6A, 50V - 600V Glass Passivated High Efficient Rectifiers

FEATURES

- Glass passivated chip junction
- 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

R-6

Pb-Free

RoHS COMPLIANT

MECHANICAL DATA

Case: R-6

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: 1.65 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)								
PARAMETER	SYMBOL	HER 601G	HER 602G	HER 603G	HER 604G	HER 605G	HER 606G	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	300	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	140	210	280	420	V
Maximum DC blocking voltage	V_{DC}	50	100	200	300	400	600	V
Maximum average forward rectified current	$I_{F(AV)}$	6						A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	150						A
Maximum instantaneous forward voltage (Note 1) @ 6 A	V_F	1.0				1.3	1.7	V
Maximum reverse current @ rated V_R T_J=25°C	I_R	10						µA
T_J=125°C		200						
Maximum reverse recovery time (Note 2)	t_{rr}	50					75	ns
Typical junction capacitance (Note 2)	C_J	80					65	pF
Typical thermal resistance	$R_{\theta JA}$	37						°C/W
Operating junction temperature range	T_J	- 55 to +150						°C
Storage temperature range	T_{STG}	- 55 to +150						°C

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

Note 2: Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=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
HER60xG (Note 1)	H	A0	G	R-6	700 / Ammo box
		R0		R-6	1,000 / 13" Paper reel
		B0		R-6	400 / Bulk packing

Note 1: "x" defines voltage from 50V (HER601G) to 600V (HER606G)

*: Optional available

EXAMPLE					
PREFERRED P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
HER605GHA0G	HER605G	H	A0	G	AEC-Q101 qualified Green compound

RATINGS AND CHARACTERISTICS CURVES

(T_A=25°C unless otherwise noted)

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

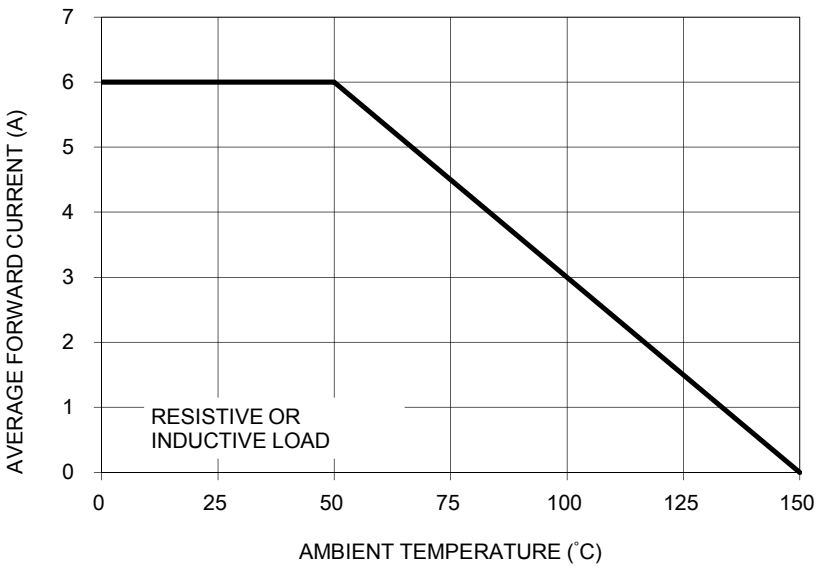


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

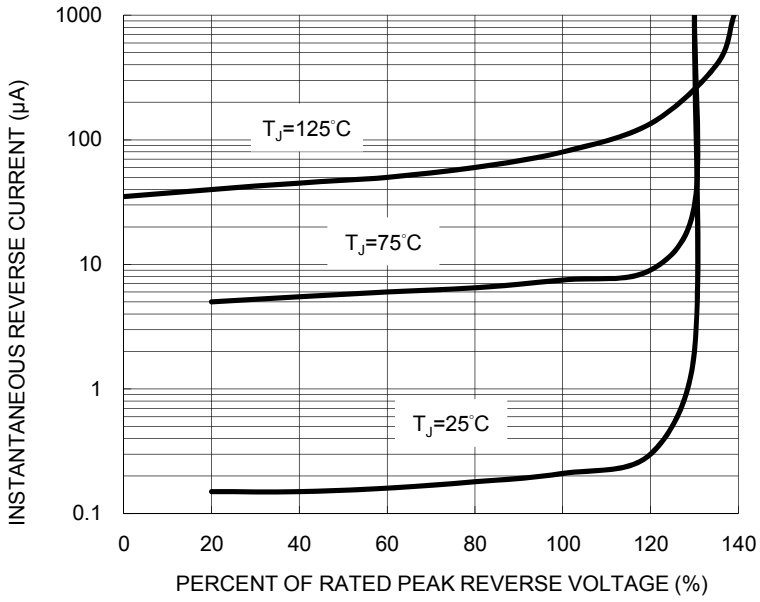


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

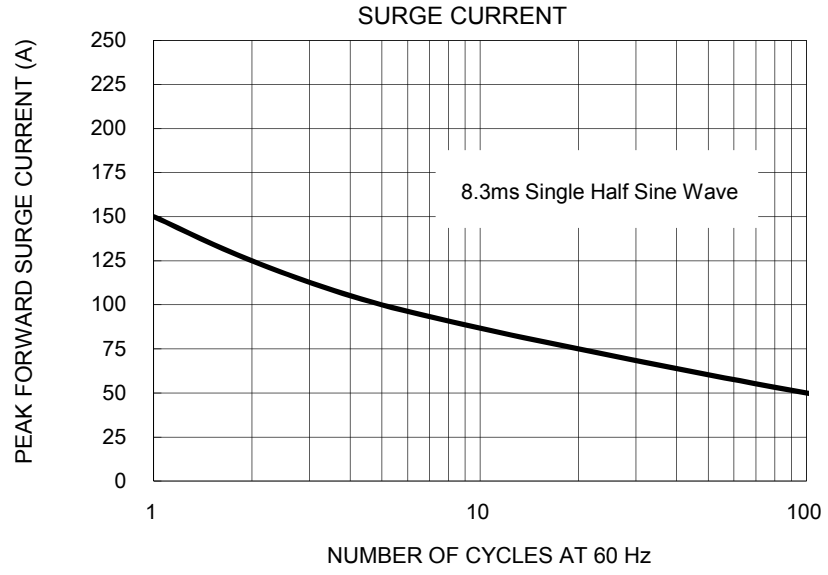


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

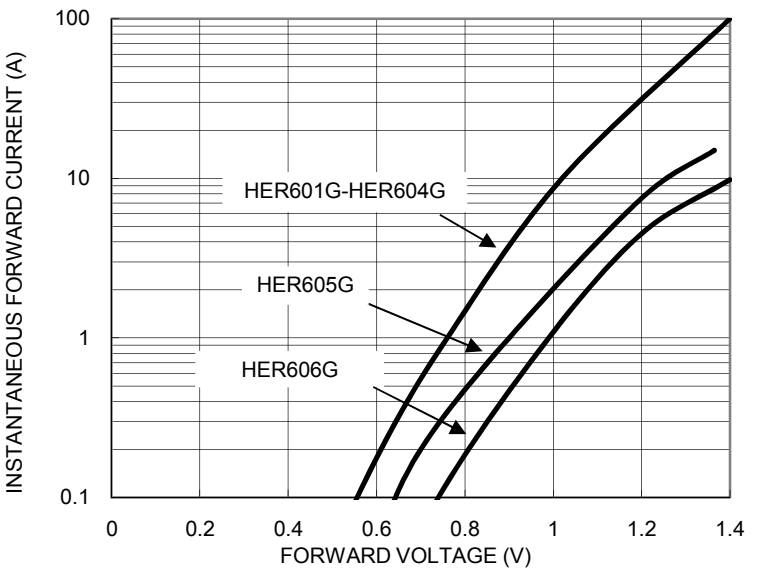


FIG. 5 TYPICAL JUNCTION CAPACITANCE

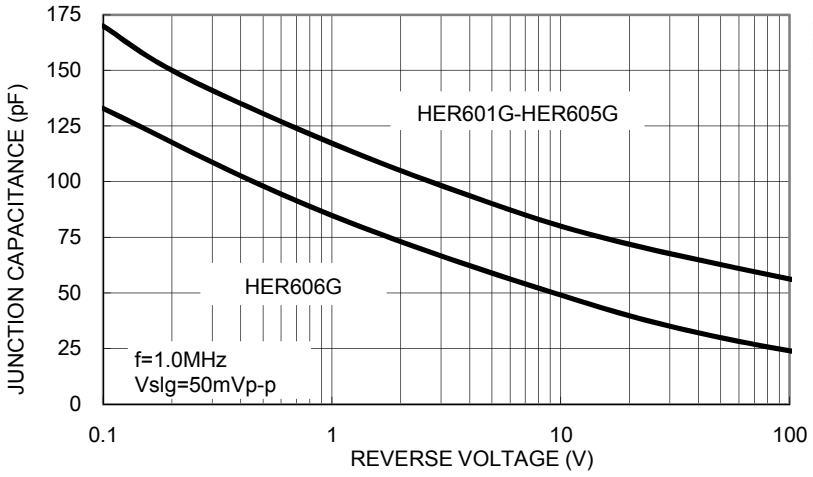
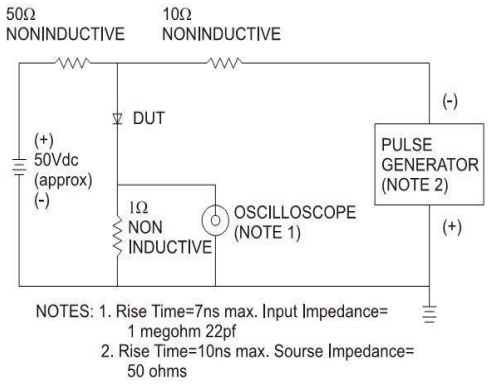
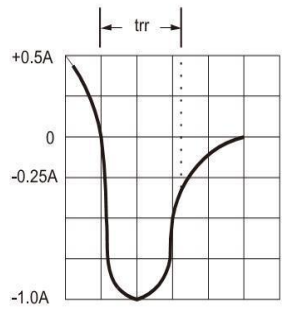


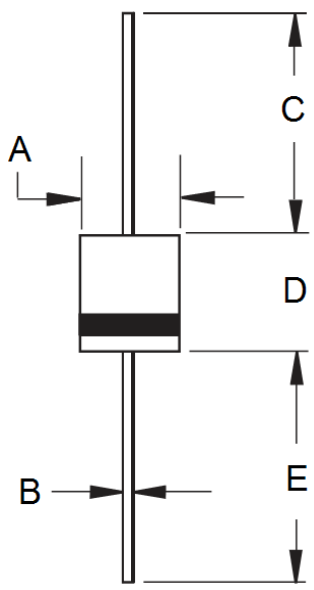
FIG.6 REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM





PACKAGE OUTLINE DIMENSIONS

R-6



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	6.80	7.20	0.268	0.283
B	1.20	1.30	0.047	0.051
C	25.40	-	1.000	-
D	8.60	9.10	0.339	0.358
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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