

**INTRODUCE:**

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

**FEATURES:**

1. High reliability design.
2. Small volume.
3. High frequency.
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. Negative ion generator.

**MECHANICAL DATA:**

1. Case: epoxy resin molding.
2. Terminal: welding axis.
3. Net weight: 0.34 grams (approx).

**SHAPE DISPLAY:**

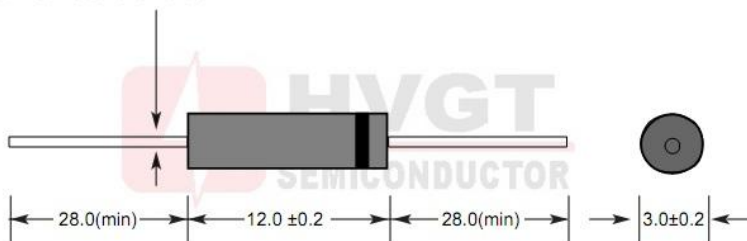


**SIZE: (Unit:mm)**

**HVGT NAME: DO-312**

**DO-312 Series**

Lead Diameter 0.6±0.03



Unit:mm

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

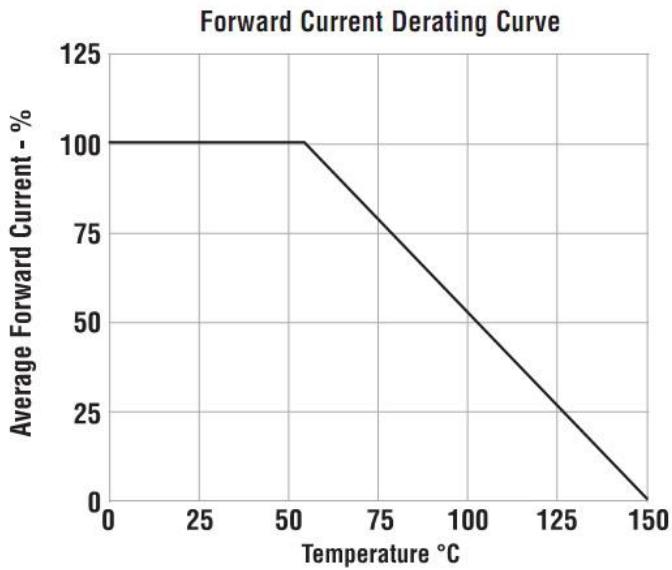
| Items                                | Symbols    | Condition                                      | Data Value | Units       |
|--------------------------------------|------------|--|------------|-------------|
| Repetitive Peak Rense Voltage        | $V_{RRM}$  | $T_A=25^{\circ}C$                              | 20         | kV          |
| Non-Repetitive Peak Rense Voltage    | $V_{RSM}$  | $T_A=25^{\circ}C$                              | --         | kV          |
| Average Forward Current Maximum      | $I_{FAVM}$ | $T_A=55^{\circ}C$                              | 30         | mA          |
|                                      |            | $T_{OIL}=55^{\circ}C$                          | --         | mA          |
| Non-Repetitive Forward Surge Current | $I_{FSM}$  | $T_A=25^{\circ}C$ ; 50Hz Half-Sine Wave; 8.3mS | 3.0        | A           |
| Junction Temperature                 | $T_J$      |  | 150        | $^{\circ}C$ |
| Allowable Operation Case Temperature | $T_C$      |  | -40~+150   | $^{\circ}C$ |
| Storage Temperature                  | $T_{STG}$  |  | -40~+150   | $^{\circ}C$ |

**ELECTRICAL CHARACTERISTICS:  $T_A=25^{\circ}C$  (Unless Otherwise Specified)**

| Items                         | Symbols  | Condition   | Data value | Units   |
|-------------------------------|----------|---|------------|---------|
| Maximum Forward Voltage Drop  | $V_{FM}$ | at $25^{\circ}C$ ; at $I_{FAVM}$                                    | 35         | V       |
| Maximum Reverse Current       | $I_{R1}$ | at $25^{\circ}C$ ; at $V_{RRM}$                                     | 2.0        | $\mu A$ |
|                               | $I_{R2}$ | at $100^{\circ}C$ ; at $V_{RRM}$                                    | 10         | $\mu A$ |
| Maximum Reverse Recovery Time | $T_{RR}$ | at $25^{\circ}C$ ; $I_F=0.5I_R$ ; $I_R=I_{FAVM}$ ; $I_{RR}=0.25I_R$ | 100        | nS      |
| Junction Capacitance          | $C_J$    | at $25^{\circ}C$ ; $V_R=0V$ ; $f=1MHz$                              | 1.0        | pF      |

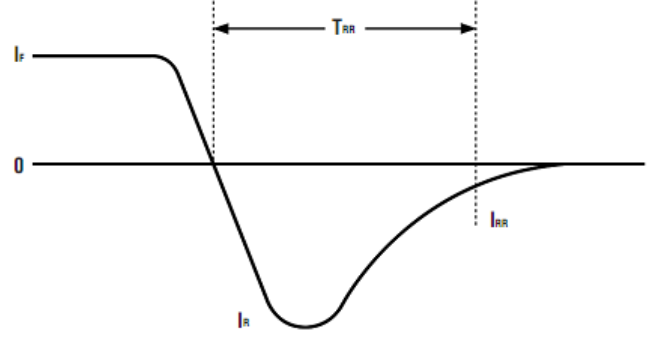
**Fig 1**

**Forward Current Derating Curve**



**Fig 2**

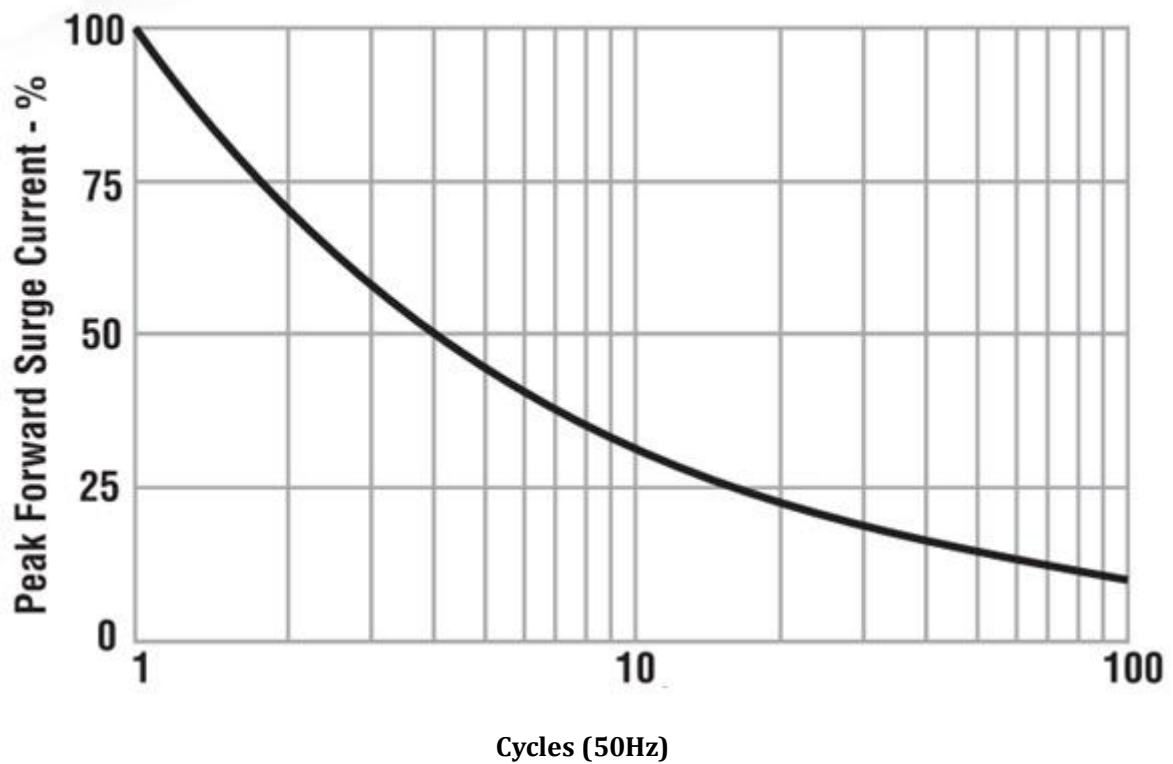
**Reverse Recovery Measurement Waveform**




Typical data capture points:  $I_F = 0.5I_R$ ,  $I_R, I_{RR} = 0.25I_R$   
 $I_R$  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  |
|---------|----------|------|---|
|         | AF03-20F |      |  |