

1A, 50V - 1000V Silicon Rectifiers

FEATURES

- High efficiency, low VF
- High current capability
- High reliability
- High surge current capability
- Low power loss
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21



A-405



MECHANICAL DATA

Case: A-405

Molding compound, UL flammability classification rating 94V-0

Packing code with suffix "G" means green compound (halogen-free)

Terminal: Pure tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 1A whisker test

Weight: 0.2g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted)									
PARAMETER	SYMBOL	1N 4001S	1N 4002S	1N 4003S	1N 4004S	1N 4005S	1N 4006S	1N 4007S	UNIT
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	I _{F(AV)}	1							A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	30							A
Maximum instantaneous forward voltage (Note 1) @ 1 A	V _F	1.0							V
Maximum reverse current @ rated V _R	I _R	<div style="display: flex; justify-content: space-between;"> T_J=25°C 5 </div> <div style="display: flex; justify-content: space-between;"> T_J=125°C 50 </div>							μA
Typical junction capacitance (Note 2)	C _J	15							pF
Typical thermal resistance	R _{θJA}	50							°C/W
Operating junction temperature range	T _J	- 55 to +150							°C
Storage temperature range	T _{STG}	- 55 to +150							°C

Note 1: Pulse test with PW=300 μs, 1% duty cycle

Note 2: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

ORDERING INFORMATION

PART NO.	PACKING CODE	PACKING CODE SUFFIX (*)	PACKAGE	PACKING
1N400xS (Note 1)	A1	G	A-405	3K / AMMO box (26mm tape)
	A0		A-405	3K / AMMO box (52mm tape)
	R0		A-405	5K / 13" Reel
	B0		A-405	1K / Bulk packing

Note 1: "x" defines voltage from 50V (1N4001S) to 1000V (1N4007S)

*: Optional available

EXAMPLE

PREFERRED P/N	PART NO.	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
1N4007S A0G	1N4007S	A0	G	Green compound

RATINGS AND CHARACTERISTICS CURVES

(T_A=25°C unless otherwise noted)

FIG. 1 MAXIMUM FORWARD CURRENT DERATING CURVE

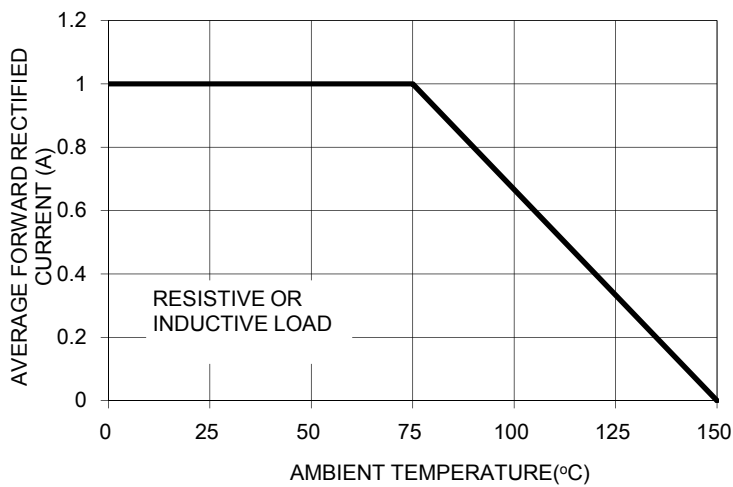


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

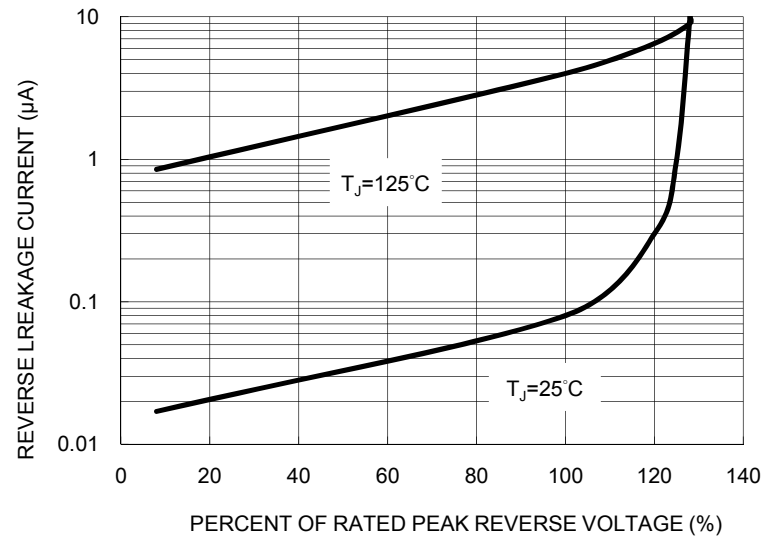


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

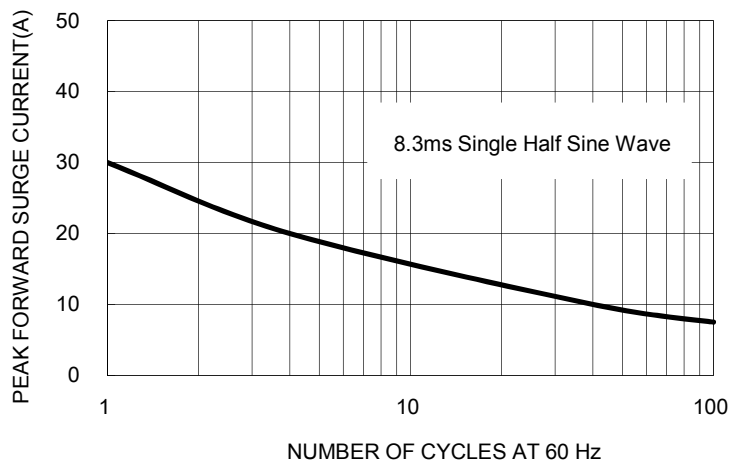


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

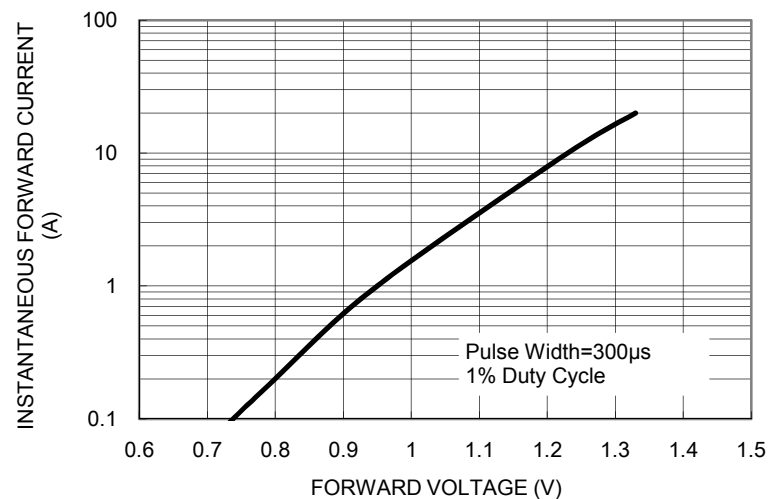
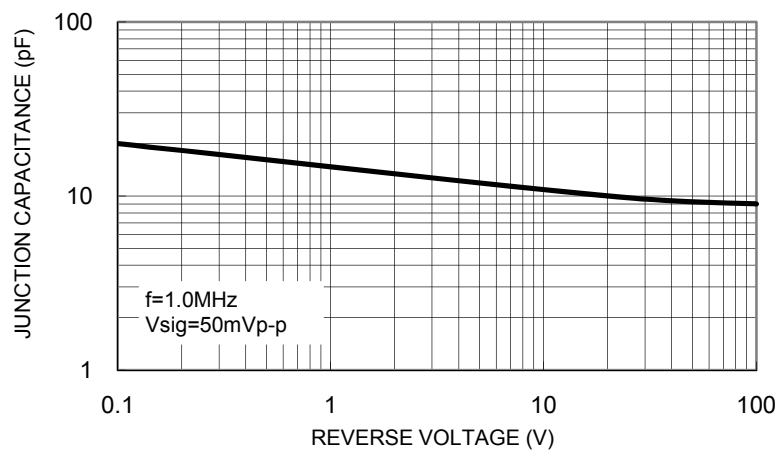
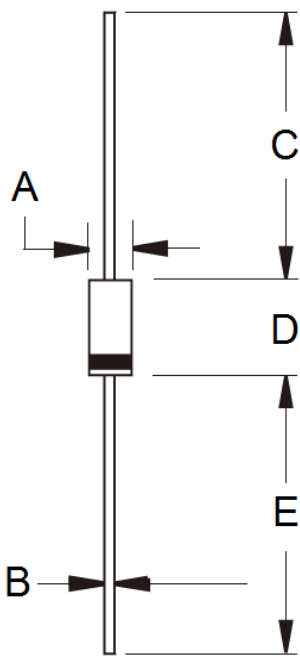


FIG. 5 TYPICAL JUNCTION CAPACITANCE



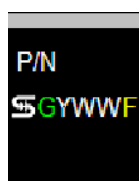
PACKAGE OUTLINE DIMENSIONS

A-405



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.00	2.70	0.079	0.106
B	0.53	0.64	0.021	0.025
C	25.40	-	1.000	-
D	4.20	5.20	0.165	0.205
E	25.40	-	1.000	-

MARKING DIAGRAM



P/N = Specific Device Code
 G = Green Compound
 YWW = Date Code
 F = Factory Code

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