Glass Passivated Fast Recovery Rectifiers

FEATURES

- Glass passivated chip junction
- High current capability, Low VF
- High reliability
- High surge current capability
- Low power loss, high efficiency
- 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
Base P/N with suffix "G" on packing code - green compound (halogen-free)
Base P/N with prefix "H" on packing code - AEC-Q101 qualified
Terminal: Matte tin plated leads, solderable per JESD22-B102
Meet JESD 201 class 1A whisker test
with prefix "H" on packing code meet JESD 201 class 2 whisker test
Weight: 0.33 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25℃ unless otherwise noted)					
PARAMETER	SYMBOL	BA157G	BA158G	BA159G	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	400	600	1000	V
Maximum RMS voltage	V_{RMS}	280	420	700	V
Maximum DC blocking voltage	V_{DC}	400	600	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	1.2			V
Maximum reverse current @ rated VR T_J=25 ℃ T_J=125 ℃	I_R	5 100			μA
Maximum reverse recovery time (Note 2)	Trr	150		250	ns
Typical junction capacitance (Note 3)	Cj	15			pF
Typical thermal resistance	$R_{\theta JA}$	60			^{O}C/W
Operating junction temperature range	T_J	- 55 to +150			^{O}C
Storage temperature range	T_{STG}	- 55 to +150			^{O}C

Note 1: Pulse Test with PW=300μs, 1% Duty Cycle
Note 2: Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A
Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

ORDERING INFORMATION

PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
BA15xG (Note 1)	Prefix "H"	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: "x" defines voltage from 400V (BA157G) to 1000V (BA159G)

EXAMPLE

PREFERRED P/N	PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
BA157G A0	BA157G		A0		
BA157G A0G	BA157G		A0	G	Green compound
BA157GHA0	BA157G	H	A0		AEC-Q101 qualified

RATINGS AND CHARACTERISTICS CURVES

(TA=25℃ unless otherwise noted)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

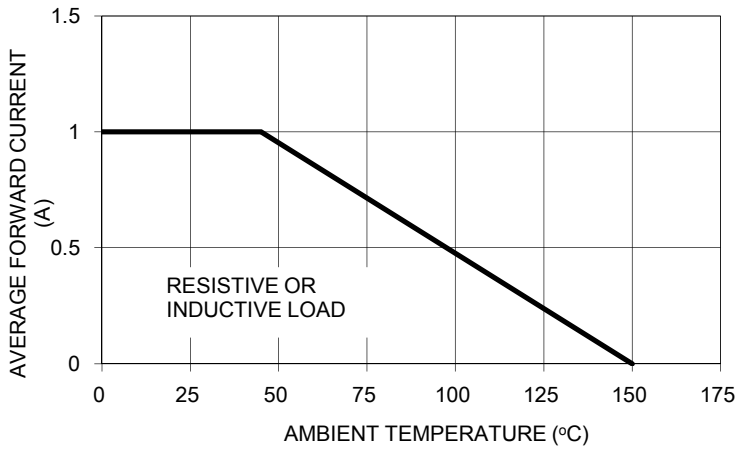


FIG. 2- TYPICAL REVERSE CHARACTERISTICS

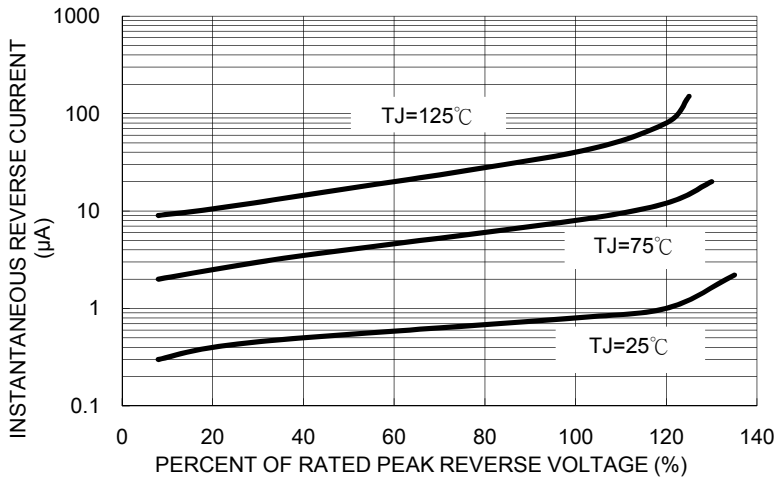


FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

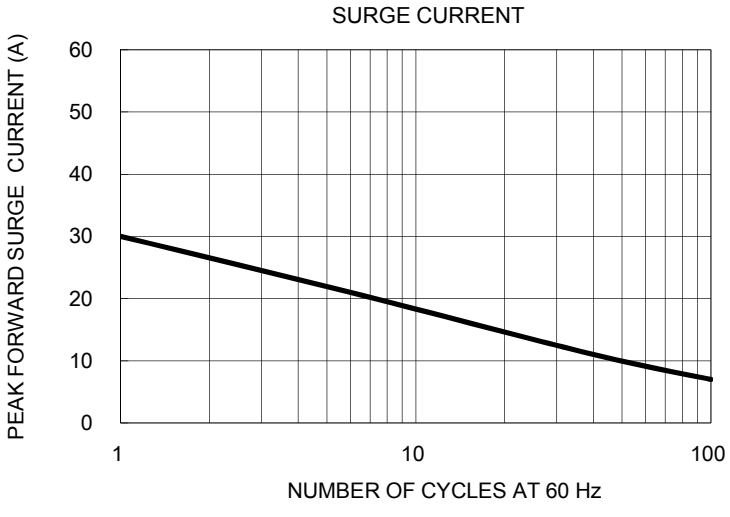


FIG. 4- TYPICAL FORWARD CHARACTERISTICS

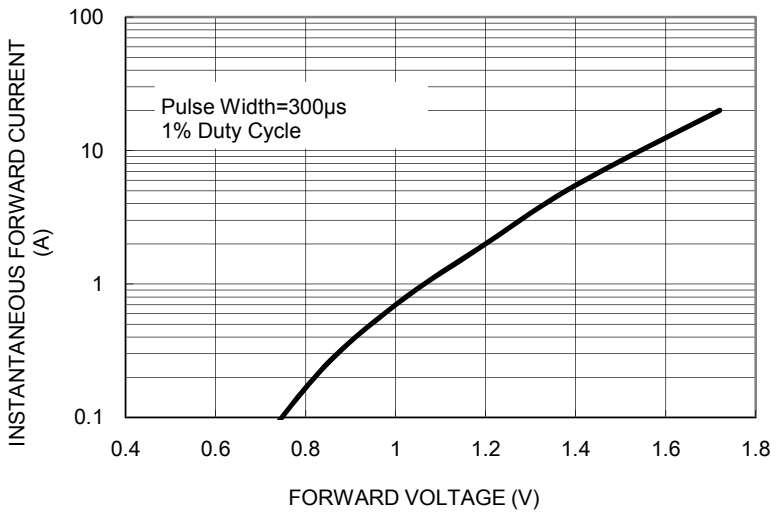


FIG. 5- TYPICAL JUNCTION CAPACITANCE

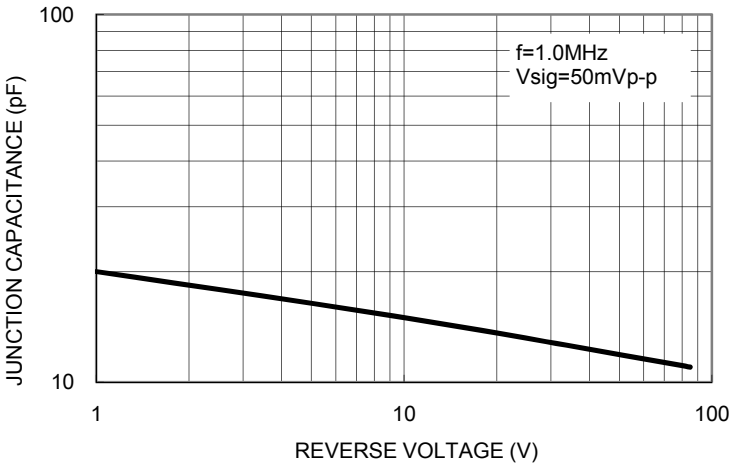
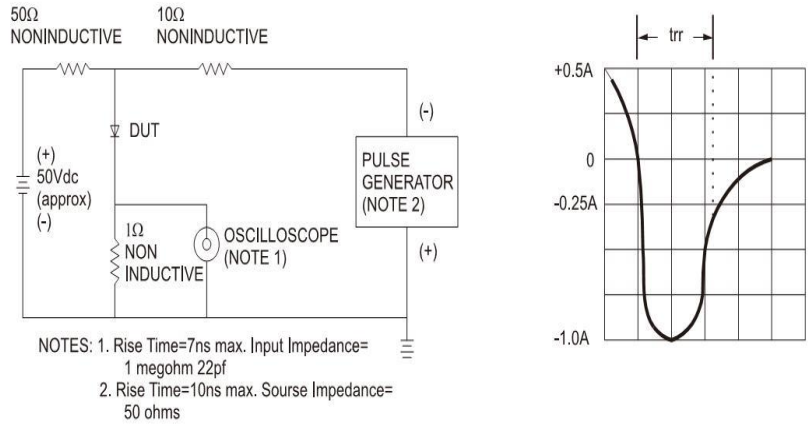
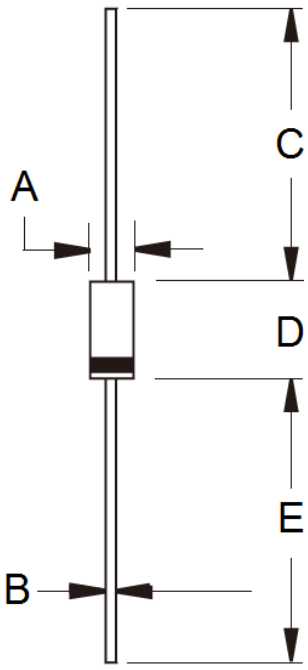


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



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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