

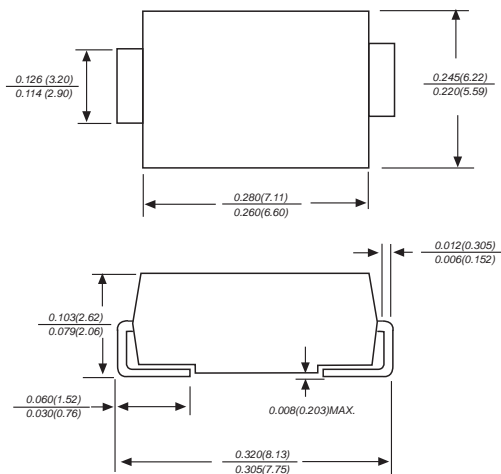


# B520C THRU B5200C

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 200 Volts Forward Current - 5.0 Amperes

### DO-214AB/SMC



Dimensions in inches and (millimeters)

### FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Low reverse leakage
- ◆ Built-in strain relief, ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 250°C/10 seconds at terminals

### MECHANICAL DATA

**Case:** JEDEC DO-214AB molded plastic body  
**Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.007 ounce, 0.25grams

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.  
 Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

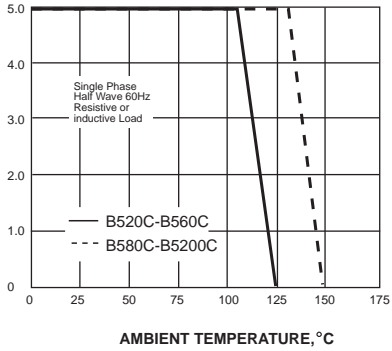
MDD Catalog Number	SYMBOLS	B520C	B530C	B540C	B550C	B560C	B580C	B5A0C	B5150C	B5200C	UNITS	
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	50	60	80	100	150	200	VOLTS	
Maximum RMS voltage	$V_{RMS}$	14	21	28	35	42	56	70	105	150	VOLTS	
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	80	100	150	200	VOLTS	
Maximum average forward rectified current at TL (see fig.1)	$I_{(AV)}$	5.0									Amps	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	150.0									Amps	
Maximum instantaneous forward voltage at 5.0A	$V_F$	0.55		0.70		0.85		0.95		Volts		
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	$I_R$	0.5						0.2		mA		
Typical junction capacitance (NOTE 1)	$C_J$	200									pF	
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	50.0									°C/W	
Operating junction temperature range	$T_J$	-50 to +125					-50 to +150					°C
Storage temperature range	$T_{STG}$	-50 to +150									°C	

**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
 2. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

# RATINGS AND CHARACTERISTIC CURVES B520C THRU B5200C

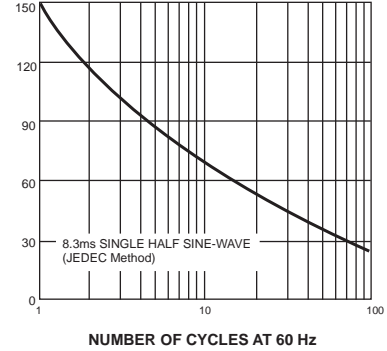
AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



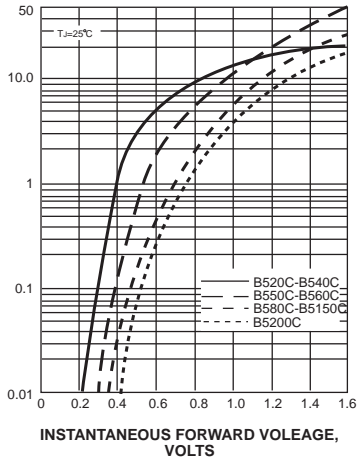
PEAK FORWARD SURGE CURRENT,  
AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



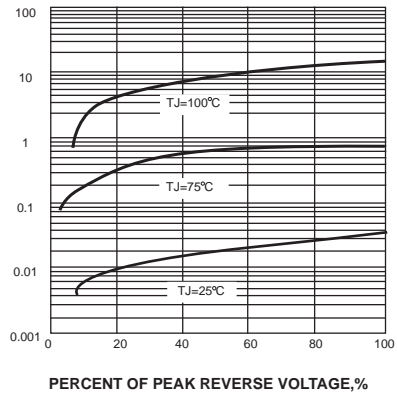
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



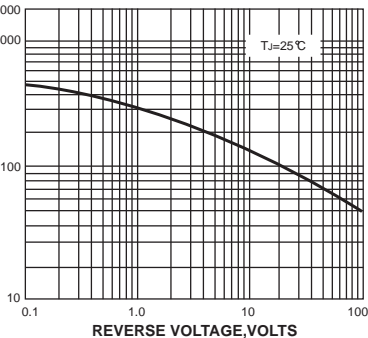
INSTANTANEOUS REVERSE CURRENT,  
MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,  
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

