ELECTRONIC

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

SS32L THRU SS310L

VOLTAGE RANGE **20 to 100 Volts**

CURRENT **3.0 Ampere**

RoHS COMPLIANT

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-214AA (SMB J-Bend)

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: 0.003ounce, 0.093 gram

Maximum Ratings and Electrical Characteristics

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

TYPE NUMBER		SYMBOLS	SS 32L	SS 34L	SS 35L	SS 36L	SS 38L	SS 310L	UNIT
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	20	40	50	60	80	100	Volts
Maximum RMS Voltage		V_{RMS}	14	28	35	42	56	70	Volts
Maximum DC Blocking Voltage		V_{DC}	20	40	50	60	80	100	Volts
Maximum Average Forward Rectified Current at $T_L$see figure 1 T_L =85℃		$I_{(AV)}$	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(Note1)		V_F	0.45		0.55		0.70		Volts
Maximum DC Reverse Current at rated DC Blocking Voltage per element	T_A = 25℃	I_R	0.5				0.3		mA
	T_A = 125℃		20				10		
Typical Thermal Resistance (Note 2)		$R_{\theta JA}$	50						℃/W
		$R_{\theta JL}$	15						
Diode junction capacitance (Note 3)		C_J	200						pF
Operating Junction Temperature		T_J	(-55 to +150)						℃
Storage Temperature Range		T_{STG}	(-55 to +150)						℃

Notes:

1. Pulse test:300μs pulse width,1% duty cycle.
2. Thermal resistance from Junction to ambient and from junction to lead mounted on PCB. with 0.3×0.3″(8.0 × 8.0mm)copper pad areas.
3. f=1MHz and applied 4V DC reverse voltage.

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

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

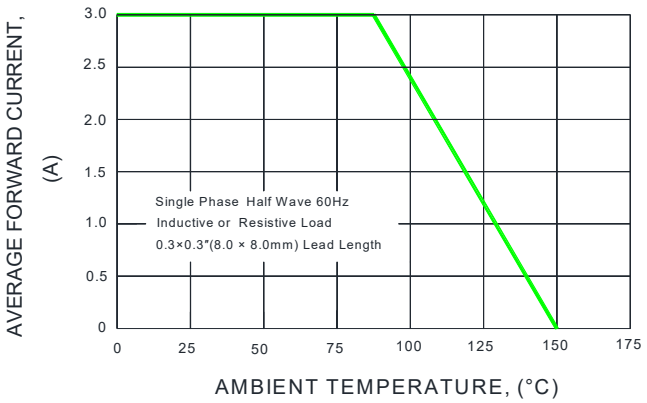


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

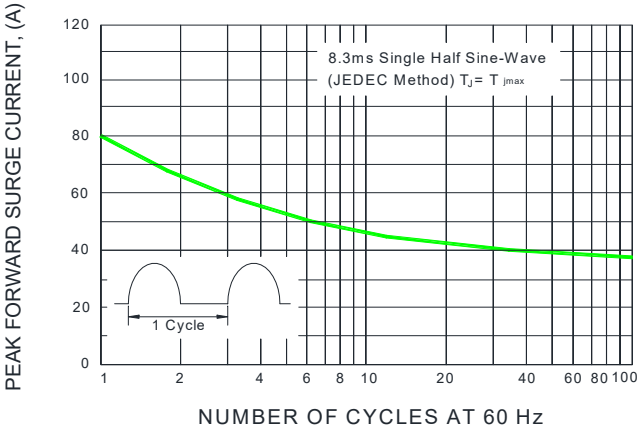


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

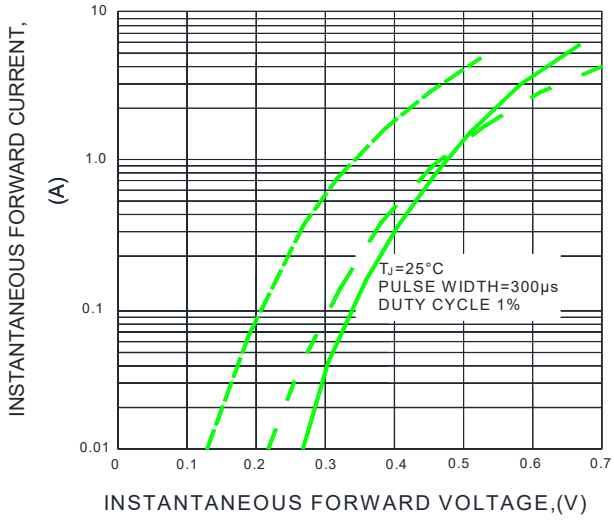


FIG.4-TYPICAL REVERSE CHARACTERISTICS

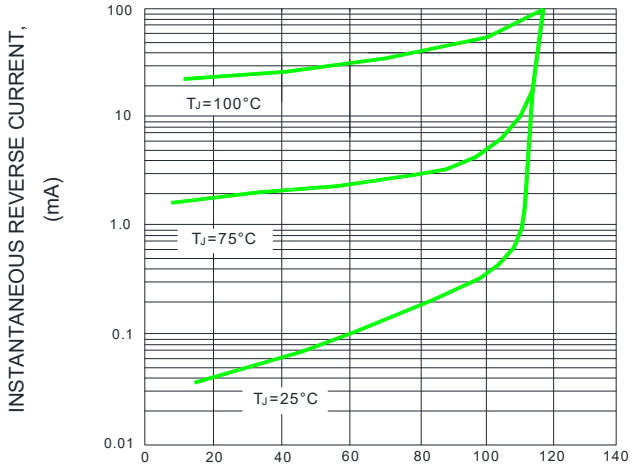
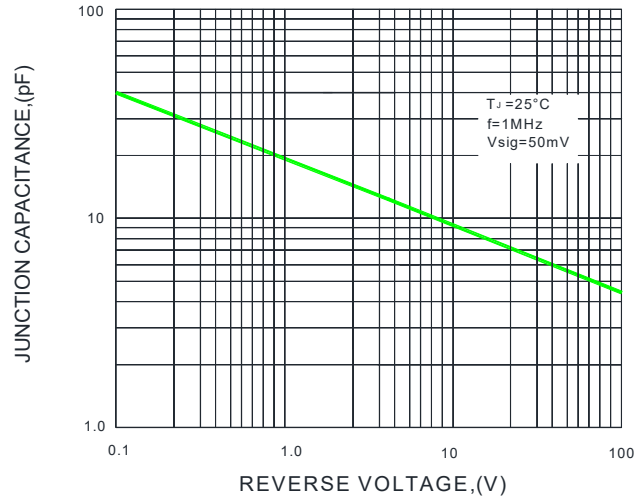


FIG.5-TYPICAL JUNCTION CAPACITANCE



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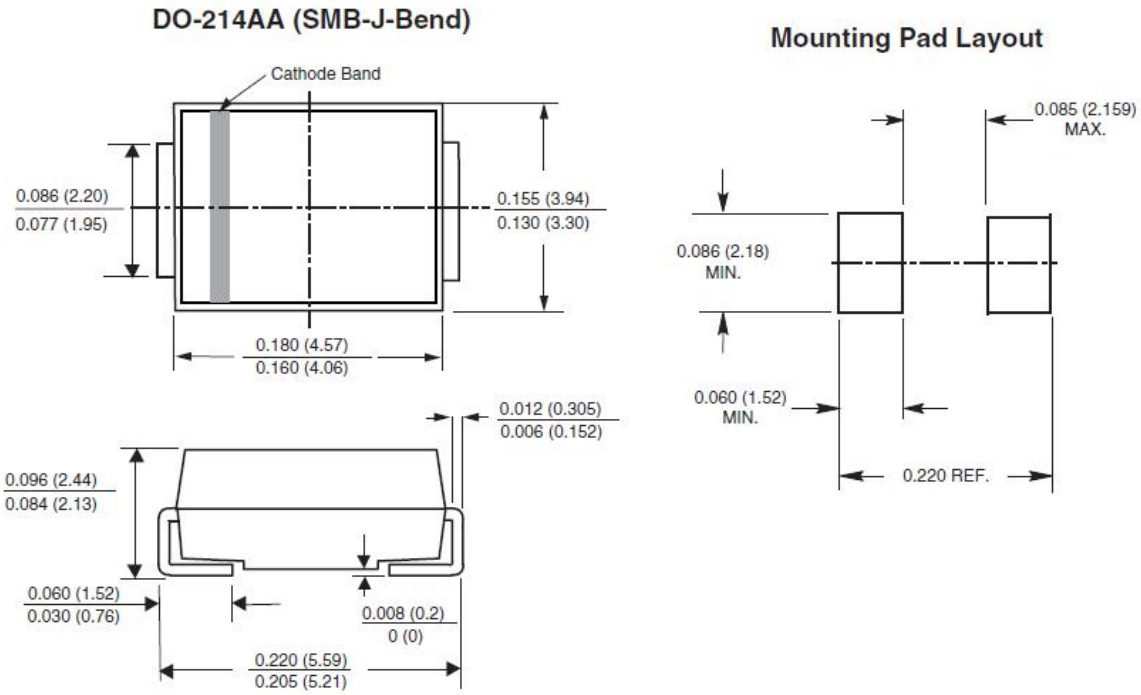
Package Outline Dimensions in inches (millimeters)



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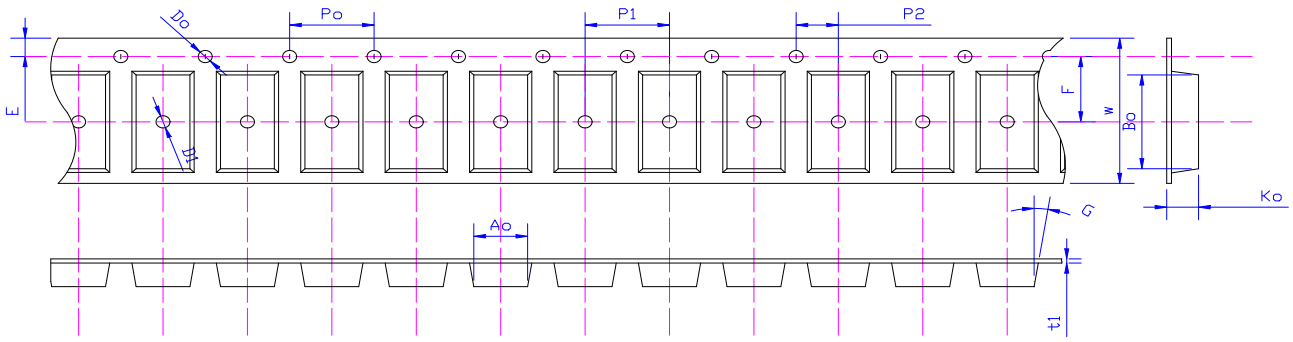
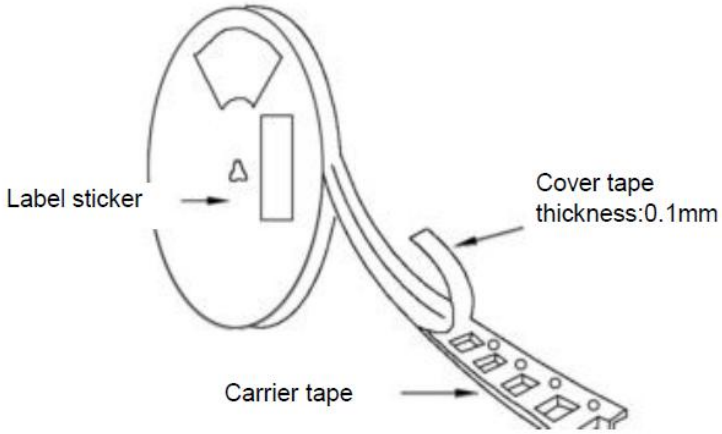
Package Reel Information



Specifications	Ao	Bo	Ko	Po	W	t1
SMB	3.77±0.10	5.70±0.10	2.67±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)
SMB	12mm	3000	8	48000	NA	NA	NA	NA

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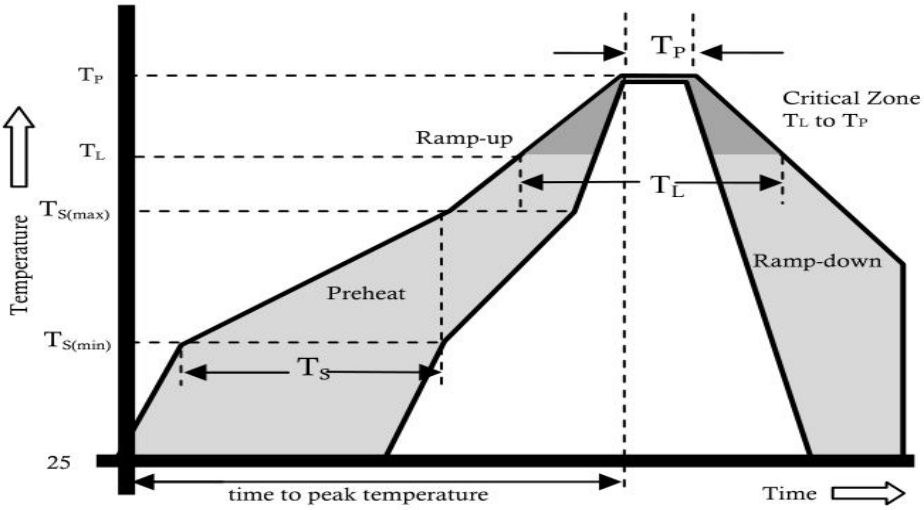
Reflow Profile



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_L) to peak)		3°C/sec. Max.
T_S(max) to T_L - Ramp-up Rate		3°C/sec. Max.
Reflow	Temperature (T_L)(Liquidus)	+217°C
	Temperature (T_L)	60-150 secs.
Peak Temp (T_P)		+(260+0/-5)°C
Time within 5°C of actual Peak Temp (T_P)		25 secs.
Ramp-down Rate		6°C/sec. Max.
Time 25°C to peak Temp (T_P)		8 min. Max.
Do not exceed		+260°C