

## S2A THRU S2M

### SURFACE MOUNT RECTIFIER

VOLTAGE - 50 - 1000 Volts CURRENT - 2.0 Amperes

#### FEATURES

- For surface mounted applications
- High temperature metallurgically bonded-no compression contacts as found in other diode-constructed rectifiers
- Glass passivated junction
- Built-in strain relief
- Easy pick and place
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Complete device submersible temperature of 260°C for 10 seconds in solder bath

#### MECHANICAL DATA

Case: JEDEC DO-214AA molded plastic

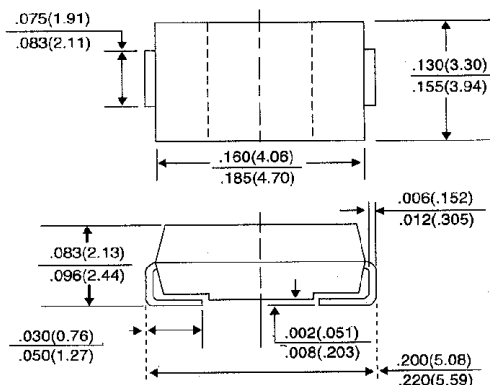
Terminals: Solder plated solderable per MIL-STD-750, Method 2026

Polarity: Indicated by cathode band

Standard Packaging: 12mm tape (EIA-481)

Weight: 0.003 ounces, 0.093 gram

#### SMB/DO-214AA



Dimensions in inches and (millimeters)

#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

	SYMBOLS	S2A	S2B	S2D	S2G	S2J	S2K	S2M	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	VRMS	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	VDC	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at TL = 110°C	I(AV)	2.0							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	60.0							Amps
Maximum Instantaneous Forward Voltage at 2.0A	VF	1.10							Volts
Maximum DC Reverse Current TA = 25°C at Rated DC Blocking Voltage TA = 125°C	IR	5.0 125							μA
Maximum Reverse Recovery Time (NOTE 1)	TRR	2.5							μs
Typical Junction Capacitance (NOTE 2)	CJ	30.0							pf
Maximum Thermal Resistance (NOTE 3)	ROJL	16							°C/W
Operating and Storage Temperature Range	TJ, TSTG	-55 to +150							°C

#### NOTES:

1. Reverse Recovery Test Conditions: IF = 0.5A, IR = 1.0A, Irr = 0.25A.
2. Measured at 1.0 MHz and Applied Vr = 4.0 volts.
3. 8.0mm<sup>2</sup> (.013mm thick) land areas.

## RATING AND CHARACTERISTIC CURVES S2A THRU S2M

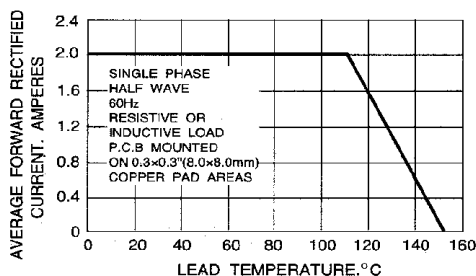


FIG. 1 - FORWARD CURRENT DERATING CURVE

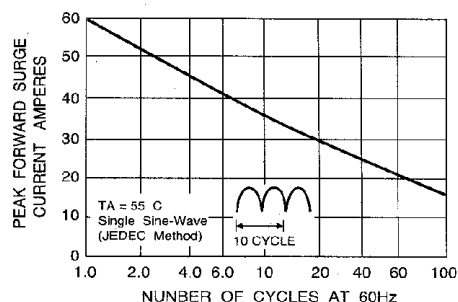


FIG. 2 - MAXIMUM NON REPETITIVE  
PEAK FORWARD SURGE CURRENT

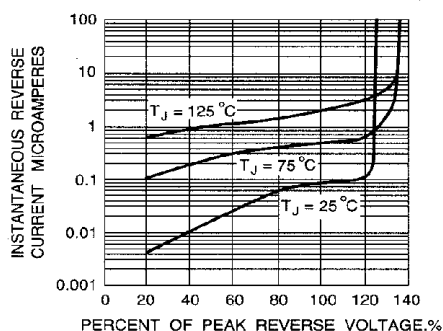


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

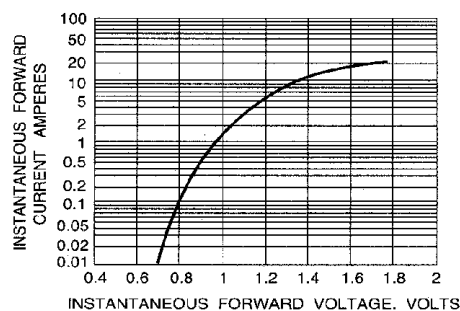


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD  
CHARACTERISTICS

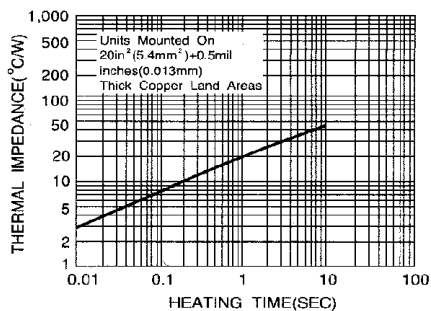


FIG. 5 - TRANSIENT THERMAL IMPEDANCE

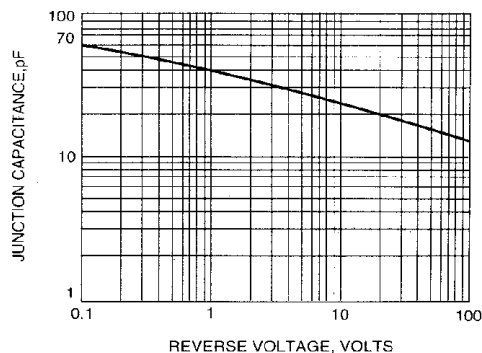


Fig. 6 - TYPICAL JUNCTION CAPACITANCE