

**RoHS  
Compliant**



## Features:

- 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
- Guard Ring for over voltage protection
- High Temperature Soldering Guaranteed : 250°C/10 Seconds At Terminals

## Mechanical Data

- Case: JEDEC DO-214AC, molded plastic over passivated chip
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Colour band denotes cathode end
- Weight : 0.002oz, 0.064g

## Maximum Ratings and Thermal Characteristics

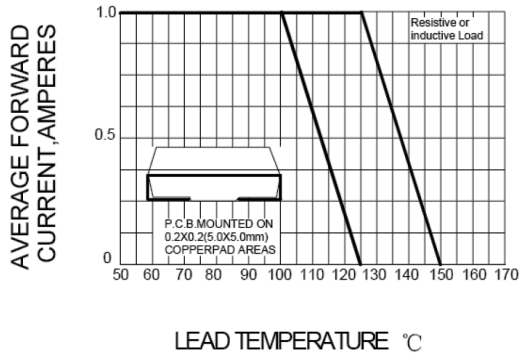
Ratings at 25°C ambient temperature unless otherwise specified

Characteristic	Symbol	B120-13-F	B130-13-F	B140-13-F	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	V
Maximum RMS voltage	$V_{RWS}$	14	21	28	V
Maximum DC blocking voltage	$V_{DC}$	20	30	40	V
Maximum average forward rectified current at $T_L = \text{See Fig. 1.}$	$I_{F(AV)}$	1			A
Peak forward surge current 8.3ms single half-sine-wave	$I_{FSM}$	30			A
Maximum instantaneous forward voltage at $I_{FM} = 1A$ (Note 1)	$V_F$	0.5			V
Maximum DC reverse current (Note 1) $T_A = 25^\circ C$ at rated DC blocking voltage $T_A = 100^\circ C$	$I_R$	0.5 10			mA
Typical thermal resistance (Note 2)	$R_{\theta JA}$ $R_{\theta JL}$	88 20			$^\circ C/W$
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +125			$^\circ C$

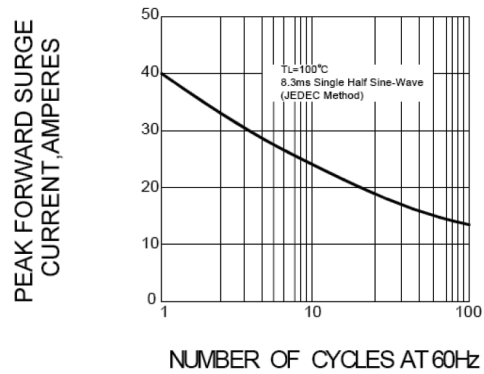
### Notes:

- (1) Pulse test: 300µs pulse width, 1% duty cycle.
- (2) PCB mounted with 0.2" x 0.2" (5 x 5mm<sup>2</sup>) copper pad areas.

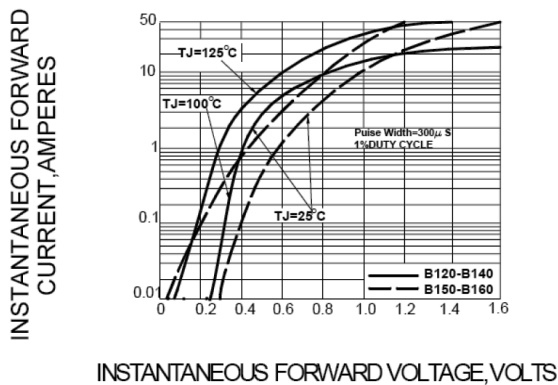
**FIG.1 – FORWARD DERATING CURVE**



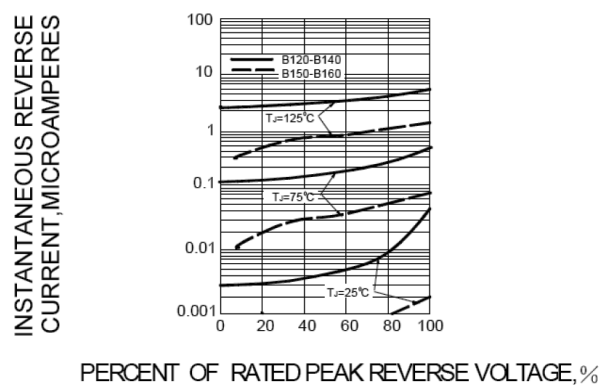
**FIG.2– PEAK FORWARD SURGE CURRENT**



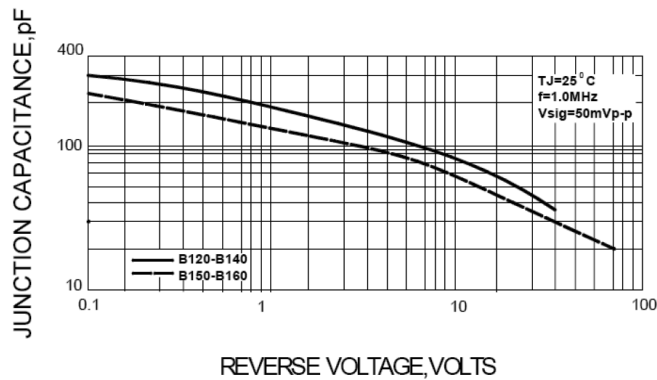
**FIG.3 – TYPICAL FORWARD CHARACTERISTICS**



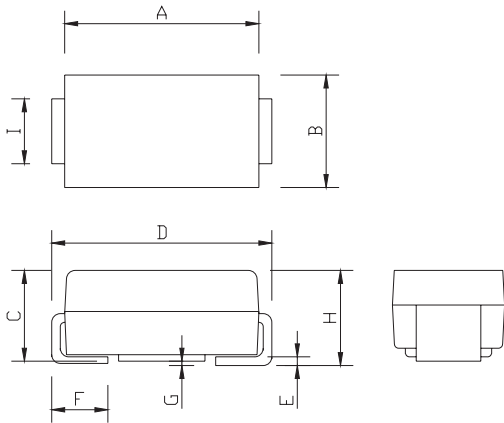
**FIG.4 -- TYPICAL REVERSE CHARACTERISTICS**



**FIG.5–TYPICAL JUNCTION CAPACITANCE**



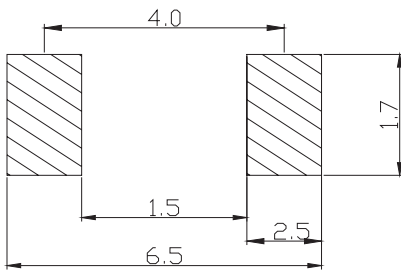
## Package Outline Dimensions



DO-214AC(SMA)		
Dim.	Min.	Max.
A	4.25	4.65
B	2.4	2.8
C	1.85	2.15
D	4.85	5.35
E	0.2 Typ.	
F	0.9	1.5
G	0.2 Max.	
H	1.9	2.3
I	1.35	1.65

Dimensions : Millimetres

## Soldering Footprint



Dimensions : Millimetres

## Package Information

Device	Package	Shipping
B120 -13-F B130 -13-F B140 -13-F	DO-214AC(SMA)	5,000 / Tape & Reel

## Part Number Table

Description	Part Number
Schottky Barrier Rectifier	B120-13-F
	B130-13-F
	B140-13-F

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