

## 2A, 200V Glass Passivated Ultra Fast Rectifier

### FEATURES

- Ultrafast recovery time for high efficiency
- Excellent high temperature switching
- Glass passivated junction
- 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



### MECHANICAL DATA

**Case:** DO-204AC (DO-15)

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)

**DO-204AC (DO-15)**

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)			
PARAMETER	SYMBOL	UG2D	UNIT
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	200	V
Maximum RMS voltage	V <sub>RMS</sub>	140	V
Maximum DC blocking voltage	V <sub>DC</sub>	200	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	2	A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	80	A
Maximum instantaneous forward voltage @ 2 A (Note 1)	V <sub>F</sub>	T <sub>J</sub> =25°C 0.95	V
		T <sub>J</sub> =125°C 0.80	
Maximum reverse current @ rated V <sub>R</sub>	I <sub>R</sub>	T <sub>J</sub> =25°C 5	μA
		T <sub>J</sub> =125°C 200	
Maximum reverse recovery time (Note 2)	t <sub>rr</sub>	15	ns
Typical reverse recovery time (Note 3)	t <sub>rr</sub>	25	ns
Typical junction capacitance (Note 4)	C <sub>J</sub>	35	pF
Typical thermal resistance	R <sub>θJA</sub>	60	°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

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

Note 2: Reverse Recovery Test Condition: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A

Note 3: Reverse Recovery Test Condition: I<sub>F</sub>=2.0A, V<sub>R</sub>=30V, dI/dt=50A/us, I<sub>rr</sub>=10% I<sub>RM</sub> for Measurement of trr

Note 4: Measured at 1MHz and Applied Reverse Voltage of 4.0 V D.C.

ORDERING INFORMATION					
PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX (*)	PACKAGE	PACKING
UG2D	H	A0	G	DO-15	1,500 / Ammo box
		R0		DO-15	3,500 / 13" Paper reel
		B0		DO-15	1,000 / Bulk packing

\*: Optional available

EXAMPLE					
PREFERRED PART NO.	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
UG2DHA0G	UG2D	H	A0	G	AEC-Q101 qualified Green compound

**RATINGS AND CHARACTERISTICS CURVES**

( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

FIG. 1 MAXIMUM FORWARD CURRENT DERATING CURVE

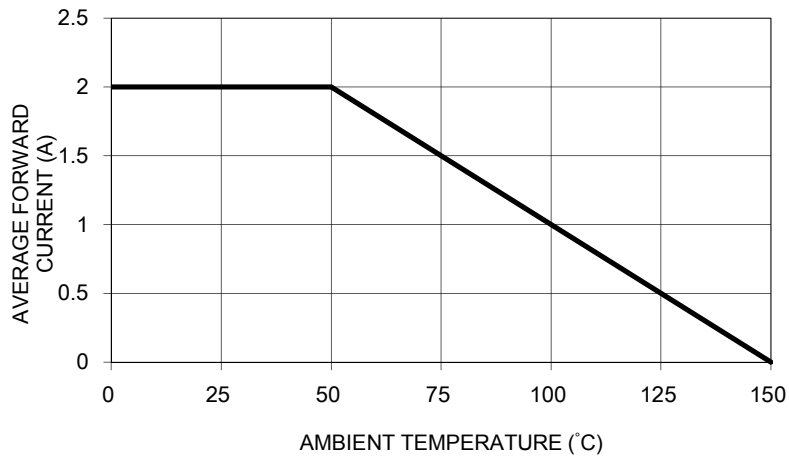


FIG. 2 MAXIMUM FORWARD SURGE CURRENT

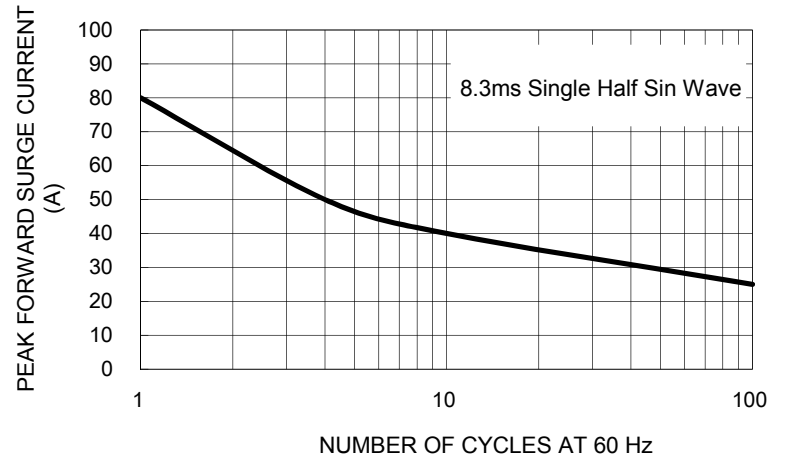


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

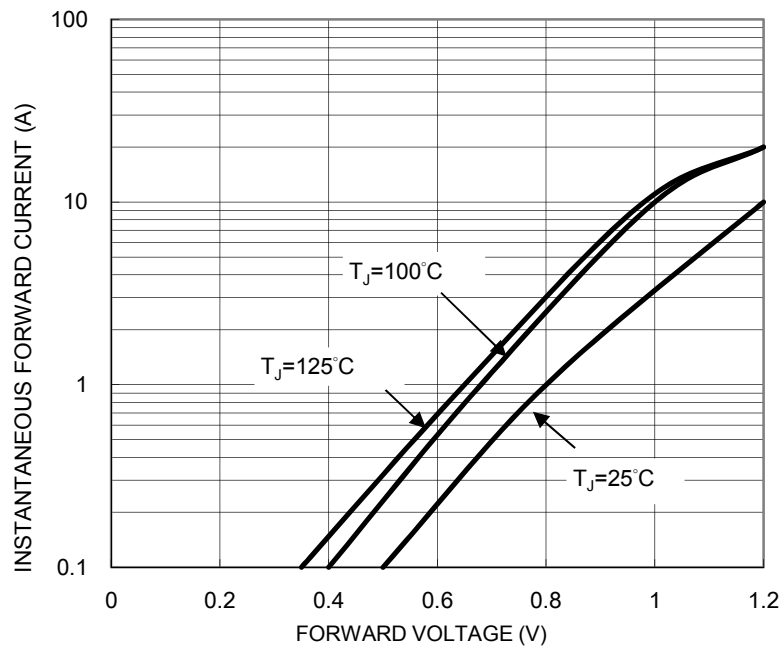


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

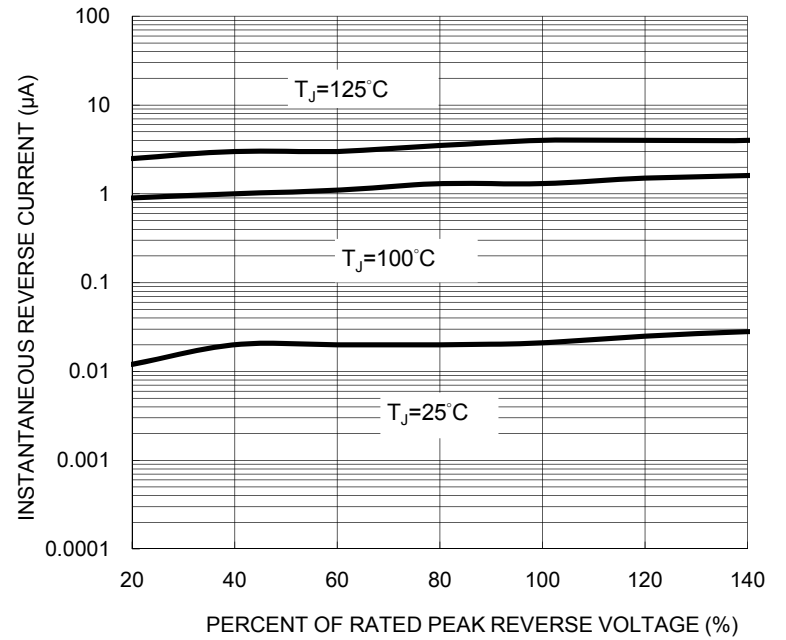


FIG. 5 TYPICAL JUNCTION CAPACITANCE

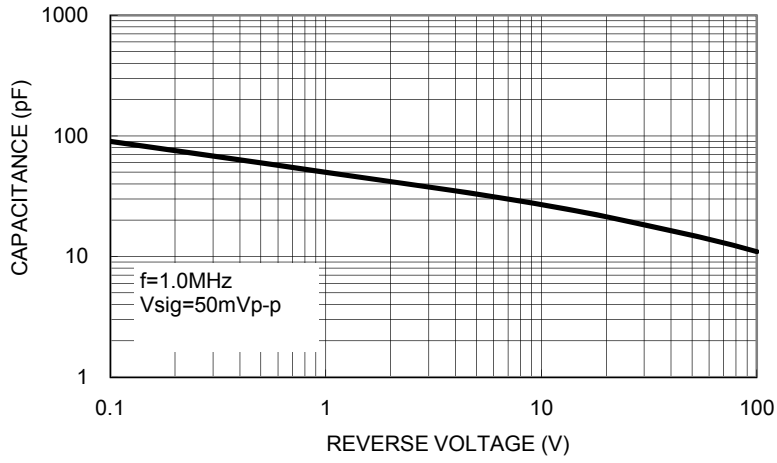
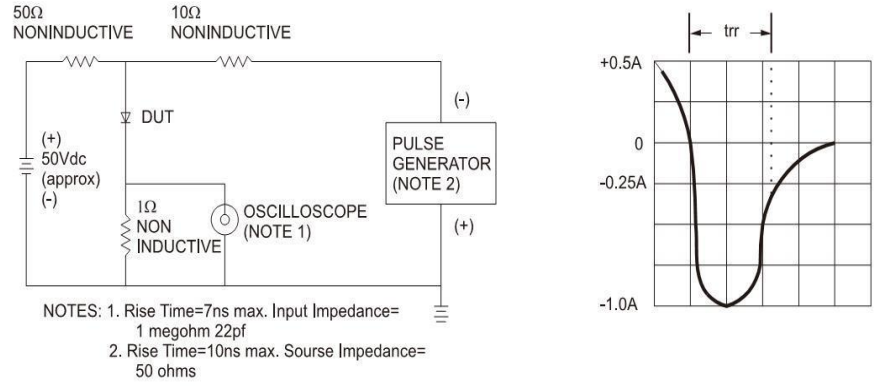
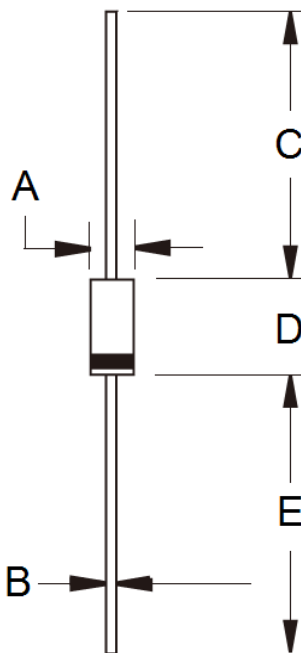


FIG.6 REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



PACKAGE OUTLINE DIMENSIONS

DO-204AC (DO-15)



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.60	3.60	0.102	0.142
B	0.70	0.90	0.028	0.035
C	25.40	-	1.000	-
D	5.80	7.60	0.228	0.299
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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