

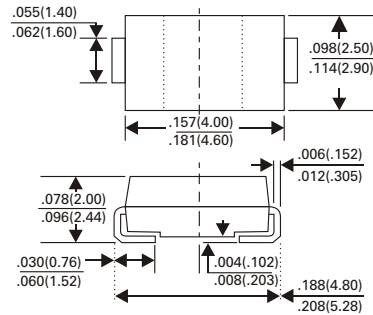
# B120L thru B140L

## LO VF SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

VOLTAGE - 20 TO 40 VOLTS CURRENT - 1.0 AMPERES



SMA/DO-214AC



Dimensions in inches and (millimeters)

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- For surface mount applications
- Low profile package
- Built-in strain relief
- Metal to silicon rectifier, majority carrier conduction
- Low power loss, high efficiency
- Easy pick and place
- High current capability, low VF
- High surge capacity
- For use in low voltage high frequency inverters, Free wheeling, and protection applications
- High temperature soldering guaranteed :
- High temperature soldering :  
260°C/10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHs Environment substance directive request

### MECHANICAL DATA

Case : JEDEC DO-214AC molded plastic  
 Terminals : Solder plated, solderable per MIL-STD-750, Method 2026  
 Polarity : Color band denotes cathode  
 Standard Package : 12mm tape (EIA STD EIA-481)  
 Weight : 0.002 ounce, 0.064gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified  
 Resistive or inductive load

	SYMBOL	B120L	B130L	B140L	UNITS
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	20	30	40	Volts
Maximum RMS Voltage	$V_{RMS}$	14	21	28	Volts
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	Volts
Maximum Average Forward Rectified Current at $T_L$ (see Figure 1)	$I_{(AV)}$	1.0			Amps
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	30			Amps
Maximum Instantaneous Forward Voltage at 1.0A (Note 1)	$V_F$	0.38		0.4	Volts
Maximum DC Reverse Current (NOTE 1) $T_A=25^{\circ}C$ (Note 1) at Rated DC Blocking Voltage $T_A=100^{\circ}C$	$I_R$	0.5 20			mA
Maximum Thermal Resistance (NOTE 2)	$R_{\theta JL}$ $R_{\theta JA}$	28 88			$^{\circ}C / W$
Operating Junction Capacitance Range	$T_J$	-50 to +150			$^{\circ}C$
Storage and Operating Temperature Range	$T_{STG}$	-50 to +150			$^{\circ}C$

NOTES :

1. Pulse test with  $p_w=300$  sec, 1% duty cycle
2. Measured on P.C.B WITH 5.0mm<sup>2</sup> (0.13mm thick ) copper pad areas

# B120L thru B140L

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### RATING AND CHARACTERISTICS CURVES B120L THRU B140L

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

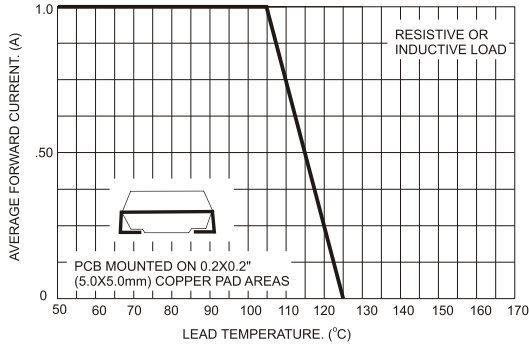


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

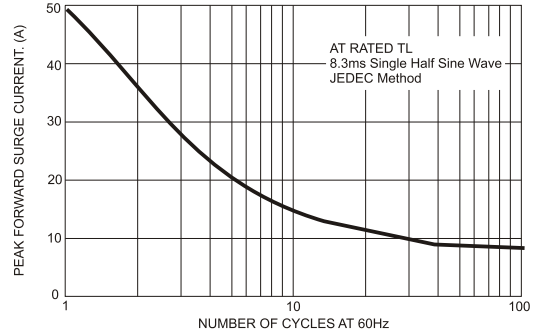


FIG.3- TYPICAL FORWARD CHARACTERISTICS

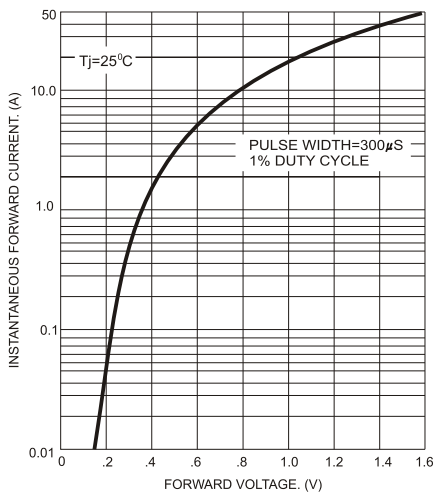


FIG.4- TYPICAL REVERSE CHARACTERISTICS

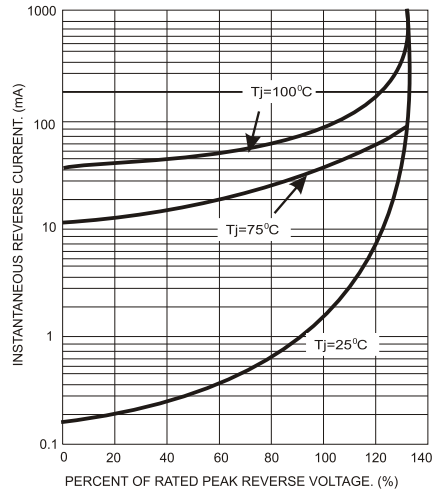


FIG.5- TYPICAL JUNCTION CAPACITANCE

