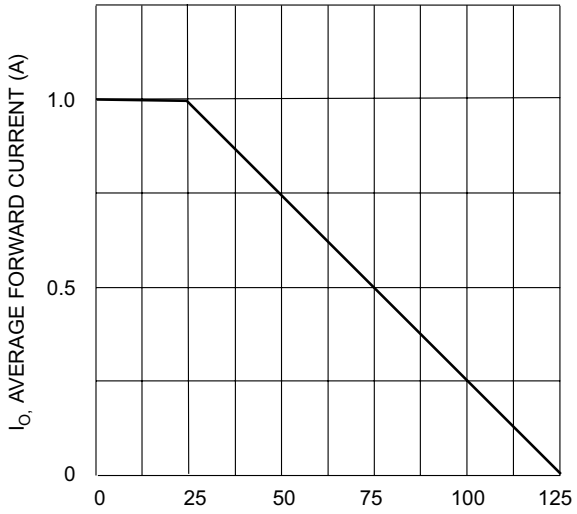


Fig. 1 Forward Current Derating Curve

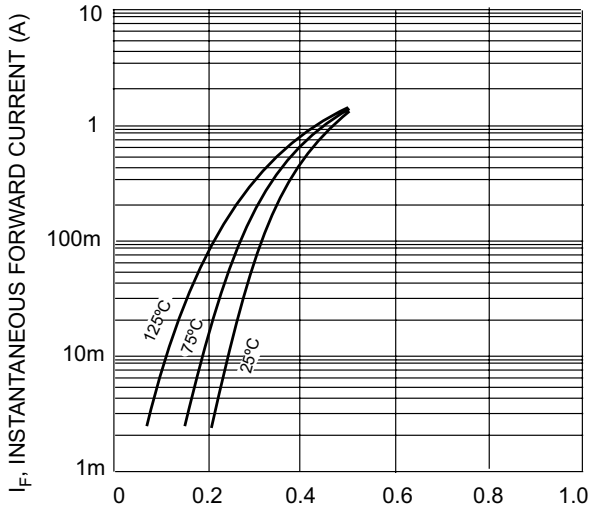


Fig. 2 Typical Forward Characteristics

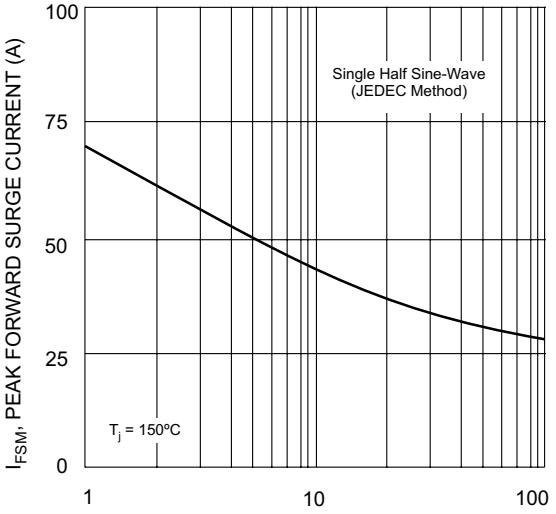


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

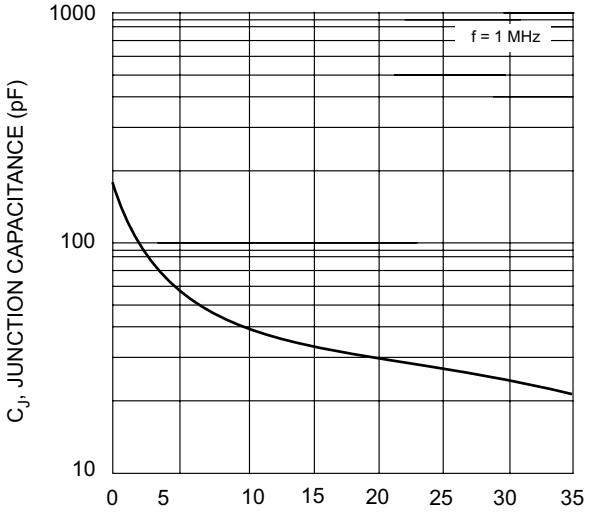


Fig. 4 Typical Junction Capacitance

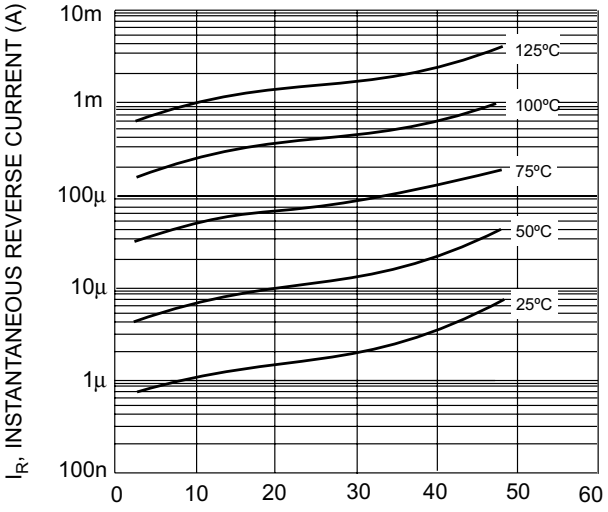


Fig. 5 Typical Reverse Characteristics