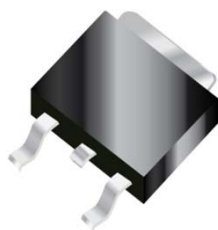




SM40xxxCD2 SERIES



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 IF=20A @ 25°C	V _F	0.65			0.75		0.85		0.95		V
Maximum DC Reverse Current @ T _C =25°C at Rated DC Blocking Voltage @ T _C =125°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 _{θJC}	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

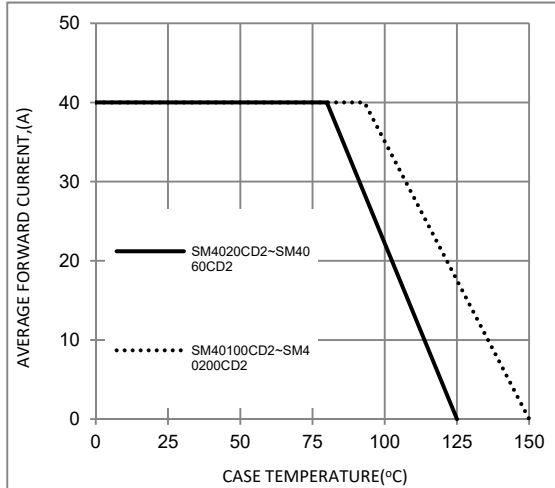


FIG. 2-Typical Forward Characteristics

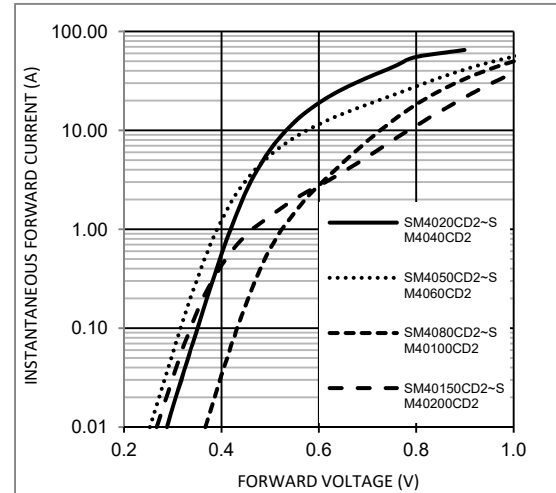


FIG. 3-Maximum Non-Repetitive Forward Surge Current

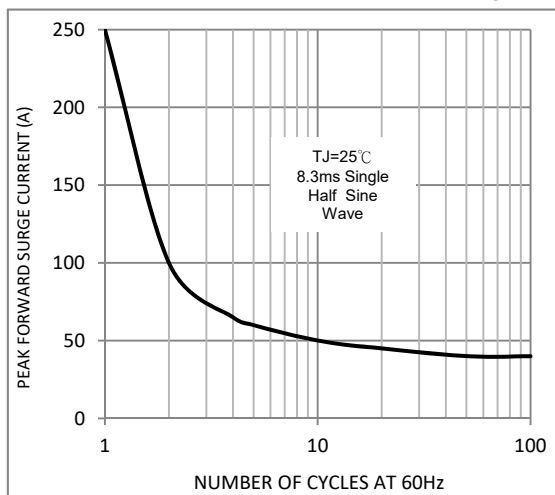


FIG. 4-Typical Reverse Characteristics

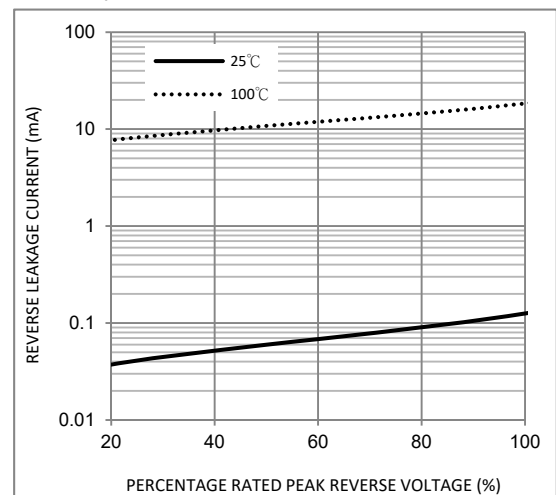
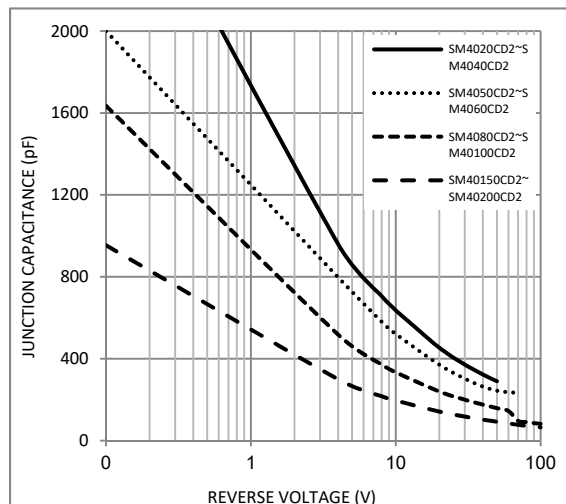


FIG. 5-TYPICAL JUNCTION CAPACITANCE



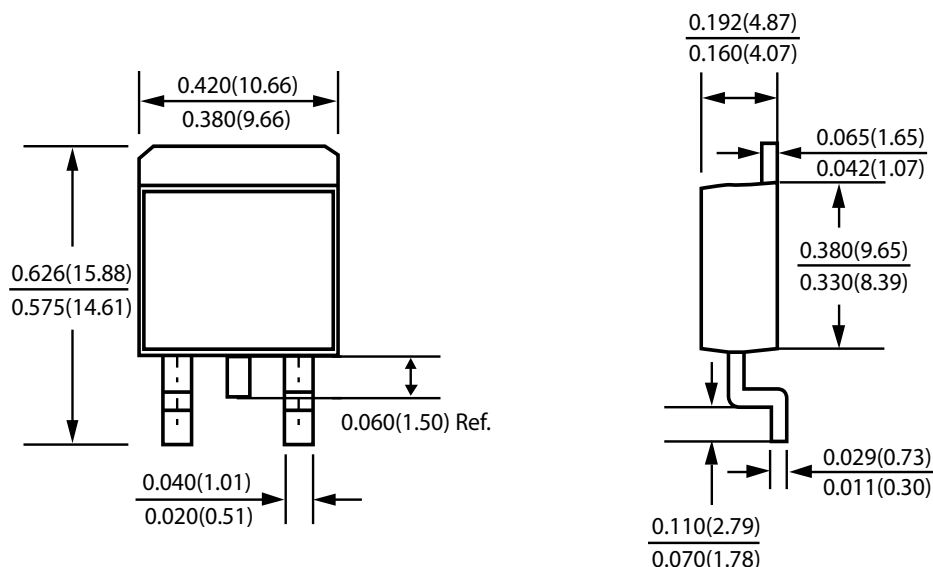


SM40xxxCD2 SERIES



Schottky Barrier Rectifiers

Package Outline Dimensions

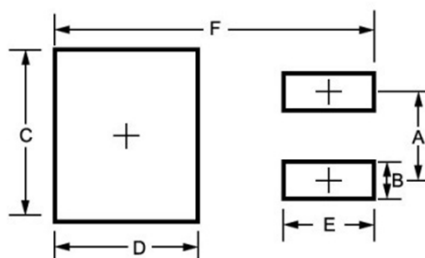


D2-PAK

Dimensions in inches and (millimeters)

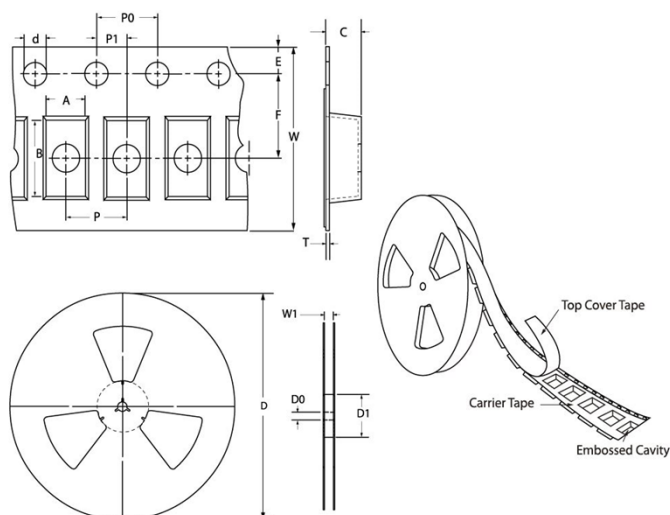
Suggested Pad Layout

Outline Dimension	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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