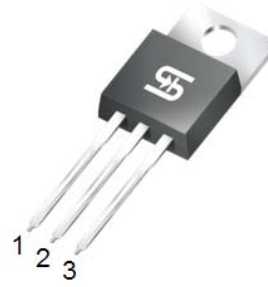


## 10A, 200V - 600V Ultra Fast Rectifiers

### 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



### MECHANICAL DATA

**Case:** TO-220AB

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

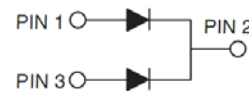
Meet JESD 201 class 2 whisker test

**Polarity:** As marked

**Mounting torque:** 0.56 Nm max.

**Weight:** 1.7 g (approximately)

### TO-220AB



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)							
PARAMETER	SYMBOL	UG 1004G	UG 1005G	UG 1006G	UG 1007G	UG 1008G	UNIT
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	200	300	400	500	600	V
Maximum RMS voltage	V <sub>RMS</sub>	140	210	280	350	420	V
Maximum DC blocking voltage	V <sub>DC</sub>	200	300	400	500	600	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	10					A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	60					A
Maximum instantaneous forward voltage (Note 1) I <sub>F</sub> = 5 A	V <sub>F</sub>	0.95	1.25		1.70		V
Maximum reverse current @ rated V <sub>R</sub> T <sub>J</sub> =25°C T <sub>J</sub> =125°C	I <sub>R</sub>	10 100					μA
Maximum reverse recovery time (Note 2)	t <sub>rr</sub>	22			30		ns
Typical thermal resistance	R <sub>θJC</sub>	4					°C/W
Operating junction temperature range	T <sub>J</sub>	- 55 to +175			- 55 to +150		°C
Storage temperature range	T <sub>STG</sub>	- 55 to +175			- 55 to +150		°C

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

Note 2: Reverse recovery test conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A

ORDERING INFORMATION					
PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX (*)	PACKAGE	PACKING
UG100xG (Note 1)	H	C0	G	TO-220AB	50 / Tube

Note 1: "xx" defines voltage from 200V (UG1004G) to 600V (UG1008G)

\*: Optional available

EXAMPLE					
EXAMPLE P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
UG1004GHC0G	UG1004G	H	C0	G	AEC-Q101 qualified Green compound

**RATINGS AND CHARACTERISTICS CURVES**

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

FIG.1 FORWARD CURRENT DERATING CURVE

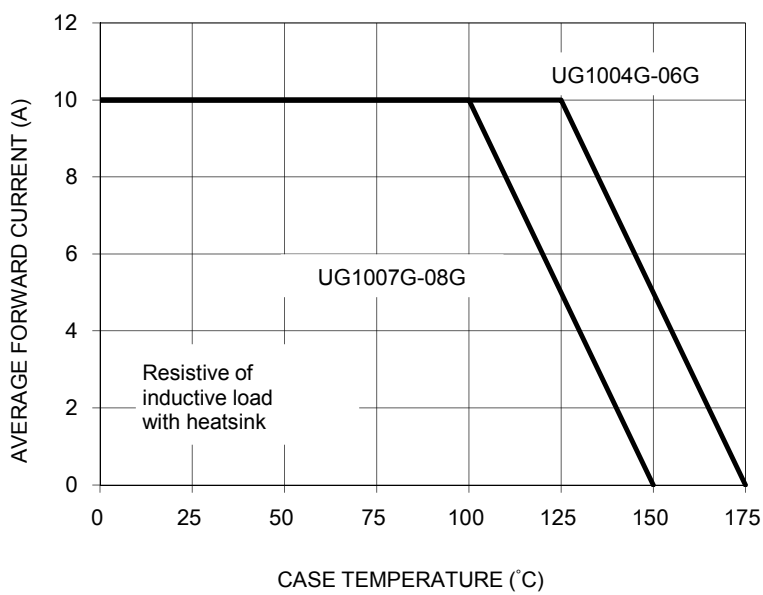


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

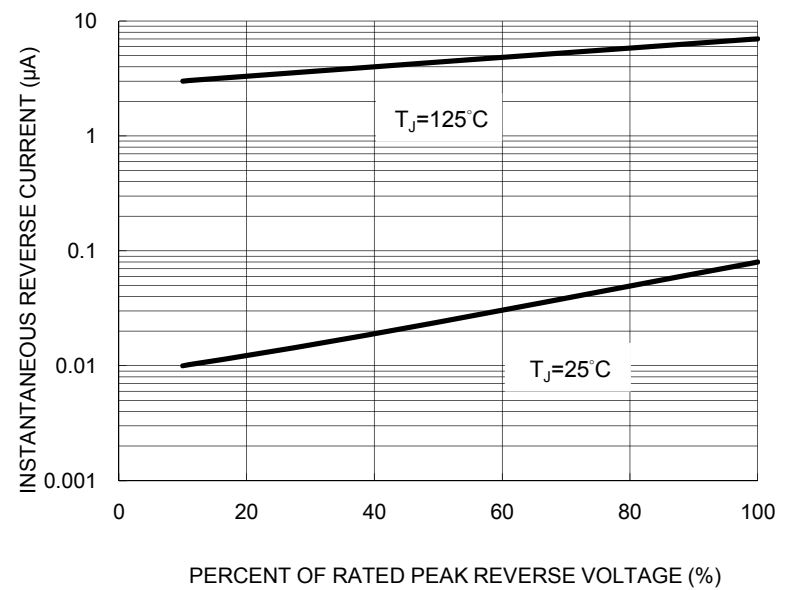


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

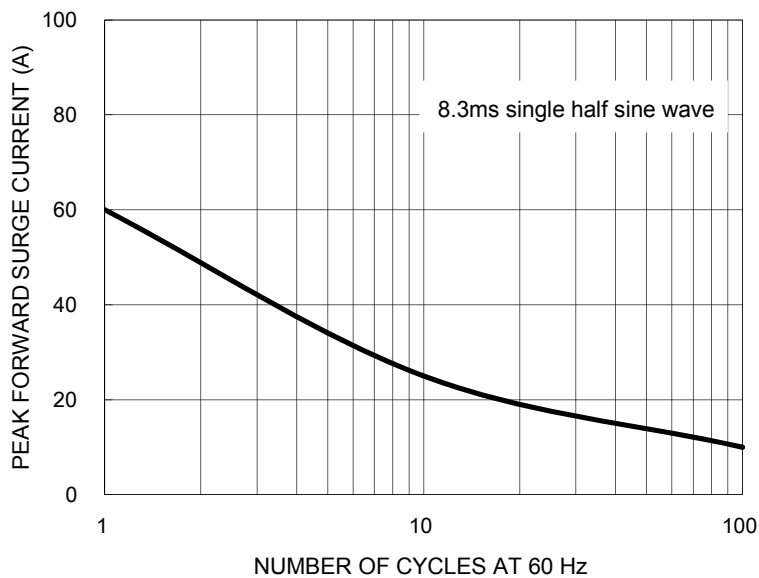


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

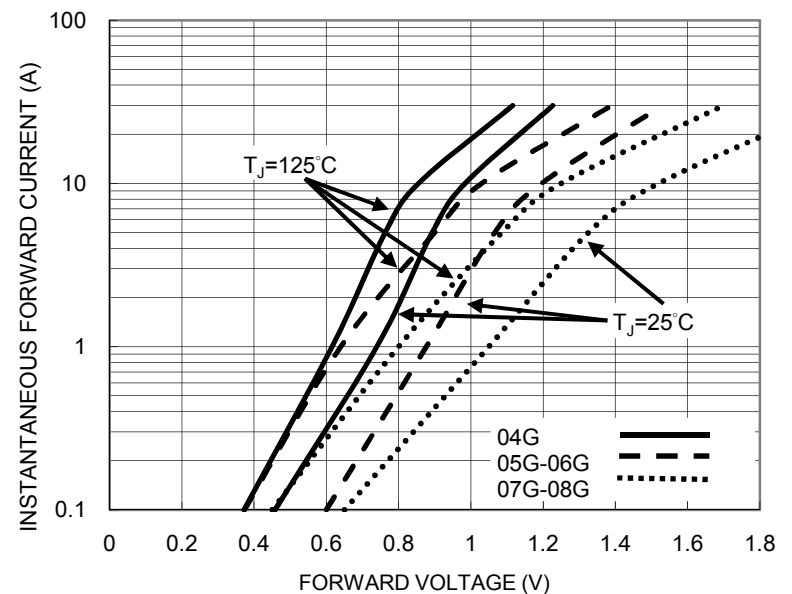
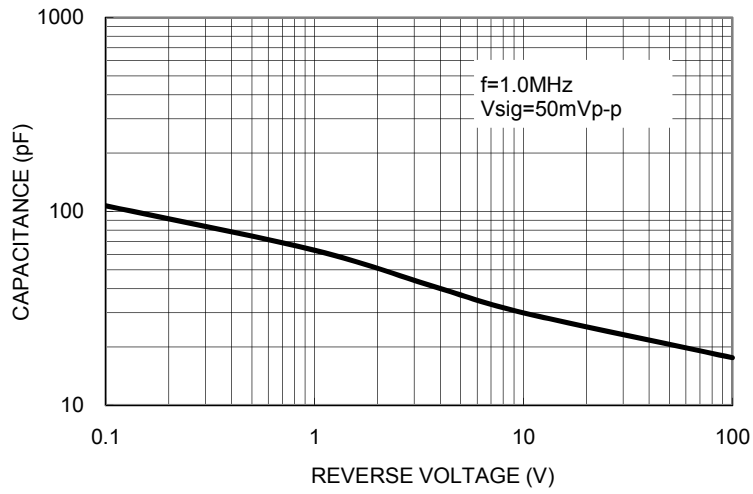
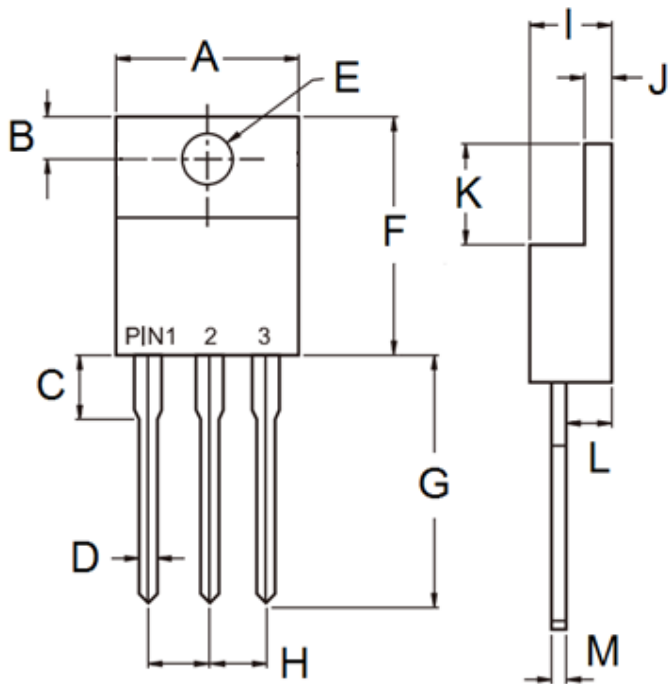


FIG. 5 TYPICAL JUNCTION CAPACITANCE



PACKAGE OUTLINE DIMENSIONS

TO-220AB



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	-	10.50	-	0.413
B	2.62	3.44	0.103	0.135
C	2.80	4.20	0.110	0.165
D	0.68	0.94	0.027	0.037
E	3.54	4.00	0.139	0.157
F	14.60	16.00	0.575	0.630
G	13.19	14.79	0.519	0.582
H	2.41	2.67	0.095	0.105
I	4.42	4.76	0.174	0.187
J	1.14	1.40	0.045	0.055
K	5.84	6.86	0.230	0.270
L	2.20	2.80	0.087	0.110
M	0.35	0.64	0.014	0.025

MARKING DIAGRAM



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

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