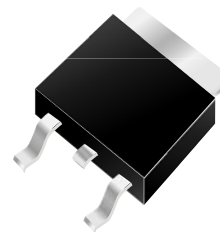


### D2PAK

Dimensions in inches and (millimeters)



Ordering Information	
Part Number	Remark
SM10xxSD2	General
SM10xxSD2-H	Halogen Free
SM10xxSD2-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

- 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 Data

- 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 1020 SD2	SM 1030 SD2	SM 1040 SD2	SM 1050 SD2	SM 1060 SD2	SM 1080 SD2	SM 10100 SD2	SM 10150 SD2	SM 10200 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	$I_F$	10.0									A	
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	150.0									A	
Maximum Instantaneous IF=10A @ 25°C	$V_F$	0.55			0.70		0.85		0.92		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			310		300		200		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

FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

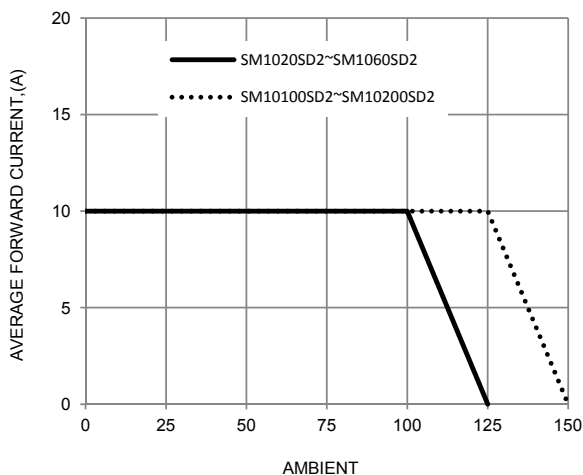


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

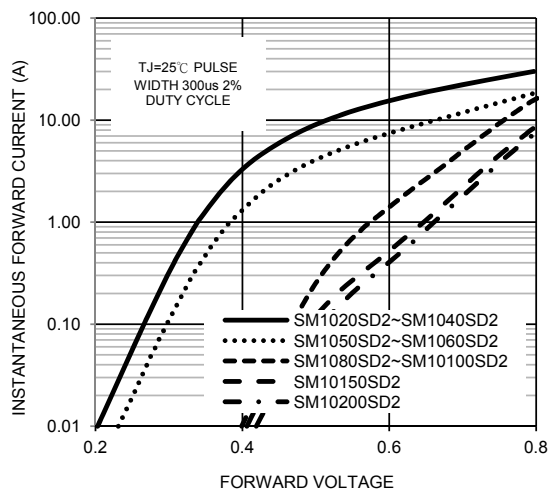


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

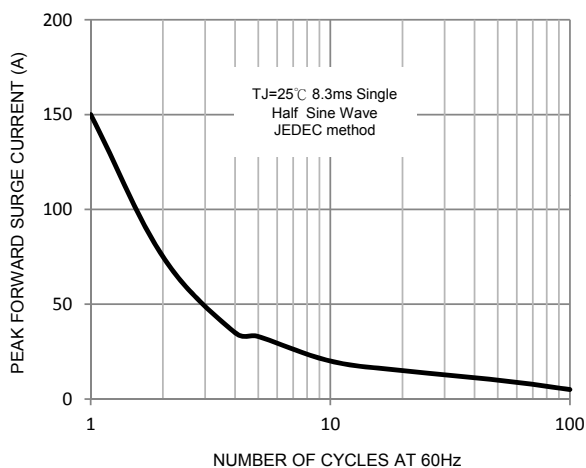


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

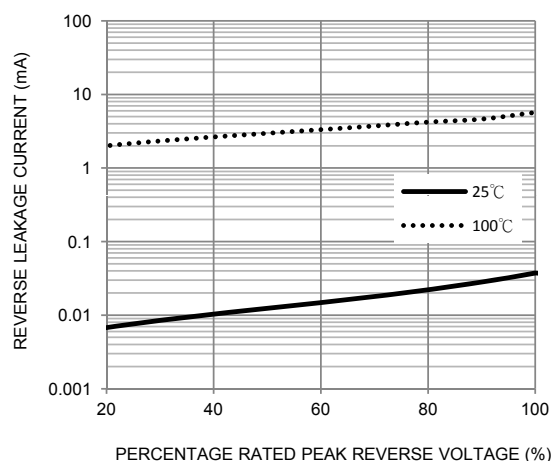


FIG. 5-TYPICAL JUNCTION CAPACITANCE

