



# SM520A thru SM5200A



## Schottky Barrier Rectifiers



DO-214AC(SMA)

### Features

- High current capability
- High surge current capability
- Low reverse current

### Primary Characteristics

$I_F$	5	A
$V_{RRM}$	20~200	V
$I_{FSM}$	100	A
$V_F$	0.55, 0.7, 0.85, 0.87, 0.90	V
$T_J \text{ max}$	125, 150	°C

### 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
SM5xxA	General	SMA	5000 / Tape & Reel
SM5xxA-H	Halogen Free		
SM5xxA-Q	AEC-Q101 qualified		

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

PARAMETER	SYMBOL	SM 520A	SM 530A	SM 540A	SM 550A	SM 560A	SM 580A	SM 5100A	SM 5150A	SM 5200A	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	$I_F$	5									A	
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	100									A	
Maximum Instantaneous Forward Voltage IF=5A @ 25°C	$V_F$	0.55			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 10					0.2 5.0				mA	
Typical Junction Capacitance(NOTE1)	$C_j$	300			250		150			110	pF	
Typical Thermal Resistance	$R_{\theta JC}$	15									°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 520A	SM 530A	SM 540A	SM 550A	SM 560A	SM 580A	SM 5100A	SM 5150A	SM 5200A		

### NOTES :

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



## Schottky Barrier Rectifiers

### Rating and Characteristics Curves

FIG. 1-Typical Forward Current Derating Curve

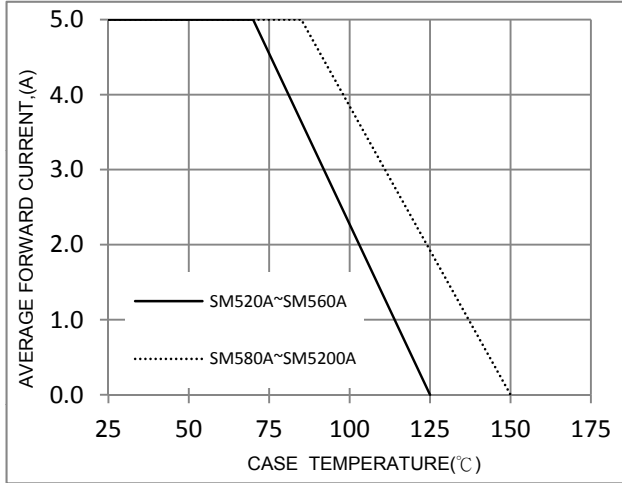


FIG. 2-Typical Forward Characteristics

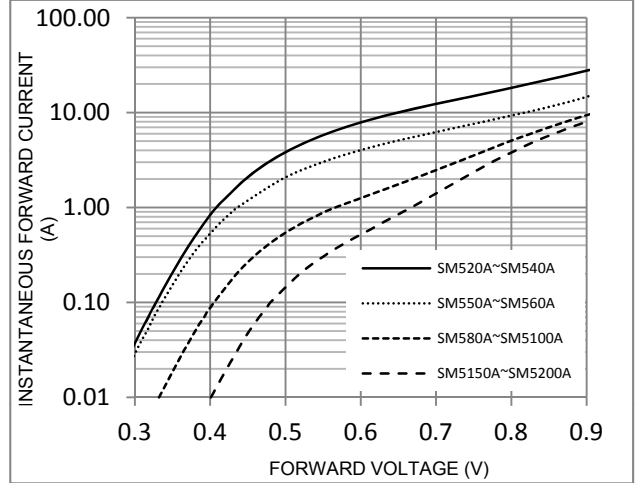


FIG. 3-Maximum Non-Repetitive Forward Surge Current

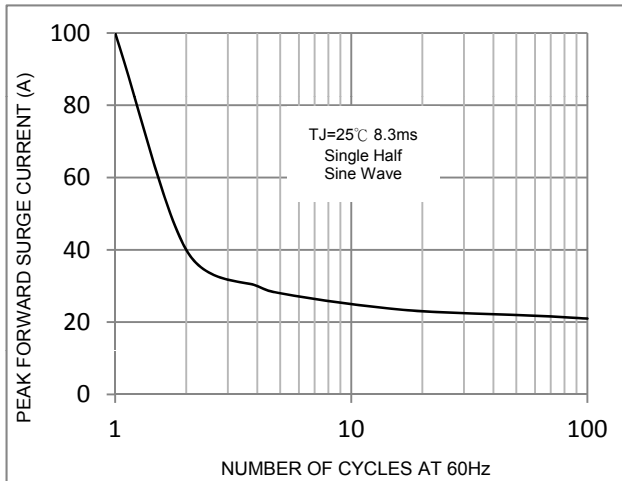


FIG. 4-Typical Reverse Characteristics

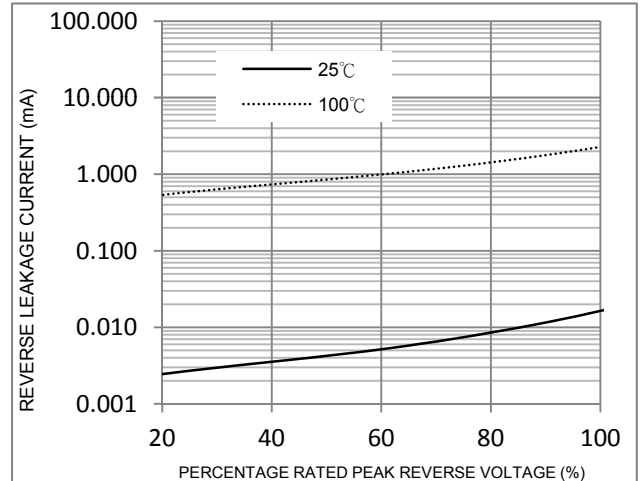
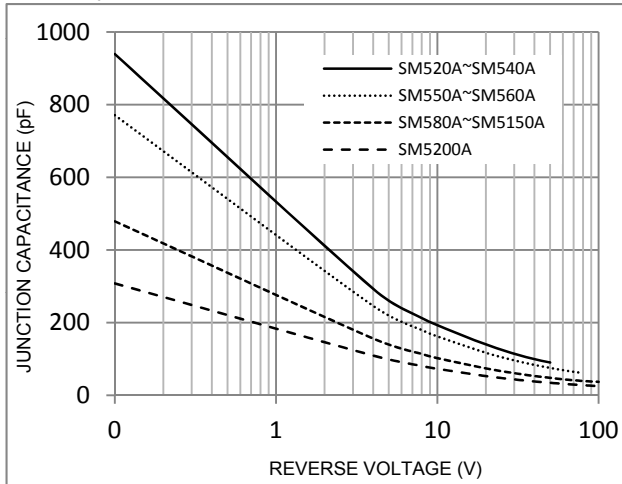


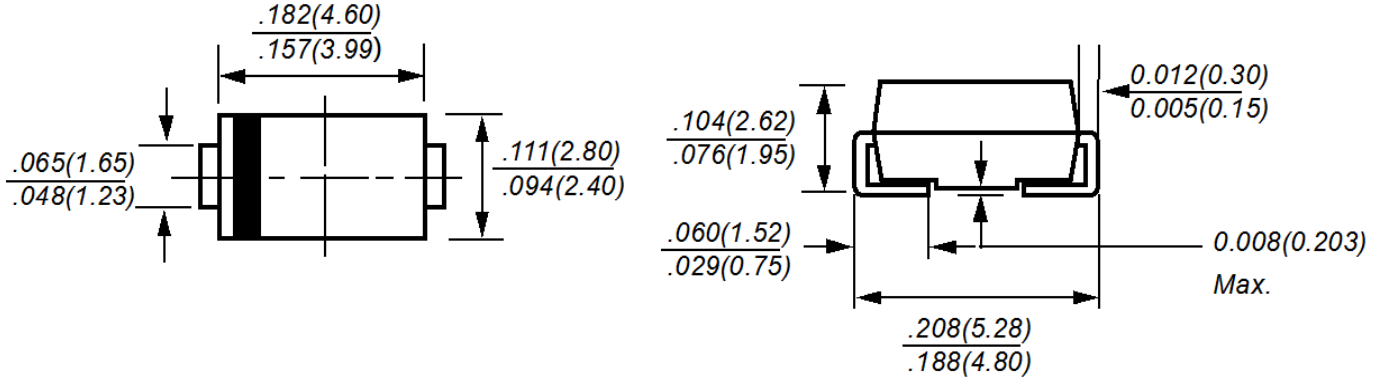
FIG. 5-Typical Junction Capacitance





# Schottky Barrier Rectifiers

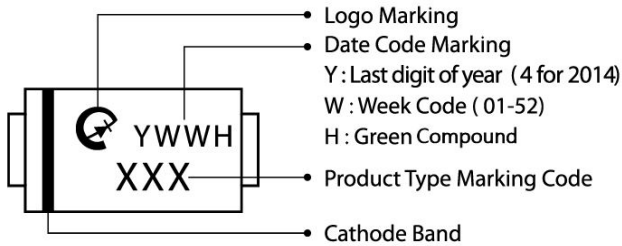
## Package Outline Dimensions



### DO-214AC(SMA)

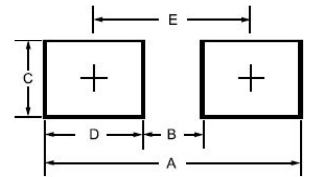
Dimensions in inches and (millimeters)

## Marking Information



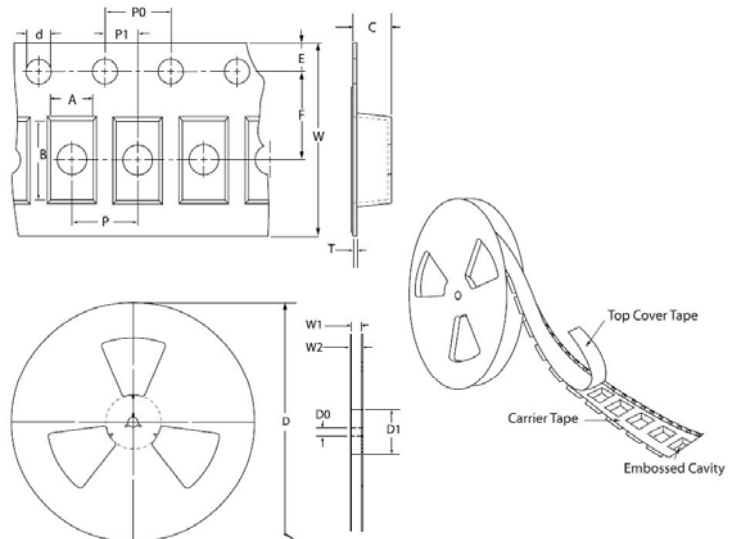
## Suggested Pad Layout

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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