

# HT11 - HT18

## 1.0 AMP. High Efficient Rectifiers

### TS-1

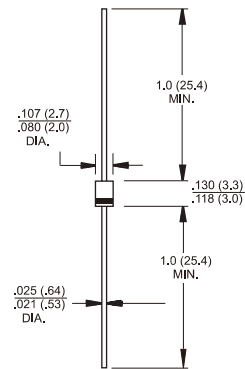
### Features

- High efficiency, Low VF
- High current capability
- High reliability
- High surge current capability
- For use in low voltage, high frequency inverter, free wheeling, and polarity protection application.
- Green compound with suffix "G" on packing code & prefix "G" on datecode.

### Mechanical Data

- Case: Molded plastic TS-1
- Epoxy: UL 94V0 rate flame retardant
- Lead: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- Polarity: Color band denotes cathode
- High temperature soldering guaranteed: 260°C/10 seconds/.375" (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- Mounting position: Any
- Weight: 0.20 grams

Dimensions in inches and (millimeters)



#### Marking Diagram



HT1X = Specific Device Code  
G = Green Compound  
Y = Year  
M = Work Month

### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

| Type Number                                                                                                      | Symbol | HT 11       | HT 12 | HT 13 | HT 14 | HT 15 | HT 16 | HT 17 | HT 18 | Units    |
|------------------------------------------------------------------------------------------------------------------|--------|-------------|-------|-------|-------|-------|-------|-------|-------|----------|
| Maximum Recurrent Peak Reverse Voltage                                                                           | VRRM   | 50          | 100   | 200   | 300   | 400   | 600   | 800   | 1000  | V        |
| Maximum RMS Voltage                                                                                              | VRMS   | 35          | 70    | 140   | 210   | 280   | 420   | 560   | 700   | V        |
| Maximum DC Blocking Voltage                                                                                      | VDC    | 50          | 100   | 200   | 300   | 400   | 600   | 800   | 1000  | V        |
| Maximum Average Forward Rectified Current .375 (9.5mm) Lead Length @T <sub>A</sub> = 55 °C                       | IF(AV) | 1.0         |       |       |       |       |       |       |       | A        |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )              | IFSM   | 30          |       |       |       |       |       |       |       | A        |
| Maximum Instantaneous Forward Voltage @ 1.0A                                                                     | VF     | 1.0         |       |       |       | 1.3   | 1.7   |       |       | V        |
| Maximum DC Reverse Current at @ T <sub>A</sub> =25°C<br>Rated DC Blocking Voltage(Note 1 )@T <sub>A</sub> =125°C | IR     | 5.0<br>150  |       |       |       |       |       |       |       | uA<br>uA |
| Maximum Reverse Recovery Time ( Note 4 )                                                                         | Trr    | 50          |       |       |       |       | 75    |       |       | nS       |
| Typical Junction Capacitance ( Note 2 )                                                                          | Cj     | 20          |       |       |       |       | 15    |       |       | pF       |
| Typical Thermal Resistance ( Note 3 )                                                                            | RθJA   | 100         |       |       |       |       |       |       |       | °C/W     |
| Operating Temperature Range                                                                                      | TJ     | -65 to +150 |       |       |       |       |       |       |       | °C       |
| Storage Temperature Range                                                                                        | TSTG   | -65 to +150 |       |       |       |       |       |       |       | °C       |

- Notes: 1. Pulse Test with PW=300 usec, 1% Duty Cycle  
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.  
3. Mount on Cu-Pad Size 5mm x 5mm on PCB.  
4. Reverse Recovery Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A

## RATINGS AND CHARACTERISTIC CURVES (HT11 THRU HT18)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

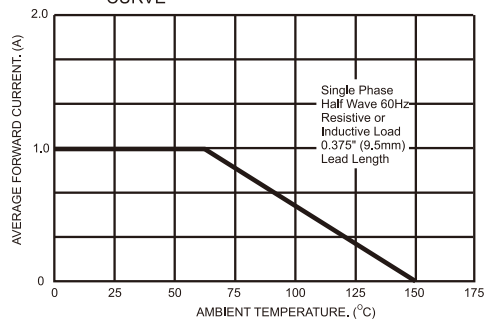


FIG.2- TYPICAL REVERSE CHARACTERISTICS

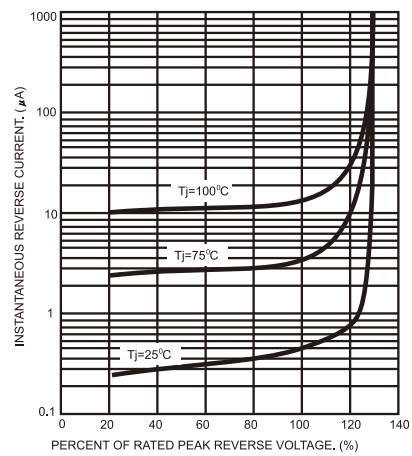


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

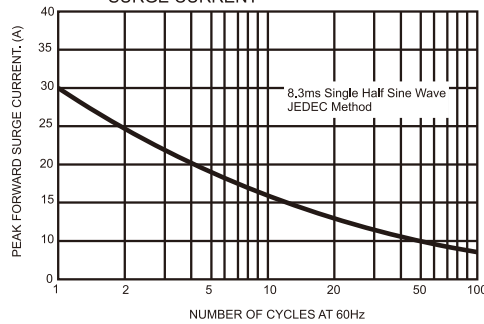


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

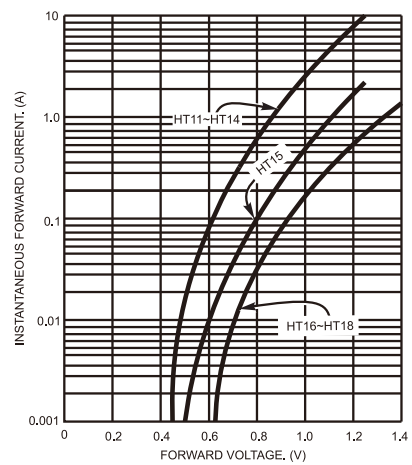


FIG.4- TYPICAL JUNCTION CAPACITANCE

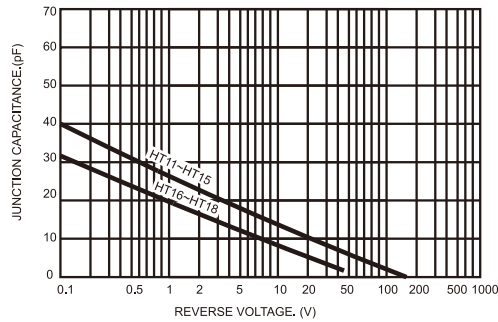


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

