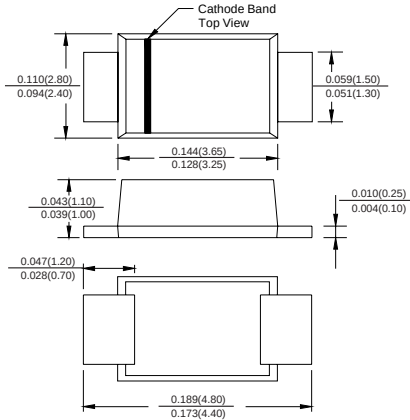


S1AAS THRU S1MAS

SURFACE MOUNT GENERAL RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 1.0 Ampere

SMAS



Dimensions in inches and (millimeters)

FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Low reverse leakage
- ◆ Built-in strain relief, ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 260°C/10 seconds at terminals
- ◆ Glass passivated chip junction

MECHANICAL DATA

Case: SMAS molded plastic body over passivated chip
Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.0011 ounce, 0.029 grams

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 current derate by 20%.

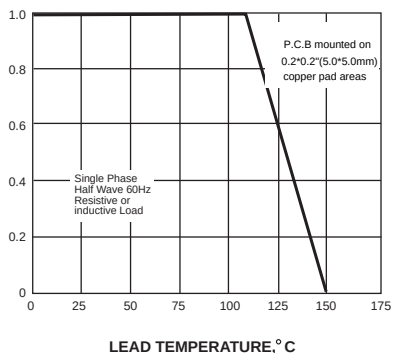
	SYMBOLS	S1AAS	S1BAS	S1DAS	S1GAS	S1JAS	S1KAS	S1MAS	UNITS
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current at T _L =110°C	I _(AV)	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	30.0							A
Maximum instantaneous forward voltage at 1.0A	V _F	1.1							V
Maximum DC reverse current T _A =25°C at rated DC blocking voltage T _A =100°C	I _R	5.0 50.0							μA
Typical junction capacitance (NOTE 1)	C _J	15.0							pF
Typical thermal resistance (NOTE 2)	R _{θJA}	90.0							°C/W
	R _{θJL}	30.0							
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150							°C

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

RATINGS AND CHARACTERISTIC CURVES S1AAS THRU S1MAS

AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT,
AMPERES

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

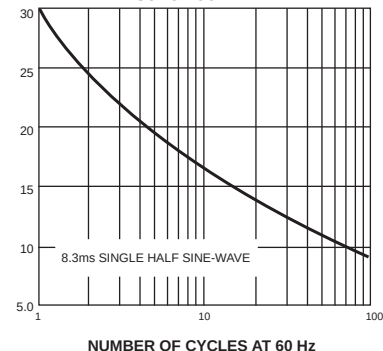
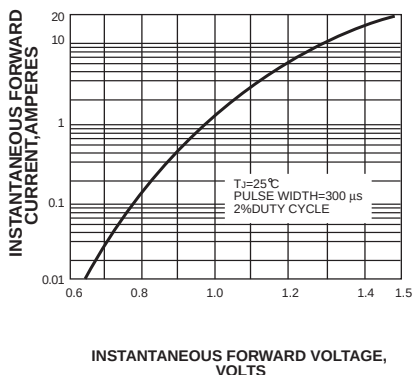


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT,
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

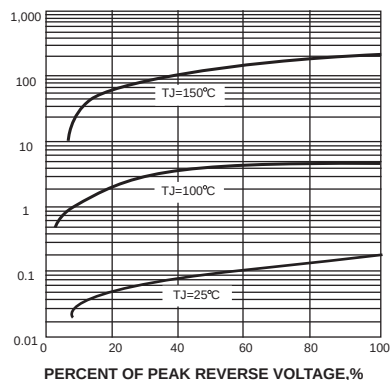
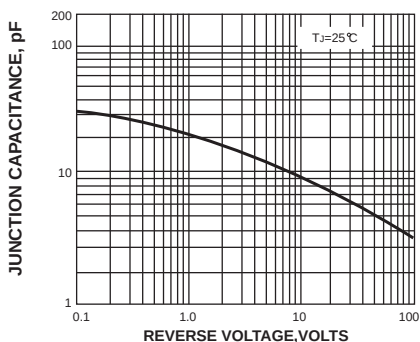


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

