

**SS52 (SK52) THRU SS510 (SK510)**

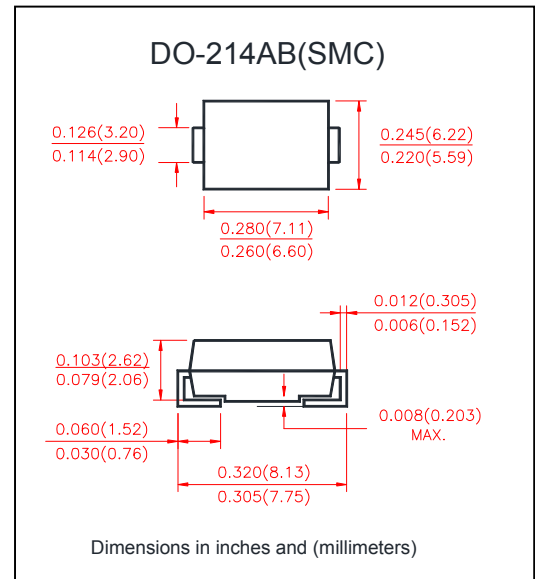
**VOLTAGE RANGE**      **20 to 100 Volts**  
**CURRENT**              **5.0 Ampere**

### FEATURES

- Low profile surface mount package
- Built-in strain relief
- High switching speed
- Low voltage drop, high efficiency
- For use in low voltage high frequency inverters, Free willing, and polarity protection applications
- Guarding for over voltage protection

### 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: 0.007 ounce, 0.25 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%.

	SYMBOLS	SS52 SK52	SS53 SK53	SS54 SK54	SS55 SK55	SS56 SK56	SS58 SK58	SS59 SK59	SS510 SK510	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	20	30	40	50	60	80	90	100	Volts
Maximum RMS Voltage	$V_{RMS}$	14	21	28	35	42	56	63	70	Volts
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	50	60	80	90	100	Volts
Maximum Average Forward Rectified Current at $T_L$ see figure 1 $T_L = 105^\circ\text{C}$	$I_{(AV)}$	5.0								Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	100								Amps
Maximum Instantaneous Forward Voltage @ 5.0A(Note1)	$V_F$	0.55			0.75		0.85			Volts
Maximum DC Reverse Current at rated DC Blocking Voltage per element	$T_A = 25^\circ\text{C}$	0.5								mA
	$T_A = 100^\circ\text{C}$	20.0				10.0				
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	55								°C/W
	$R_{\theta JL}$	12								
Operating Junction Temperature	$T_J$	(-55 to +150)				(-55 to +150)				°C
Storage Temperature Range	$T_{STG}$	(-55 to +150)								°C

#### Notes:

1. Pulse test: 300  $\mu$  s pulse width, 1% duty cycle
2. PCB mounted with 0.55"  $\times$  0.55" (14mm  $\times$  14mm) copper pads



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## RATING AND CHARACTERISTIC CURVES SS52 THRU SS510

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

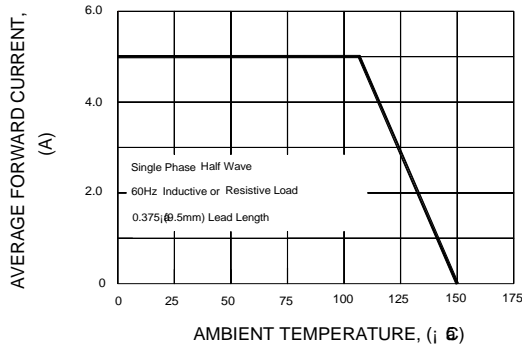


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

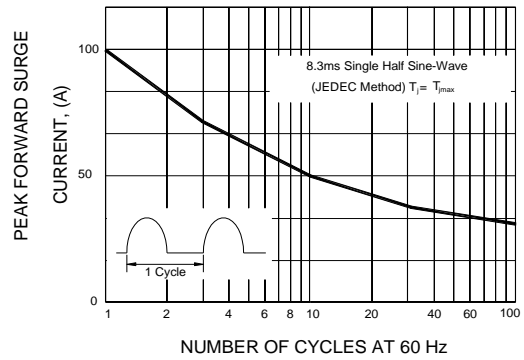


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

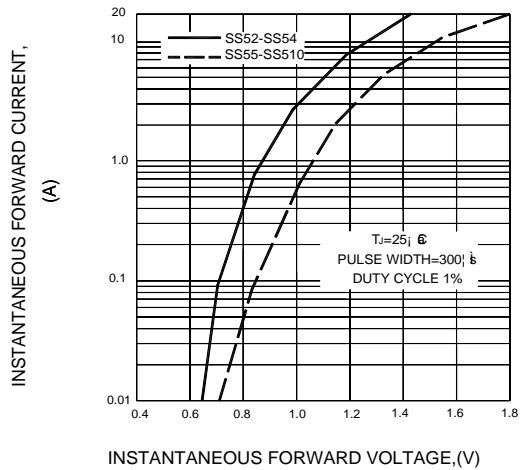


FIG.4-TYPICAL REVERSE CHARACTERISTICS

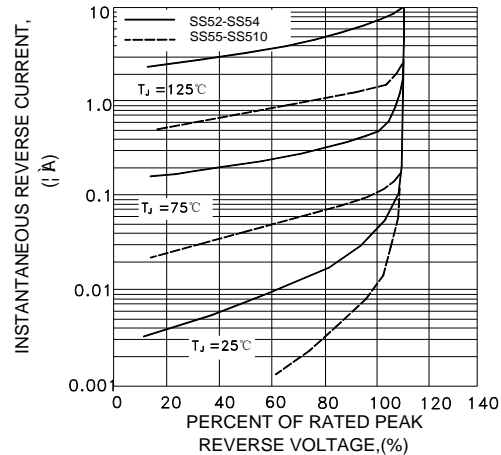
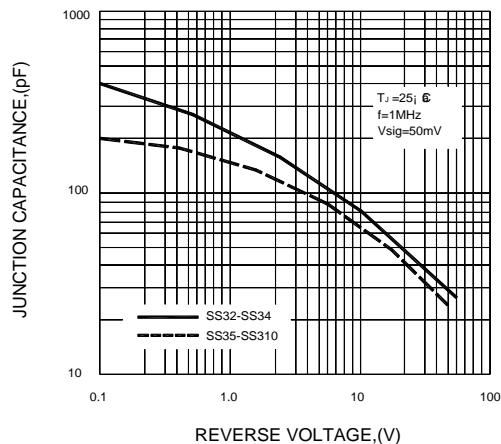


FIG.5-TYPICAL JUNCTION CAPACITANCE



Note: Specifications are subject to change without notice. For more detail and update, please visit our website.