



SS52 THRU SS520

VOLTAGE RANGE	20 to 200 Volts
CURRENT	5.0 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 52	SS 54	SS 55	SS 56	SS 58	SS 510	SS 515	SS 520	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 $T_L = 100^\circ\text{C}$	$I_{(AV)}$	5.0								Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	125								Amps
Maximum Instantaneous Forward Voltage @ 5.0A(Note1)	V_F	0.55	0.70		0.85		0.95		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	60								pF
Operating Junction Temperature	T_J	(-65 to +150)								$^\circ\text{C}$
Storage Temperature Range	T_{STG}	(-55 to +150)								$^\circ\text{C}$

Notes:

1. Pulse test: 300 μs 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.

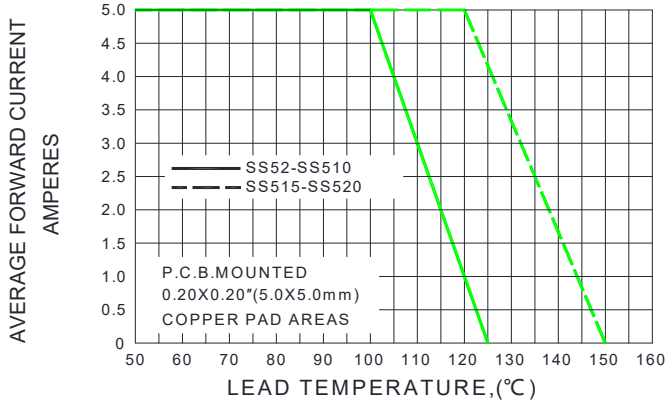


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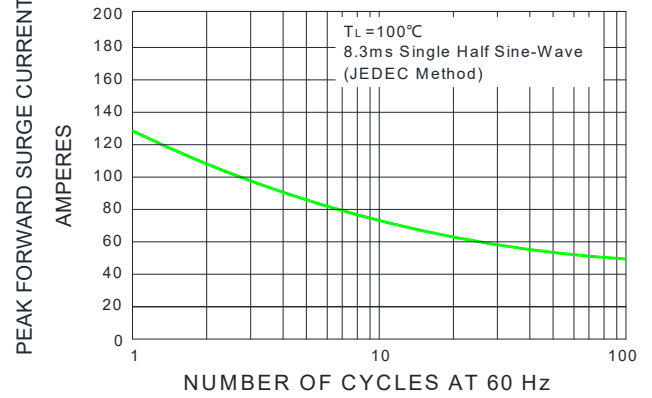
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Ratings and Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

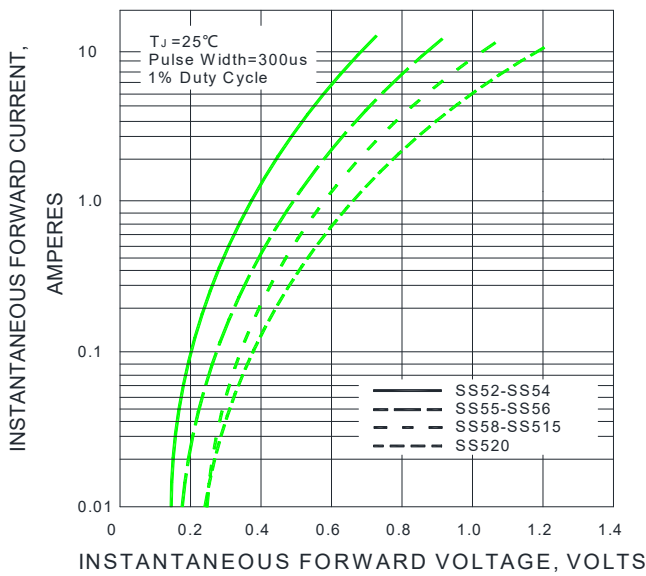
F1G.1-FORWARD CURRENT DERATING CURVE



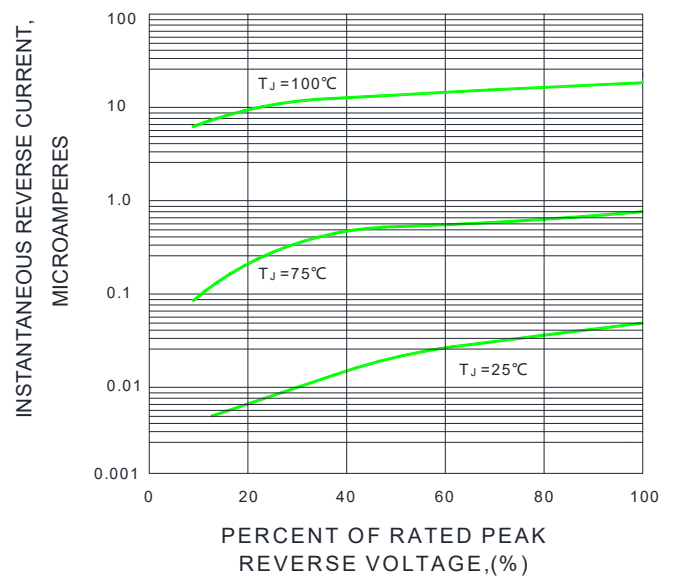
F1G.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



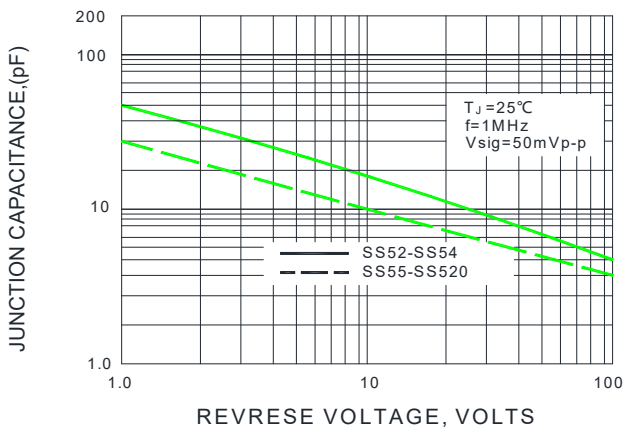
F1G.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



F1G.4-TYPICAL REVERSE CHARACTERISTICS



F1G.5-TYPICAL JUNCTION CAPACITANCE



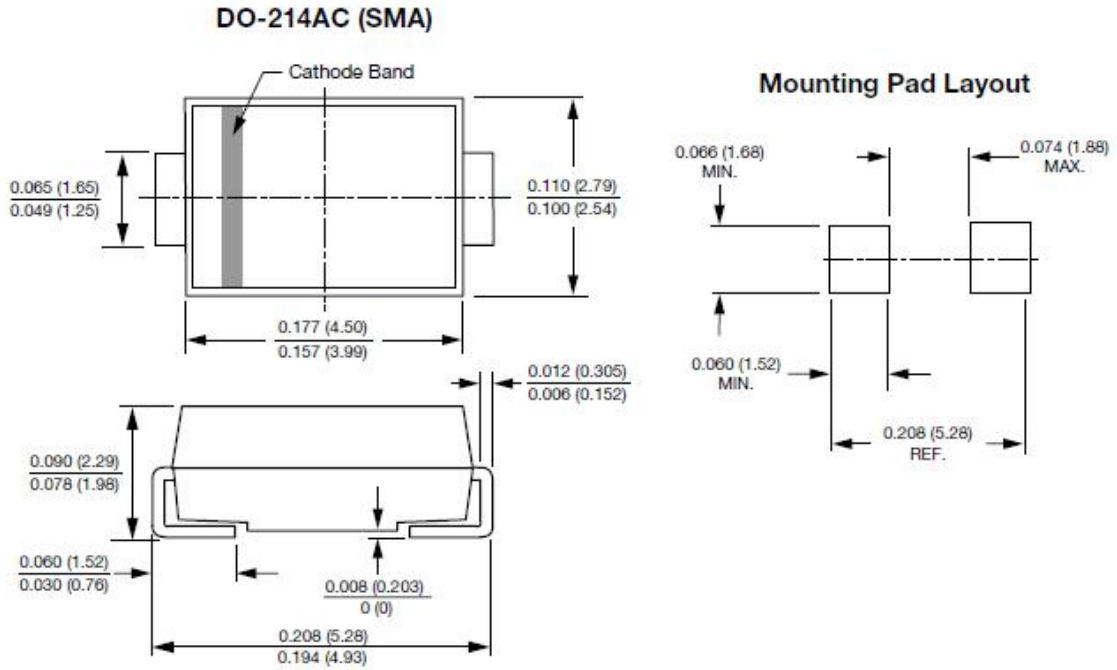


SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

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Package Outline Dimensions in inches (millimeters)

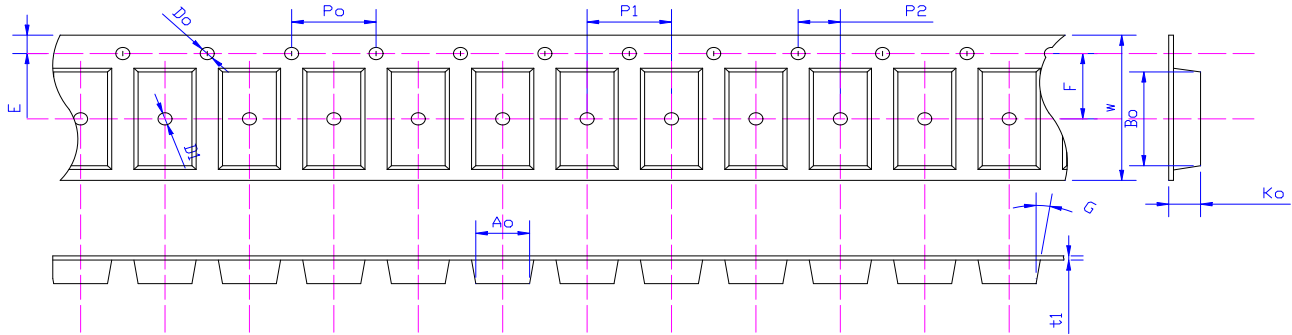




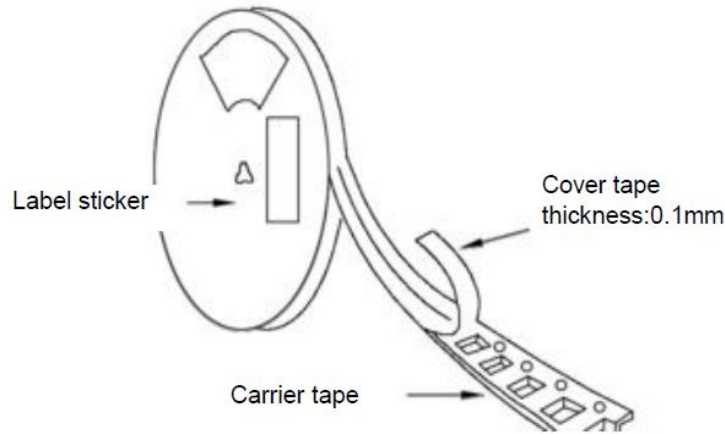
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Package Reel Information



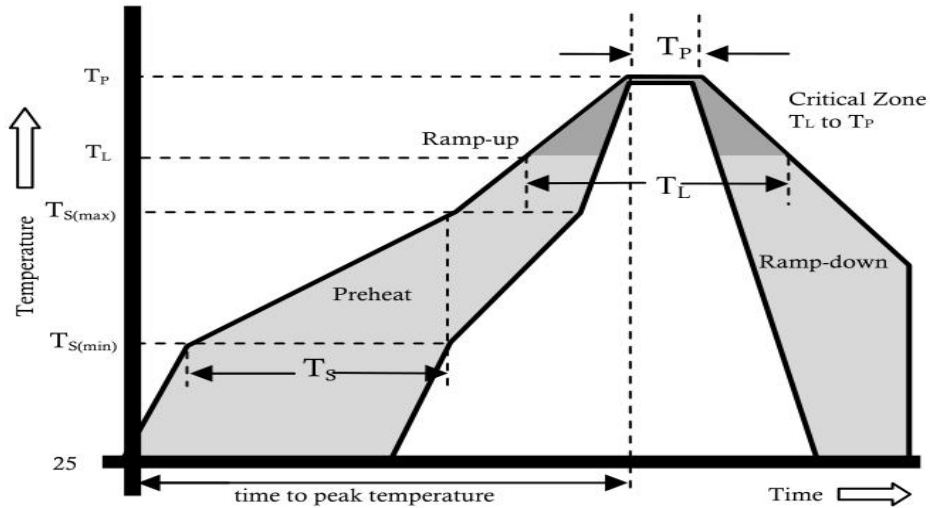
Specifications	Ao	Bo	Ko	Po	W	t1
SMA	2.55±0.10	5.10±0.10	2.36±0.10	4.00±0.1	12.0±0.05	0.23±0.02



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_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

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