

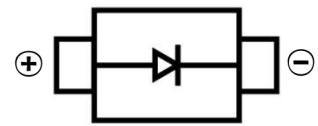
## SCHOTTKY BARRIER DIODE

### FEATURES

- Small Surface Mount device
- Low power loss, high efficiency
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Guard ring for over voltage protection
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications



SMA



### MECHANICAL DATA

- Case: SMA(DO214AC)
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Weight: 0.065grams (approximate)

### MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	SS32A	SS33A	SS34A	SS36A	SS38A	SS310A	SS315A	SS320A	Unit
Repetitive peak reverse voltage	$V_{RRM}$	20	30	40	60	80	100	150	200	V
DC Reverse Voltage	$V_R$	20	30	40	60	80	100	150	200	V
RMS Reverse Voltage	$V_{RMS}$	14	21	28	42	56	70	105	140	V
Non-Repetitive Peak Forward Surge Current @ $t = 8.3 \text{ ms}$	$I_{FSM}$	80								A
Mean rectifying current	$I_F$	3.0								A
Thermal Resistance	$R_{\theta JA}$	85								$^\circ\text{C}/\text{W}$
Junction Temperature	$T_J$	150								$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-55 ~ +175								$^\circ\text{C}$

### ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	SS32A	SS33A	SS34A	SS36A	SS38A	SS310A	SS315A	SS320A	Unit	Conditions
Forward voltage	$V_F$	0.5			0.7	0.85		0.9	0.92	V	$I_F = 3\text{A}$
Reverse current $T = 25^\circ\text{C}$	$I_R$	0.5								mA	$V = V_R$
Reverse current $T = 100^\circ\text{C}$	$I_R$	20								mA	
Junction capacitance	$C_J$	160								pF	$V = 4\text{V}, f = 1\text{MHz}$

SCHOTTKY BARRIER DIODE

Typical Characteristics

FIG.1 FORWARD CURRENT DERATING CURVE

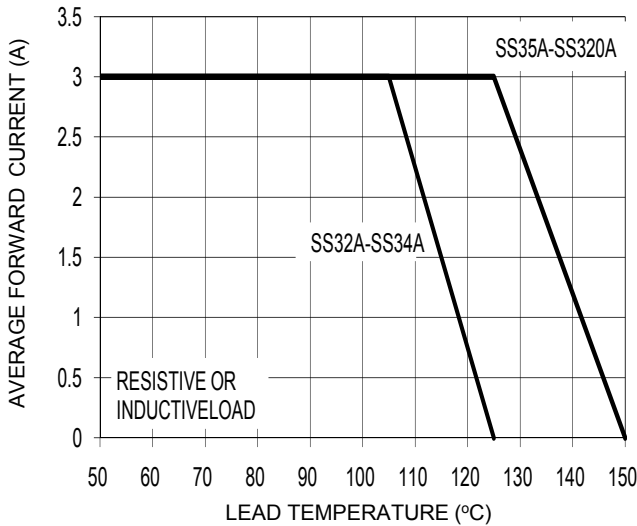


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

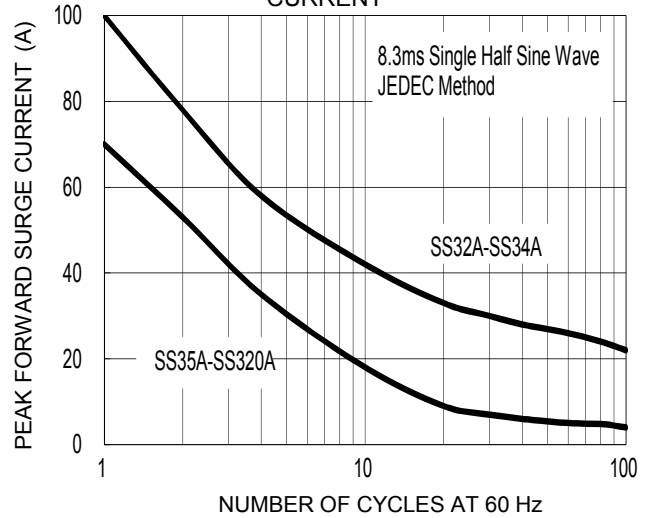


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

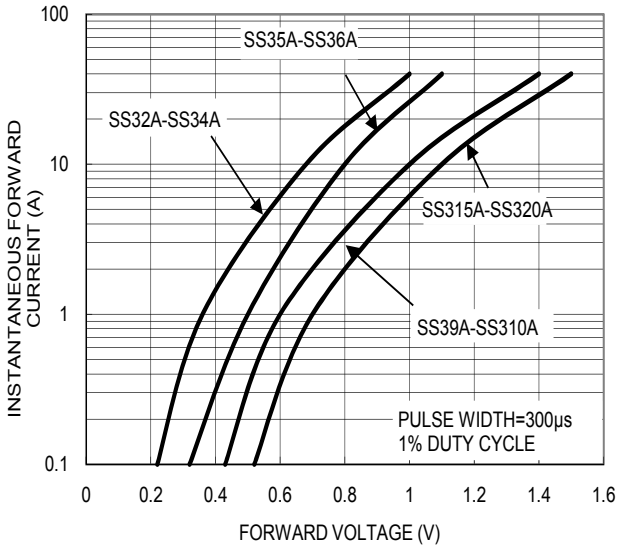


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

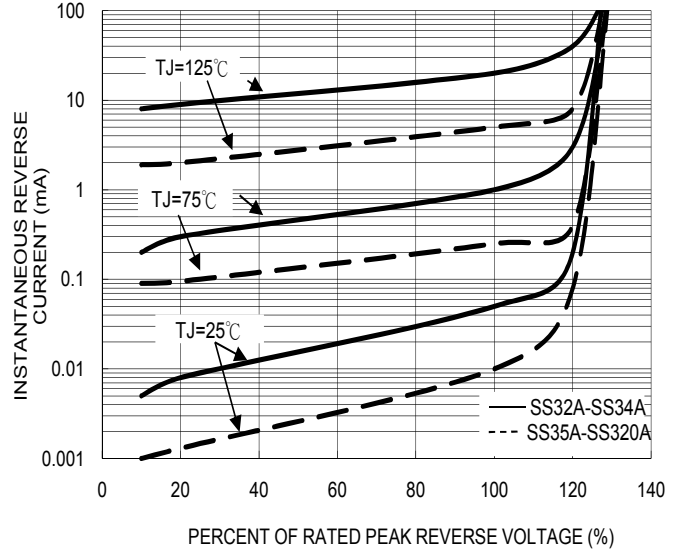


FIG. 5 TYPICAL JUNCTION CAPACITANCE

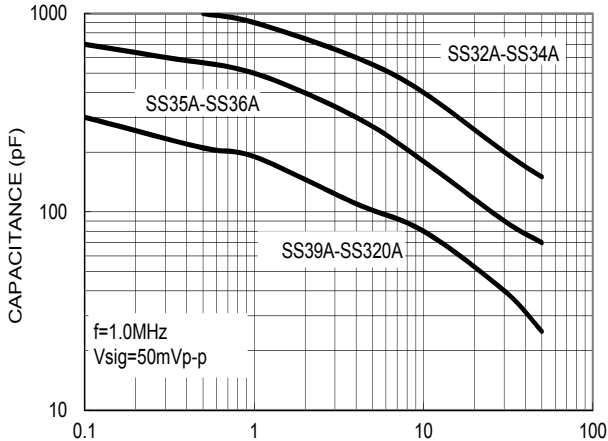
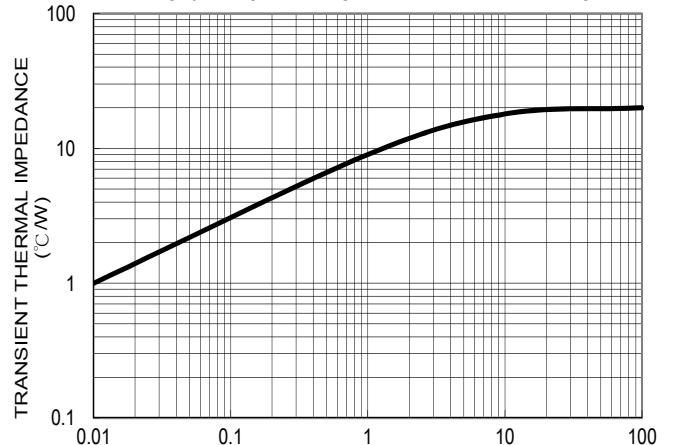
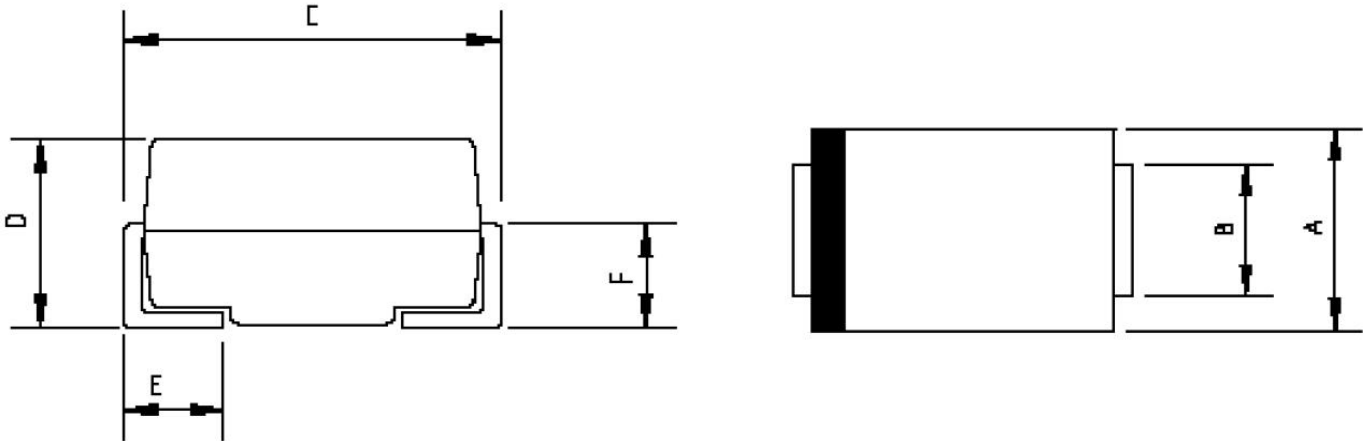


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE



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**SMA Package Outline Dimensions**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.20	2.80	0.086	0.110
B	1.30	1.70	0.051	0.067
C	4.70	5.30	0.185	0.209
D	1.70	2.55	0.067	0.100
E	0.90	1.50	0.035	0.059
F	0.90	1.50	0.035	0.059

**SMA Suggested Pad Layout**



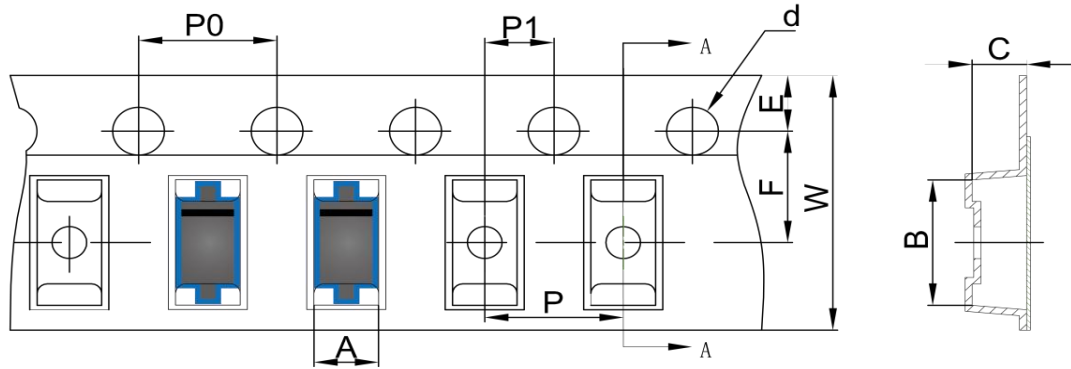
**Note:**

1. Controlling dimension: in millimeters
2. General tolerance:  $\pm 0.05\text{mm}$
3. The pad layout is for reference purposes only

SCHOTTKY BARRIER DIODE

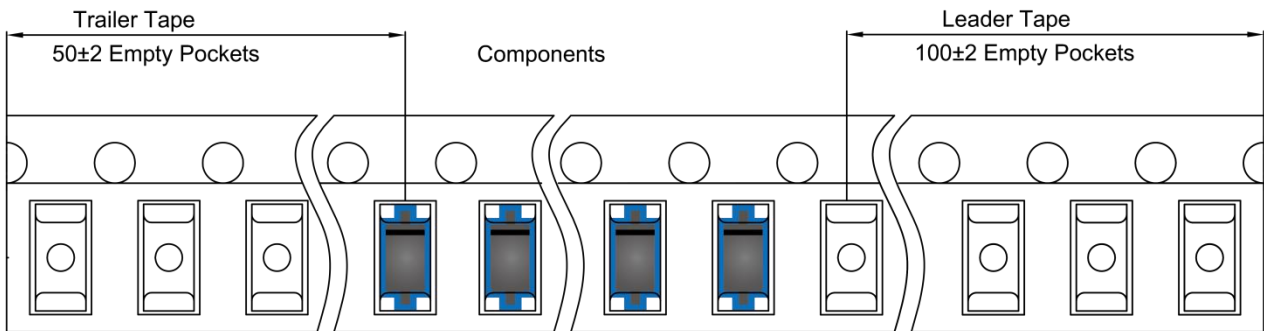
**SMA Tape and Reel**

**SMA Embossed Carrier Tape**

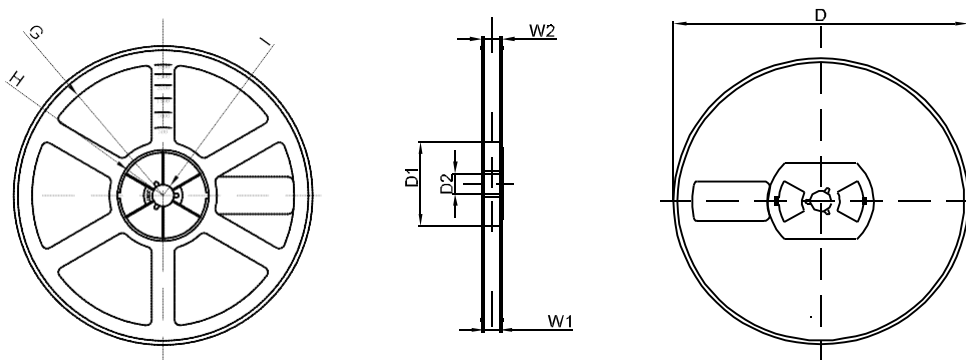


DIMENSIONS ARE IN MILLIMETER										
TYPE	A	B	C	d	E	F	P0	P	P1	W
SMA	2.89	5.35	2.68	Ø1.50	1.75	5.50	4.00	4.00	2.00	12.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

**SMA Tape Leader and Trailer**



**SMA Reel**



DIMENSIONS ARE IN MILLIMETER								
REEL OPTION	D	D1	D2	G	H	I	W1	W2
7" DIA	Ø178	54.40	13.00	R78	R25.60	R6.50	12.40	17.60
TOLERANCE	±2	±1	±1	±1	±1	±1	±1	±1