# HBG100D006G 10A 6.0kV 100nS

## Half Bridge High Voltage Rectifier Assembly

**INTRODUCE:**

HVGT Half Bridge high voltage silicon rectifier assembly is made of high quality silicon GPP 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. Power frequency ratio.
4. Conform to RoHS and SGS.
5. Epoxy resin molded in vacuumHave anticorrosion in the surface.

**APPLICATIONS:**

1. High voltage generator.
2. Industrial microwave power supply.
3. High voltage rectifier used in electrostatic cleaning.

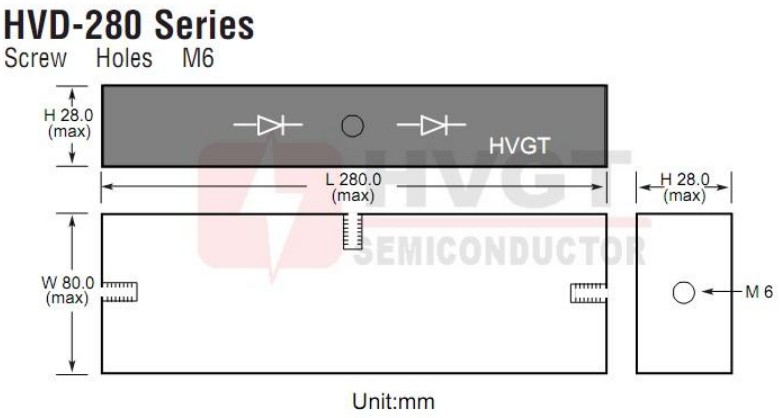
**MECHANICAL DATA:**

1. Case: epoxy resin molding.
2. Terminal: screw holes M6.
3. Net weight: 950 grams (approx).

**SHAPE DISPLAY:**




**SIZE: (Unit:mm) HVGT NAME: HVD-280**




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

| Items | Symbols | Condition | Data Value | | Units |
|---|---|---|---|---|---|
| Repetitive Peak Renerse Voltage | $V_{RRM}$ | $T_A$=25°C; $I_R$=1.0uA | 6.0 | 6.0 | kV |
| Peak Working Revere Voltage | $V_{RWM}$ | $T_A$=25°C; $I_R$=1.0uA | 6.0 | 6.0 | kV |
| Non-Repetitive Peak Renerse Voltage | $V_{RSM}$ | $T_A$=25°C; $I_R$=1.0uA | 7.2 | 7.2 | kV |
| Average Forward Current Maximum | $I_{FAVM}$ | $T_A$=50°C; 50Hz Half-sine Wave; Resistance load | 10 | | A |
| Non-Repetitive Forward Surge Current | $I_{FSM}$ | $T_A$=25°C; 50Hz Half-Sine Wave; 8.3mS | 200 | | 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)

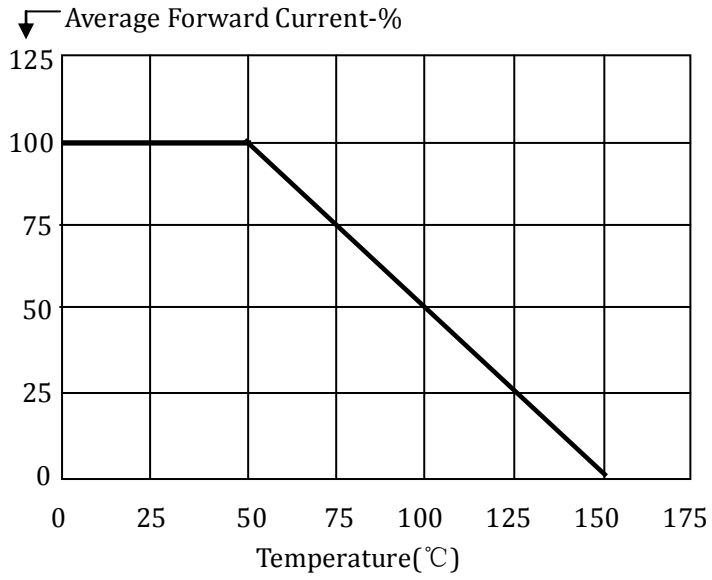
| Items | Symbols | Condition | Data value | | Units |
|---|---|---|---|---|---|
| Maximum Forward Voltage Drop | $V_{FM}$ | at 25°C; at $I_{FAVM}$ | 11 | 11 | V |
| Maximum Reverse Current | $I_{R1}$ | at 25°C; at $V_{RRM}$ | 10 | | uA |
| | $I_{R2}$ | at 100°C; at $V_{RRM}$ | 100 | | uA |
| Maximum Reverse Recovery Time | $T_{RR}$ | at 25°C; $I_F$=0.5$I_R$; $I_R$=$I_{FAVM}$; $I_{RR}$=0.25$I_R$ | 100 | | nS |
| Junction Capacitance | $C_J$ | at 25°C; VR=0V; f=1MHz | -- | | pF |


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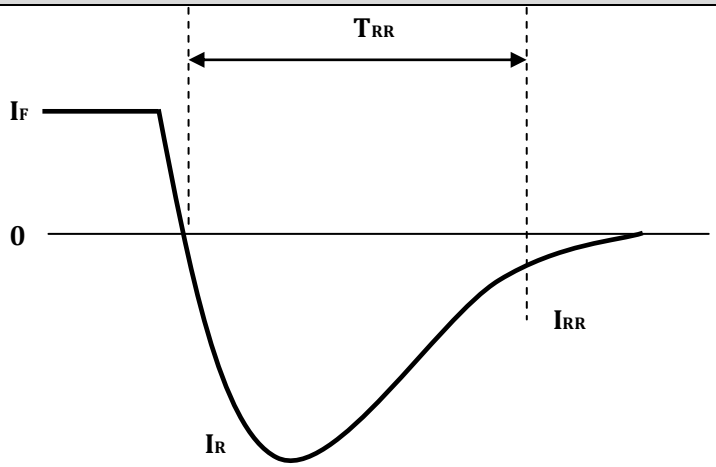
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### Forward Current Derating Curve



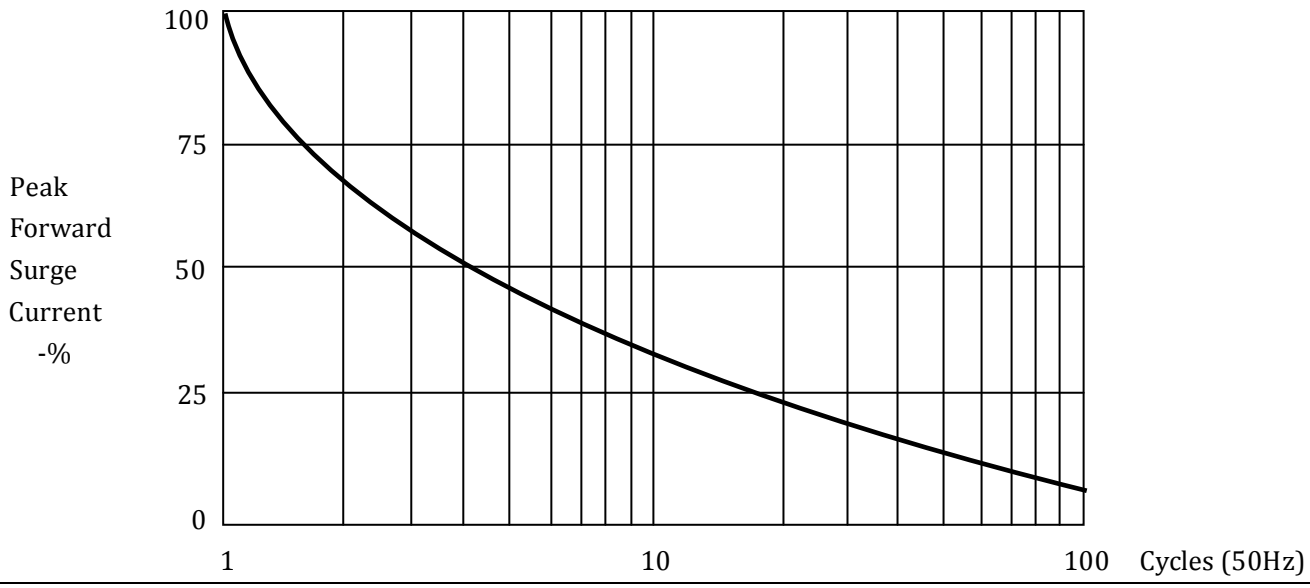

### Reverse Recovery Measurement Waveform




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

### Non-Repetitive Surge Current




**MARKING:**

| Marking | Type | Code | Cathode Mark |
|---|---|---|---|
| | HBG100D006G | HBG100D006G<br>HVGT | |

**PART NUMBER NOTE:**

| Type | Chip | $I_{F(AV)}$ | Frequency | $V_{RRM}$ | $T_{RR}$ |
|---|---|---|---|---|---|
| **HB** | **G** | **100** | D | **006** | **G** |
| Half Bridge Series | GPP Chip | 10A | D=Doubler.<br>P=Positive Center Tap.<br>N=Negative Center Cap. | 6.0kV | (U)75ns<br>(G)100ns<br>(D) Standard Recovery Time |



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