1.5A, 800V - 1000V Glass Passivated High Efficient Rectifier

FEATURES

- Glass passivated chip junction
- High efficiency, Low V_F
- High current capability
- High surge current capability
- Low power loss
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

APPLICATIONS

- Switching mode power supply (SMPS)
- Adapters
- TV
- Monitor

MECHANICAL DATA

- Case: DO-204AC (DO-15)
- Molding compound meets UL 94V-0 flammability rating
- Packing code with suffix "G" means green compound (halogen-free)
- Terminal: Pure tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1A whisker test
- Polarity: As marked
- Weight: 0.4 g (approximately)

KEY PARAMETERS		
PARAMETER	**VALUE**	**UNIT**
$I_{F(AV)}$	1.5	A
V_{RRM}	800 - 1000	V
I_{FSM}	50	A
$T_{J\ MAX}$	150	°C
Package	DO-204AC (DO-15)	
Configuration	Single Die	

Pb-Free RoHS COMPLIANT HALOGEN FREE

DO-204AC (DO-15)

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)				
PARAMETER	**SYMBOL**	**HER157G-K**	**HER158G-K**	**UNIT**
Marking code on the device		HER157G	HER158G	
Repetitive peak reverse voltage	V_{RRM}	800	1000	V
Reverse voltage, total rms value	$V_{R(RMS)}$	560	700	V
Forward current	$I_{F(AV)}$	1.5		A
Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load per diode	I_{FSM}	50		A
Junction temperature	T_J	- 55 to +150		°C
Storage temperature	T_{STG}	- 55 to +150		°C

THERMAL PERFORMANCE

PARAMETER	SYMBOL	LIMIT	UNIT
Junction-to-ambient thermal resistance	$R_{\Theta JA}$	60	°C/W

ELECTRICAL SPECIFICATIONS (T_A = 25°C unless otherwise noted)

PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage per diode (1)	I_F =1.5A, T_J = 25°C	V_F	-	1.7	V
Reverse current @ rated V_R per diode (2)	T_J = 25°C	I_R	-	5	μA
	T_J = 125°C		-	150	μA
Junction capacitance	1 MHz, V_R=4.0V	C_J	20	-	pF
Reverse recovery time	I_F=0.5A, I_R=1.0A I_{RR}=0.25A	t_{rr}	-	75	ns

Notes:

1. Pulse test with PW=0.3 ms
2. Pulse test with PW=30 ms

ORDERING INFORMATION

PART NO.	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
HER15xG-K (Note 1, 2)	A0	G	DO-15	1,500 / Ammo box
	R0		DO-15	3,500 / 13" Paper reel
	B0		DO-15	1,000 / Bulk packing

Notes:

1. "x" defines voltage from 800V (HER157G-T) to 1000V (HER158G-T)
2. Whole series with green compound (halogen-free)

EXAMPLE P/N

EXAMPLE P/N	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
HER157G-K A0G	HER157G-K	A0	G	Green compound

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

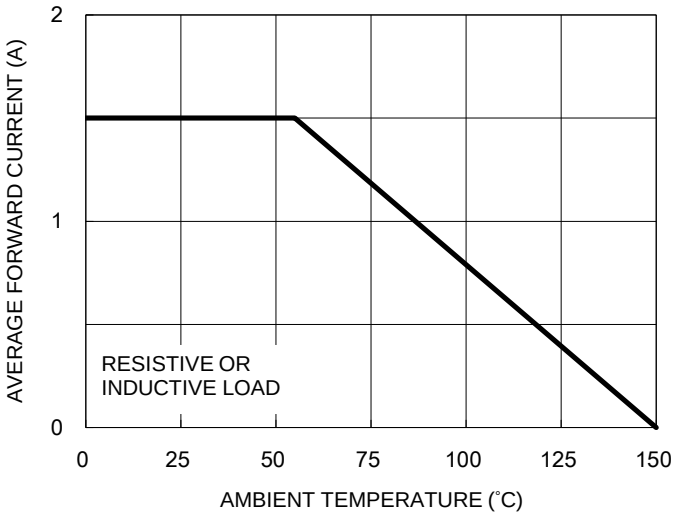


Fig.2 Typical Junction Capacitance

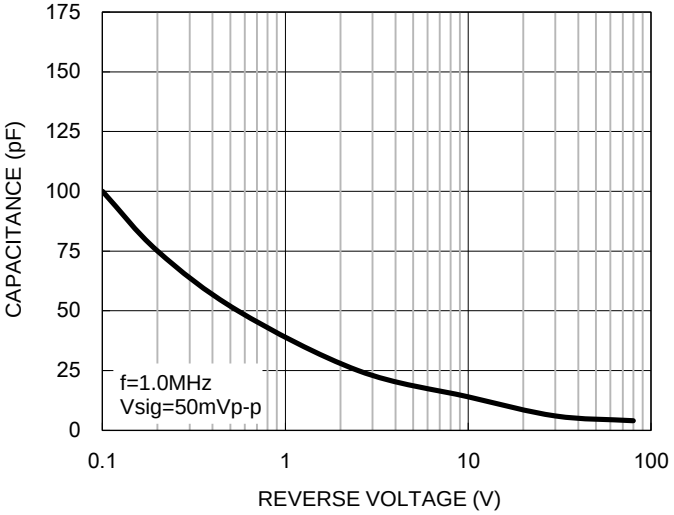


Fig.3 Typical Reverse Characteristics

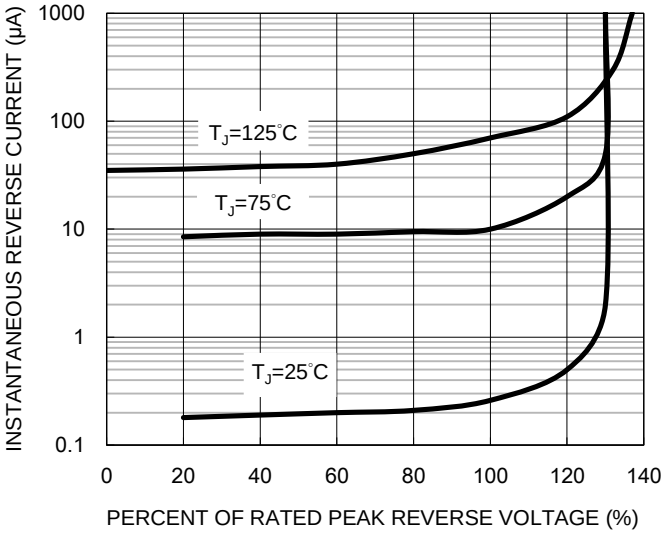
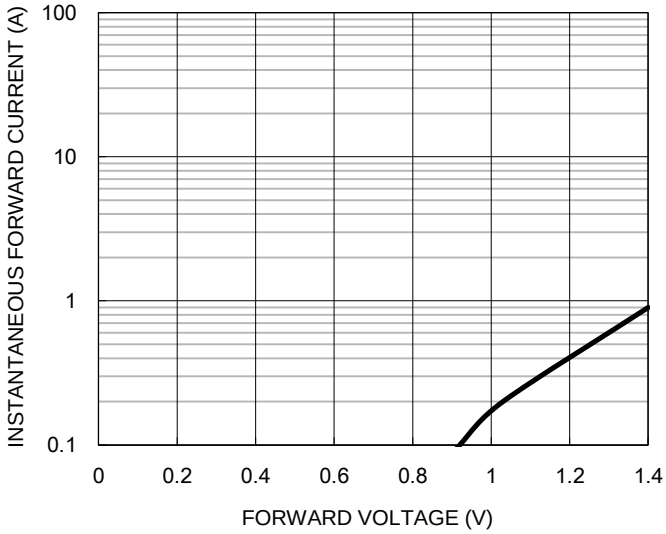


Fig.4 Typical Forward Characteristics



CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.5 Maximum Non-repetitive Forward Surge Current

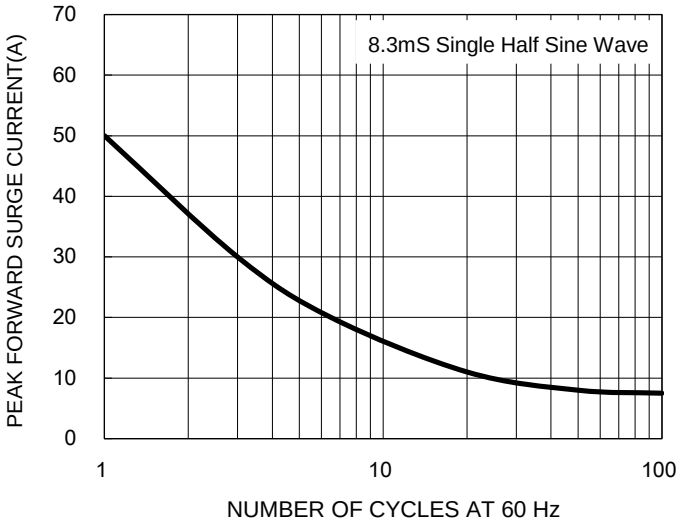
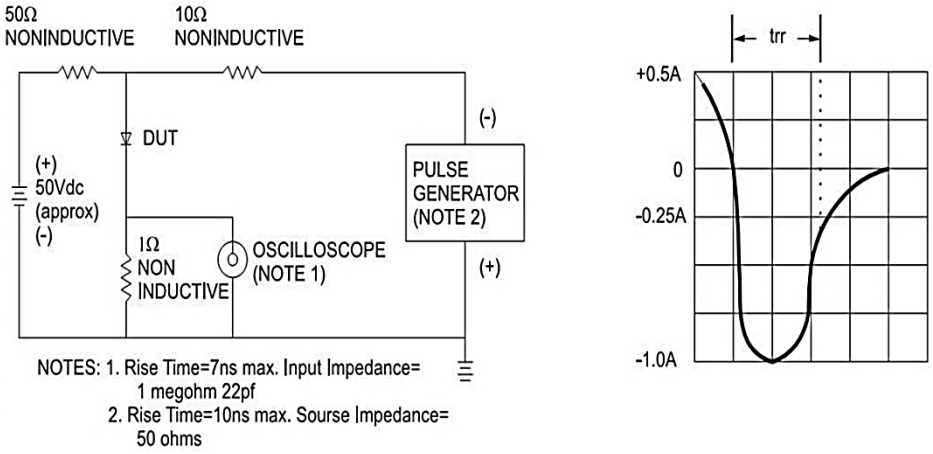
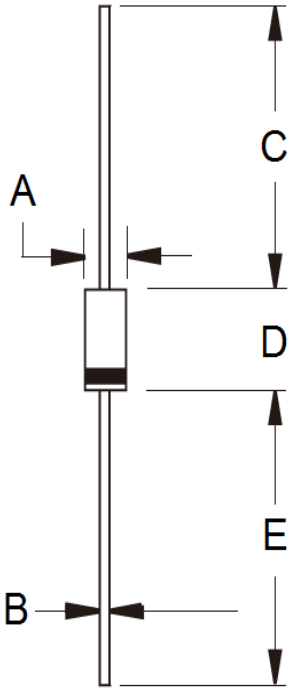


Fig.6 Reverse Recovery Time Characteristic And Test Circuit Diagram



PACKAGE OUTLINE DIMENSIONS

DO-204AC (DO-15)



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.60	3.60	0.102	0.142
B	0.70	0.90	0.028	0.035
C	25.40	-	1.000	-
D	5.80	7.60	0.228	0.299
E	25.40	-	1.000	-

MARKING DIAGRAM

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

Notice

Specifications of the products displayed herein are subject to change without notice. TSC or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in TSC's terms and conditions of sale for such products, TSC assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of TSC products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify TSC for any damages resulting from such improper use or sale.