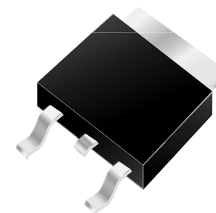


D2PAK

Dimensions in inches and (millimeters)



Ordering Information	
Part Number	Remark
SM20xxCD2	General
SM20xxCD2-H	Halogen Free
SM20xxCD2-Q	Automotive

PRIMARY CHARACTERISTICS	
I_F	20A
V_{RRM}	20~200V
I_{FSM}	150A
V_F	0.52V, 0.60V, 0.70V, 0.85V
$T_J \text{ max}$	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 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 2020 CD2	SM 2030 CD2	SM 2040 CD2	SM 2050 CD2	SM 2060 CD2	SM 2080 CD2	SM 20100 CD2	SM 20150 CD2	SM 20200 CD2	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 (Total) (Per Leg)	I_F	20 10									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 Forward Voltage IF=10A @ 100°C	V_F	0.55 0.52		0.75 0.60		0.85 0.70		0.92 0.85		V		
Maximum DC Reverse Current @ Tc=25°C at Rated DC Blocking Voltage @ Tc=100°C	I_R	0.5 50						0.2 20		mA		
Typical Junction Capacitance(NOTE1)	C_j	600			400			300		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

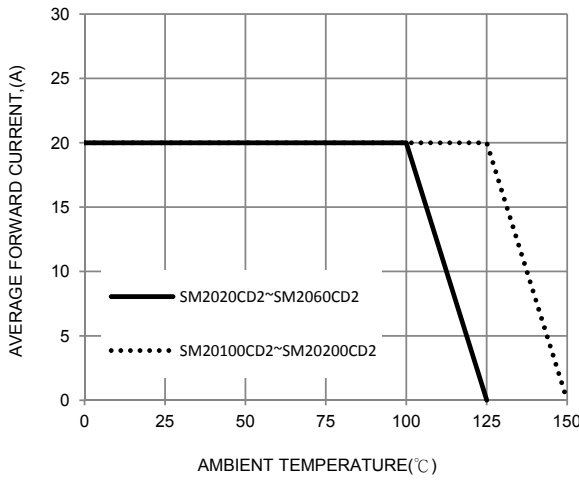


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

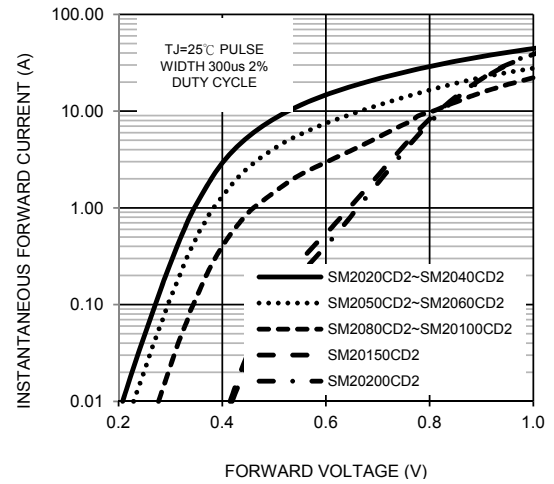


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

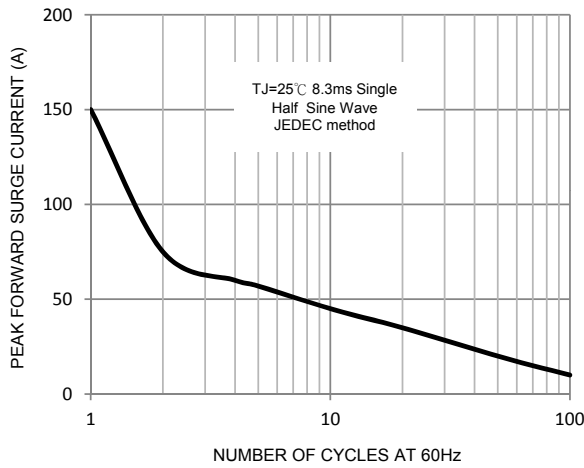


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

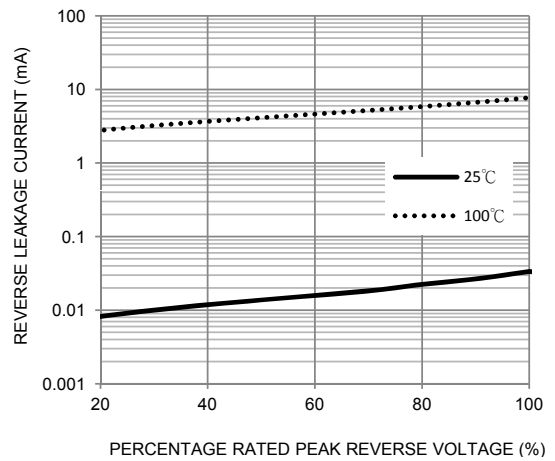


FIG. 5-TYPICAL JUNCTION CAPACITANCE

