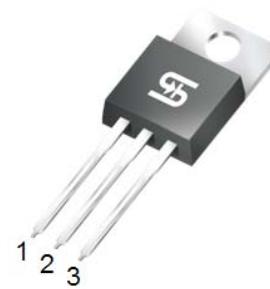


10A, 200V - 600V Ultra Fast Rectifiers

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

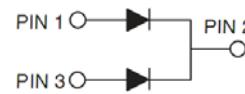
Meet JESD 201 class 2 whisker test

Polarity: As marked

Mounting torque: 0.56 Nm max.

Weight: 1.7 g (approximately)

TO-220AB



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)							
PARAMETER	SYMBOL	UG 1004G	UG 1005G	UG 1006G	UG 1007G	UG 1008G	UNIT
Maximum repetitive peak reverse voltage	V_{RPM}	200	300	400	500	600	V
Maximum RMS voltage	V_{RMS}	140	210	280	350	420	V
Maximum DC blocking voltage	V_{DC}	200	300	400	500	600	V
Maximum average forward rectified current	$I_{F(AV)}$	10					A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	60					A
Maximum instantaneous forward voltage (Note 1) $I_F = 5\text{ A}$	V_F	0.95	1.25	1.70			V
Maximum reverse current @ rated V_R $T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	I_R	10 100					μA
Maximum reverse recovery time (Note 2)	t_{rr}	22		30			ns
Typical thermal resistance	$R_{\theta JC}$	4					$^\circ\text{C/W}$
Operating junction temperature range	T_J	- 55 to +175			- 55 to +150		$^\circ\text{C}$
Storage temperature range	T_{STG}	- 55 to +175			- 55 to +150		$^\circ\text{C}$

Note 1: Pulse Test with $PW=300\mu\text{s}$, 1% duty cycle

Note 2: Reverse recovery test conditions: $I_F=0.5\text{ A}$, $I_R=1.0\text{ A}$, $I_{RR}=0.25\text{ A}$

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

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

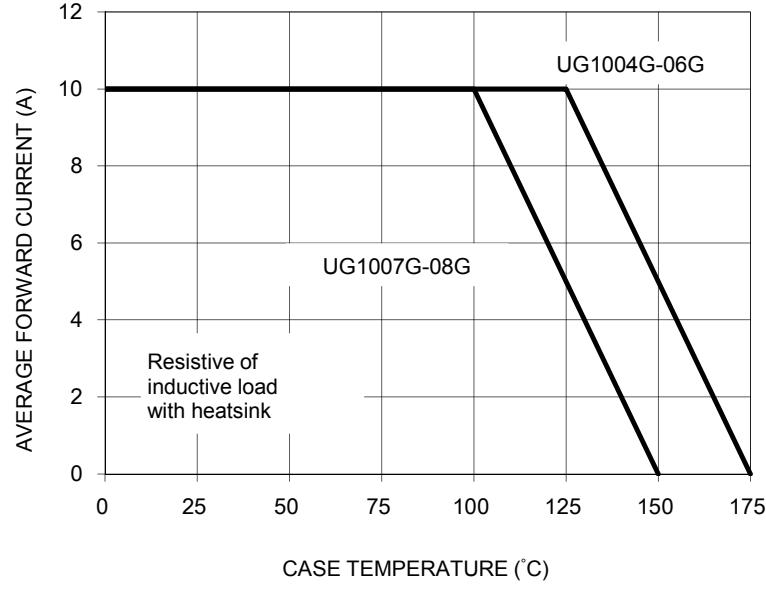
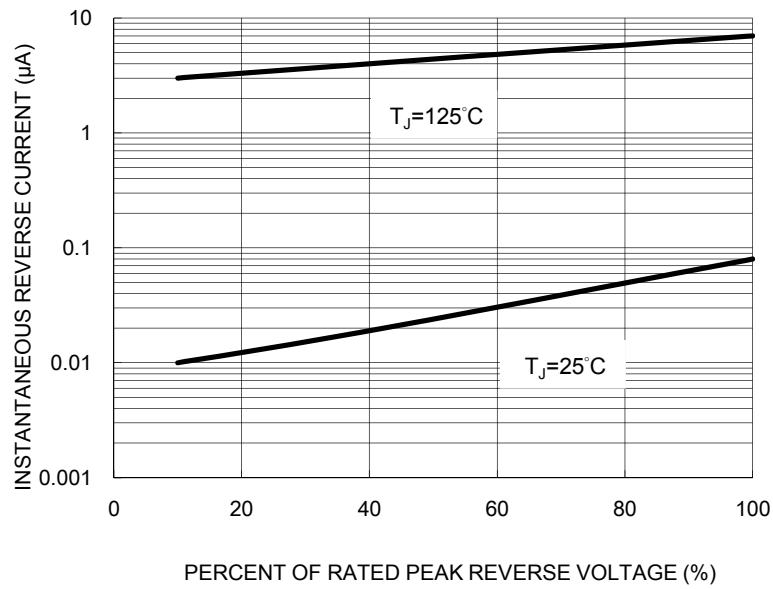
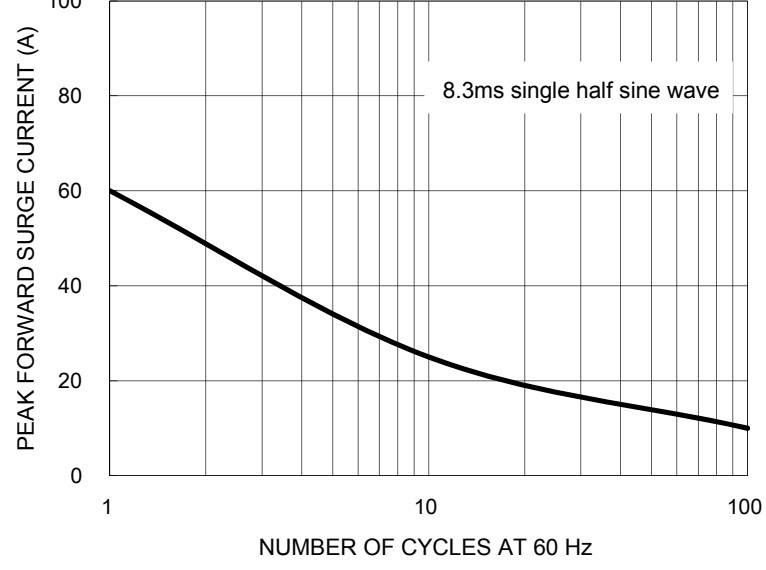
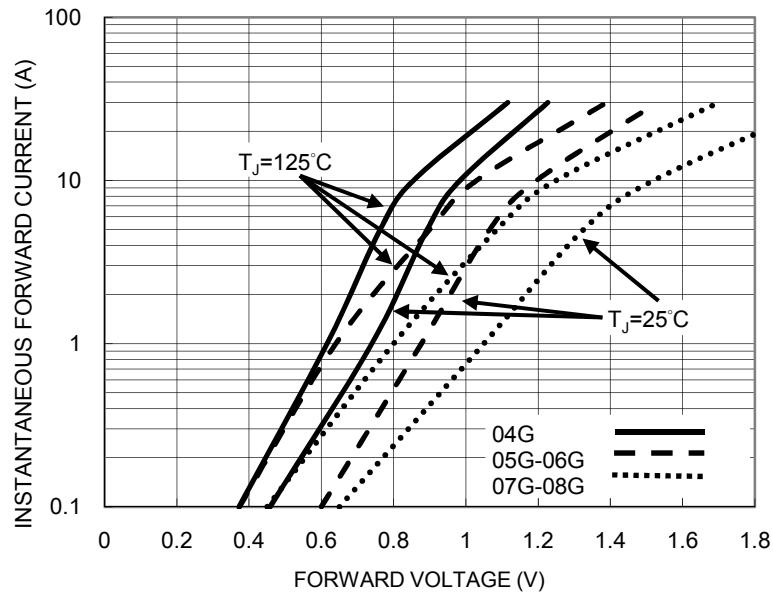
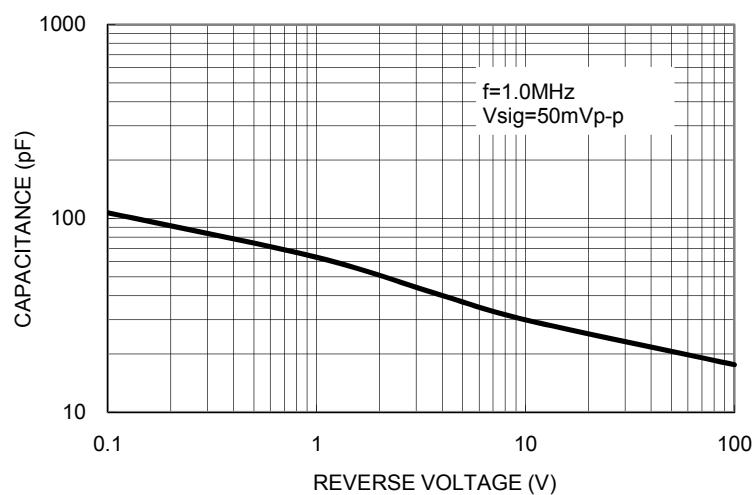
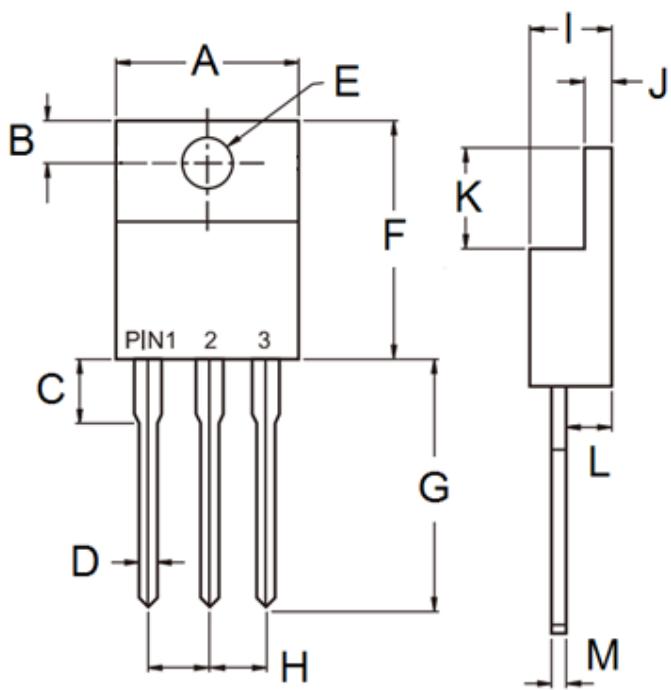
FIG.1 FORWARD CURRENT DERATING CURVE

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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