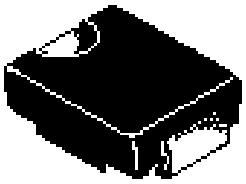
Semiconductor

Data Sheet

3.0 Amp SCHOTTKY BARRIER RECTIFIERS

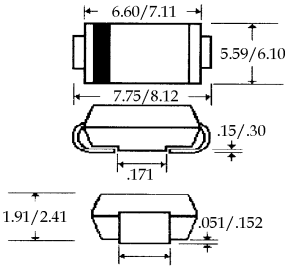
SMC320...3100 Series

Description



Mechanical Dimensions

DO-214AB
(SMC)



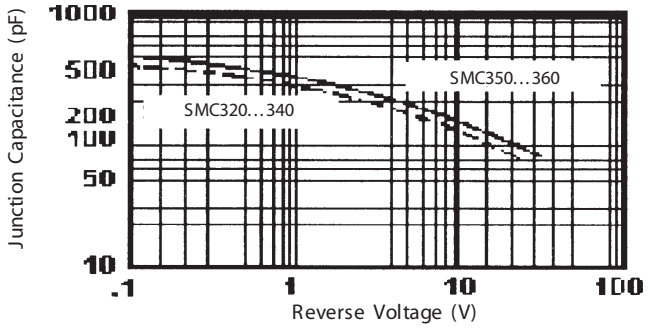
(Dimensions in mm)

Features

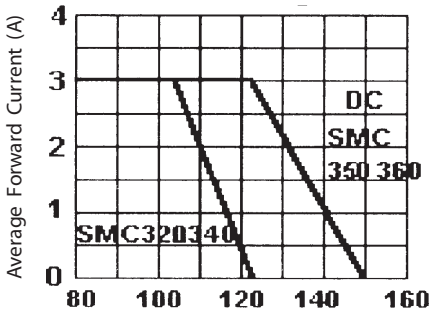
- EXTREMELY LOW V_F
- LOW STORAGED CHARGE
- LOW POWER LOSS – HIGH EFFICIENCY
- MAJORITY CARRIER CONDUCTION
- MEETS UL SPECIFICATION 94V-0

	SMC320 . . . 3100 Series						Units
Maximum Ratings	SMC320	SMC330	SMC340	SMC350	SMC360	SMC3100	
Peak Repetitive Reverse Voltage...V_{RRM}	20	30	40	50	60	100	Volts
Working Peak Reverse Voltage...V_{RWM}	20	30	40	50	60	100	Volts
DC Blocking Voltage...V_{DC}	20	30	40	50	60	100	Volts
RMS Reverse Voltage...$V_{R(rms)}$	14	21	28	35	42	70	Volts
Average Forward Rectified Current...$I_{F(av)}$	3.0						Amps
Non-Repetitive Peak Forward Surge Current...I_{FSM}	100						Amps
Operating Temperature Range...T_J	< -65 to 125					> -65 to 150	°C
Storage Temperature Range...T_{STRG}	< -65 to 125					> -65 to 150	°C
Electrical Characteristics							
Maximum Forward Voltage...V_F (Note 2)	.50	.50	.55	.70	.70	.85	Volts
Maximum DC Reverse Current...I_R @ Rated DC Blocking Voltage T_C = 25°C	0.5						mAmps
T_C =100°C	20						mAmps
Typical Junction Capacitance...C_J	< 250			> < 360		> 200	pF
Typical Thermal Resistance...$R_{\theta JA}$	60						°C / W

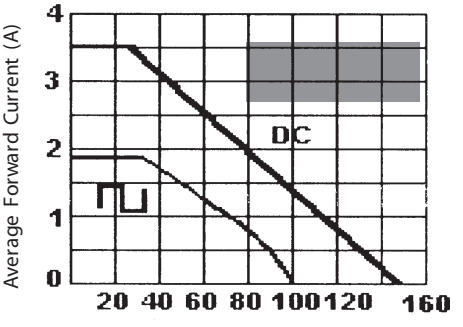
Typical Junction Capacitance



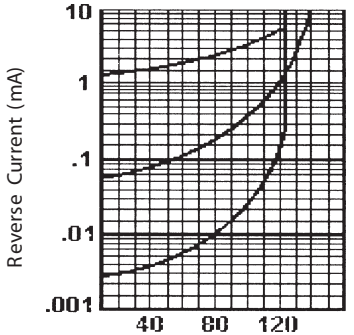
Forward Current Derating Curve



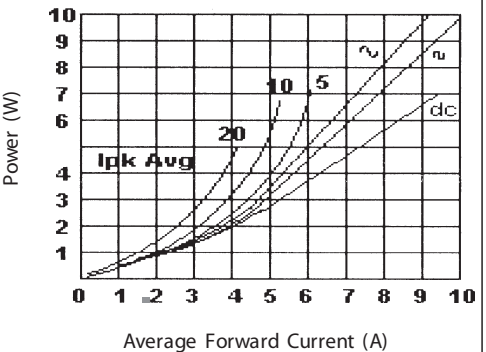
Forward Current Derating Curve



Typical Reverse Characteristics



Average Power Dissipation



Ratings at 25 Deg. C ambient temperature unless otherwise specified.

Single Phase Half Wave, 60 Hz Resistive or Inductive Load.

For Capacitive Load, Derate Current by 20%.

NOTES: 1. Measured @ 1 MHz and applied reverse voltage of 4.0V.
2. Measured with Pulse Width = 300 mS, 2% Duty Cycle.