

MASTER INSTRUMENT CORPORATION

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER SS12 THRU SS110

VOLTAGE RANGE 20 to 100 Volts
Forward Current 1.0 Amperes

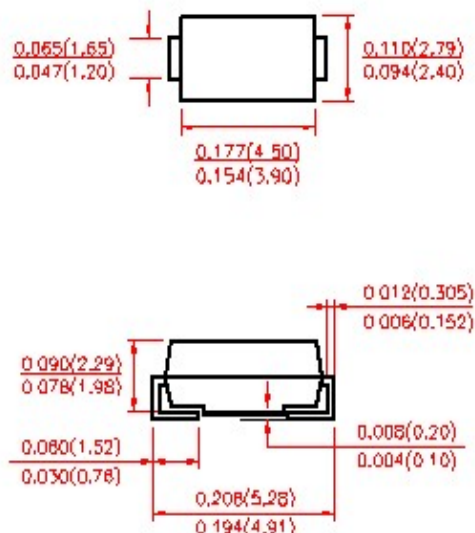
FEATURES

- ! Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ! Metal silicon junction, majority carrier conduction
- ! For surface mount applications
- ! Guard ring for over voltage protection
- ! Low power loss, high efficiency
- ! High current capability, Low forward voltage drop
- ! High surge capability
- ! For use in low voltage, high frequency inverters, Free wheeling, and polarity protection applications
- ! High temperature soldering guaranteed:
250°C/10 seconds at terminals

MECHANICAL DATA

- ! Case: JEDED SMA (DO-214AC) molded plastic body
- ! Terminals: Solder Plated, solderable per MIL-STD-750 Method 2026
- ! Polarity: Color band denotes cathode end
- ! Weight: 0.002ounce, 0.064 gram

DO-214AC(SMA)



Dimensions in inches and (millimeters)

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 by 20%.

		SYMBOLS	SS12	SS13	SS14	SS15	SS16	SS18	SS19	SS110	UNITS
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 0.375"(9.5mm) lead length (see Fig.1)		I _(AV)	1.0								Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)		I _{FSM}	30.0								Amps
Maximum Instantaneous Forward Voltage of 1.0A (Note 1)		V _F	0.55			0.75		0.85			Volts
Maximum instantaneous Reverse Current at rated DC blocking voltage (Note 1)	T _A =25 °C	I _R	0.5								mA
	T _A =125 °C		10								
Typical thermal capacitance (Note 2)		R _{QJL} R _{QJA}	28.0 88.0								°C/W
Operating and Storage Temperature Range		T _J	-65 to +125				-65 to +150				°C
Storage temperature range		T _{STG}	-65 to +150								

NOTES:

- 1.Pulse test: 300μs pulse width, 1% duty cycle.
- 2.P.C.B. Mounted with 0.2*0.2"(5.0*5.0mm) copper pads.

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RATING AND CHARACTERISTIC CURVES SS12 thru SS110

FIG.1-FORWARD CURRENT DERATING CURVE

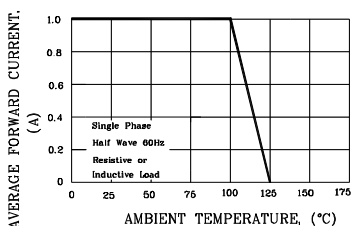


FIG.2-MAXIMUM NON-REPETITIVE SURGE CURRENT

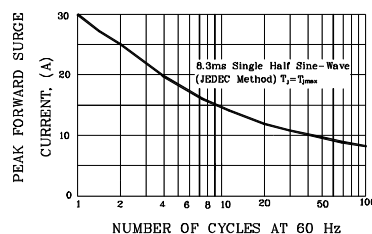


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

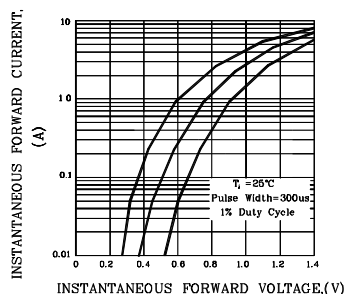


FIG.4-TYPICAL JUNCTION CAPACITANCE

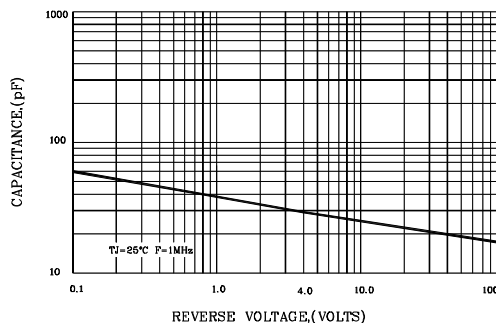


FIG.5-TYPICAL REVERSE CHARACTERISTICS

