Silicon Rectifiers

FEATURES

- High efficiency, Low VF
- High current capability
- High reliability
- 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 definition

DO-204AL (DO-41)

Pb-Free

RoHS COMPLIANT

MECHANICAL DATA

Case: DO-204AL (DO-41)

Molding compound, UL flammability classification rating 94V-0

Base P/N with suffix "G" on packing code - green compound (halogen-free)

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

Meet JESD 201 class 1A whisker test

Weight: 0.33g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25℃ unless otherwise noted)

PARAMETER	SYMBOL	1N 4001	1N 4002	1N 4003	1N 4004	1N 4005	1N 4006	1N 4007	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
Rating for fusing (t<8.3ms)	I^2t	3.7							A^2s
Maximum instantaneous forward voltage (Note 1) @ 1 A	V_F	1.0							V
Maximum reverse current @ Rated VR T_J=25 ℃ T_J=125℃	I_R	5 50							μA
Typical junction capacitance (Note 2)	Cj	10							pF
Typical Thermal Resistance	$R_{\theta jC}$ $R_{\theta jL}$ $R_{\theta jA}$	6 15 65							$^OC/W$
Operating junction temperature range	T_J	- 55 to +150							^OC
Storage temperature range	T_{STG}	- 55 to +150							^OC

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

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

ORDERING INFORMATION				
PART NO.	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
1N400x (Note 1)	A0	Suffix "G"	DO-41	3,000 / Ammo box (52mm taping)
	R0		DO-41	5,000 / 13" Paper reel
	R1		DO-41	5,000 / 13" Paper reel (Reverse)
	B0		DO-41	1,000 / Bulk packing

Note 1: "xx" defines voltage from 50V (1N4001) to 1000V (1N4007)

EXAMPLE				
PREFERRED P/N	PART NO.	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
1N4007 A0	1N4007	A0		
1N4007 A0G	1N4007	A0	G	Green compound

RATINGS AND CHARACTERISTICS CURVES

(TA=25℃ unless otherwise noted)

FIG.1 MAXMUM FORWARD CURRENT DERATING CURVE

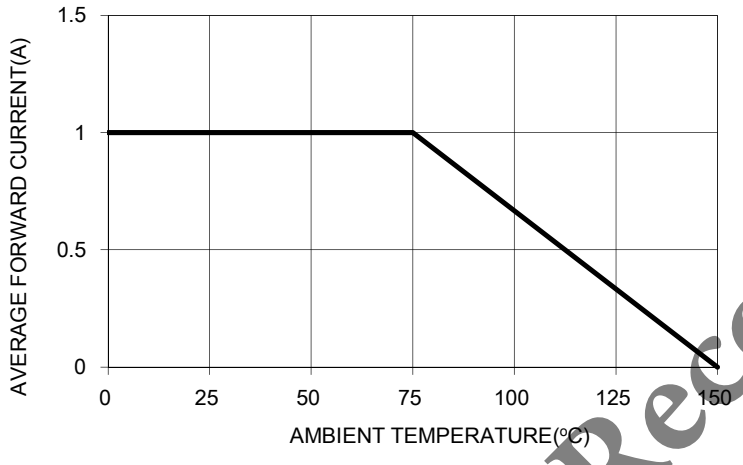


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

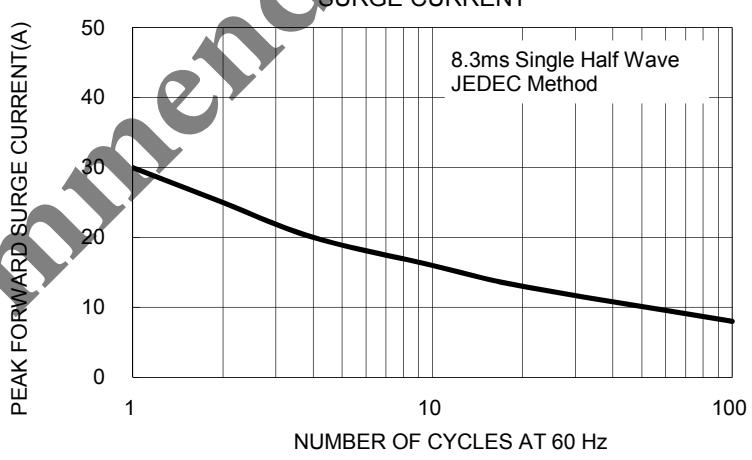


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

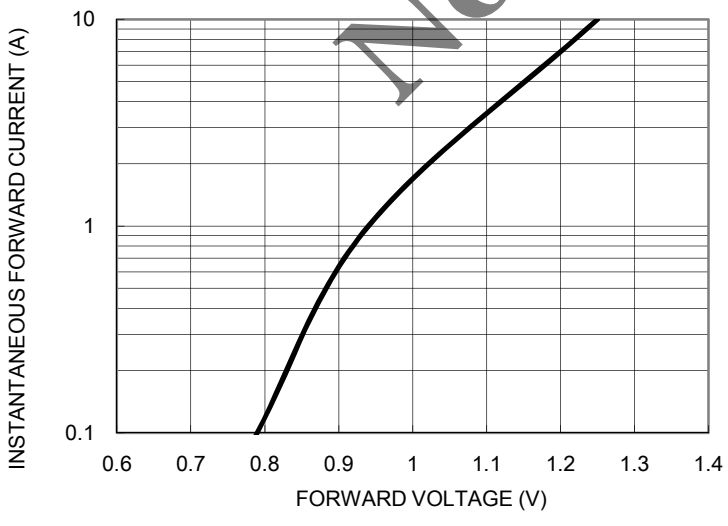


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

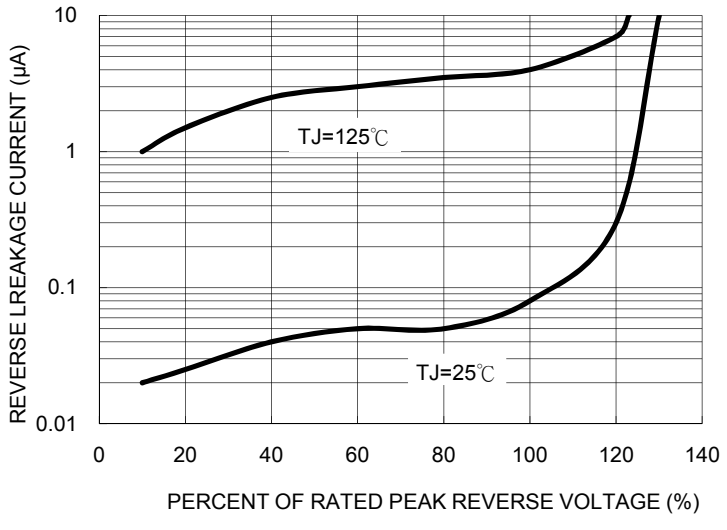
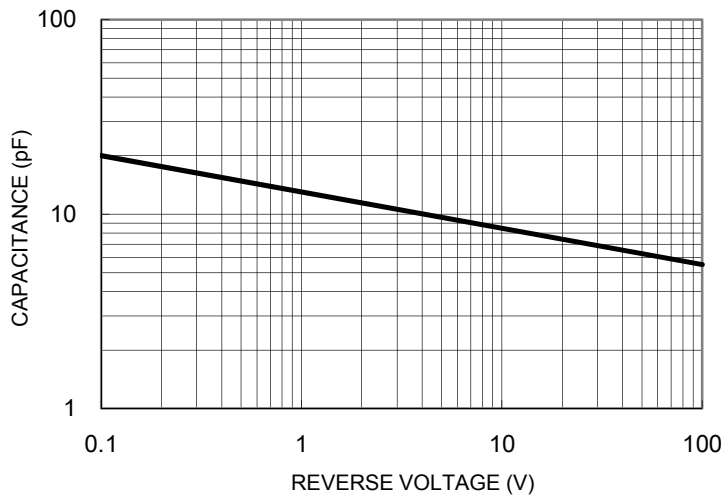
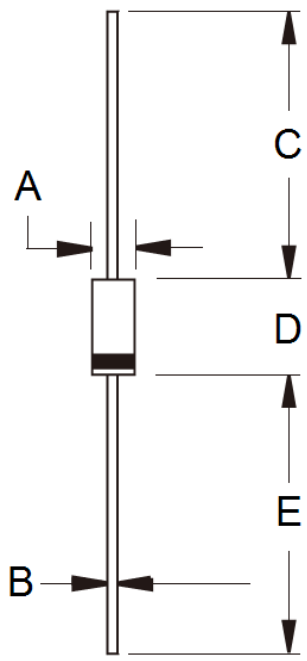


FIG. 5 TYPICAL JUNCTION CAPACITANCE



PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.00	2.70	0.079	0.106
B	0.71	0.86	0.028	0.034
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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