

# 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 SMC, molded plastic over passivated chip
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Colour band denotes cathode end
- Weight : 0.007oz, 0.21g

## Maximum Ratings and Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified

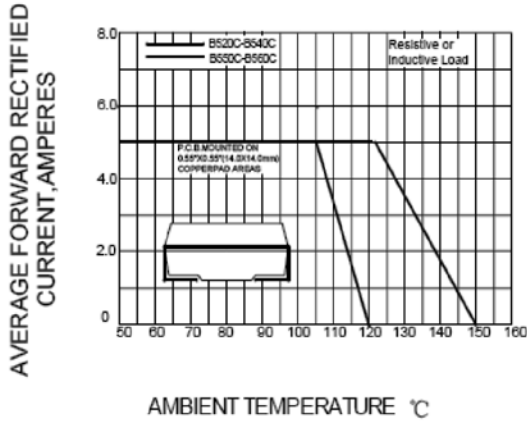
Characteristic	Symbol	B540C-13-F	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	40	V
Maximum RMS voltage	$V_{RWS}$	28	V
Maximum DC blocking voltage	$V_{DC}$	40	V
Maximum average forward rectified current at $T_L$ =See Fig. 1 (Note 1)	$I_{F(AV)}$	5	A
Peak forward surge current 8.3ms single half-sine-wave	$I_{FSM}$	175	A
Maximum instantaneous forward voltage at 5A (Note 1)	$V_F$	0.5	V
Maximum DC reverse current at $T_A = 25^\circ\text{C}$ at rated DC blocking voltage at $T_A = 100^\circ\text{C}$ (Note 1)	$I_R$	0.5 20	mA
Typical thermal resistance (Note 2)	$R_{\theta JA}$ $R_{\theta JL}$	50 10	$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +125	$^\circ\text{C}$

### Notes:

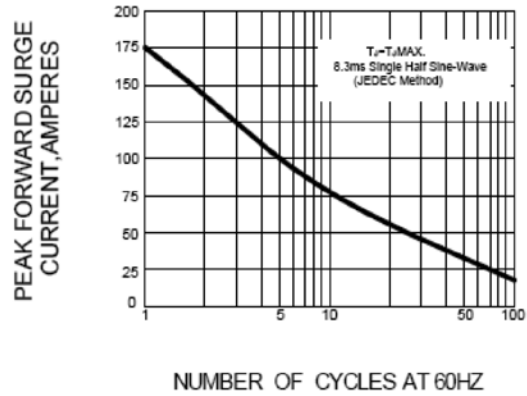
- (1) Pulse test: 300 $\mu\text{s}$  pulse width, 1% duty cycle.
- (2) PCB mounted with 0.55"  $\times$  0.55" (14  $\times$  14mm<sup>2</sup>) copper pad areas.

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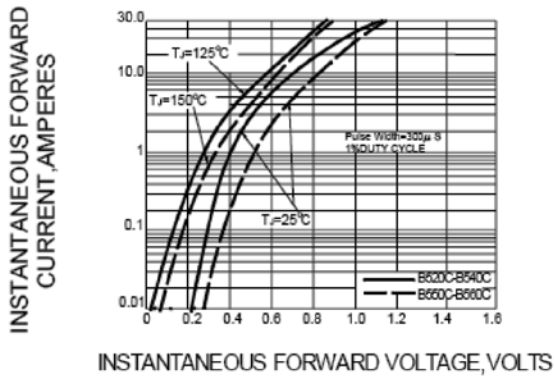
**FIG.1 -- FORWARD DERATING CURVE**



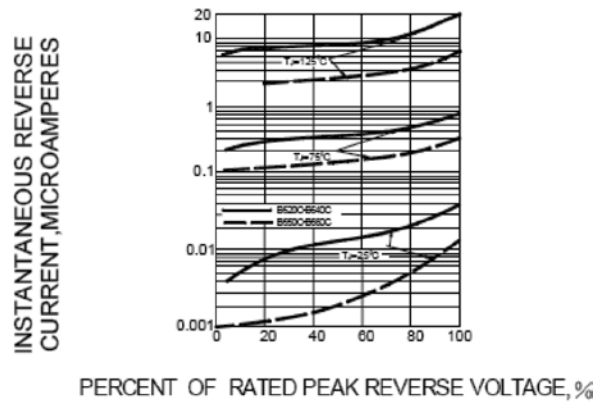
**FIG.2-- PEAK FORWARD SURGE CURRENT**



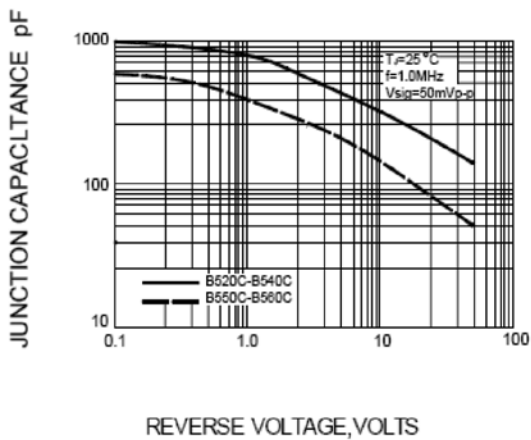
**FIG.3 -- TYPICAL FORWARD CHARACTERISTICS**



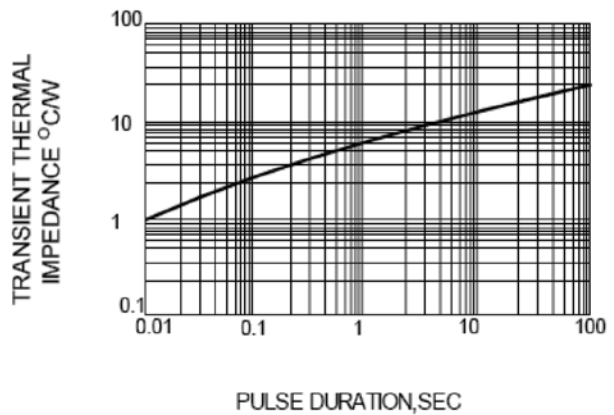
**FIG.4 -- TYPICAL REVERSE CHARACTERISTICS**



**FIG.5-TYPICAL JUNCTION CAPACITANCE**

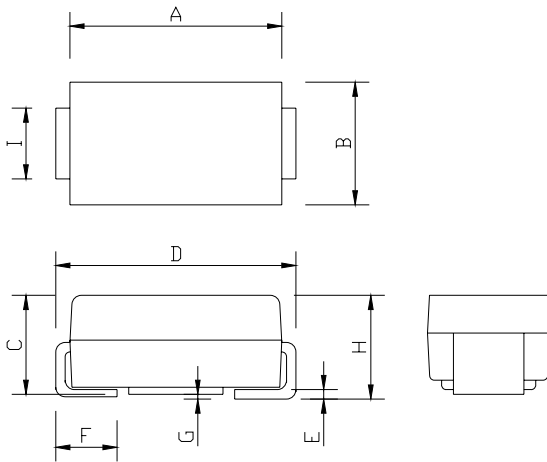


**FIG.6-- TYPICAL TRANSIENT THERMAL IMPEDANCE**



# Schottky Barrier Rectifier

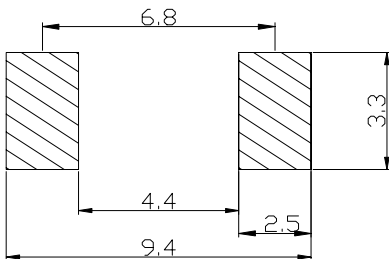
## Package Outline Dimensions



DO-214AB(SMC)		
Dim.	Min.	Max.
A	6.7	7.1
B	5.7	6.1
C	2.1	2.4
D	7.55	8.05
E	0.25 Typ.	
F	1	1.6
G	0.2 Max.	
H	2.15	2.45
I	2.85	3.15

Dimensions : Millimetres

## Soldering Footprint



Dimensions : Millimetres

## Package Information

Device	Package	Shipping
B540C-13-F	DO-214AB(SMC)	3,000 / Tape & Reel

## Part Number Table

Description	Part Number
Schottky Barrier Rectifier	B540C-13-F

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