



## SS32 THRU SS320

VOLTAGE RANGE	20 to 200 Volts
CURRENT	3.0 Ampere

## Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- Built-in strain relief, ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed: 260 C/10 seconds at terminals



DO-214AC (SMA)

## Mechanical Data

- Case: Transfer molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead :Solder plated, solderable per MIL-STD-750 method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.002 ounce, 0.064 gram

## Maximum Ratings and Electrical Characteristics

- Ratings at 25°C ambient temperature unless otherwise specified
- Single phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

TYPE NUMBER	SYMBOL	SS 32	SS 34	SS 35	SS 36	SS 38	SS 310	SS 315	SS 320	UNIT	
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	20	40	50	60	80	100	150	200	Volts	
Maximum RMS Voltage	$V_{RMS}$	14	28	35	42	56	70	105	140	Volts	
Maximum DC Blocking Voltage	$V_{DC}$	20	40	50	60	80	100	150	200	Volts	
Maximum Average Forward Rectified Current at $T_L$ see figure 1 $T_L = 100^\circ\text{C}$	$I_{(AV)}$	3.0								Amps	
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	80								Amps	
Maximum Instantaneous Forward Voltage @ 3.0A (Note 1)	$V_F$	0.55	0.70	0.85	0.90					Volts	
Maximum DC Reverse Current at rated DC Blocking Voltage per element	$T_A = 25^\circ\text{C}$	0.1							0.01	mA	
	$T_A = 100^\circ\text{C}$	20.0				10.0		2.0			
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	55								$^\circ\text{C/W}$	
	$R_{\theta JL}$	25									
Diode junction capacitance (Note 3)	$C_J$	300	200							pF	
Operating Junction Temperature	$T_J$	(-55 to +150)							(-65 to +175)		$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	(-55 to +150)									$^\circ\text{C}$

## Notes:

1. Pulse test: 300 $\mu\text{s}$  pulse width, 1% duty cycle.
2. Unit mounted on P.C.B. with 0.20"×0.20" (5.00mm×5.00mm) copper pads.
3.  $f=1\text{MHz}$  and applied 4V DC reverse voltage.



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Ratings and Characteristic Curves (TA=25°C unless otherwise noted)

FIG.1-FORWARD CURRENT DERATING CURVE

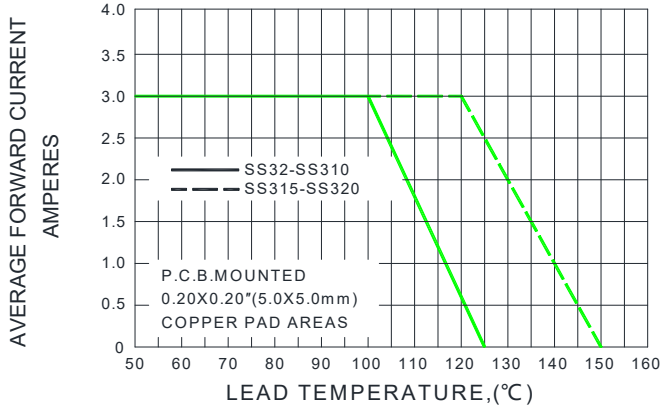


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

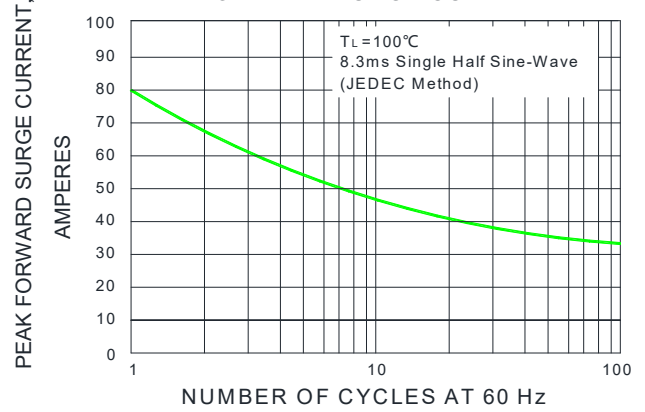


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

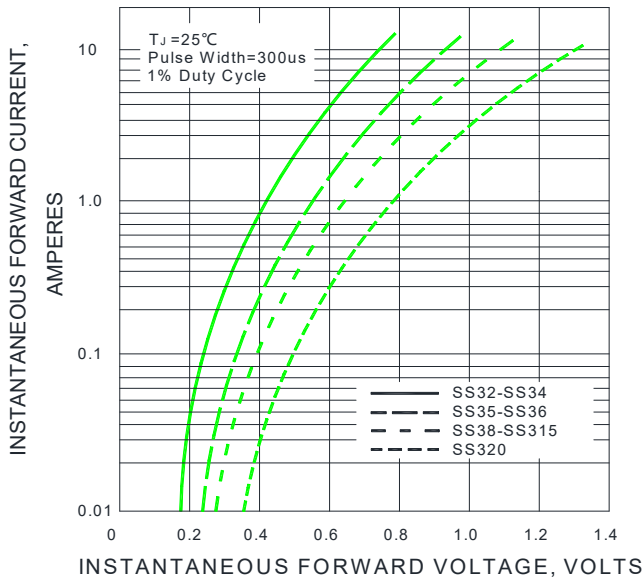


FIG.4-TYPICAL REVERSE CHARACTERISTICS

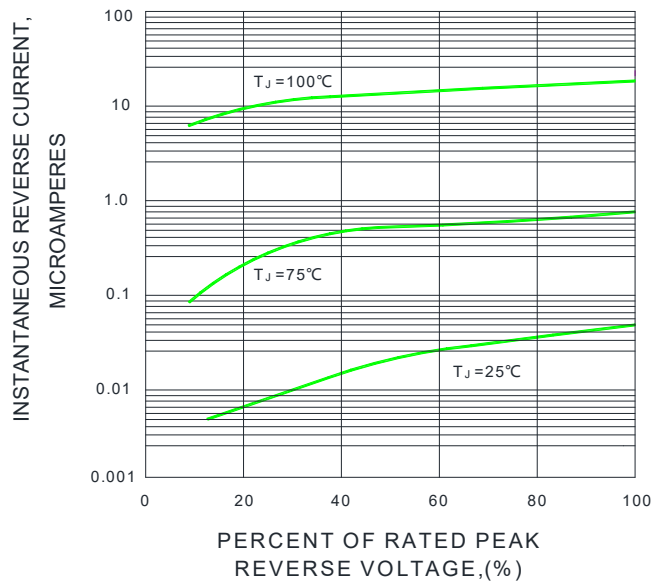
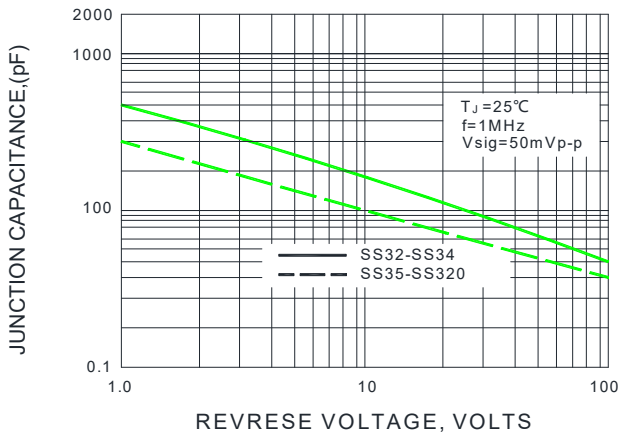


FIG.5-TYPICAL JUNCTION CAPACITANCE



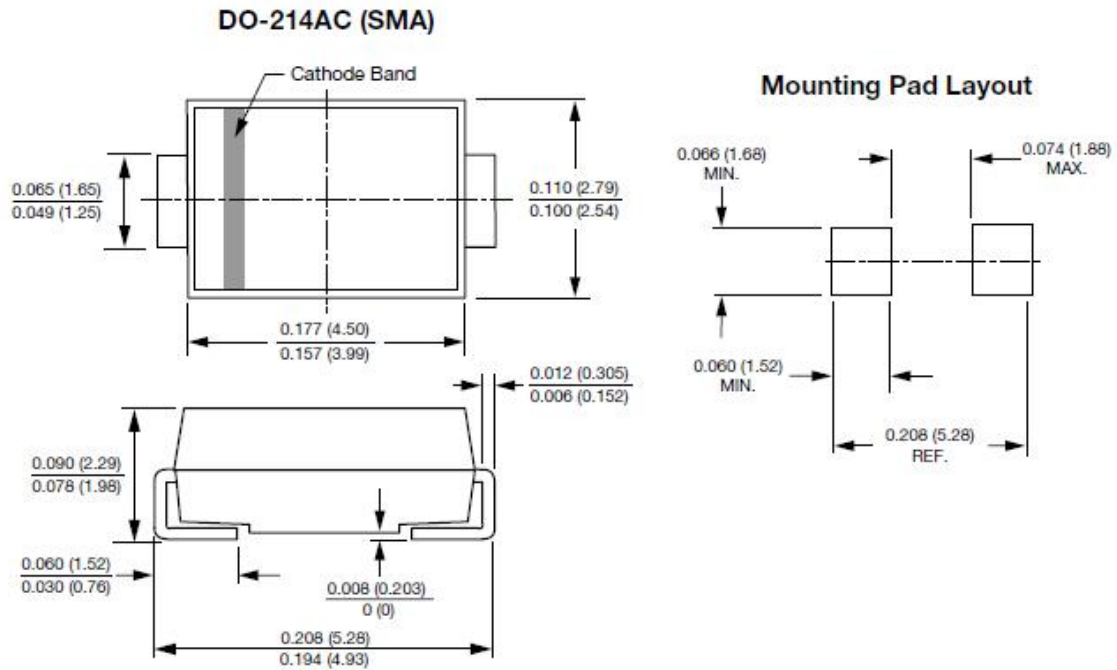


# SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

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## Package Outline Dimensions in inches (millimeters)



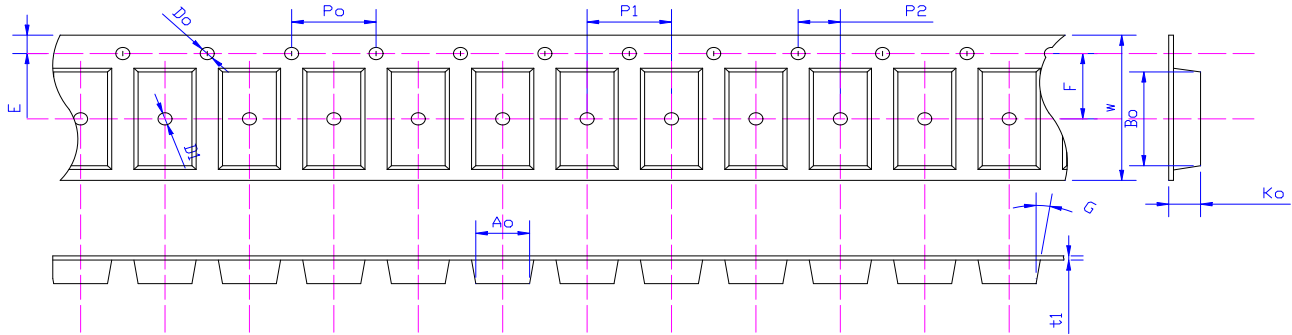


# SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

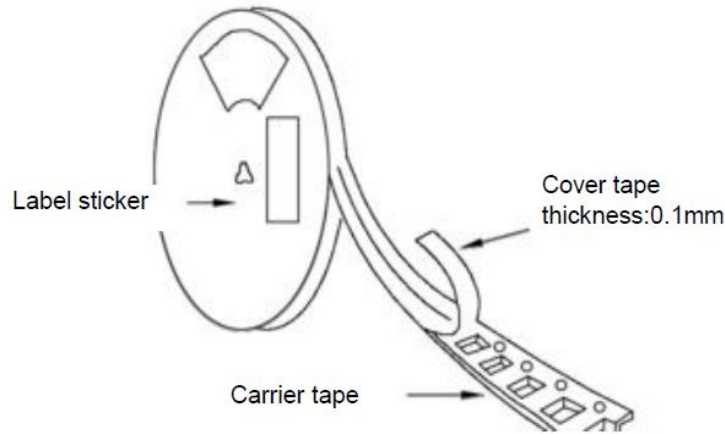
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### Package Reel Information



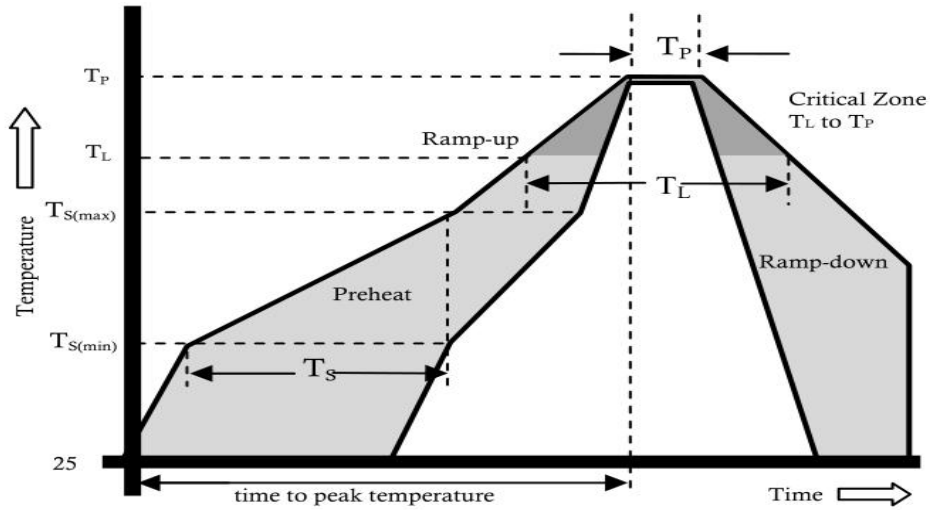
Specifications	Ao	Bo	Ko	Po	W	t1
SMA	2.55±0.10	5.10±0.10	2.36±0.10	4.00±0.1	12.0±0.05	0.23±0.02



DEVICE TYPE	Tape Width	13"Reel			07"Reel			
		Q'TY/REEL(pcs)	BOX/CARTON	Q'TY/CARTON(pcs)	Q'TY/REEL(pcs)	REEL/BOX	BOX/CARTON	Q'TY/CARTON(pcs)
SMA	12mm	5000	8	80000	1500	2	16	48000



Reflow Profile



Reflow Condition		Pb-Free Assembly
Pre Heat	Temperature Min.	+150°C
	Temperature Max.	+200°C
	Time(Min to Max)	60-180 secs.
Average ramp up rate(Liquidus Temp(T <sub>L</sub> ) to peak)		3°C/sec. Max.
T <sub>S</sub> (max) to T <sub>L</sub> - Ramp-up Rate		3°C/sec. Max.
Reflow	Temperature (T <sub>L</sub> )(Liquidus)	+217°C
	Temperature (T <sub>L</sub> )	60-150 secs.
Peak Temp (T <sub>P</sub> )		+(260+0/-5) °C
Time within 5°C of actual Peak Temp (T <sub>P</sub> )		25 secs.
Ramp-down Rate		6°C/sec. Max.
Time 25°C to peak Temp (T <sub>P</sub> )		8 min. Max.
Do not exceed		+260°C

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