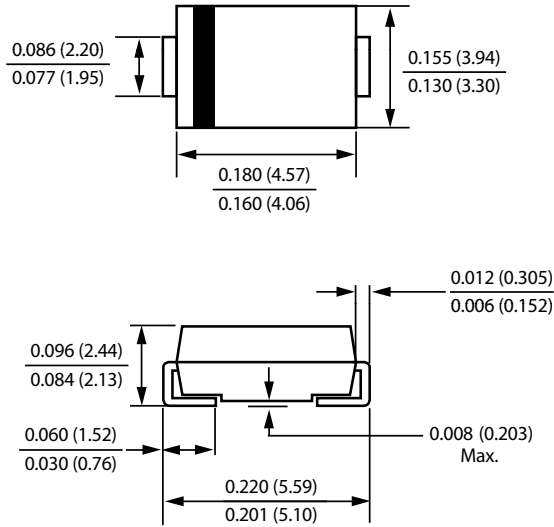




SM120B thru SM1200B



Schottky Barrier Rectifiers



DO-214AA(SMB)

Dimensions in inches and (millimeters)



Ordering Information

Part Number	Remark
SM1xxB	General
SM1xxB-H	Halogen Free
SM1xxB-Q	Automotive

PRIMARY CHARACTERISTICS

I_F	1A
V_{RRM}	20~200V
I_{FSM}	30A
V_F	0.50V, 0.70V, 0.85V, 0.87V, 0.90V
T_J 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	SM 120B	SM 130B	SM 140B	SM 150B	SM 160B	SM 180B	SM 1100B	SM 1150B	SM 1200B	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	1.0									A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	30.0									A
Maximum Instantaneous Forward Voltage IF=1A @ 25°C	V _F	0.50			0.70		0.85		0.87	0.90	V
Maximum DC Reverse Current @ Tc=25°C at Rated DC Blocking Voltage @ Tc=100°C	I _R	0.5 10					0.2 5.0			mA	
Typical Junction Capacitance(NOTE1)	C _j	90	70		60		50		35		pF
Typical Thermal Resistance	R _{θJa} R _{θJC}	90 60									°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.



FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

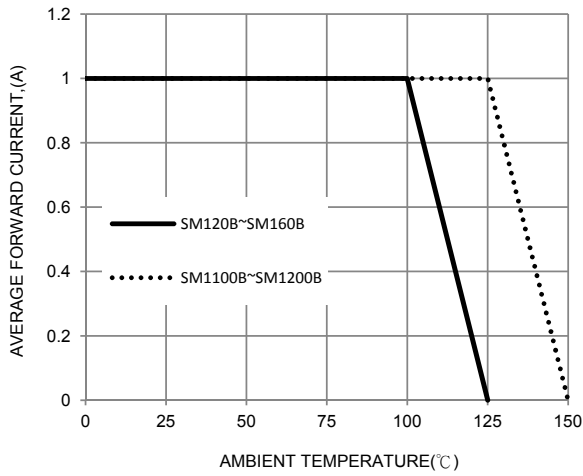


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

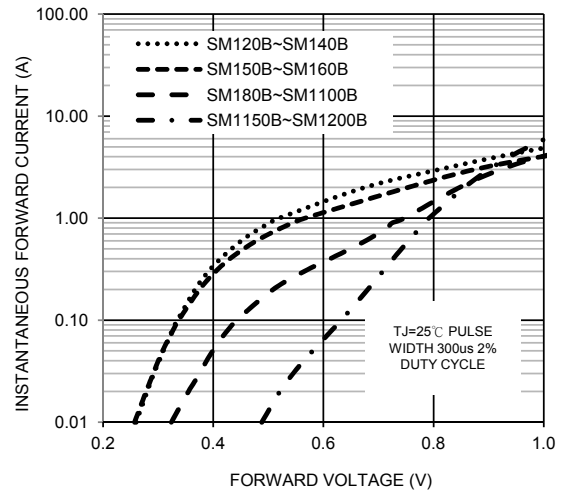


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

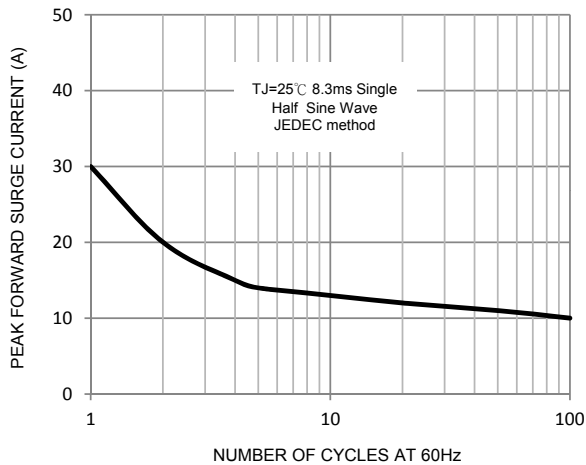


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

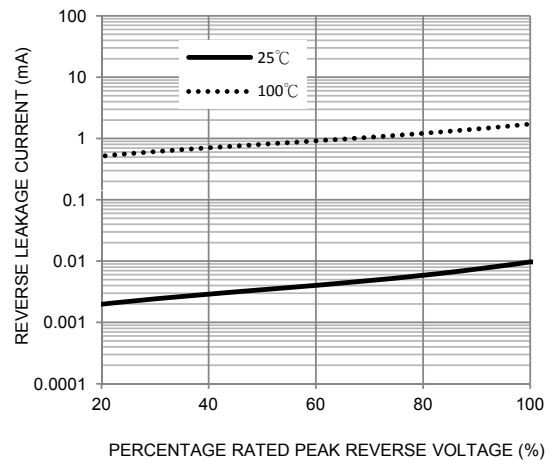


FIG. 5-TYPICAL JUNCTION CAPACITANCE

