# BT105S thru BT110S

**SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIERS**

REVERSE VOLTAGE **- 50** to **1000** Volts
FORWARD CURRENT **- 1.0** Ampere

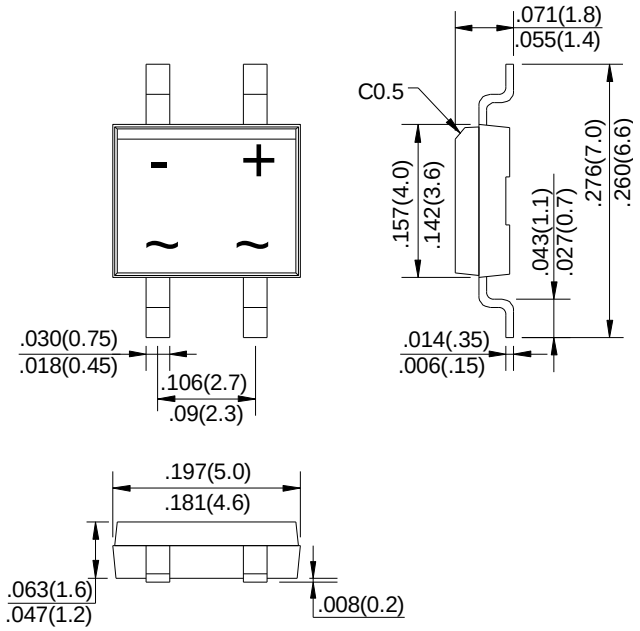
## FEATURES

- Rating to 1000V PRV
- Ideal for printed circuit board
- Reliable low cost construction utilizing molded plastic technique results in inexpensive product
- Lead tin plated copper

## MECHANICAL DATA

- Polarity:Symbol molded on body
- Mounting position :Any

**BTS**




Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25℃ ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%

| CHARACTERISTICS | SYMBOL | BT105S | BT11S | BT12S | BT14S | BT16S | BT18S | BT110S | UNIT |
|---|---|---|---|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | $V_{RRM}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | $V_{RMS}$ | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | $V_{DC}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current (Note 1) @$T_A$=40 ℃ | $I_{(AV)}$ | 1.0 | | | | | | | A |
| Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load(JEDEC Method) | $I_{FSM}$ | 30 | | | | | | | A |
| Peak Forward Voltage at 1.0A DC | $V_F$ | 1.1 | | | | | | | V |
| Maximum DC Reverse Current @$T_J$=25℃<br>at Rated DC Bolcking Voltage @$T_J$=125℃ | $I_R$ | 5.0<br>500 | | | | | | | μA |
| Typical Junction Capacitance Per Element (Note2) | $C_J$ | 10 | | | | | | | pF |
| Thermal Resistance (Note3) | $R_{\theta JA}$ | 95 | | | | | | | ℃/W |
| Thermal Resistance (Note4) | $R_{\theta JC}$ | 30 | | | | | | | ℃/W |
| Operating Temperature Range | $T_J$ | -55 to +150 | | | | | | | ℃ |
| Storage Temperature Range | $T_{STG}$ | -55 to +150 | | | | | | | ℃ |

NOTES:1.Mounted on P.C. board.

2.Measured at1.0MHz and applied reverse voltage of 4.0V DC.

3.Thermal resistance junction to ambient

4.Thermal resistance junction to case

# RATING AND CHARACTERTIC CURVES BT105S thru BT110S

FIG.1-FORWARD CURRENT DERATING CURVE

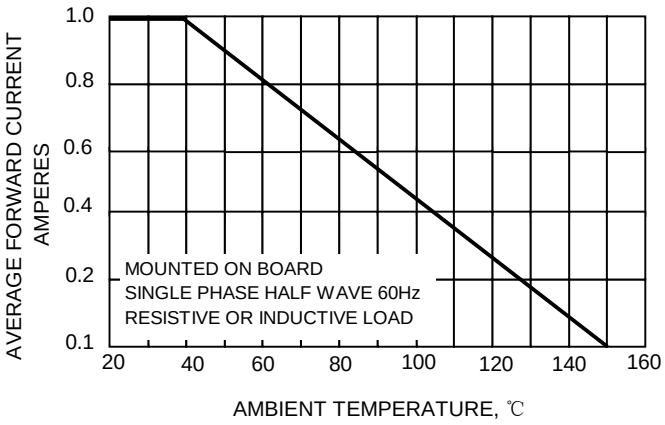



FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

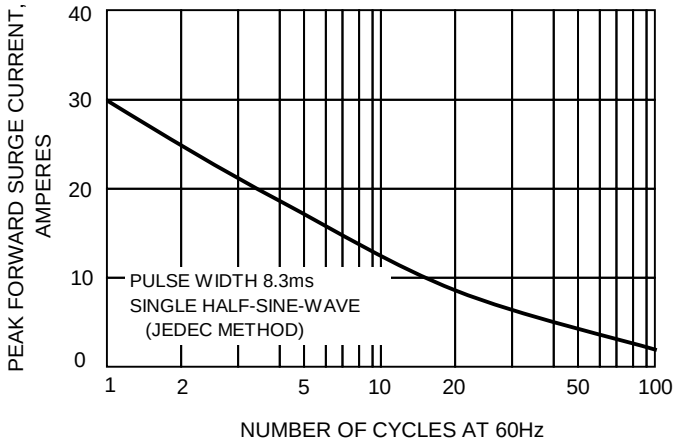



FIG.3-TYPICAL REVERSE CHARACTERISTICS

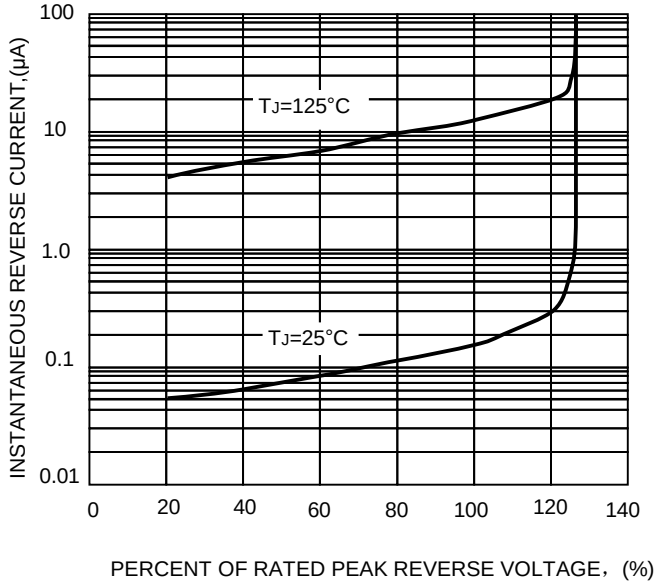



FIG.4-TYPICAL FORWARD CHARACTERISTICS

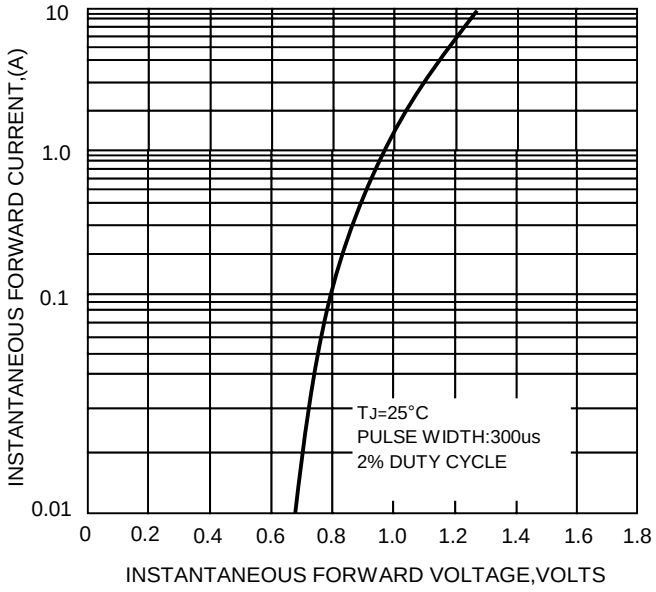



FIG.5-TYPICAL JUNCTION CAPACITANCE