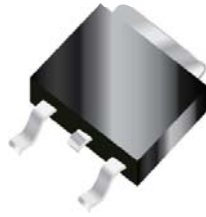




SM3020CD2 thru SM30200CD2



Schottky Barrier Rectifiers



D2-PAK

Primary Characteristics		
I_F	30	A
V_{RRM}	20~200	V
I_{FSM}	200	A
V_F	0.60,0.75,0.85,0.95	V
T_J max	125,150	°C

Features
<ul style="list-style-type: none"> • Guard Ring for over voltage Protection • High forward surge capability • High frequency operation • Component in accordance to RoHS 2002/95/EC

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)

Ordering Information			
Part No.	Remark	Package	
SM30xxCD2	General	D2-PAK	800 / Reel
SM30xxCD2 -H	Halogen Free		

Maximum Ratings (TA=25°C unless otherwise noted)												
PARAMETER	SYMBOL	SM 3020 CD2	SM 3030 CD2	SM 3040 CD2	SM 3045 CD2	SM 3050 CD2	SM 3060 CD2	SM 3080 CD2	SM 30100 CD2	SM 30150 CD2	SM 30200 CD2	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	45	50	60	80	100	150	200	V
Maximum RMS voltage	V_{RMS}	14	21	28	31.5	35	42	56	70	105	140	V
Maximum DC blocking voltage	V_{DC}	20	30	40	45	50	60	80	100	150	200	V
Maximum average forward rectified current (Total) (Per Leg)	I_F	30 15										A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	200										A
Maximum Instantaneous IF=15A @ 25°C Forward Voltage IF=15A @ 100°C	V_F	0.60		0.75		0.85		0.92		0.92		V
		0.55		0.65		0.75		0.82				
Maximum DC Reverse Current @ TA=25°C at Rated DC Blocking Voltage @ TA=100°C	I_R	1 50						0.5 20				mA
Typical Junction Capacitance(NOTE1)	C_j	750			680			470		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
Marking Code		SM 3020 CD2	SM 3030 CD2	SM 3040 CD2	SM 3045 CD2	SM 3050 CD2	SM 3060 CD2	SM 3080 CD2	SM 30100 CD2	SM 30150 CD2	SM 30200 CD2	

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

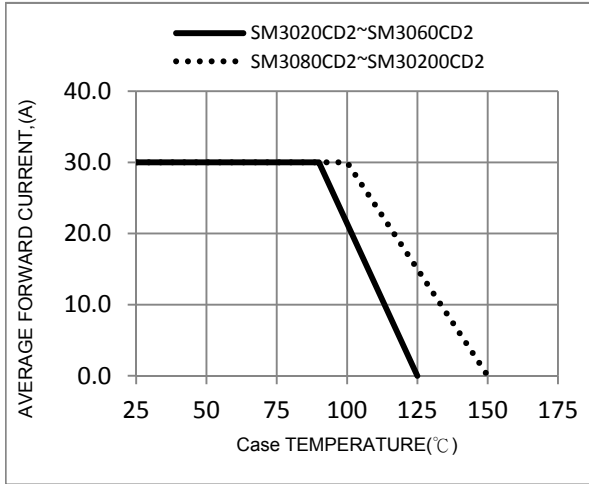


FIG. 2-Typical Forward Characteristics

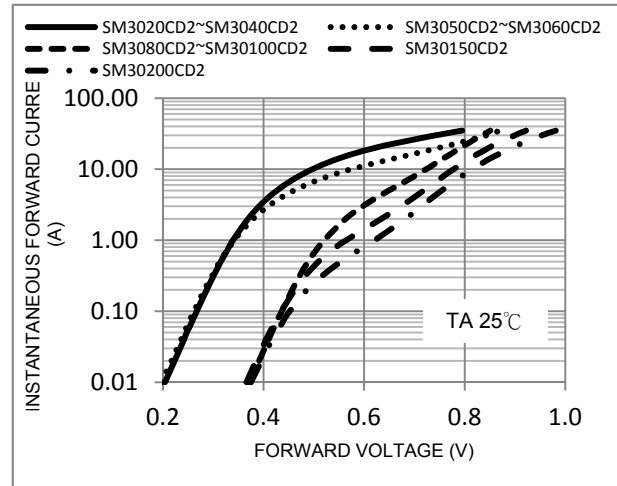


FIG. 3-Maximum Non-Repetitive Forward Surge Current

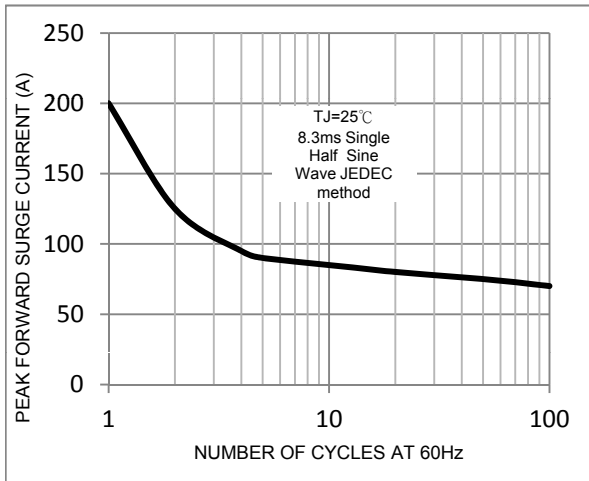


FIG. 4-Typical Reverse Characteristics

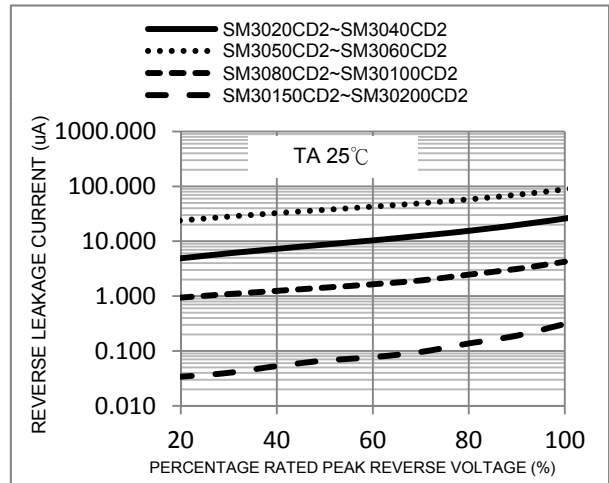
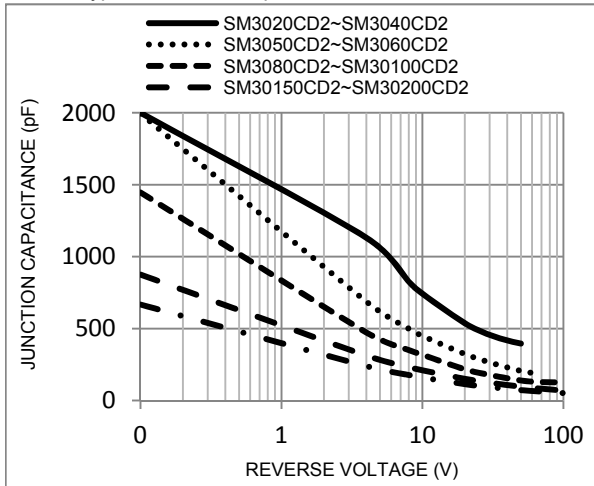


FIG. 5-Typical Junction Capacitance



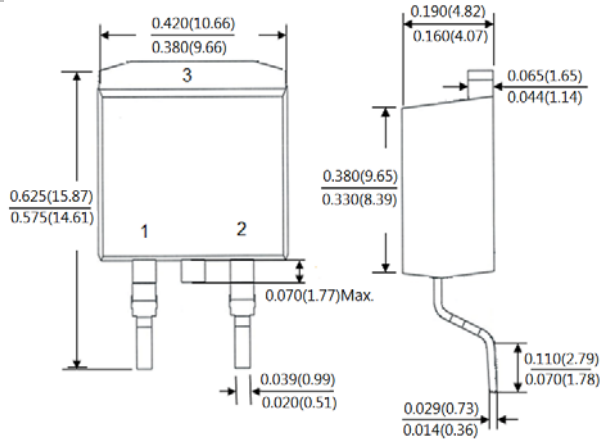


SM3020CD2 thru SM30200CD2

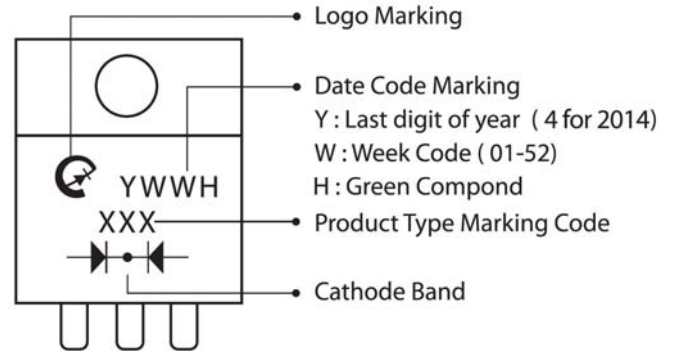


Schottky Barrier Rectifiers

Package Outline Dimensions



Marking Information

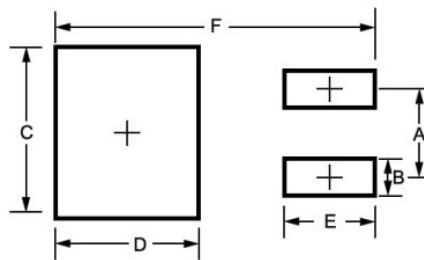


D2-PAK

Dimensions in inches and (millimeters)

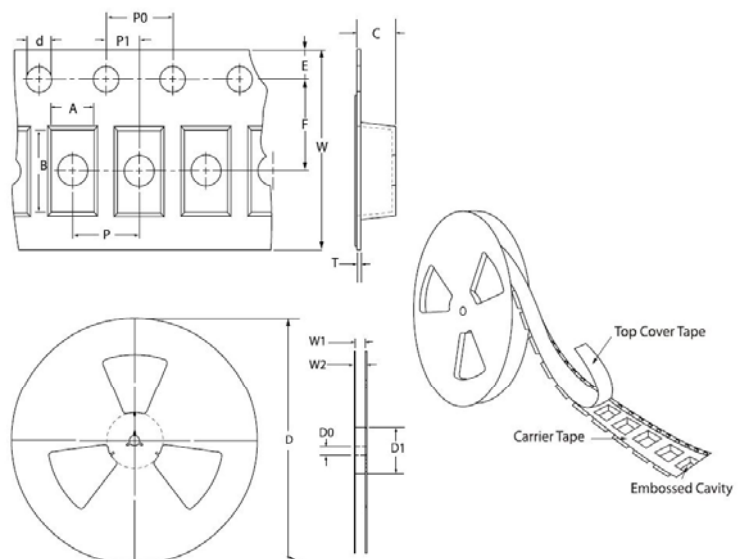
Suggested Pad Layout

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



Tap & Reel Specification

ITEM	SYMBOL	D2-PAK(mm) (mm)
Carrier width	A	10.7±0.1
Carrier length	B	16.3±0.1
Carrier depth	C	5±0.1
Sprocket hole	d	1.55±0.05
Reel outside diameter	D	330±2
Feed hole diameter	D0	13.5±1
Reel inner diameter	D1	100(min)
Sprocket hole position	E	1.75±0.1
Punch hole position	F	11.5±0.1
Sprocket hole pitch	P	16±0.1
Sprocket hole pitch	P0	4±0.1
Embossment center	P1	2±0.1
Overall tape thickness	T	0.3±0.05
Tape width	W	24±0.3
Reel width	W2	-
Reel width	W1	24.2(Max)





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