

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE: 20 --- 60 V
CURRENT: 1.0 A

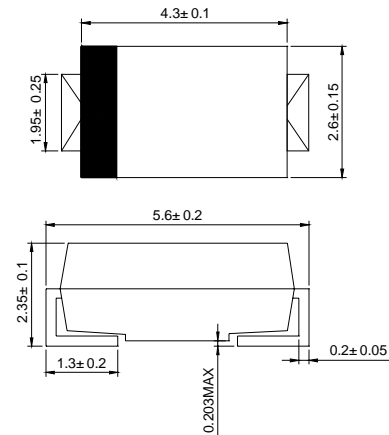
FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Metal silicon junction, majority carrier conduction
- High surge capability
- Low power loss, high efficiency
- For use in low voltage high frequency inverters, free wheeling and polarity protection applications
- Guardring for overvoltage protection
- High temperature soldering guaranteed: 250°C/10 seconds at terminals

MECHANICAL DATA

- Case: JEDEC SMAJ, molded plastic over passivated chip
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end

SMAJ



Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

		B120J	B130J	B140J	B150J	B160J	UNITS
Device marking code		B120	B130	B140	B150	B160	
Maximum recurrent peak reverse voltage	V_{RRM}	20	30	40	50	60	V
Maximum RMS voltage	V_{RWS}	14	21	28	35	42	V
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	V
Maximum average forward rectified current at T_c (SEE FIG.1)	$I_{(AV)}$	1.0					A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30.0					A
Maximum instantaneous forward voltage at 1.0A (NOTE.1)	V_F	0.5		0.7			V
Maximum DC reverse current (NOTE.1) @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$	I_R	0.5 10.0					mA
Typical thermal resistance (NOTE. 2)	R_{JA}	88.0					°C/W
	R_{JL}	20.0					
Storage temperature range Operating junction and storage temperature range	T_j	- 55 --- +125					°C
Storage temperature range	T_{STG}	- 55 --- +150					°C

NOTE: 1. Pulse test: 300 μs pulse width, 1% duty cycle

2. P.C.B. mounted with 0.2" x 0.2" (5.0 x 5.0 mm²) copper pad areas

FIG.1 – FORWARD DERATING CURVE

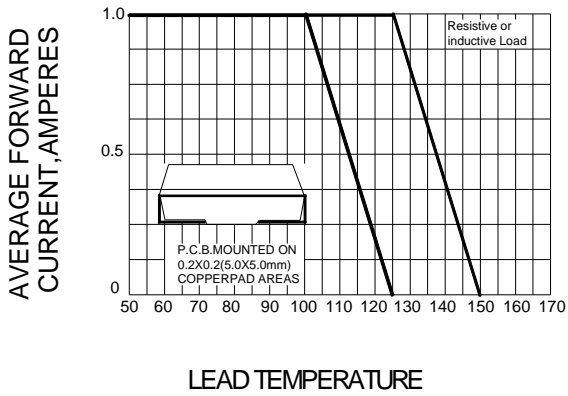


FIG.2– PEAK FORWARD SURGE CURRENT

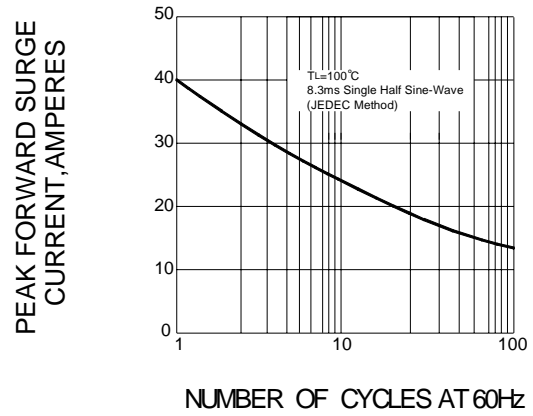


FIG.3 – TYPICAL FORWARD CHARACTERISTICS

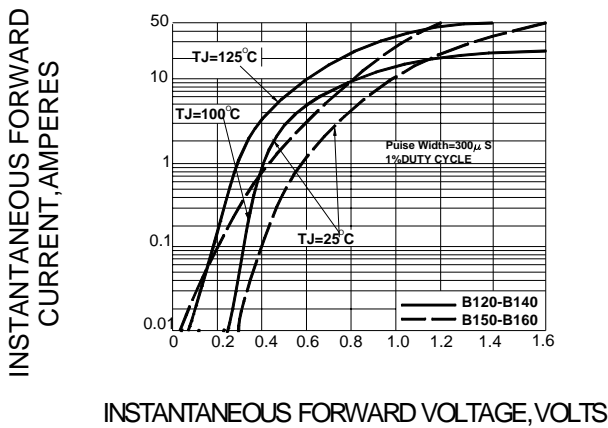


FIG.4 – TYPICAL REVERSE CHARACTERISTICS

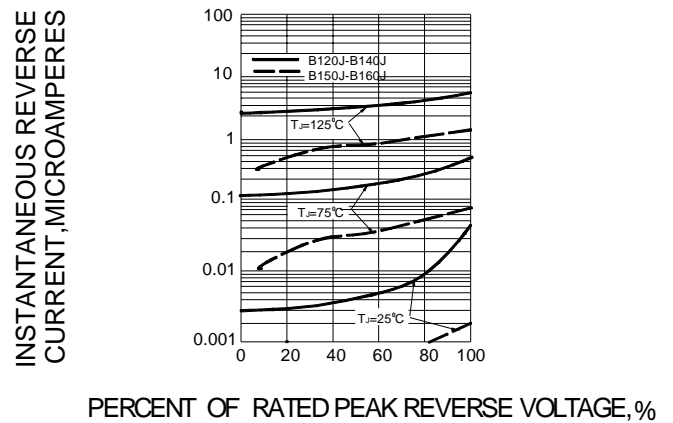


FIG.5–TYPICAL JUNCTION CAPACITANCE

