

1A, 50V - 1000V 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



TS-1



MECHANICAL DATA

Case: TS-1

Molding compound, UL flammability classification rating 94V-0

Paer 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 _A =25°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 V _R T _J =25°C T _J =125°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 _{θJA} | 95 | | | | | | | | °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 |
| HT1xG (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 (HT11G) to 1000V (HT18G)

*: Optional available

| EXAMPLE | | | | | |
|---------------|----------|-----------------|--------------|---------------------|--------------------------------------|
| PREFERRED P/N | PART NO. | PART NO. SUFFIX | PACKING CODE | PACKING CODE SUFFIX | DESCRIPTION |
| HT17GHA0G | HT17G | 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

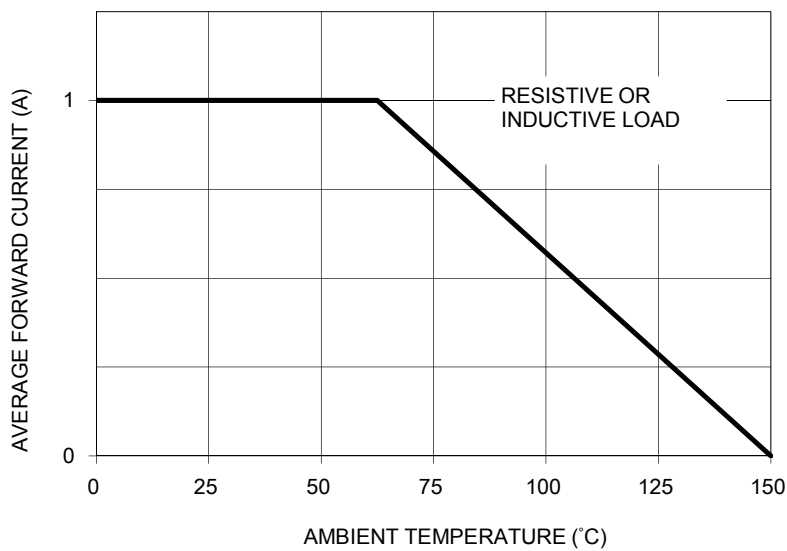


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

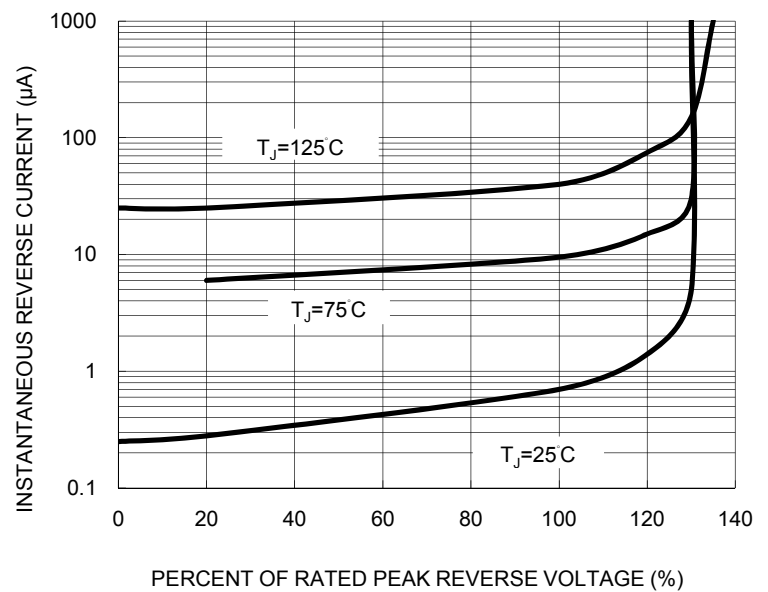


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



FIG. 4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

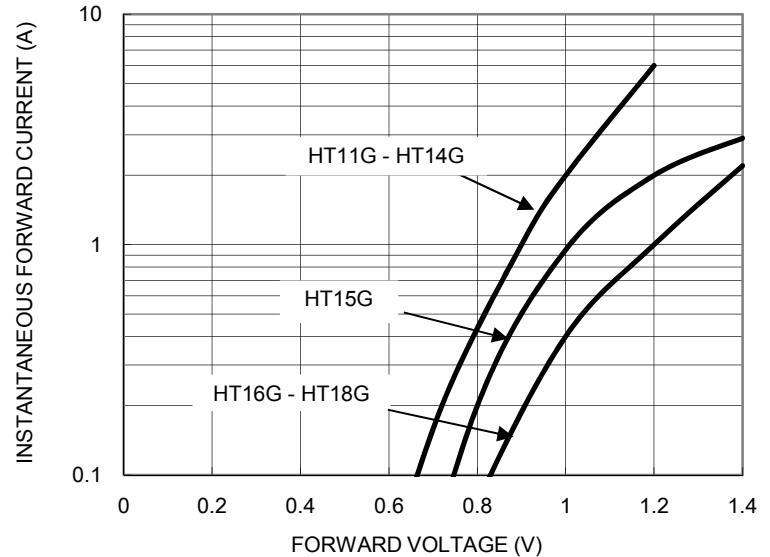


FIG. 5 TYPICAL JUNCTION CAPACITANCE

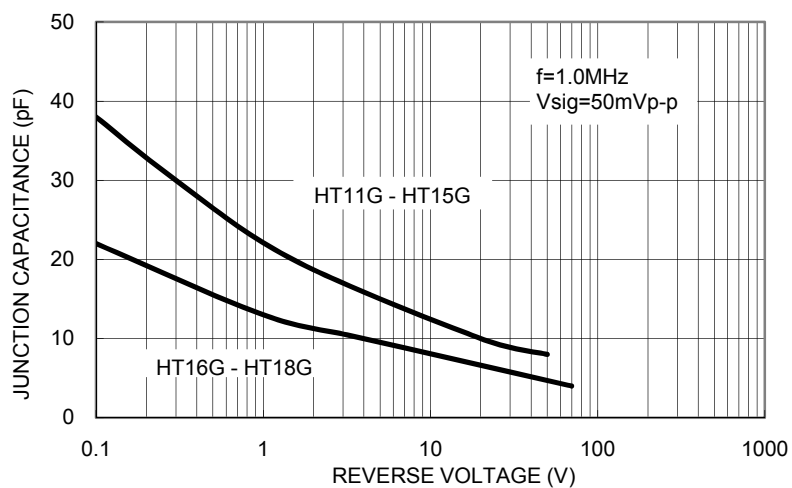
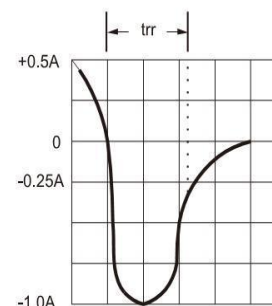
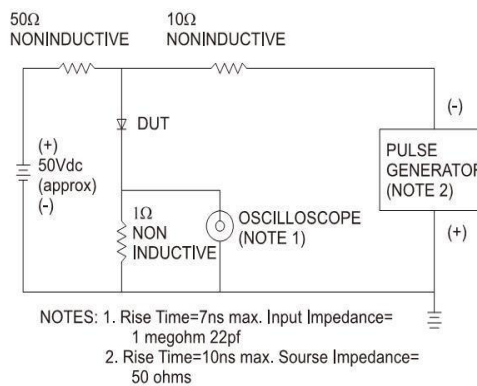
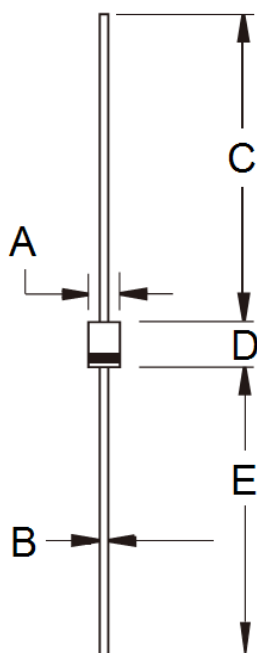


FIG.6 REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



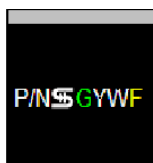
PACKAGE OUTLINE DIMENSIONS

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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