



MASTER INSTRUMENT CORPORATION

SS32A THRU SS310A

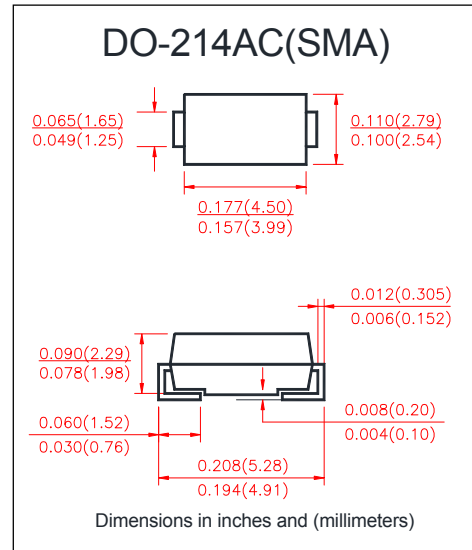
VOLTAGE RANGE 20 to 100 Volts
CURRENT 3.0 Ampere

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



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	SS32A	SS33A	SS34A	SS35A	SS36A	SS38A	SS39A	SS310A	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 $T_L = 105^\circ\text{C}$	$I_{(AV)}$	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	0.55			0.70		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								$^\circ\text{C}/\text{W}$
	$R_{\theta JL}$	12								
Operating Junction Temperature	T_J	(-55 to +125)								$^\circ\text{C}$
Storage Temperature Range	T_{STG}	(-55 to +150)								$^\circ\text{C}$

Notes:

1. Pulse test: 300 μs pulse width, 1% duty cycle
2. PCB mounted with 0.2 \times 0.2" (5.0 \times 5.0mm) copper pads



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FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

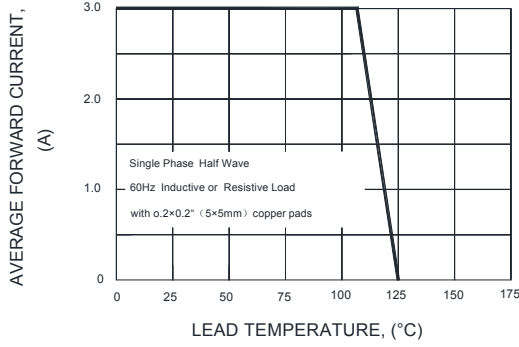


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

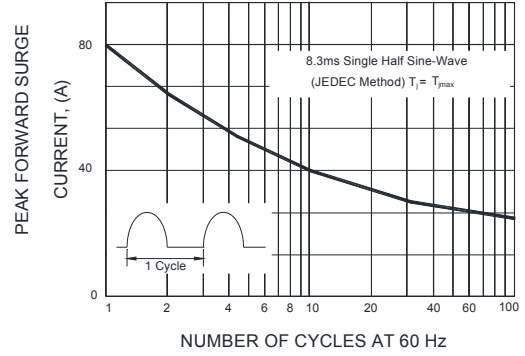


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

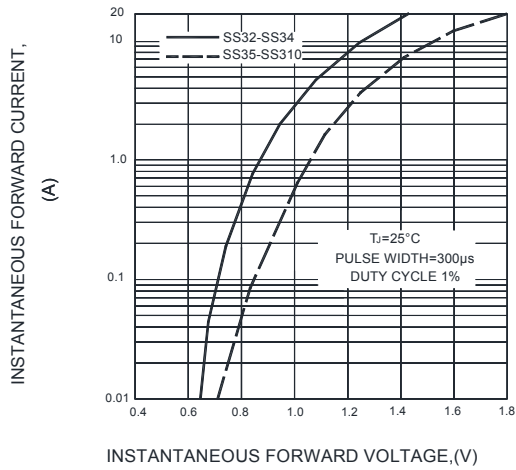


FIG.4-TYPICAL REVERSE CHARACTERISTICS

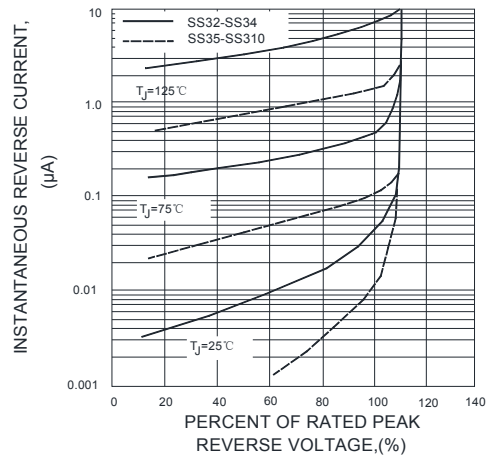


FIG.5-TYPICAL JUNCTION CAPACITANCE

