# BRU04SF 600mA 4.0kV 75nS

## High Voltage Medium and High Current Diodes

**INTRODUCE:**

HVGT high voltage silicon rectifier diodes is made of high quality glass passivated chip and high reliability epoxy resin sealing structure, and through professional testing equipment inspection qualified after to customers.

**FEATURES:**

1. High reliability design.
2. High voltage design.
3. High frequency, Fast recovery.
4. Conform to RoHS and SGS.
5. Epoxy resin molded in vacuumHave anticorrosion in the surface.

**APPLICATIONS:**

1. High voltage multiplier circuit
2. Electrostatic generator circuit .
3. General purpose high voltage rectifier.
4. Other.

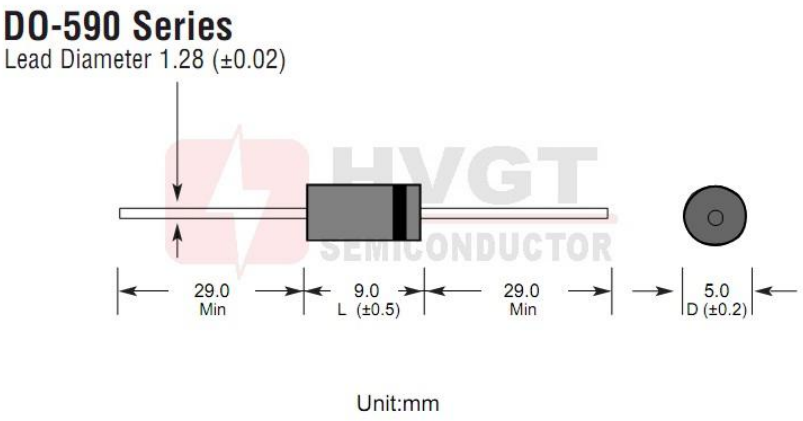
**MECHANICAL DATA:**

1. Case: epoxy resin molding.
2. Terminal: welding axis.
3. Net weight: 2.1 grams (approx).

**SHAPE DISPLAY:**



**SIZE: (Unit:mm)** **HVGT NAME: DO-590**



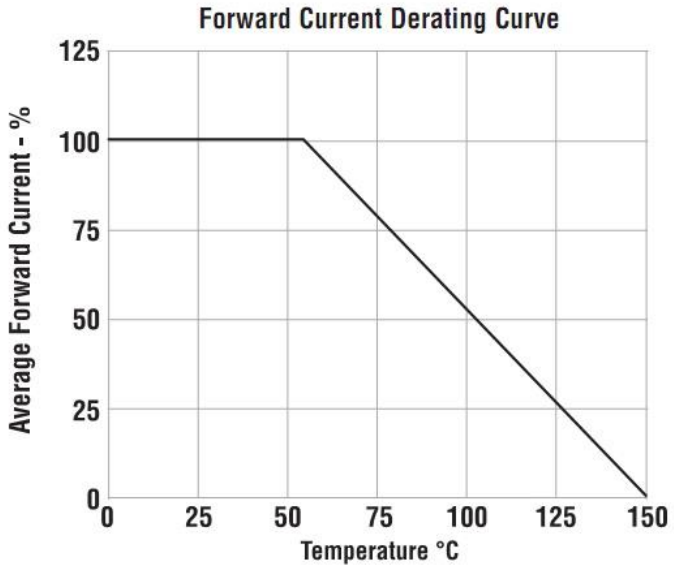

**MAXIMUM RATINGS AND CHARACTERISTICS:** (Absolute Maximum Ratings)

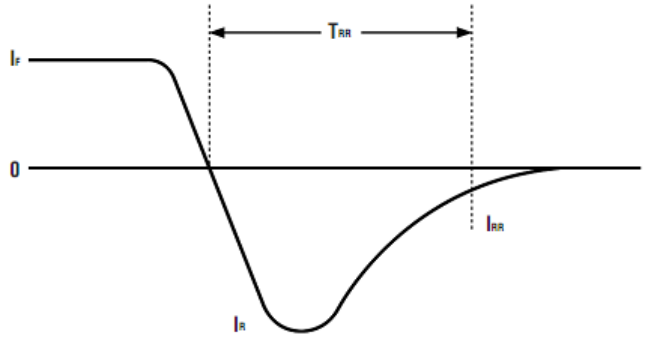
| Items | Symbols | Condition | Data Value | Units |
|---|---|---|---|---|
| Repetitive Peak Renerse Voltage | $V_{RRM}$ | $T_A$=25°C | 4.0 | kV |
| Non-Repetitive Peak Renerse Voltage | $V_{RSM}$ | $T_A$=25°C | -- | kV |
| Average Forward Current Maximum | $I_{FAVM}$ | $T_A$=55°C | 600 | mA |
| | | $T_{OIL}$=55°C | -- | mA |
| Non-Repetitive Forward Surge Current | $I_{FSM}$ | $T_A$=25°C; 60Hz Half-Sine Wave; 8.3mS | 20 | A |
| Junction Temperature | $T_J$ | | 150 | °C |
| Allowable Operation Case Temperature | Tc | | -40~+150 | °C |
| Storage Temperature | $T_{STG}$ | | -40~+150 | °C |

**ELECTRICAL CHARACTERISTICS:** $T_A$=25°C (Unless Otherwise Specified)

| Items | Symbols | Condition | Data value | Units |
|---|---|---|---|---|
| Maximum Forward Voltage Drop | $V_{FM}$ | at 25°C; at $I_{FAVM}$ | 7.0 | V |
| Maximum Reverse Current | $I_{R1}$ | at 25°C; at $V_{RRM}$ | 5.0 | uA |
| | $I_{R2}$ | at 100°C; at $V_{RRM}$ | 50 | uA |
| Maximum Reverse Recovery Time | $T_{RR}$ | at 25°C; $I_F$=0.5$I_R$; $I_R$=$I_{FAVM}$; $I_{RR}$=0.25$I_R$ | 75 | nS |
| Junction Capacitance | $C_J$ | at 25°C; $V_R$=0V; f=1MHz | 30 | pF |

| Fig 1 | Fig 2 |
|---|---|
| **Forward Current Derating Curve** | **Reverse Recovery Measurement Waveform** |

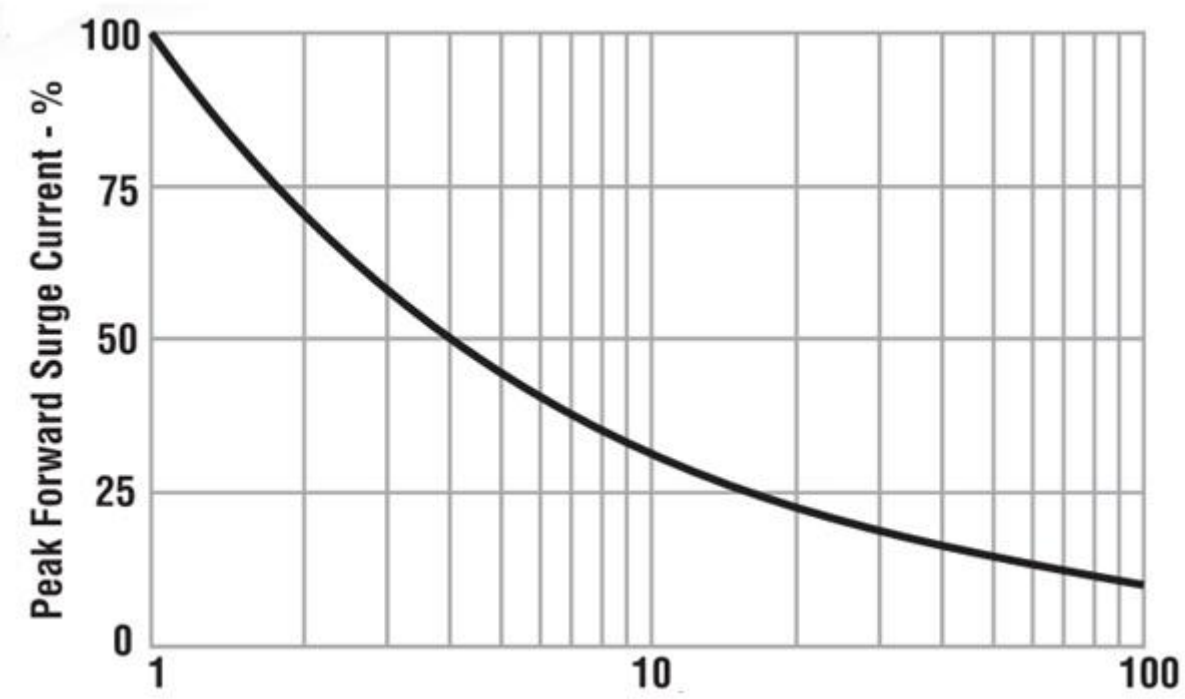



Typical data capture points: $I_F$ =0.5$I_R$ , $I_R$,$I_{RR}$ =0.25$I_R$
$I_R$ is typically the rated average forward current maximum ($I_{FAVM}$) of the D.U.T

**Fig 3**

**Non-Repetitive Surge Current**




| Marking | Type | Code | Cathode Mark |
|---|---|---|---|
| | BRU04SF | BRU04SF<br>HVGT | |