



MASTER INSTRUMENT CORPORATION

SURFACE MOUNT GLASS PASSIVATED JUNCTION RECTIFIER S5A THRU S5M

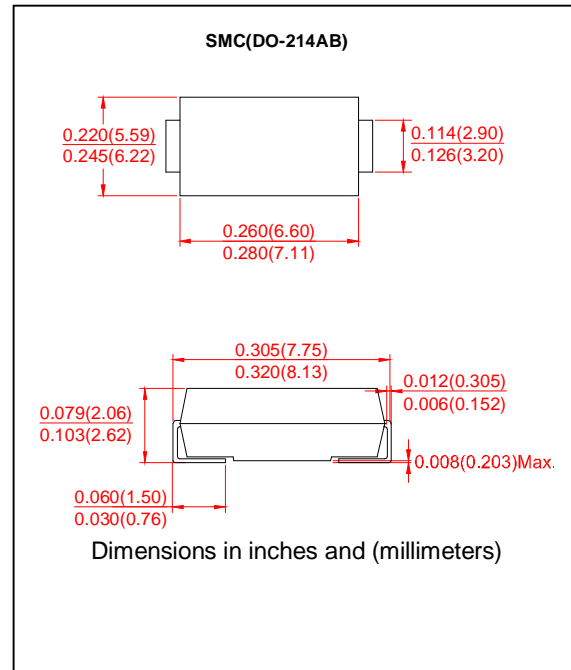
VOLTAGE RANGE 50 to 1000 Volts
Forward Current 5.0 Amperes

FEATURES

- Glass passivated die Construction
- Low Forward Voltage Drop and High Current Capability
- Surge Overload Rating to 100A Peak
- Ideally Suited for Automated Assembly

MECHANICAL DATA

- Case: Molded Plastic
- Case Material-UL Flammability Rating Classification 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A
- Terminals: Solder Plated Terminal – Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band or Cathode Notch
- 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	S5A	S5B	S5D	S5G	S5J	S5K	S5M	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Rectified Output Current, At $T_T = 75^\circ\text{C}$	$I_{(AV)}$	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	V_F	1.15							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage per element	I_R	10							μA
$T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$		250							
Typical Total Capacitance (Note 1)	C_T	40							pF
Typical Thermal Resistance, Junction to Terminal (Note 2)	$R_{\theta JT}$	10							$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	(-65 to +150)							$^\circ\text{C}$
Storage Temperature Range	T_{STG}	(-65 to +150)							$^\circ\text{C}$

Notes:

1. Measured at 1.0MHz and Applied Reverse Voltage of 4.0V DC.
2. Thermal Resistance Junction to Terminal, unit mounted on PC board with 5.0mm² (0.013mm thick) copper pads as Heat Sink.



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S5A THRU S5M**

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RATINGS AND CHARACTERISTIC CURVES S5A THRU S5M

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

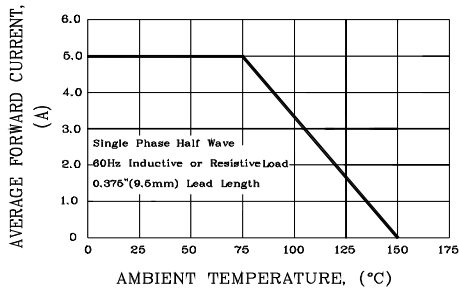


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

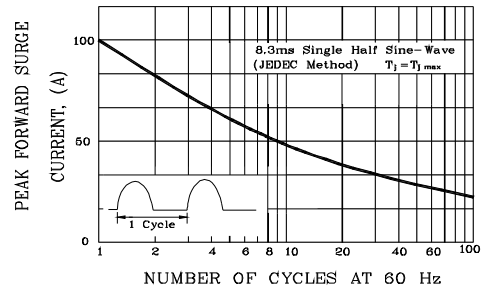


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

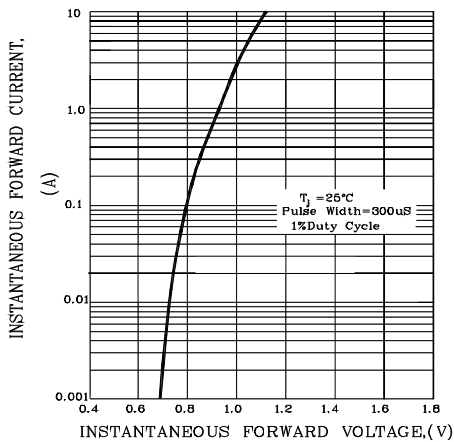


FIG.4-TYPICAL REVERSE CHARACTERISTICS

