

# B520C-B560C

Surface Mount Schottky Barrier Rectifiers

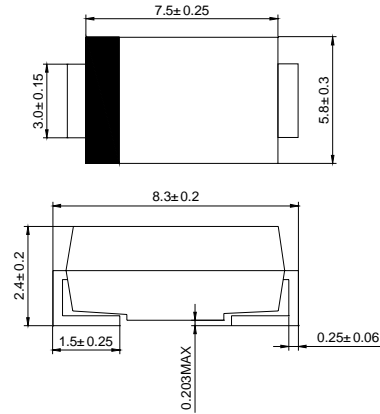


**REVERSE VOLTAGE: 20 --- 60 V**  
**CURRENT: 5.0 A**

**DO - 214AB(SMC)**

## 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



Dimensions in millimeters

## Mechanical Data

- Case: JEDEC DO-214AB, molded plastic over passivated chip
- Polarity: Color band denotes cathode end
- Weight: 0.007 ounces, 0.21 gram

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

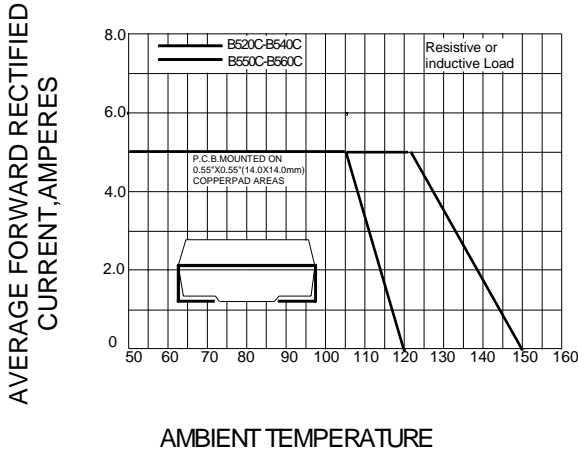
		B520C	B530C	B540C	B550C	B560C	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	20	30	40	50	60	V
Maximum RMS voltage	$V_{RWS}$	14	21	28	35	42	V
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	V
Maximum average forward rectified current at $T_L$ (SEE FIG. 1) (NOTE 2)	$I_{(AV)}$	5.0					A
Peak 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)	$R_{JA}$ $R_{JL}$	50.0 10.0					$^\circ\text{C}/\text{W}$
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  $\mu\text{s}$  pulse width, 1% duty cycle

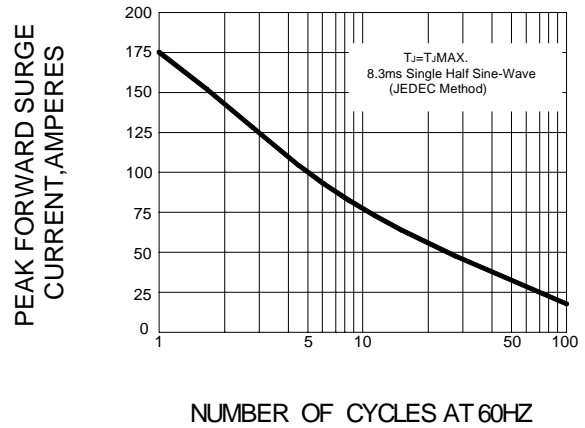
2. P.C.B. mounted with 0.55"X0.55" (14.0X14.0mm<sup>2</sup>) copper pad areas

### Ratings AND Characteristic Curves

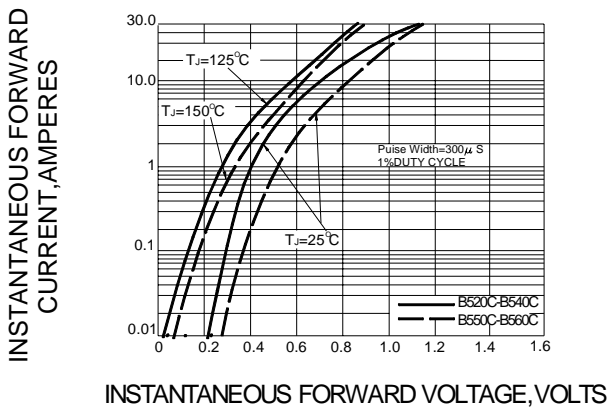
**FIG.1 – FORWARD DERATING CURVE**



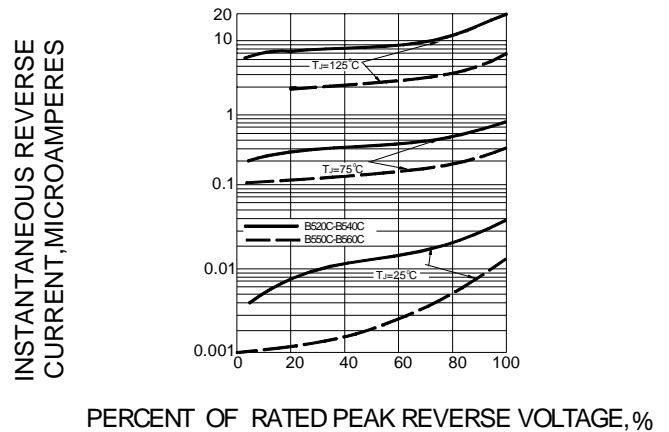
**FIG.2- PEAK FORWARD SURGE CURRENT**



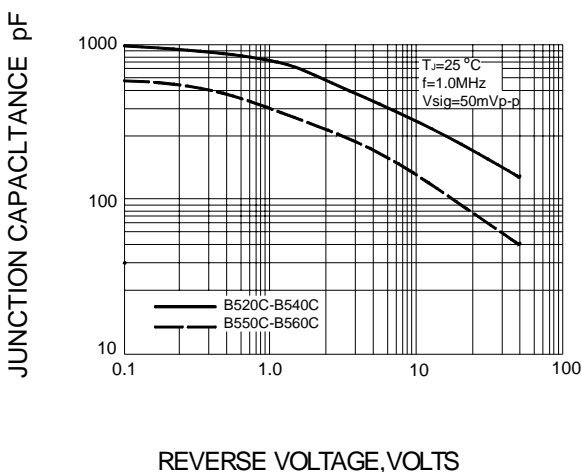
**FIG.3 – TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 – TYPICAL REVERSE CHARACTERISTICS**



**FIG.5-TYPICAL JUNCTION CAPACITANCE**



**FIG.6- TYPICAL TRANSIENT THERMAL IMPEDANCE**

