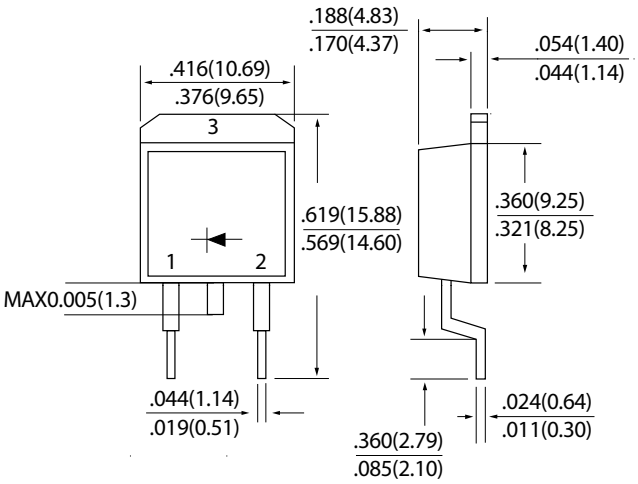
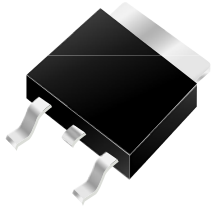
SM820SD2 thru SM8200SD2

Schottky Barrier Rectifiers



D2PAK

Dimensions in inches and (millimeters)



Ordering Information	
Part Number	**Remark**
SM8xxSD2	General
SM8xxSD2-H	Halogen Free
SM8xxSD2-Q	Automotive

PRIMARY CHARACTERISTICS	
I_F	8A
V_{RRM}	20~200V
I_{FSM}	125A
V_F	0.55V, 0.70V, 0.85V, 0.90V
T_J max	125°C , 150°C

Features

- Guard Ring for over voltage Protection
- High forward surge capability
- High frequency operation
- Component in accordance to RoHS 2002/95/EC
- AEC-Q101 qualified

Mechanical Date

- Case:D2PAK
- Case Material: Molded Plastic, UL Flammability Classification Rating 94V-0
- Terminals:Matte Tin Finish annealed over copper Leadframe. Solderable per MIL-STD-202
- Weight: 1.541 grams (approximate)

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

PARAMETER	SYMBOL	SM 820 SD2	SM 830 SD2	SM 840 SD2	SM 850 SD2	SM 860 SD2	SM 880 SD2	SM 8100 SD2	SM 8150 SD2	SM 8200 SD2	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	8.0									A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	125.0									A
Maximum Instantaneous IF=8A @ 25°C	V_F	0.55			0.70		0.85		0.87		V
Maximum DC Reverse Current @ Tc=25°C at Rated DC Blocking Voltage @ Tc=100°C	I_R	0.5 30					0.2 10				mA
Typical Junction Capacitance(NOTE1)	C_j	450			350		250		200	150	pF
Typical Thermal Resistance	$R_{\theta JC}$	3									°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

SM820SD2 thru SM8200SD2

Schottky Barrier Rectifiers

FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

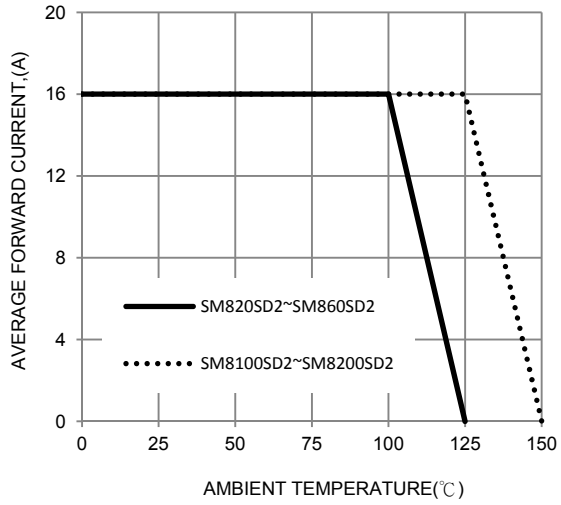


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

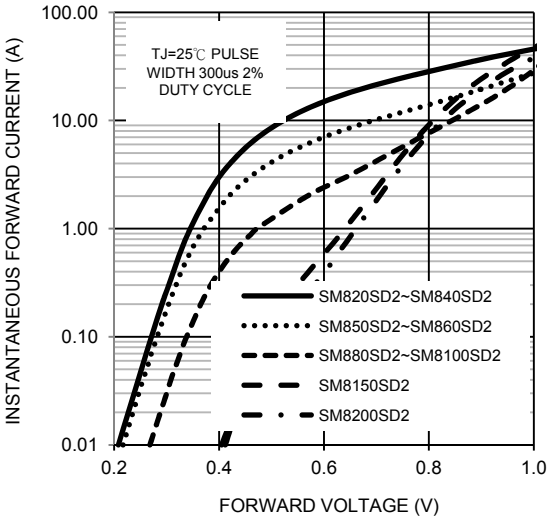


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

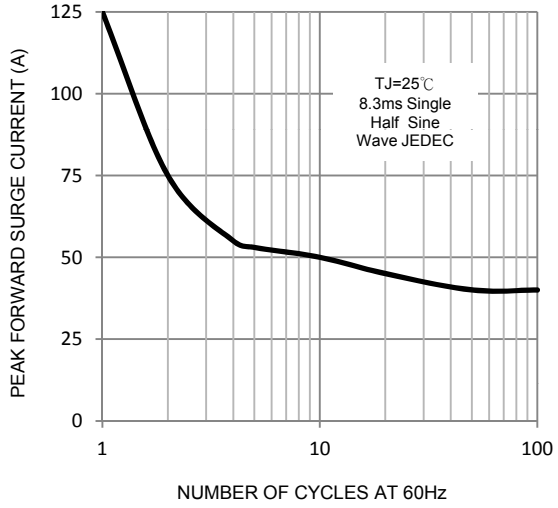


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

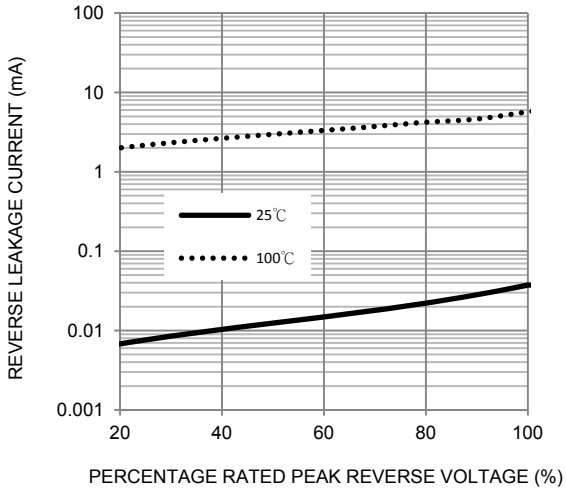


FIG. 5-TYPICAL JUNCTION CAPACITANCE