



SS52A THRU SS520A

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 52A	SS 54A	SS 55A	SS 56A	SS 58A	SS 510A	SS 515A	SS 520A	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_c see figure 1 $T_c=100^\circ\text{C}$	$I_{(AV)}$	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	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
	$T_A = 125^\circ\text{C}$	20.0				10.0		2.0		
Typical Thermal Resistance ^(Note 1)	$R_{\theta JA}$	55								$^\circ\text{C}/\text{W}$
	$R_{\theta JL}$	25								
Diode junction capacitance ^(Note 2)	C_J	60								pF
Operating Junction Temperature	T_J	-65 to +150							-65 to +175	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150								$^\circ\text{C}$

Notes:

1. Unit mounted on P.C.B. with 0.20"×0.20"(5.00mm×5.00mm) copper pads.
2. $f=1\text{MHz}$ and applied 4V DC reverse voltage.

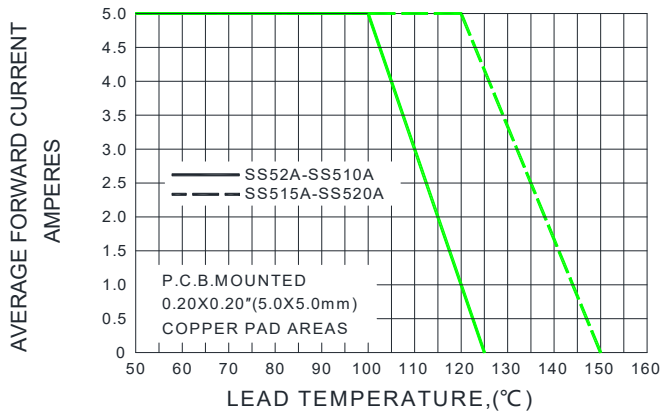


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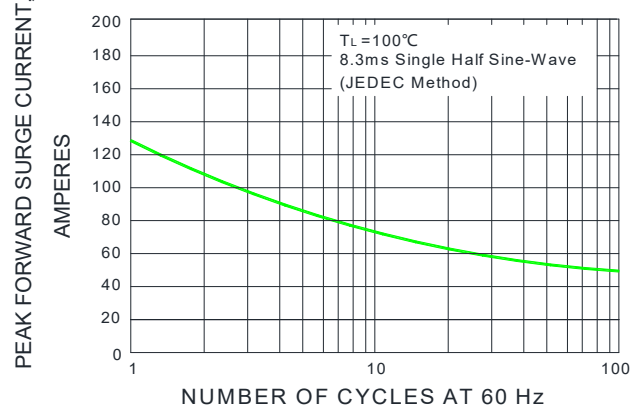
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Ratings and Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

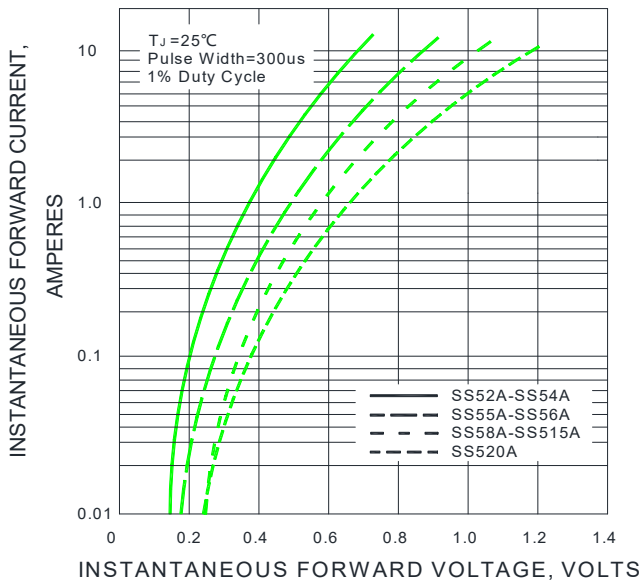
F1G.1-FORWARD CURRENT DERATING CURVE



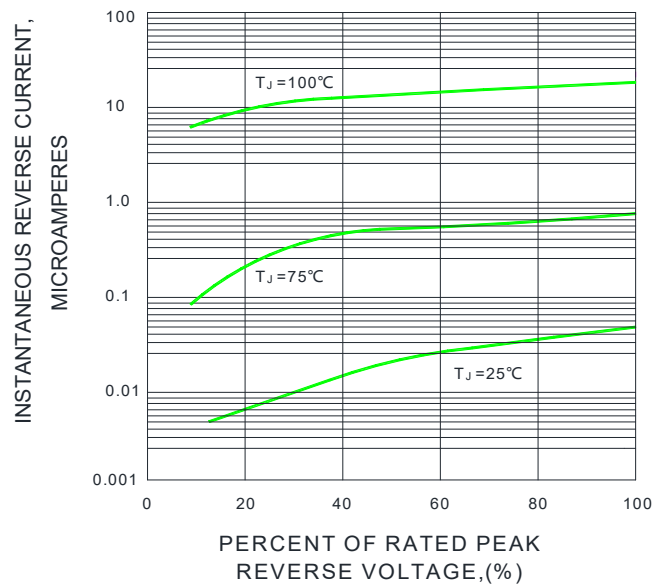
F1G.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



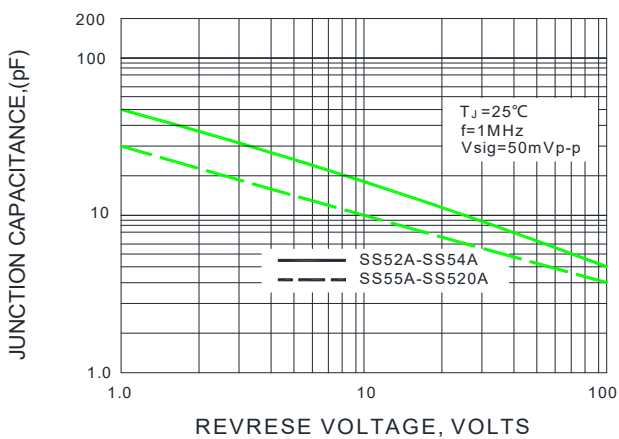
F1G.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



F1G.4-TYPICAL REVERSE CHARACTERISTICS

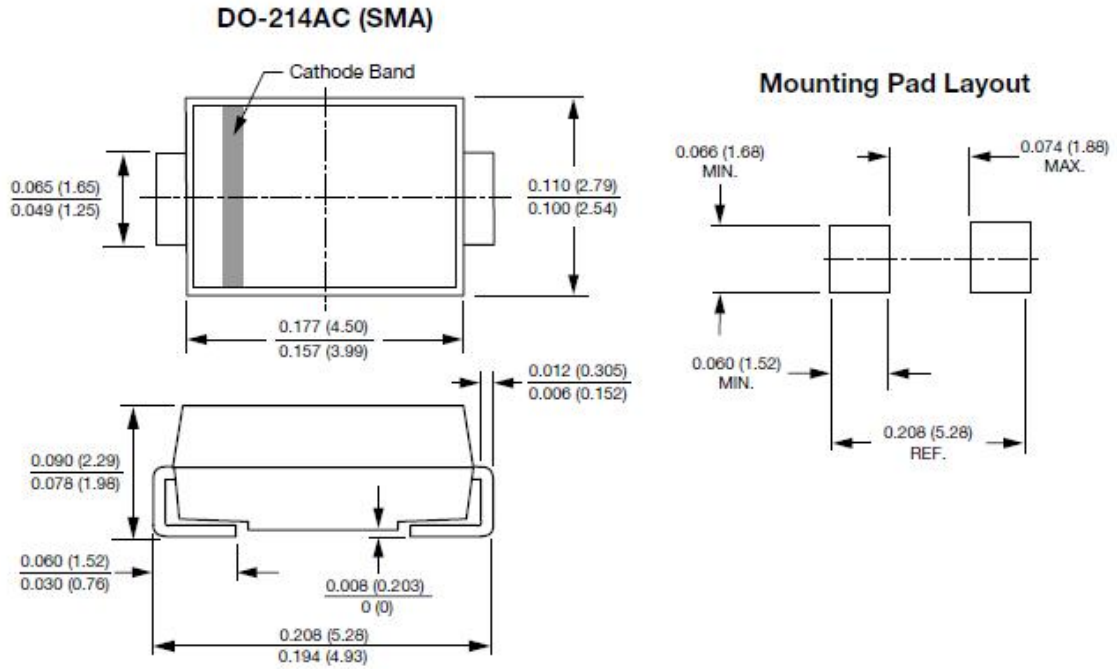


F1G.5-TYPICAL JUNCTION CAPACITANCE





Package Outline Dimensions in inches (millimeters)



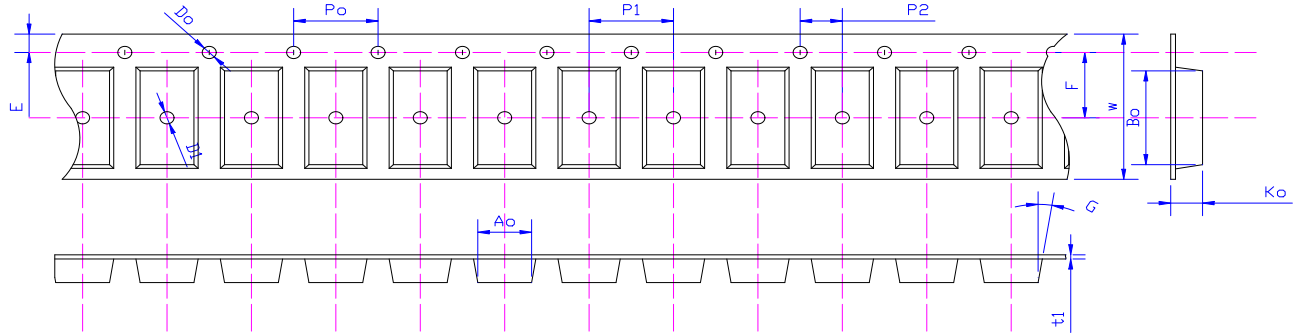
Printing Specifications

Marking

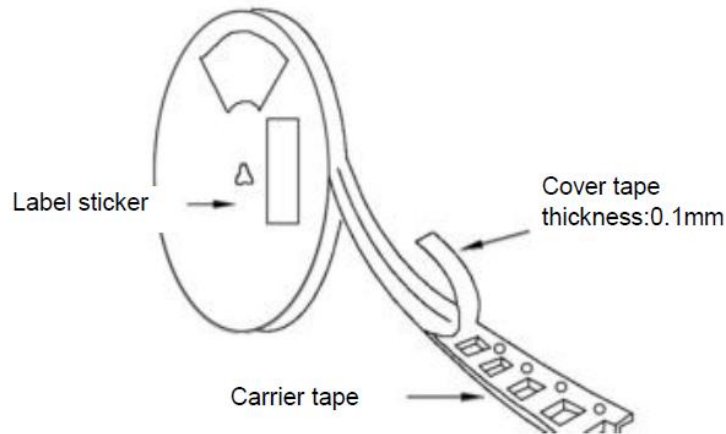
Type number	Marking code
SS52A	SS52
SS54A	SS54
SS55A	SS55
SS56A	SS56
SS58A	SS58
SS510A	SS510
SS515A	SS515
SS520A	SS520



Package Reel Information



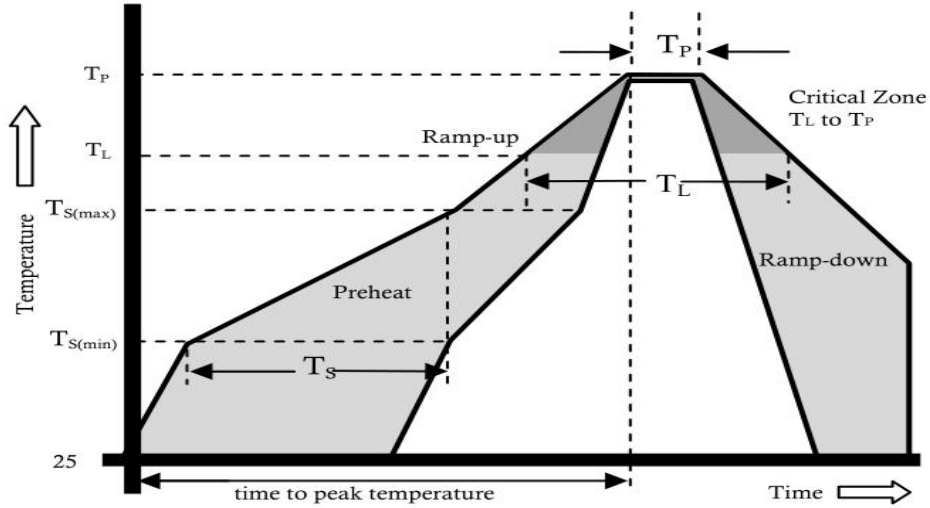
Specifications	Ao	Bo	Ko	Po	W	t1
SMA	2.55±0.10	5.10±0.10	2.36±0.10	4.00±0.1	12.0±0.05	0.23±0.02



DEVICE TYPE	Tape Width	13"Reel			07"Reel			
		Q'TY/REEL(pcs)	BOX/CARTOO N	Q'TY/CARTON (pcs)	Q'TY/REEL(pcs)	REEL/BOX	BOX/CARTOO N	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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Disclaimer

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