

# 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



DO-204AC (DO-15)





#### **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)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)				
PARAMETER	SYMBOL	UG2D	UNIT	
Maximum repetitive peak reverse voltage	$V_{RRM}$	200	V	
Maximum RMS voltage	$V_{RMS}$	140	V	
Maximum DC blocking voltage	V <sub>DC</sub>	200	V	
Maximum average forward rectified current	I <sub>F(AV)</sub>	2	А	
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	80	А	
Maximum instantaneous forward voltage T <sub>J</sub> =25°C	W	0.95	V	
@ 2 A (Note 1) T <sub>J</sub> =125°C	V <sub>F</sub>	0.80		
Maximum reverse current @ rated V <sub>R</sub>	1	5	μА	
T <sub>J</sub> =125°C	I <sub>R</sub>	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	$R_{ heta JA}$	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: $I_F$ =2.0A,  $V_R$ =30V, dl/dt=50A/us, Irr=10%  $I_{RM}$  for Measurement of trr

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



ORDERING INFORMATION					
PART	PART NO.	PACKING CODE	PACKING CODE	PACKAGE	PACKING
NO.	SUFFIX		SUFFIX <sup>(*)</sup>		
		A0		DO-15	1,500 / Ammo box
UG2D	Н	R0	G	DO-15	3,500 / 13" Paper reel
		В0		DO-15	1,000 / Bulk packing

<sup>\*:</sup> Optional available

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

### **RATINGS AND CHARACTERISTICS CURVES**

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

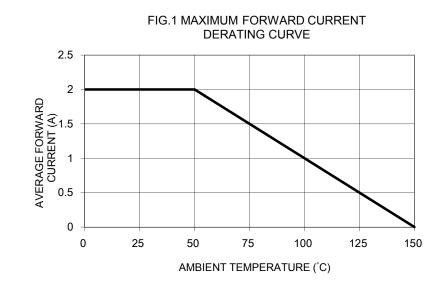
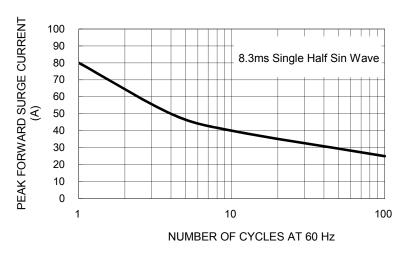
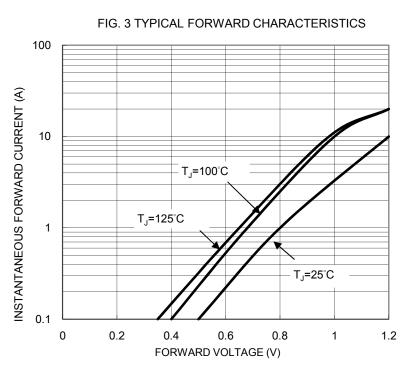
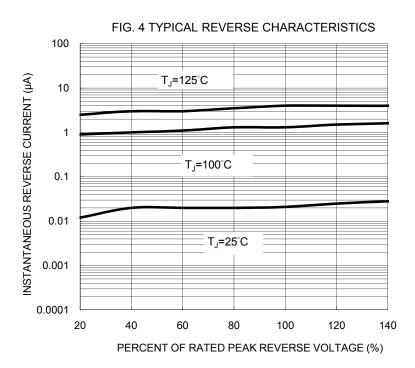


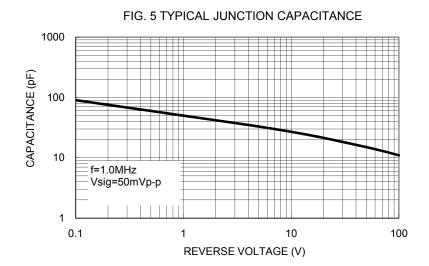
FIG. 2 MAXIMUM FORWARD SURGE CURRENT



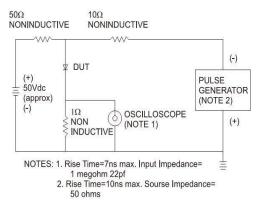


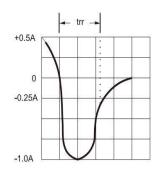




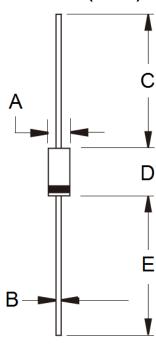


#### FIG.6 REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM





## PACKAGE OUTLINE DIMENSIONS DO-204AC (DO-15)



DIM.	Unit (mm)		Unit (inch)		
	Min	Max	Min	Max	
Α	2.60	3.60	0.102	0.142	
В	0.70	0.90	0.028	0.035	
С	25.40	-	1.000	-	
D	5.80	7.60	0.228	0.299	
Е	25.40	-	1.000	-	

## **MARKING DIAGRAM**



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





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