



SM120A thru SM1200A



Schottky Barrier Rectifiers



DO-214AC(SMA)

Primary Characteristics

I_F	1	A
V_{RRM}	20~200	V
I_{FSM}	30	A
V_F	0.50, 0.70, 0.85, 0.87, 0.90	V
T_J max	125,150	°C

Features

- Low profile package
- Ideal for automated placement
- Guard Ring for over voltage protection
- Low forward voltage drop

Mechanical Data

- Case : DO-214AC(SMA)
- Case Material : Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals : Lead free Plating (Tin Finish)
Solderable per MIL-STD-202, Method 208
- Polarity : Cathode Band
- Weight : 0.062 grams (approximate)

Ordering Information

Part No.	Remark	Package	Packing
SM1x0A	General	SMA	5000 / Tape & Reel
SM1x0A-H	Halogen Free		
SM1x0A-Q	AEC-Q101 qualified		

Maximum Ratings (TA=25°C unless otherwise noted)

PARAMETER	SYMBOL	SM 120A	SM 130A	SM 140A	SM 150A	SM 160A	SM 180A	SM 1100A	SM 1150A	SM 1200A	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	I_F	1.0									A	
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	30.0									A	
Maximum Instantaneous Forward Voltage IF=1A @ 25°C	V_F	0.50		0.70		0.85		0.87	0.90		V	
Maximum DC Reverse Current @ TA=25°C at Rated DC Blocking Voltage @ TA=100°C	I_R	0.5 15			0.2 5.0						mA	
Typical Junction Capacitance(NOTE1)	C_j	65		60		30		25			pF	
Typical Thermal Resistance	$R_{\theta JC}$	40									°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 120A	SM 130A	SM 140A	SM 150A	SM 160A	SM 180A	SM 1100A	SM 1150A	SM 1200A		

NOTES :

1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC



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Rating and Characteristics Curves

FIG. 1-Typical Forward Current Derating Curve

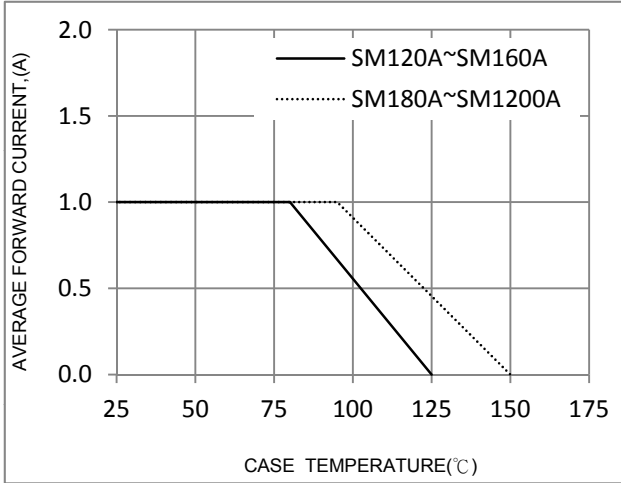


FIG. 2-Typical Forward Characteristics

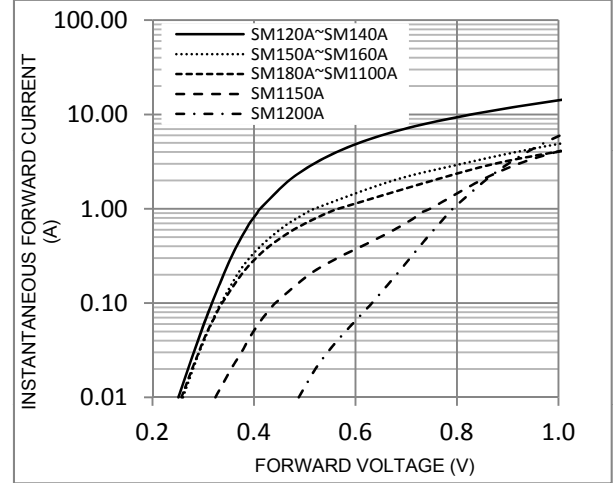


FIG. 3-Maximum Non-Repetitive Forward Surge Current

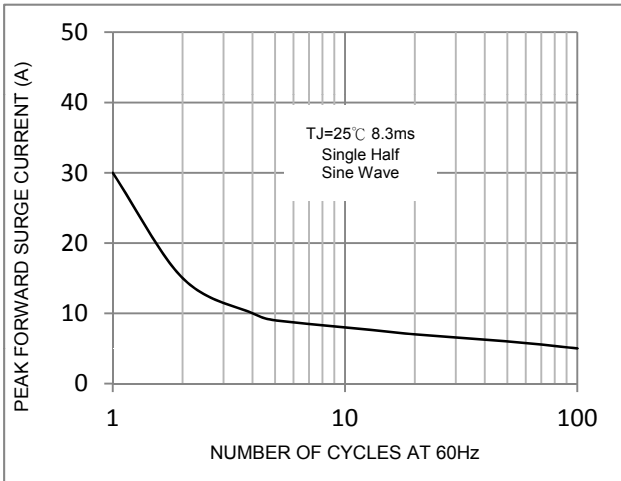


FIG. 4-Typical Reverse Characteristics

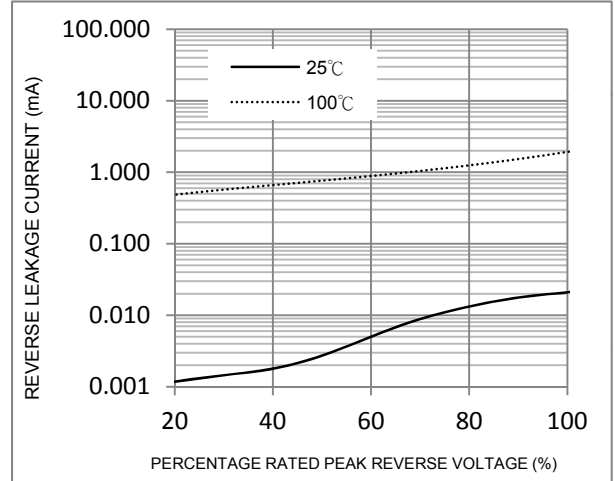
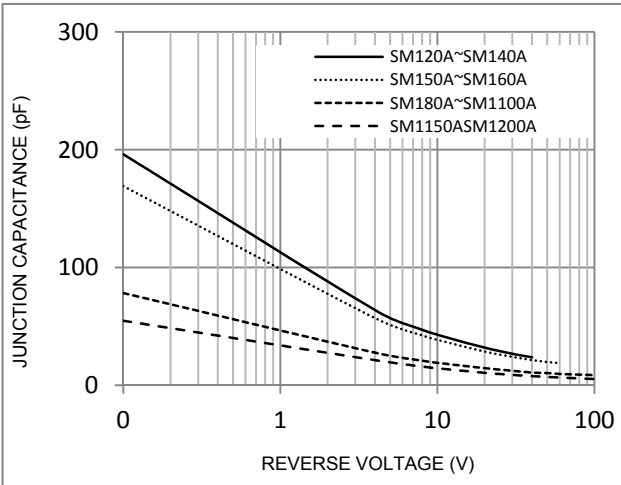


FIG. 5-Typical Junction Capacitance



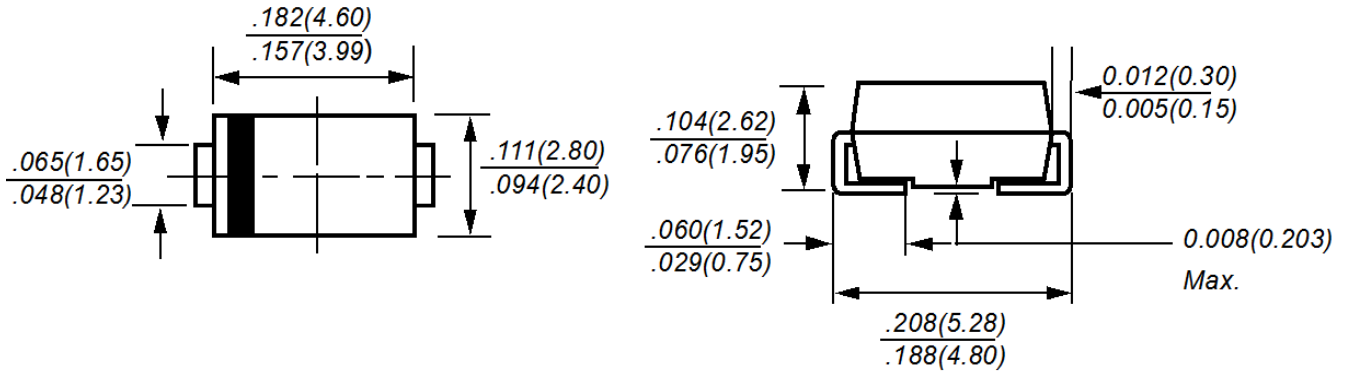


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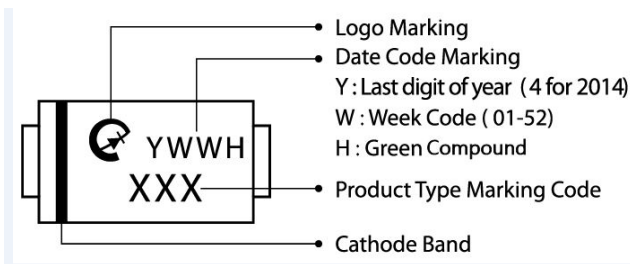
Package Outline Dimensions



DO-214AC(SMA)

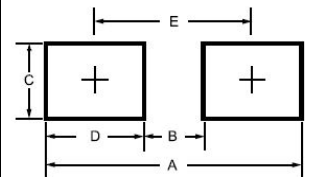
Dimensions in inches and (millimeters)

Marking Information



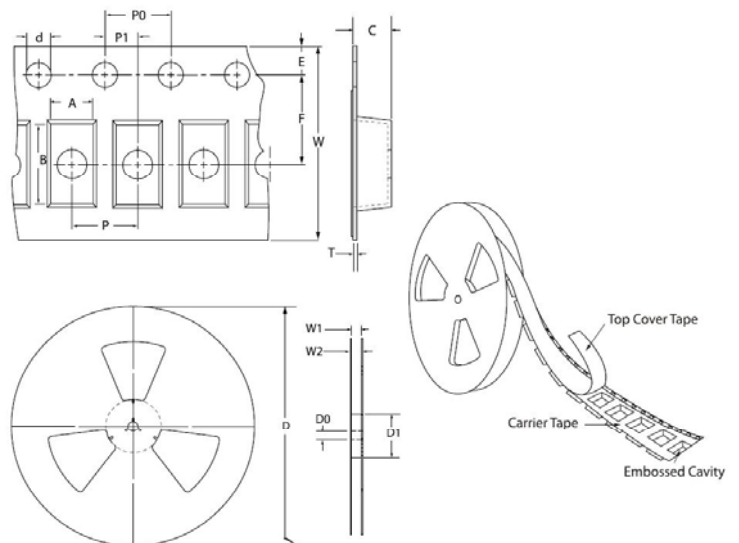
Suggested Pad Layout

Dimension	Outline	SMA (DO-214AC)
A		6.50
B		1.50
C		1.70
D		2.50
E		4.00



Tape & Reel Specification

ITEM	SYMBOL	SMA(mm) DO-214AC
Carrier width	A	2.9(max)
Carrier length	B	5.9(max)
Carrier depth	C	2.66(max)
Sprocket hole	d	1.50±0.1
Reel outside diameter	D	330±2.0
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	5.5±0.05
Sprocket hole pitch	P	4.0±0.1
Sprocket hole pitch	P0	4.0±0.1
Embossment center	P1	2.0±0.05
Overall tape thickness	T	0.6 (max)
Tape width	W	12.0±0.3
Reel width	W2	18.4 (max)
Reel width	W1	14.4 (max)





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