

Glass Passivated High Efficient Rectifiers

FEATURES

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



MECHANICAL DATA

Case: TS-1

TS-1

Molding compound, UL flammability classification rating 94V-0

Base P/N with suffix "G" on packing code - green compound (halogen-free)

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

Meet JESD 201 class 1A whisker test

Weight: 0.2g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)													
PARAMETER	SYMBOL	HT 11G	HT 12G	HT 13G	HT 14G	HT 15G	HT 16G	HT 17G	HT 18G	UNIT			
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	300	400	600	800	1000	V			
Maximum RMS voltage	V_{RMS}	35	70	140	210	280	420	560	700	V			
Maximum DC blocking voltage	V_{DC}	50	100	200	300	400	600	800	1000	V			
Maximum average forward rectified current	$I_{F(AV)}$	1							A				
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	30							A				
Maximum instantaneous forward voltage (Note 1) @ 1 A	V_F	1.0			1.3	1.7			V				
Maximum reverse current @ rated VR $T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	I_R	5			150				μA				
Maximum reverse recovery time (Note 2)	T_{rr}	50			75	ns							
Typical junction capacitance (Note 3)	C_J	15			10	pF							
Typical thermal resistance	$R_{\theta JA}$	95							$^\circ\text{C}/\text{W}$				
Operating junction temperature range	T_J	- 55 to +150							$^\circ\text{C}$				
Storage temperature range	T_{STG}	- 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: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

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

ORDERING INFORMATION

PART NO.	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
HT1xG (Note 1)	A0	Suffix "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 (HT11G) to 1000V (HT18G)

EXAMPLE

PREFERRED P/N	PART NO.	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
HT17G A0	HT17G	A0		
HT17G A0G	HT17G	A0	G	Green compound

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

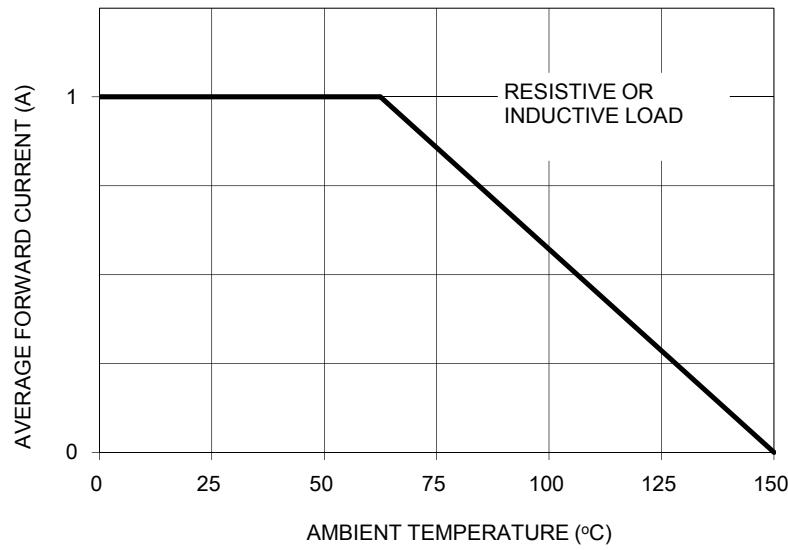
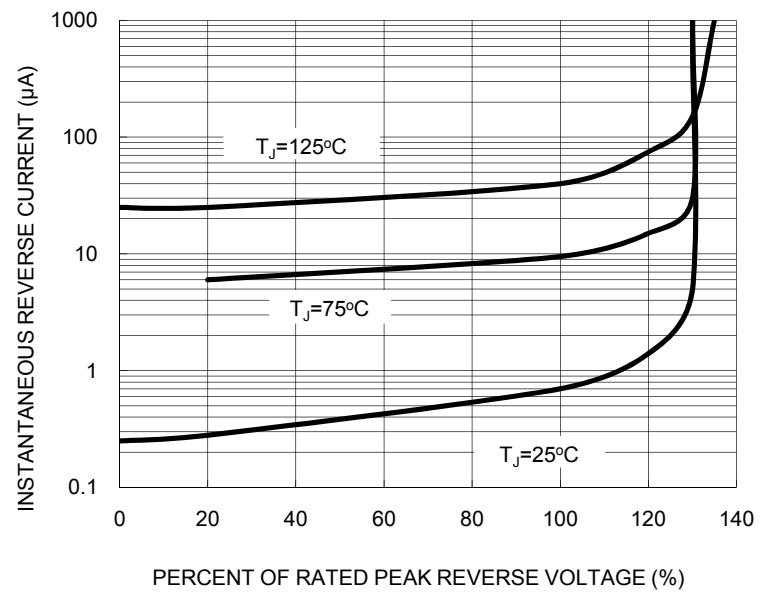
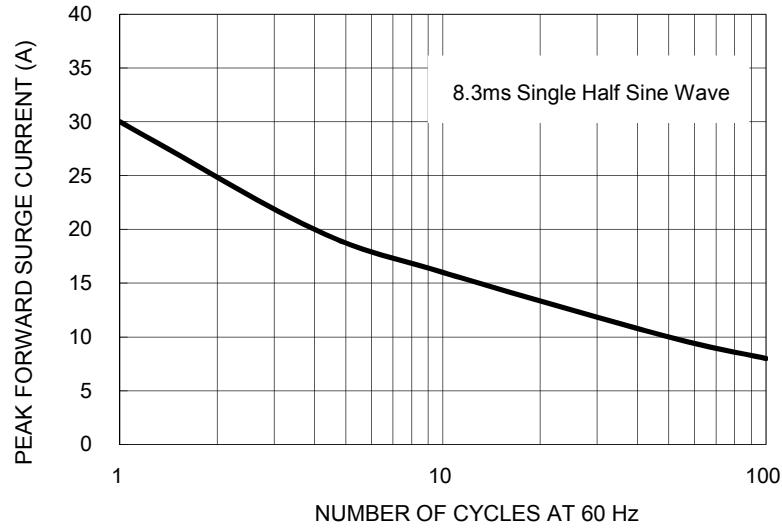
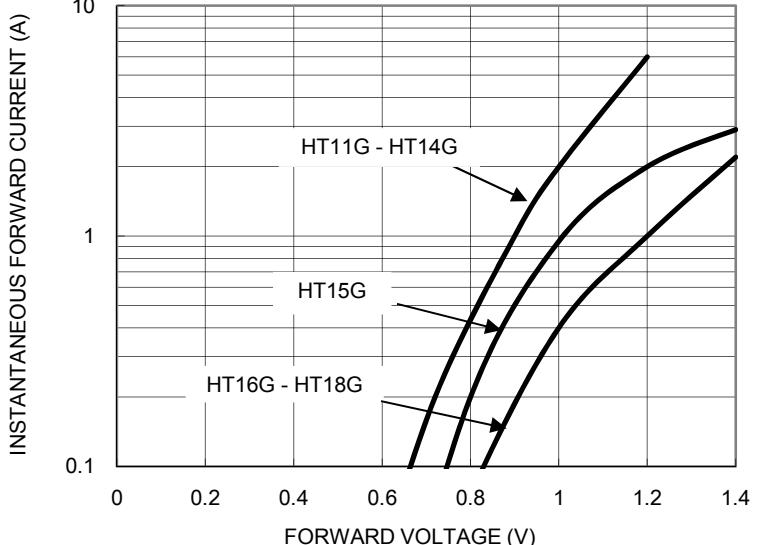
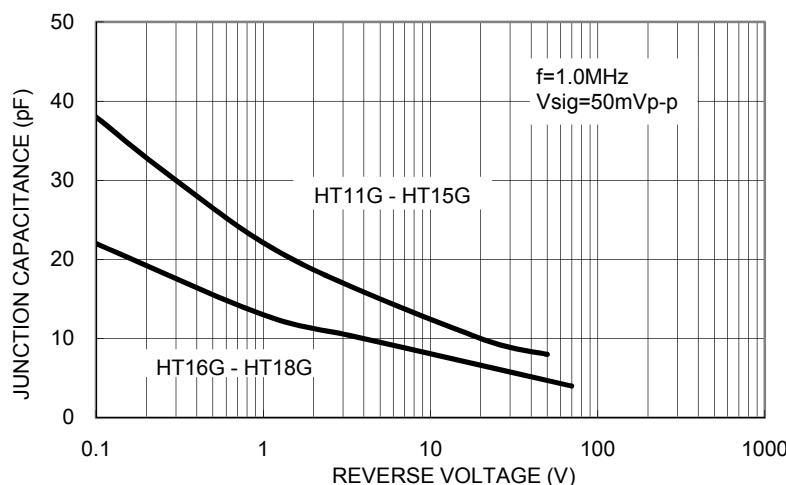
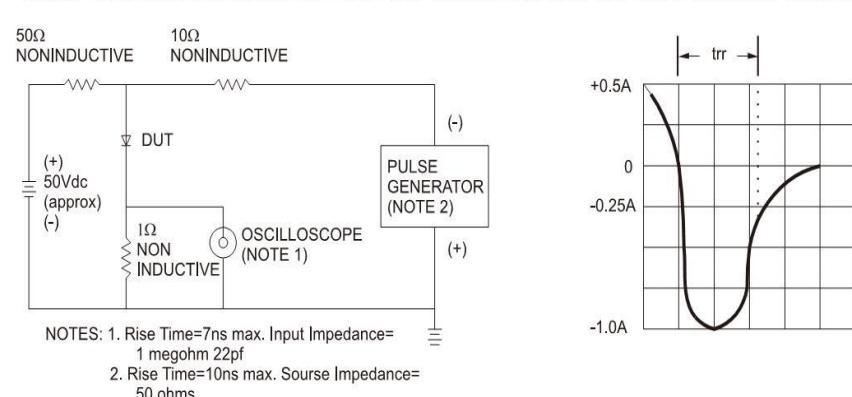
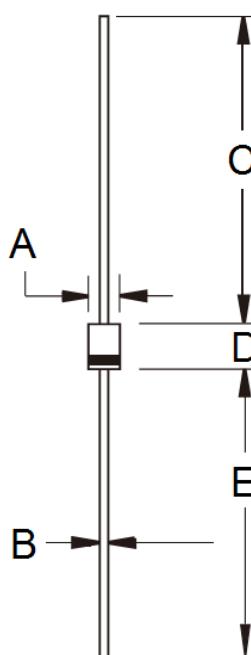
FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

FIG. 2- TYPICAL REVERSE CHARACTERISTICS

FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

FIG. 4 TYPICAL INSTANTANEOUS FORWARD 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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