

Schottky Barrier Rectifier



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) $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 100^\circ\text{C}$	I_R	0.5 10			mA
Typical thermal resistance (Note 2)	$R_{\theta JA}$ $R_{\theta JL}$	88 20			$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +125			$^\circ\text{C}$

Notes:

- (1) Pulse test: 300 μ s pulse width, 1% duty cycle.
(2) PCB mounted with 0.2" $\times$ 0.2" (5 $\times$ 5mm²) copper pad areas.

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FIG.1 – FORWARD DERATING CURVE

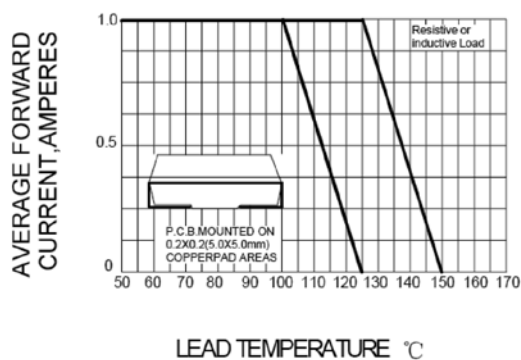


FIG.2– PEAK FORWARD SURGE CURRENT

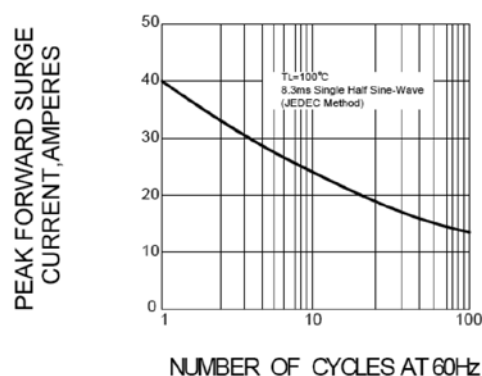


FIG.3 – TYPICAL FORWARD CHARACTERISTICS

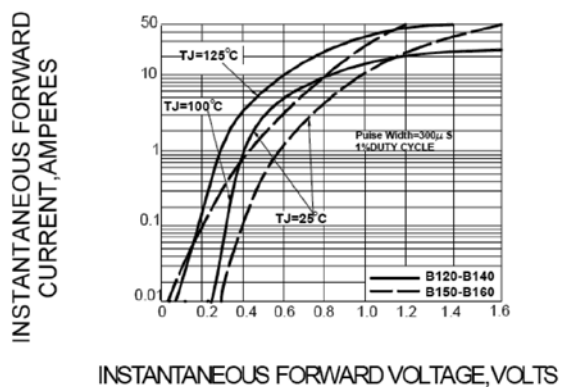


FIG.4 -- TYPICAL REVERSE CHARACTERISTICS

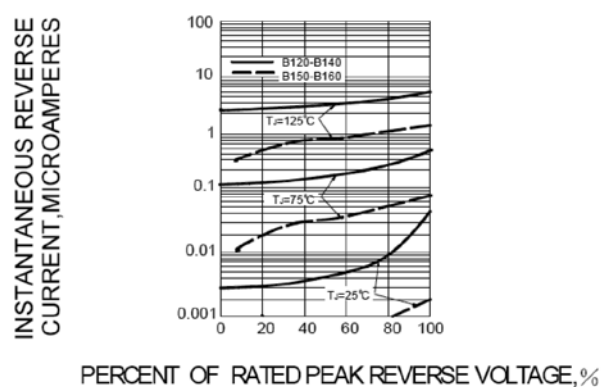
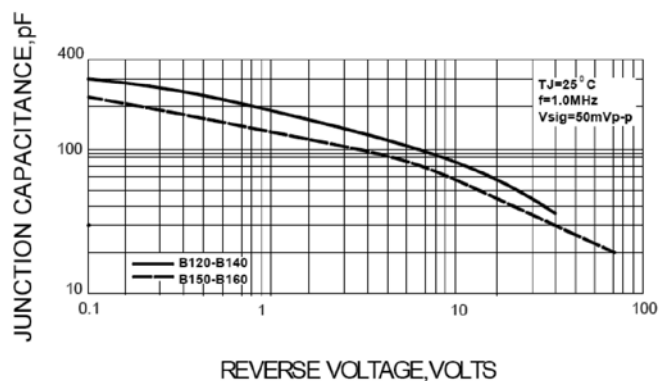
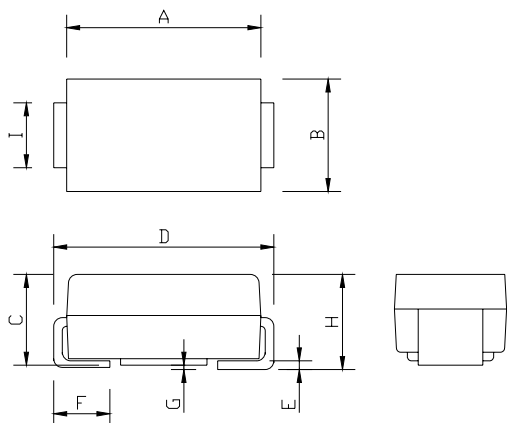


FIG.5–TYPICAL JUNCTION CAPACITANCE



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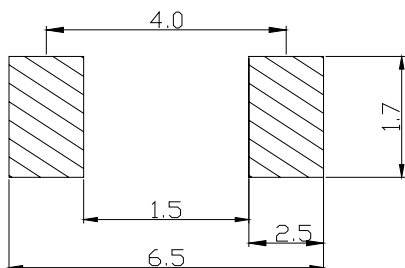
Package Outline Dimensions



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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