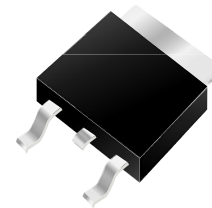


D2PAK

Dimensions in inches and (millimeters)



Ordering Information	
Part Number	Remark
SM40xxCD2	General
SM40xxCD2-H	Halogen Free
SM40xxCD2-Q	Automotive

PRIMARY CHARACTERISTICS	
I_F	40A
V_{RRM}	20~200V
I_{FSM}	250A
V_F	0.60V, 0.75V, 0.85V, 0.95V
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 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 4020 CD2	SM 4030 CD2	SM 4040 CD2	SM 4050 CD2	SM 4060 CD2	SM 4080 CD2	SM 40100 CD2	SM 40150 CD2	SM 40200 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	40 20									A	
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	250.0									A	
Maximum Instantaneous Forward Voltage $I_F=20A @ 25^\circ C$	V_F	0.60			0.75		0.85		0.95		V	
Maximum DC Reverse Current @ $T_c=25^\circ C$ at Rated DC Blocking Voltage @ $T_c=100^\circ C$	I_R	1.0 50					0.2 20				mA	
Typical Junction Capacitance(NOTE1)	C_j	1,250			850		560		350		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

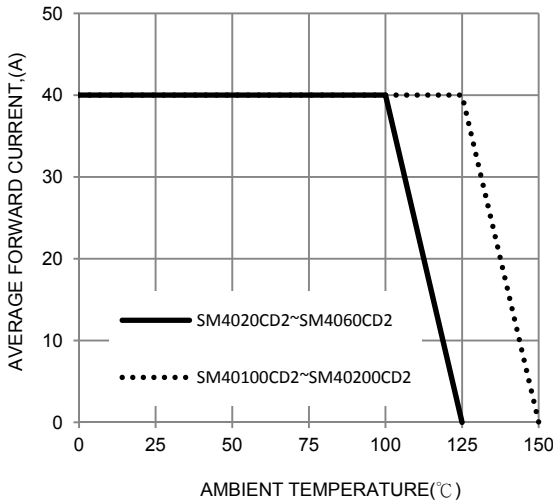


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

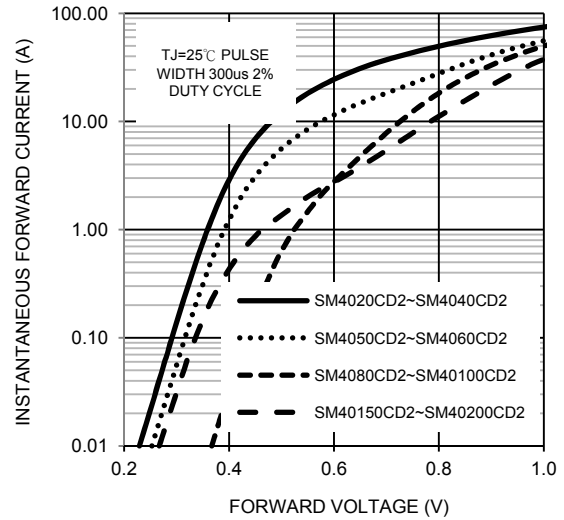


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

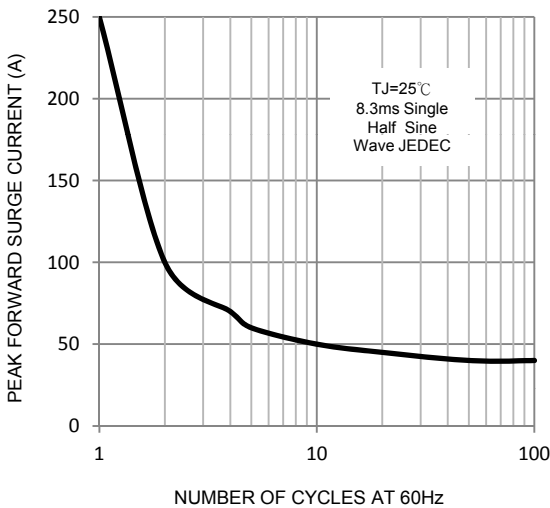


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

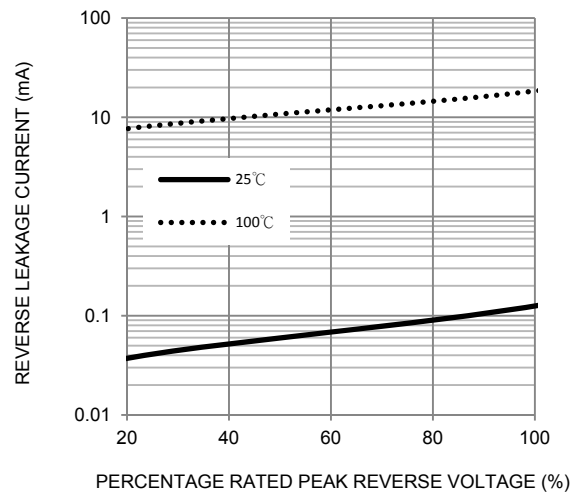


FIG. 5-TYPICAL JUNCTION CAPACITANCE

