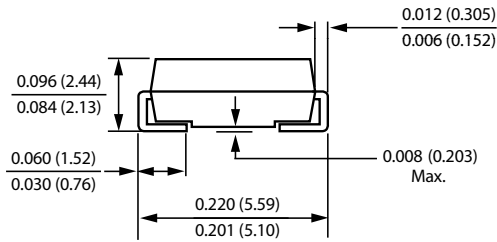
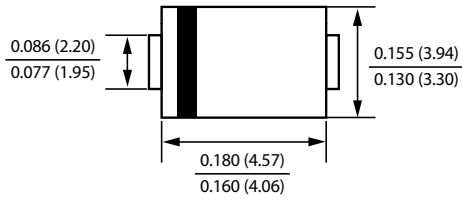




SM1020B thru SM10200B



Schottky Barrier Rectifiers



DO-214AA(SMB)

Dimensions in inches and (millimeters)



Ordering Information

Part Number	Remark
SM10xxB	General
SM10xxB-H	Halogen Free
SM10xxB-Q	Automotive

PRIMARY CHARACTERISTICS

I_F	10A
V_{RRM}	20~200V
I_{FSM}	150A
V_F	0.55V, 0.70V, 0.85V, 0.92V
$T_J \text{ max}$	125°C, 150°C

Features

- Low profile package
- Ideal for automated placement
- Guard Ring for over voltage protection
- Low forward voltage drop
- Component in accordance to RoHS 2002/95/EC
- AEC-Q101 qualified

Mechanical Data

- Case: DO-214AA (SMB)
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals: Lead Free Plating (Tin Finish). Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.095 grams (approximate)

MAXIMUM RATINGS (TA=25°C unless otherwise noted)

PARAMETER	SYMBOL	SM10 20B	SM10 30B	SM10 40B	SM10 50B	SM10 60B	SM10 80B	SM10 100B	SM10 150B	SM10 200B	UNIT	
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	80	100	150	200	V	
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	56	70	105	140	V	
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	80	100	150	200	V	
Maximum average forward rectified current	I_F	10.0									A	
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	150.0									A	
Maximum Instantaneous Forward Voltage $I_F=10A @ 25^\circ C$	V_F	0.55			0.70		0.85		0.92		V	
Maximum DC Reverse Current @ $T_c=25^\circ C$ at Rated DC Blocking Voltage @ $T_c=100^\circ C$	I_R	0.5 10					0.2 5.0					mA
Typical Junction Capacitance(NOTE1)	C_j	450			310		300		200		pF	
Typical Thermal Resistance	$R_{\theta Ja}$ $R_{\theta Jc}$	80 50									°C/W	
Operating Temperature Range	T_J	-55 to +125					-55 to +150					°C
Storage Temperature Range	T_{STG}	-55 to +150										°C

NOTES:

1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC
2. Device mounted on FR-4 substrate, 1"×1", 2oz, single-sided, PC boards with 0.1"×0.15" copper pad.



Schottky Barrier Rectifiers

FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

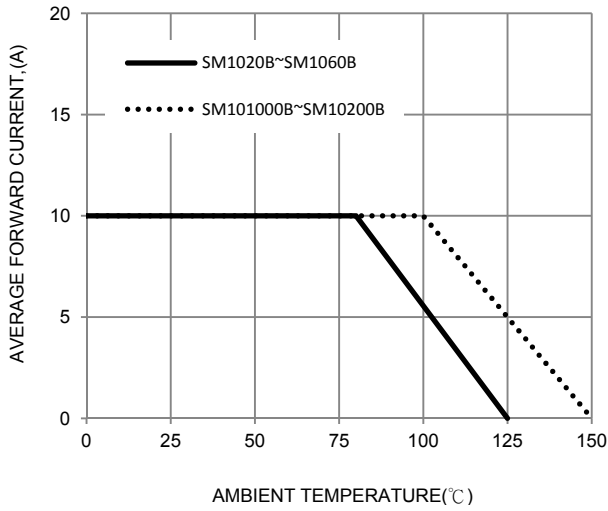


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

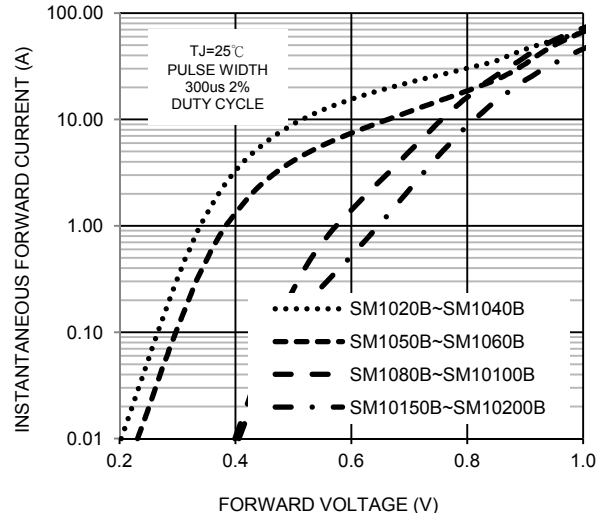


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

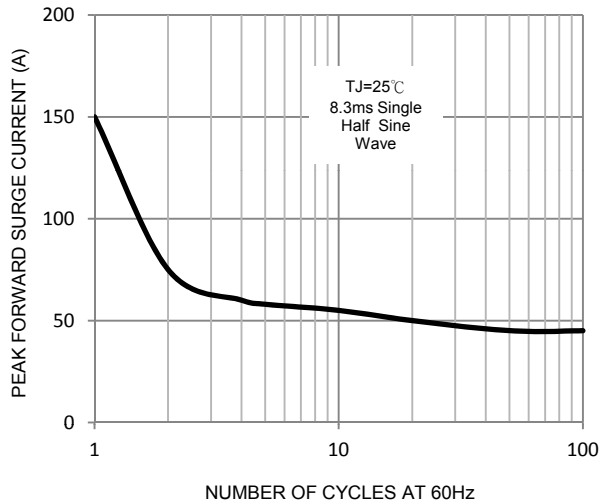


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

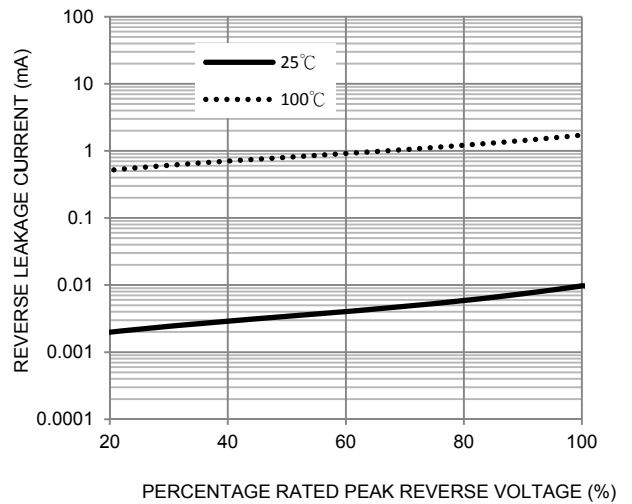


FIG. 5-TYPICAL JUNCTION CAPACITANCE

