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## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



## 0.6A, 50V - 200V Glass Passivated Ultra Fast Rectifiers

### FEATURES

- Glass passivated chip junction
- Ultrafast recovery time for high efficiency
- Excellent high temperature switching
- Ideally suited for use in very high frequency switching power supplies, inverters and as free wheeling diodes
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21



**TS-1**

### MECHANICAL DATA

**Case:** TS-1

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:** 0.2g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)						
PARAMETER	SYMBOL	UG06A	UG06B	UG06C	UG06D	UNIT
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	150	200	V
Maximum RMS voltage	V <sub>RMS</sub>	25	70	105	140	V
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	150	200	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	0.6				A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	40				A
Maximum instantaneous forward voltage (Note 1) @ 0.6 A	V <sub>F</sub>	0.95				V
Maximum reverse current @ rated V <sub>R</sub>	I <sub>R</sub>	5				μA
		T <sub>J</sub> =25°C				
		T <sub>J</sub> =125°C				
Maximum reverse recovery time (Note 2)	t <sub>rr</sub>	15				ns
Typical junction capacitance (Note 3)	C <sub>J</sub>	9				pF
Typical thermal resistance	R <sub>θJL</sub> R <sub>θJA</sub>	28 97				°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 Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A

Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

ORDERING INFORMATION					
PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX (*)	PACKAGE	PACKING
UG06x (Note 1)	H	A0	G	TS-1	3,000 / Ammo box (52mm taping)
		A1		TS-1	3,000 / Ammo box (26mm taping)
		R0		TS-1	5,000 / 13" Paper reel
		B0		TS-1	1,000 / Bulk packing

Note 1: "x" defines voltage from 50V (UG06A) to 200V (UG06D)

\*: Optional available

EXAMPLE					
PREFERRED P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
UG06DHA0G	UG06D	H	A0	G	AEC-Q101 qualified Green compound

**RATINGS AND CHARACTERISTICS CURVES**

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

FIG. 1 MAXIMUM FORWARD CURRENT DERATING CURVE

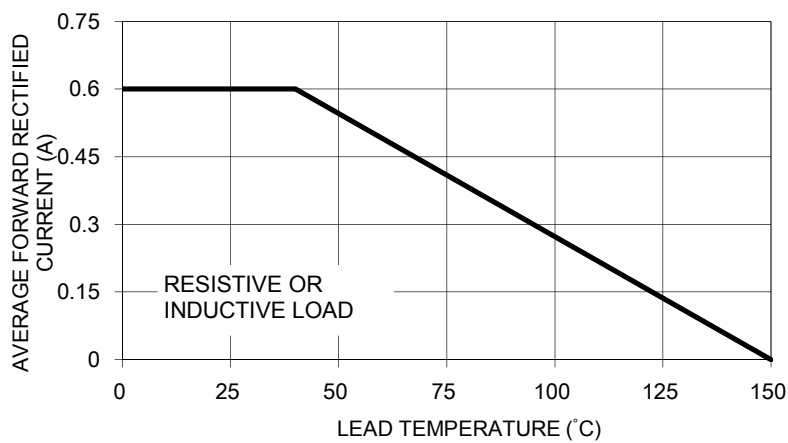


FIG. 2 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

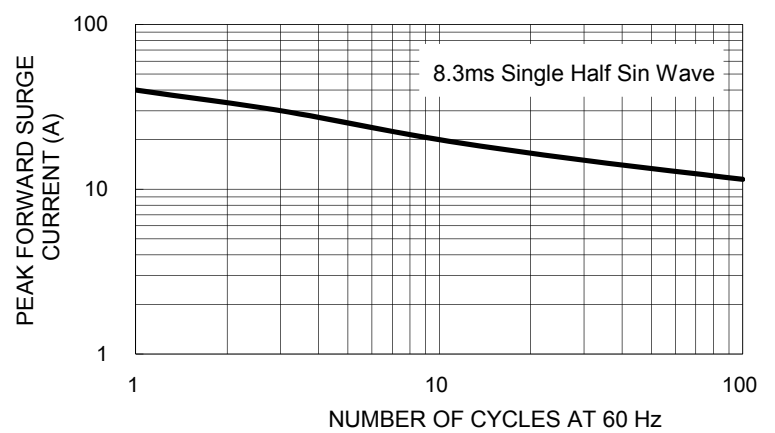


FIG. 3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

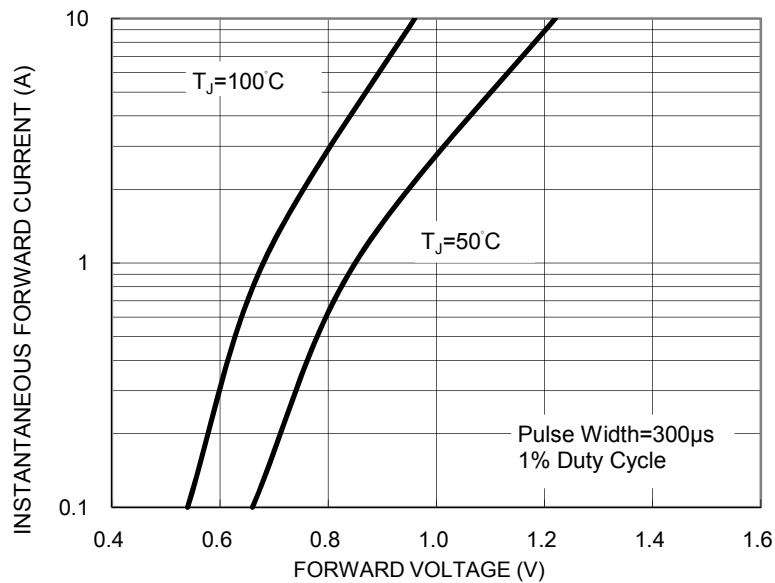


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

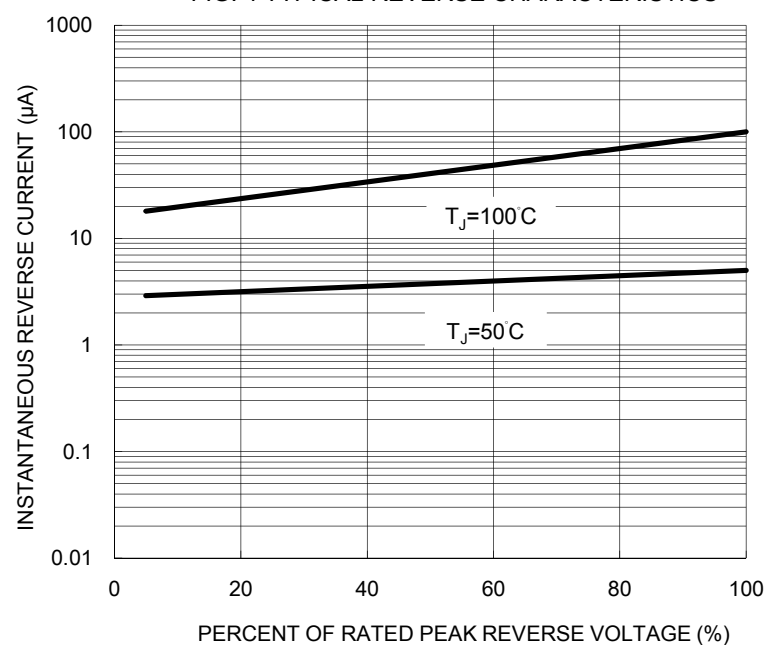


FIG. 5 TYPICAL JUNCTION CAPACITANCE

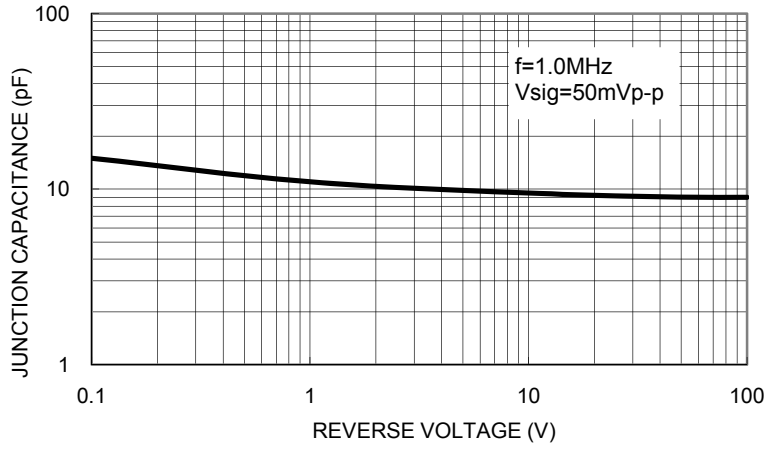
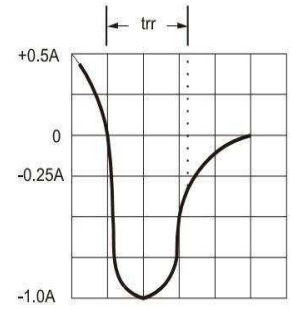
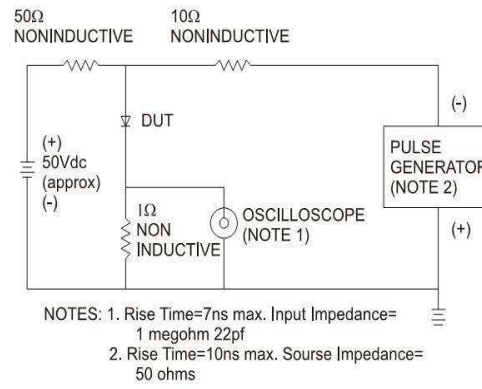
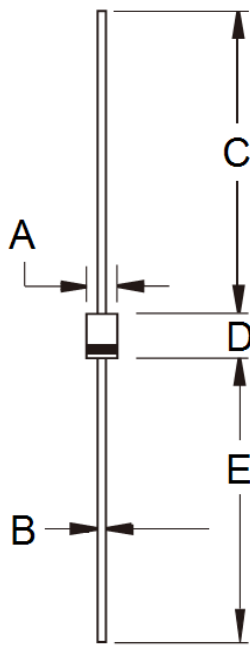


FIG.6 REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



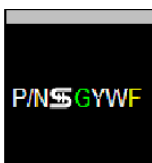
**PACKAGE OUTLINE DIMENSIONS**

TS-1



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.00	2.70	0.079	0.106
B	0.53	0.64	0.021	0.025
C	25.40	-	1.000	-
D	3.00	3.30	0.118	0.130
E	25.40	-	1.000	-

**MARKING DIAGRAM**



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

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