

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE: 20 --- 60 V
CURRENT: 5.0 A

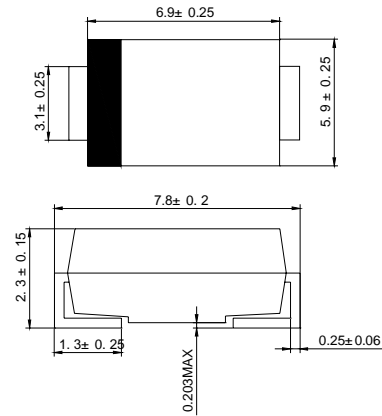
FEATURES

- Plastic package has Underwriters Laborator Flammability Classification 94V-0
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Metal silicon junction, majority carrier conduction
- High surge capability
- High current capability, low forward voltage drop
- 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 DO-214AB, molded plastic over passivated chip
- Terminals: Solder Plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.007 ounces, 0.21 gram

DO - 214AB(SMC)



Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

		B520C	B530C	B540C	B550C	B560C	UNITS
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_L (SEE FIG. 1) (NOTE 2)	$I_{(AV)}$	5.0					A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	175.0					A
Maximum instantaneous forward voltage at 5.0A (NOTE 1)	V_F	0.50			0.70		V
Maximum DC reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage (NOTE 1) @ $T_A=100^\circ\text{C}$	I_R	0.5					mA
		20					
Typical thermal resistance (NOTE 2)	R_{JA}	50.0					$^\circ\text{C/W}$
	R_{JL}	10.0					
Operating junction and storage temperature range	T_{STG}	-65 --- +150					$^\circ\text{C}$
Storage temperature range	T_J	-65 --- +150			-65 --- +150		$^\circ\text{C}$

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

2. P.C.B. mounted with 0.55"X0.55" (14.0X14.0mm²) copper pad areas

FIG.1 – FORWARD DERATING CURVE

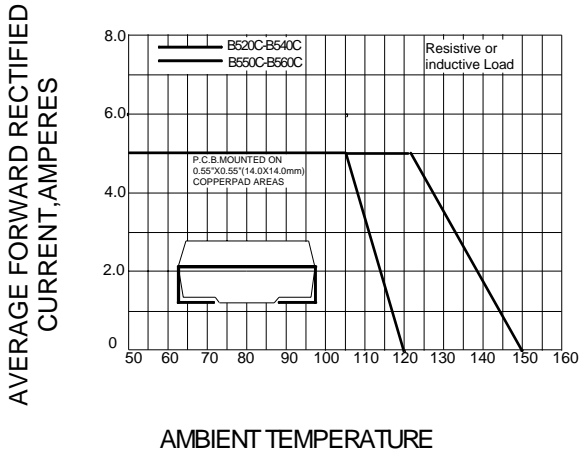


FIG.2- PEAK FORWARD SURGE CURRENT

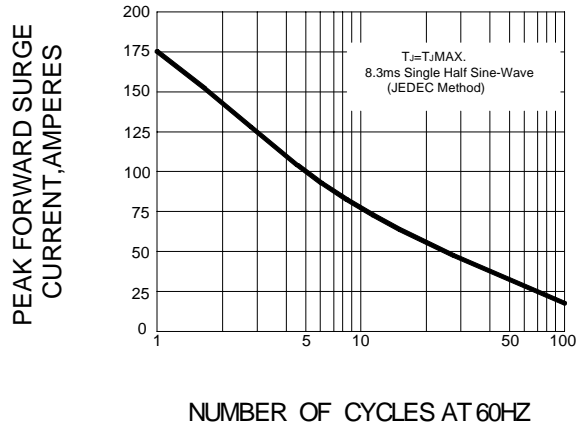


FIG.3 – TYPICAL FORWARD CHARACTERISTICS

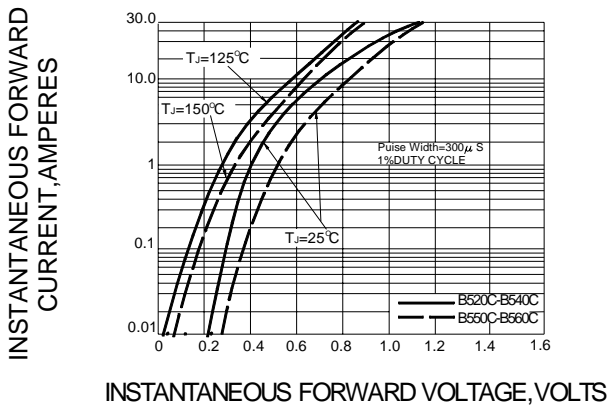


FIG.4 – TYPICAL REVERSE CHARACTERISTICS

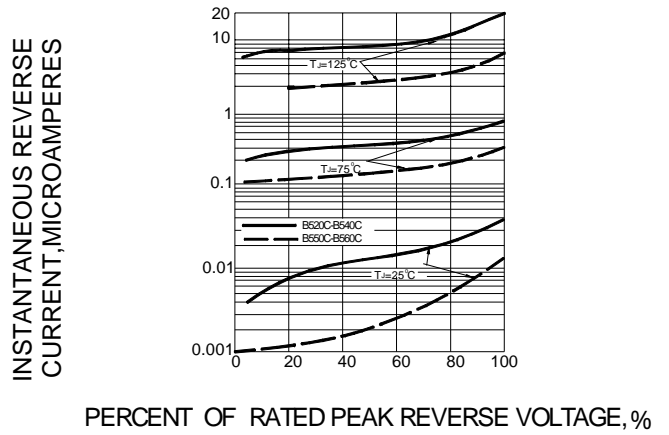


FIG.5-TYPICAL JUNCTION CAPACITANCE

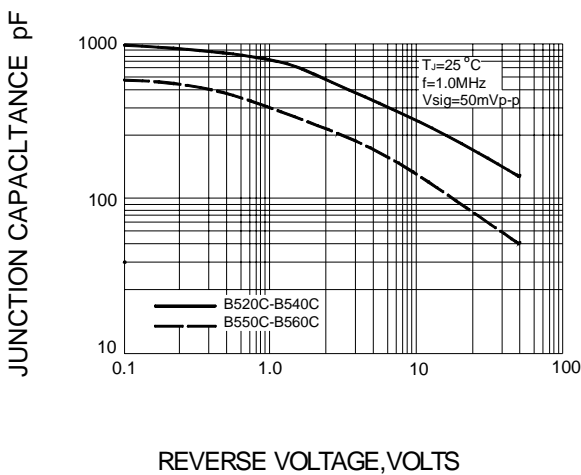


FIG.6- TYPICAL TRANSIENT THERMAL IMPEDANCE

