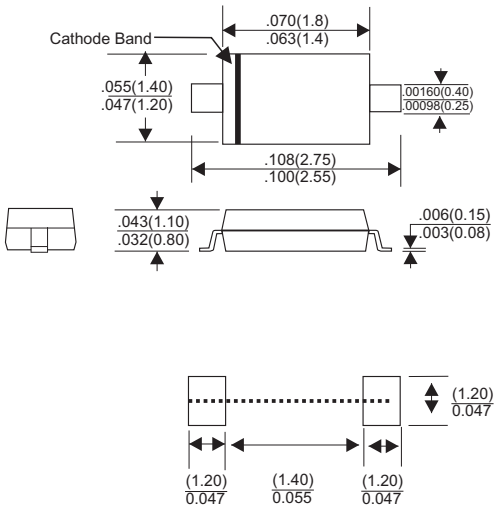
SGP1A THRU SGP7A

SUFACE MOUNT GENERAL PURPOSE SILICON RECTIFIERS

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

SOD-323



Dimensions in inches and (millimeters)

FEATURES

* For surface mouted applications
* Glass passivated Chip junction
* Low profile packags
* Easy to pick and piace
* Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

* Case: JEDEC SOD-323 molded plastic
* Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
* Polarity: Color band denotes cathode end
* Mounting Position: Any
* Weight: 5.48 mg, 0.00019 oz

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25˚C ambient temperature uniess otherwies specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

TYPE NUMBER	SGP1A	SGP2A	SGP3A	SGP4A	SGP5A	SGP6A	SGP7A	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at Ta=75˚C	1.0							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	15							A
Maximum Instantaneous Forward Voltage at 1.0A	1.1							V
Maximum DC Reverse Current Ta=25˚C	5.0							μA
at Rated DC Blocking Voltage Ta=100˚C	50							μA
Typical reverse recovery time	1.8							us
Typical Junction Capacitance (Note 1)	5							pF
Typical Thermal Resistance RθJA (Note 2)	55							˚C/W
Operating and Storage Temperature Range T_J, T_{STG}	-65 — +175							˚C
Marking code	1A	2A	3A	4A	5A	6A	7A	

NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. Thermal Resistance from Junction to Ambient .375" (9.5mm) lead length.

RATING AND CHARACTERISTIC CURVES (SGP1A THRU SGP7A)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

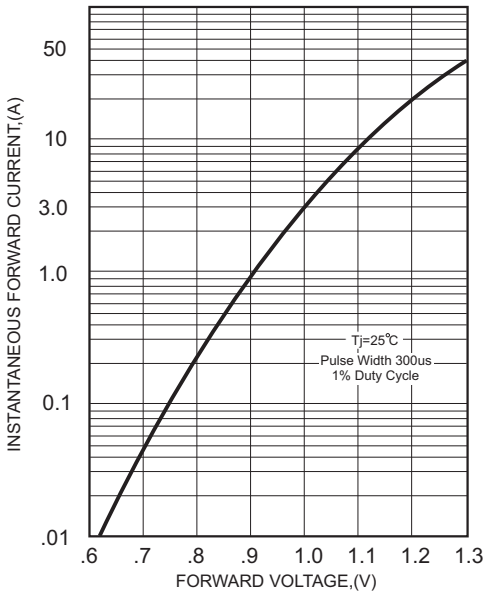


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

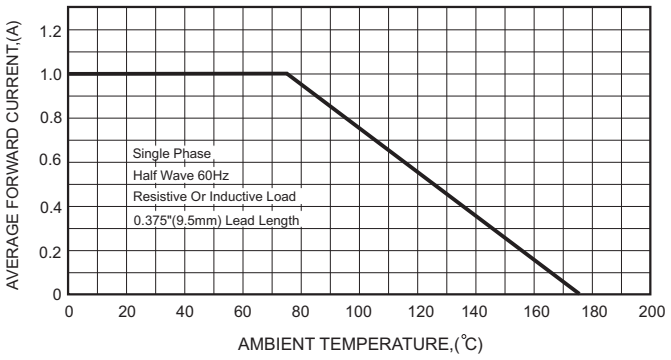


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

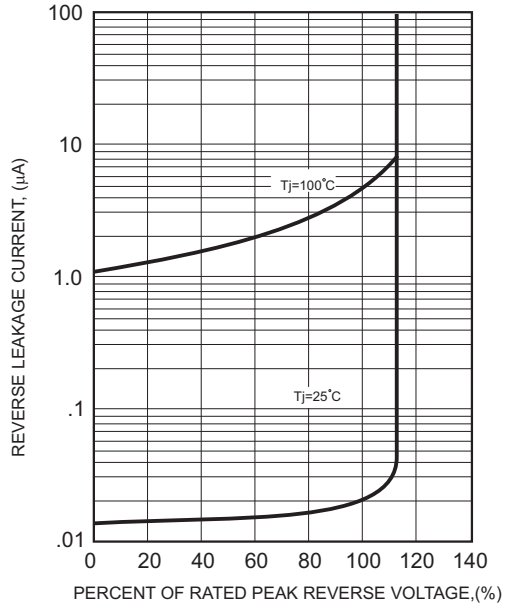


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

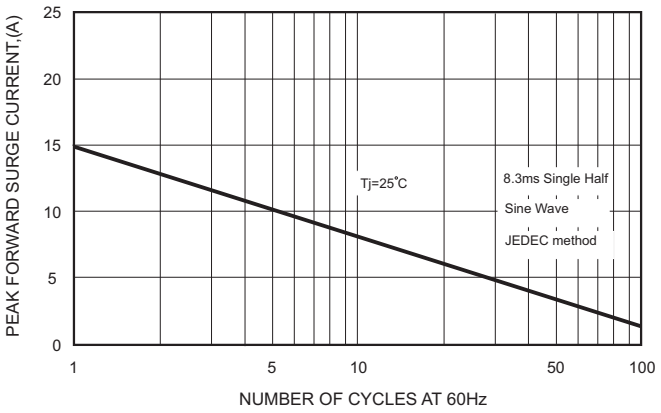


FIG.5-TYPICAL JUNCTION CAPACITANCE