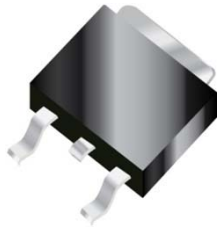




SM40xxxCD2 SERIES



Schottky Barrier Rectifiers



D2-PAK

Primary Characteristics

I_F	40	A
V_{RRM}	40~200	V
I_{FSM}	250	A
$I_F=20A @ V_F$	0.65, 0.75, 0.85, 0.95	V
$T_J \text{ max}$	125, 150	°C

Features

- Guard Ring for Over Voltage Protection
- High Forward Surge Capability
- High Frequency Operation

Mechanical Data

- Case : D2-PAK
- Case Material : Molded Plastic, UL Flammability Classification Rating 94V-0
- Terminals : Matte Tin Finish annealed over copper Leadframe. Solderable per MIL-STD-202

Ordering Information

Part No.	Remark	Package	Packing
SM40xxxCD2	RoHS Compliant	D2-PAK	800 / Reel
SM40xxxCD2-H	Halogen Free		

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									A	
Maximum Instantaneous Forward Voltage $I_F=20A @ 25^\circ C$	V_F	0.65			0.75		0.85		0.95		V	
Maximum DC Reverse Current @ $T_C=25^\circ C$ at Rated DC Blocking Voltage @ $T_C=125^\circ C$	I_R	1.0 50					0.2 20					mA
Typical Junction Capacitance(NOTE1)	C_j	980			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



Rating and Characteristics Curves

FIG. 1-Typical Forward Current Derating Curve

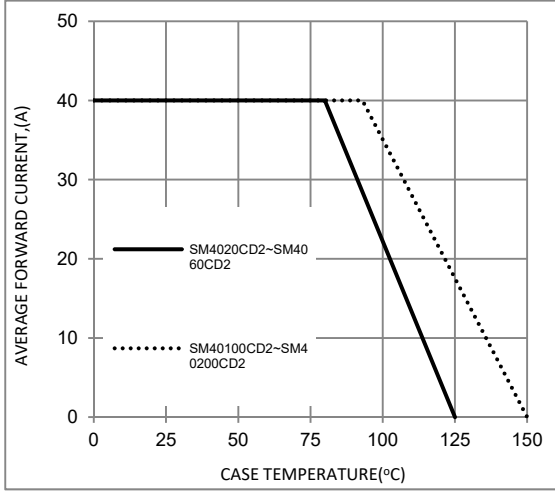


FIG. 2-Typical Forward Characteristics

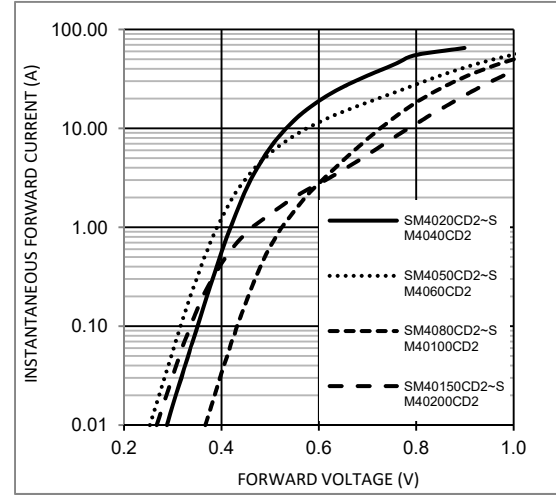


FIG. 3-Maximum Non-Repetitive Forward Surge Current

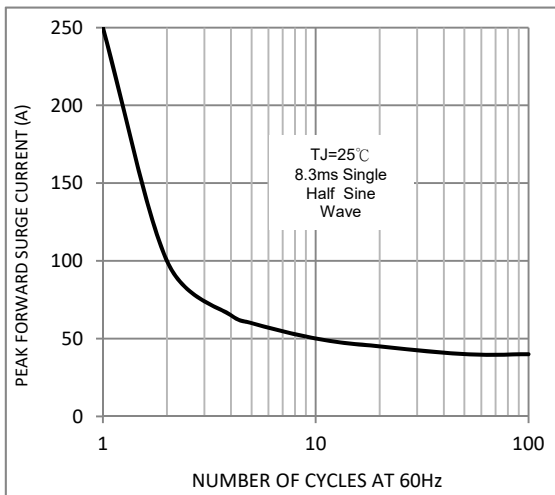


FIG. 4-Typical Reverse Characteristics

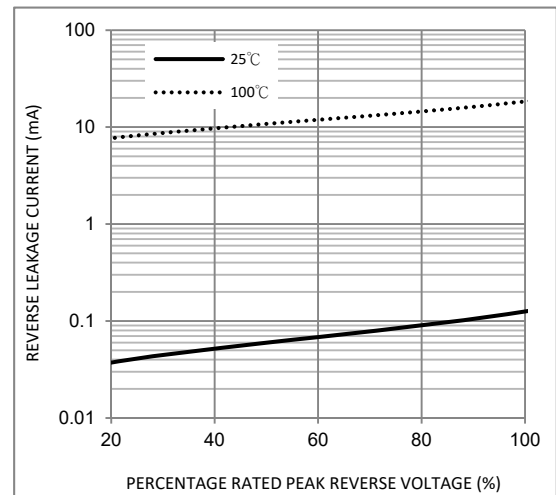
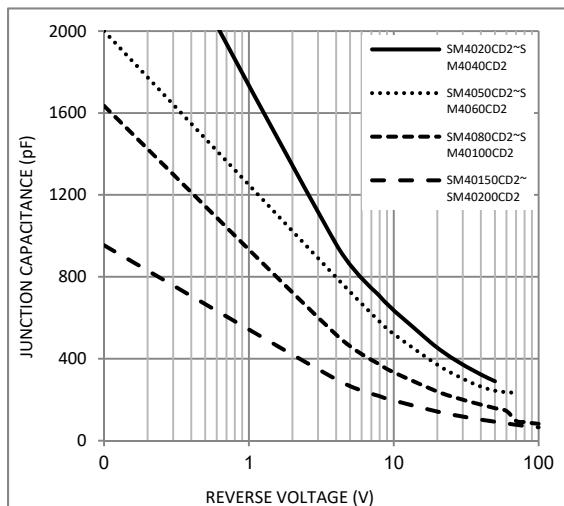
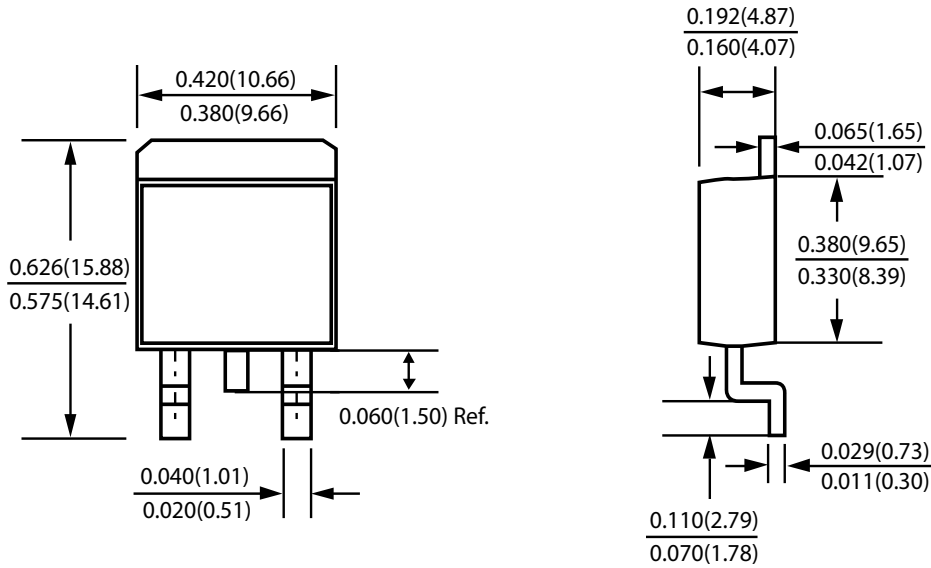


FIG. 5-TYPICAL JUNCTION CAPACITANCE





Package Outline Dimensions

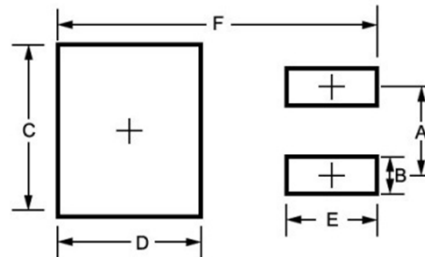


D2-PAK

Dimensions in inches and (millimeters)

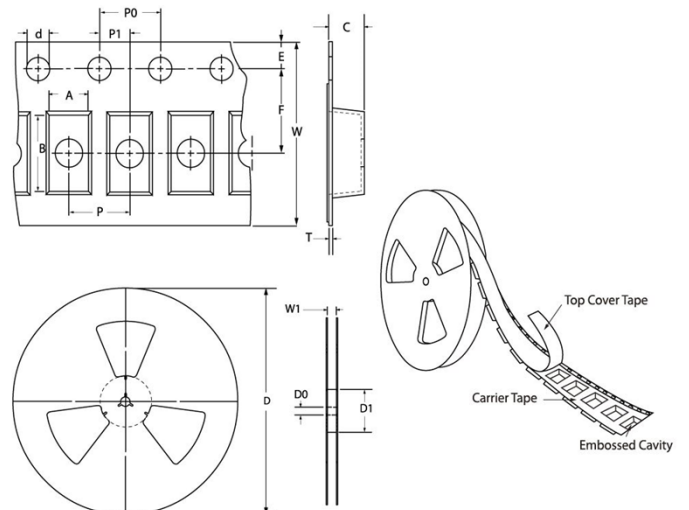
Suggested Pad Layout

Dimension	Outline	D2-PAK (mm)
A		5.08
B		1.10
C		10.80
D		8.30
E		3.50
F		16.90



Tape & Reel Specification

Item	Symbol	D2-PAK (mm)
Carrier width	A	10.8 ± 0.1
Carrier length	B	16.2 ± 0.2
Carrier depth	C	5.2 ± 0.3
Sprocket hole	d	1.55 ± 0.05
Reel outside diameter	D	330 ± 2
Feed hole diameter	D0	13.5 ± 1
Reel inner diameter	D1	50 (min)
Sprocket hole position	E	1.75 ± 0.1
Punch hole position	F	11.5 ± 0.1
Sprocket hole pitch	P	16.0 ± 0.1
Sprocket hole pitch	P0	4.0 ± 0.1
Embossment center	P1	2.0 ± 0.1
Overall tape thickness	T	0.305 ± 0.1
Tape width	W	24 ± 0.3
Reel width	W1	24.3 (max)





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