



MASTER INSTRUMENT CORPORATION

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER SS52 THRU SS510

VOLTAGE RANGE	20 to 100 Volts
Forward Current	5.0 Amperes

FEATURES

- For surface mount applications
- Metal-Semiconductor Junction with Guarding
- Epitaxial Construction
- Very Low forward voltage drop
- High Current 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



DO-214AB (SMC)

MECHANICAL DATA

- Case: Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750 Method 2026
- Polarity: Color band denote Cathode end
- Weight: 0.007ounce, 0.21 gram
0.003 ounce, 0.093 gram for DO-214AA (SMB) Package. (Note3)
0.002ounce, 0.064 gram for DO-214AC (SMA) Package (Note4)

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	SS52	SS53	SS54	SS55	SS56	SS58	SS510	UNITS
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	20	30	40	50	60	80	100	Volts
Maximum RMS Voltage	V _{RMS}	14	21	28	35	42	56	70	Volts
Maximum DC Blocking Voltage	V _{DC}	20	30	40	50	60	80	100	Volts
Maximum Average Forward Rectified Current @TL=90℃	I _(AV)	5.0							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	175							Amps
Maximum Forward Voltage at 5.0A DC @T _C =100 ℃		V _F	0.55			0.70		0.85	Volts
Maximum instantaneous Reverse Current at rated DC blocking voltage	T _J =25℃	I _R	0.5						mA
	T _J =100℃		20						
Typical Junction Capacitance (Note 1)		C _J	300						pF
Typical thermal capacitance (Note 2)		R _{QJL}	10						℃/W
Typical thermal capacitance (Note 2)		R _{QJA}	50						
Operating and Storage Temperature Range		T _J	-55 to +125						℃
Storage temperature range		T _{STG}	-55 to +150						

NOTES:

- Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
- Thermal Resistance Junction to Lead.
- "B" Suffix Designates DO-214AA(SMB) Package.
- "A" Suffix Designates DO-214AC(SMA) Package.



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RATING AND CHARACTERISTIC CURVES SS52 thru SS510

FIG.1-FORWARD CURRENT DERATING CURVE

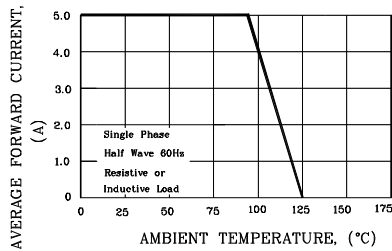


FIG.2-MAXIMUM NON-REPETITIVE SURGE CURRENT

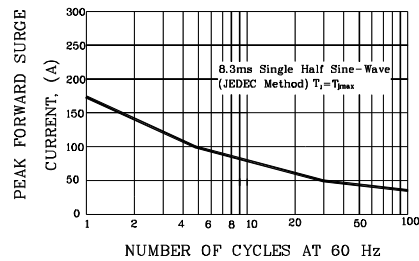


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

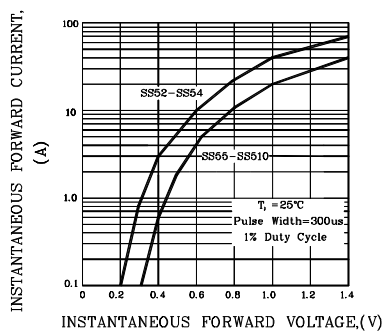


FIG.4-TYPICAL JUNCTION CAPACITANCE

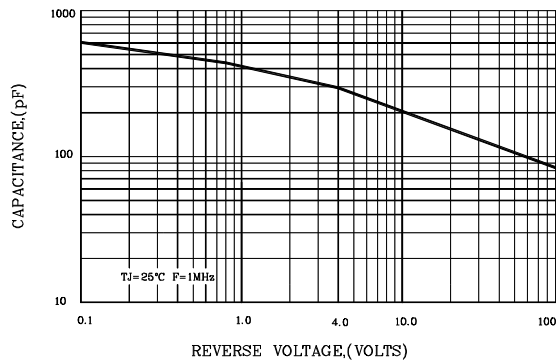
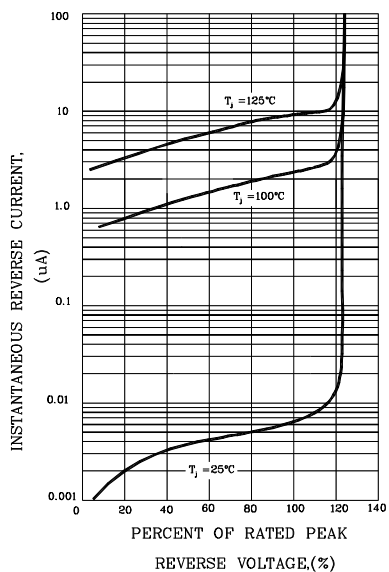


FIG.5-TYPICAL REVERSE CHARACTERISTICS





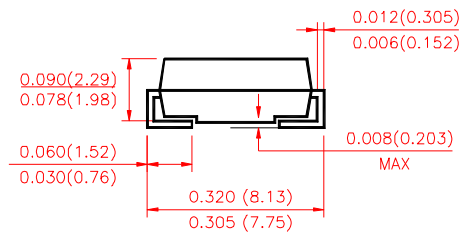
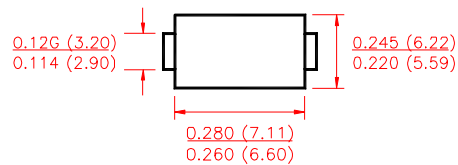
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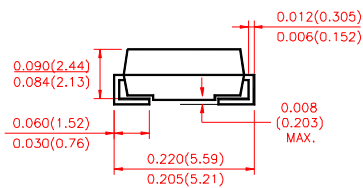
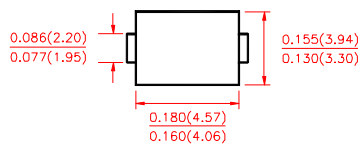
PACKAGE OUTLINE

DO-214AB(SMC)



Dimensions in inches and (millimeters)

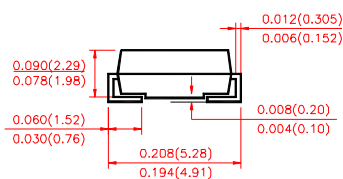
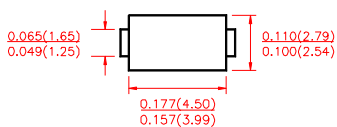
DO-214AA(SMB)



DO-214AA (SMB)

Dimensions in inches and (millimeters)

DO-214AC(SMA)



DO-214AC (SMA)

Dimensions in inches and (millimeters)