

## 1A, 50V - 600V Glass Passivated Fast Recovery Rectifiers

### FEATURES

- High efficiency, Low VF
- High current capability
- High reliability
- High surge current capability
- 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)**

### MECHANICAL DATA

**Case:** DO-204AL (DO-41)

Molding compound, UL flammability classification rating 94V-0

Part No. with suffix "H" means AEC-Q101 qualified

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

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

Meet JESD 201 class 2 whisker test

**Weight:** 0.33 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)							
PARAMETER	SYMBOL	1N 4933G	1N 4934G	1N 4935G	1N 4936G	1N 4937G	UNIT
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	V
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	V
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	1.0					A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	30					A
Maximum instantaneous forward voltage (Note 1) @ 1 A	V <sub>F</sub>	1.2					V
Maximum reverse current @ rated VR T <sub>J</sub> =25 °C T <sub>J</sub> =125 °C	I <sub>R</sub>	5 150					μA
Maximum reverse recovery time (Note 2)	t <sub>rr</sub>	200					ns
Typical junction capacitance (Note 3)	C <sub>J</sub>	10					pF
Typical thermal resistance	R <sub>θJA</sub>	65					°C/W
Operating junction temperature range	T <sub>J</sub>	- 55 to +150					°C
Storage temperature range	T <sub>STG</sub>	- 55 to +150					°C

Note1: Pulse Test with PW=300μs, 1% Duty Cycle

Note2: Reverse Recovery Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, IRR=0.25A

Note3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

ORDERING INFORMATION					
PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
1N493xG (Note 1)	H	A0	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: "x" defines voltage from 50V (1N4933G) to 600V (1N4937G)

EXAMPLE					
PREFERRED PART NO.	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
1N4937GHA0G	1N4937G	H	A0	G	AEC-Q101 qualified Green compound

**RATINGS AND CHARACTERISTICS CURVES**

(T<sub>A</sub>=25°C unless otherwise noted)

FIG. 1- MAXMUM FORWARD CURRENT DERATING CURVE

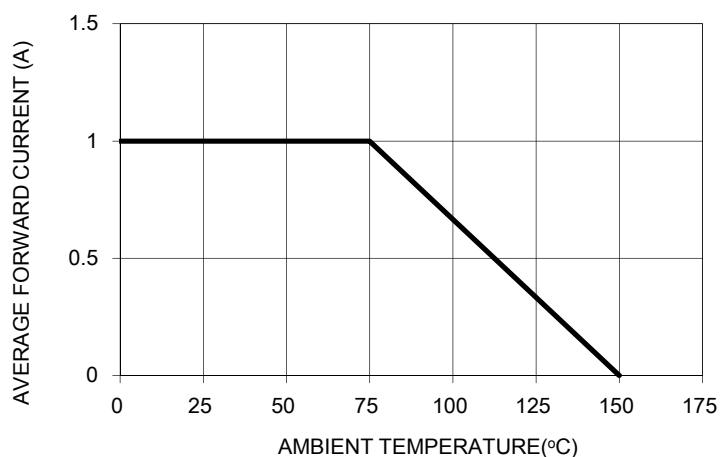


FIG. 2- TYPICAL REVERSE CHARACTERISTICS

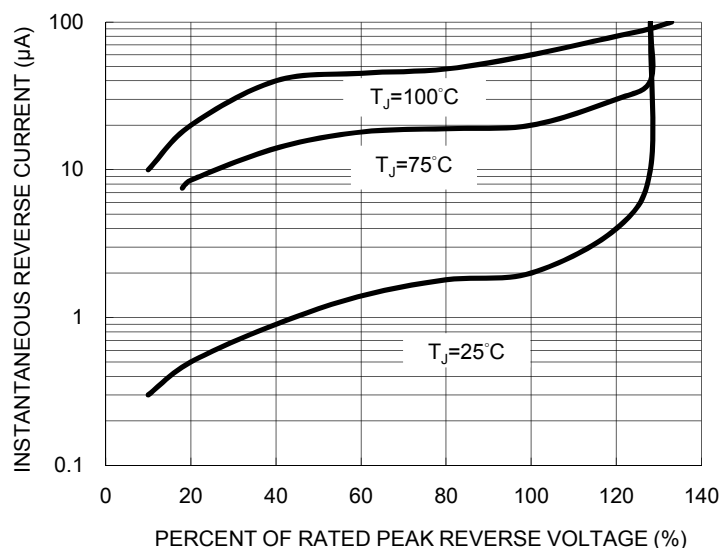


FIG. 3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

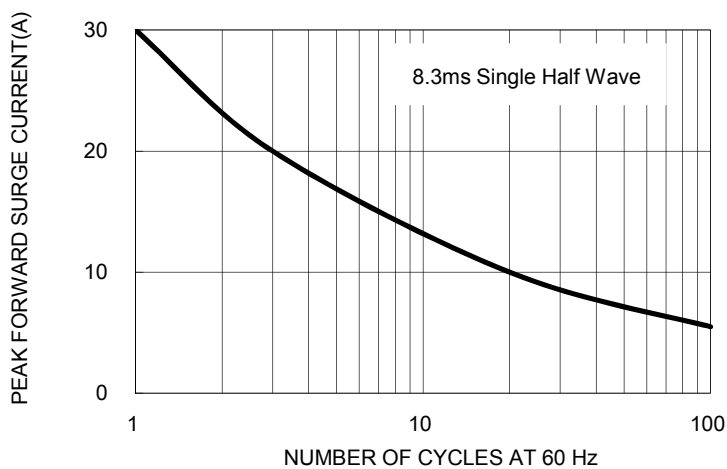


FIG. 4- TYPICAL FORWARD CHARACTERISTICS

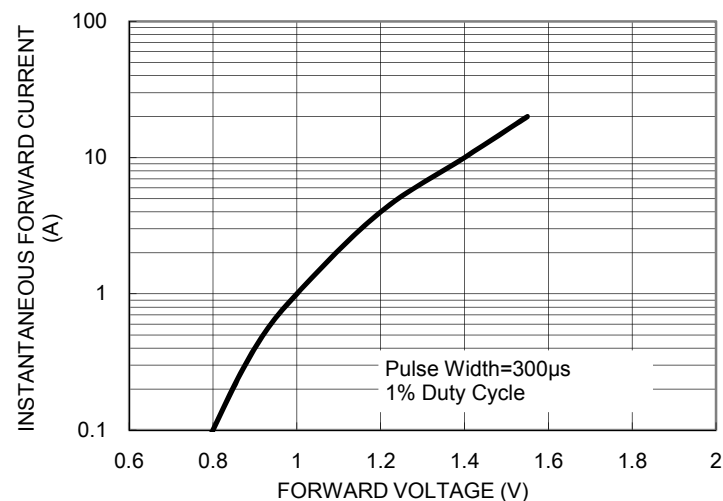


FIG. 5- TYPICAL JUNCTION CAPACITANCE

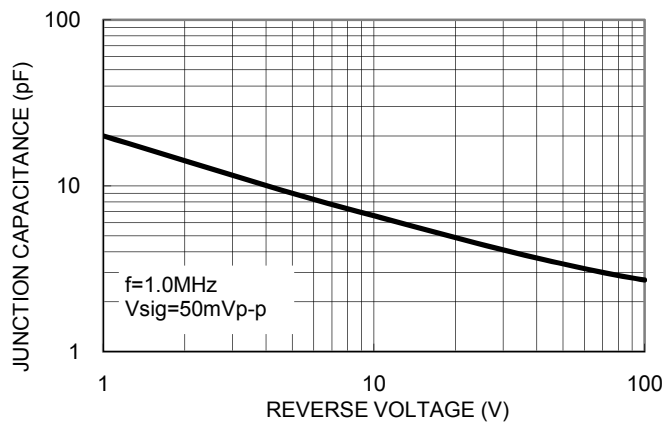
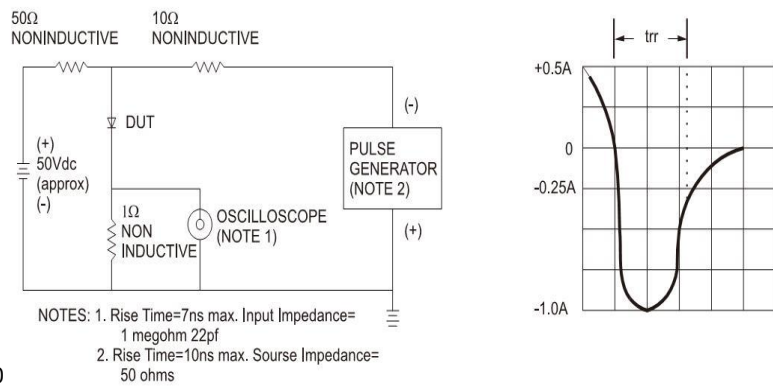
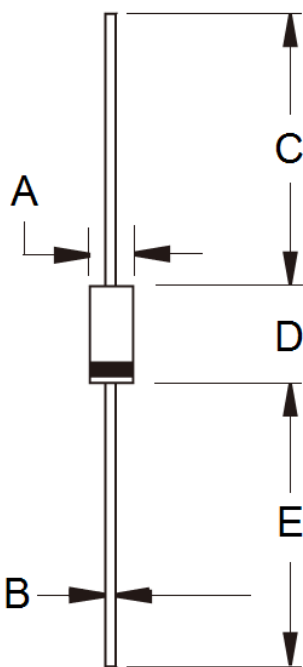


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



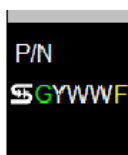
PACKAGE OUTLINE DIMENSIONS

DO-204AL (DO-41)



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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