

**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 quality glass passivated chip structure.
2. Ultra fast recovery time.
3. Medium power and high voltage design.
4. Ultra High Frequency.
5. Epoxy resin molded in vacuum.
6. Have anticorrosion in the surface.
7. UL94 V-0 Rated Material.

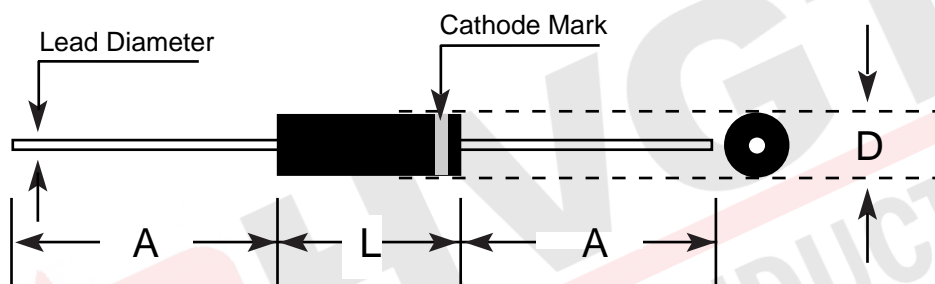
**APPLICATIONS:**

1. X-ray machine power supply.
2. Laser generator power supply.
3. Voltage doubling circuit.
4. Microwave transmission power supply.
5. Other high-voltage circuits.

**MECHANICAL DATA:**

1. Case: Epoxy resin molding.
2. Terminal: Axis soft lead.
3. Net weight: 0.65 gram (approx).

**PACKAGE SIZE:**



<b>DO-415 Series</b>						
Lead Diameter 0.8± 0.03						
Dim.	Millimeters			Inches		
	Value	Min.	Max.	Value	Min.	Max.
D	4.2	4.0	4.4	0.165	0.157	0.173
L	15.0	14.8	15.2	0.591	0.583	0.598
A	22.0	22.0	--	0.866	0.866	--

**REFERENCE SHAPE:**

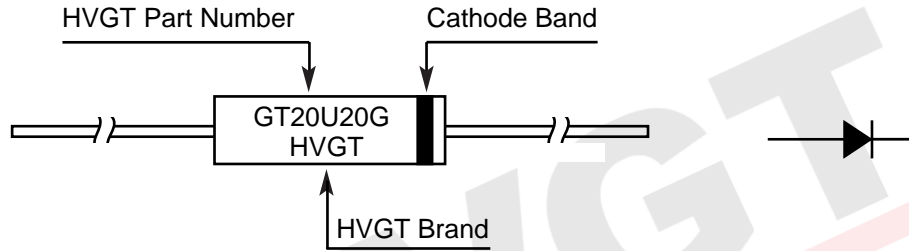


HVGT Name: DO-415

**Primary Characteristics**

<b>IF (AV)</b>	200	mA
<b>VRRM</b>	20	kV
<b>IFSM</b>	30	A
<b>IRM</b>	1.0	uA
<b>VFM</b>	35	V
<b>TRR</b>	50	nS
<b>TJ (max.)</b>	150	° C

**MARKING:**



**MAXIMUM RATINGS AND CHARACTERISTICS:** (Ta=25° C, Ambient temperature unless stated otherwise.)

Items	Symbols	Condition	Data Value	Units
Maximum Repetitive Reverse Voltage	V <sub>RRM</sub>	--	20	kV
Non-Repetitive Peak Reverse Voltage	V <sub>RSM</sub>	--	24	kV
Maximum Average Forward Current	I <sub>FAVM</sub>	T <sub>A</sub> = 55° C	200	mA
		T <sub>OIL</sub> = 55° C	480	mA
Non-Repetitive Forward Surge Current	I <sub>FSM</sub>	60Hz Half-Sine Wave; 8.3mS	30	A
Maximum Junction Temperature	T <sub>J</sub>		150	° C
Allowable Operation Case Temperature	T <sub>C</sub>		-40~150	° C
Storage Temperature	T <sub>STG</sub>		-55~175	° C

**ELECTRICAL CHARACTERISTICS:** (Ta=25° C, Ambient temperature unless stated otherwise.)

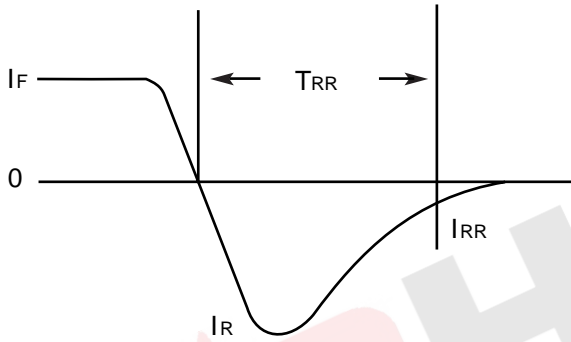
Items	Symbols	Condition	Data Value	Units	
Maximum Forward Voltage Drop	V <sub>FM</sub>	At I <sub>F</sub> =500mA	35	V	
Maximum Reverse Current	I <sub>R1</sub>	At V <sub>RRM</sub> , T <sub>A</sub> =25° C	1.0	uA	
	I <sub>R2</sub>	At V <sub>RRM</sub> , T <sub>OIL</sub> =100° C	20	uA	
Maximum Reverse Recovery Time	T <sub>RR</sub>	I <sub>F</sub> =0.2A ; I <sub>R</sub> = -0.4A ; I <sub>RR</sub> = -0.1A	50	nS	
Typical Junction Capacitance	C <sub>J</sub>	At V <sub>R</sub> = 0VDC, f = 1MHz	5.6	pF	
Thermal Resistance	Junction to Oil	R <sub>TH(J-O)</sub>	On glass-epoxy Board, In Oil	30	° C/W
	Junction to Ambient	R <sub>TH(J-A)</sub>	On glass-epoxy Board, In Air	70	° C/W

**NOTE:**

Standard package quantity:1,000PCS/in Box.

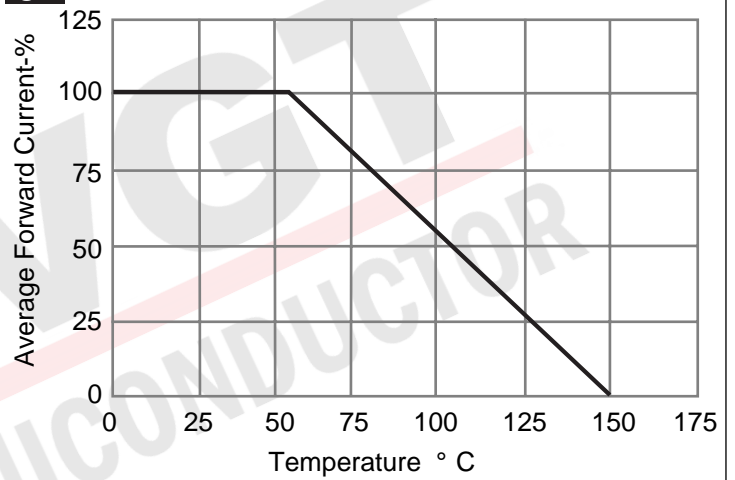
Specifications subject to change without notice. Photo is representation only.

**FIGURE 01** Reverse Recovery Measurement Waveform

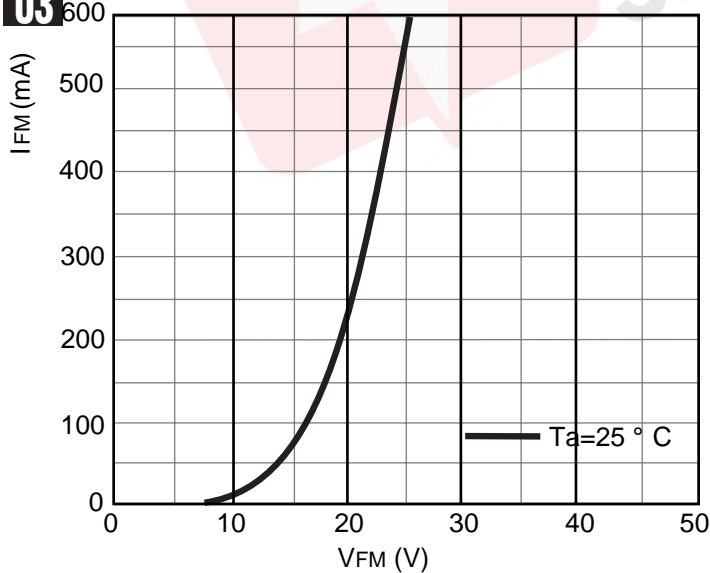


Typical data capture points:  $I_F = 0.5I_R$ ,  $I_R$ ,  $I_{RR} = 0.25I_R$   
 $I_R$  is typically the rated average forward current maximum ( $I_{FAVM}$ ) of the D.U.T

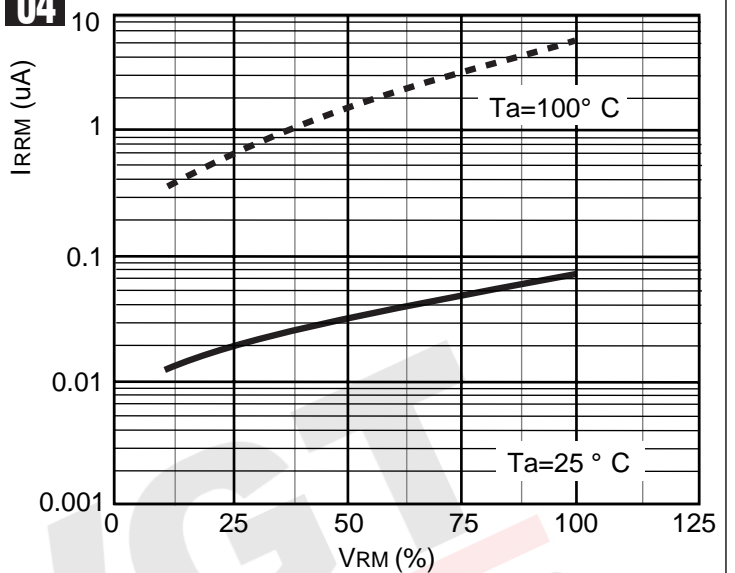
**FIGURE 02** Forward Current Derating Curve



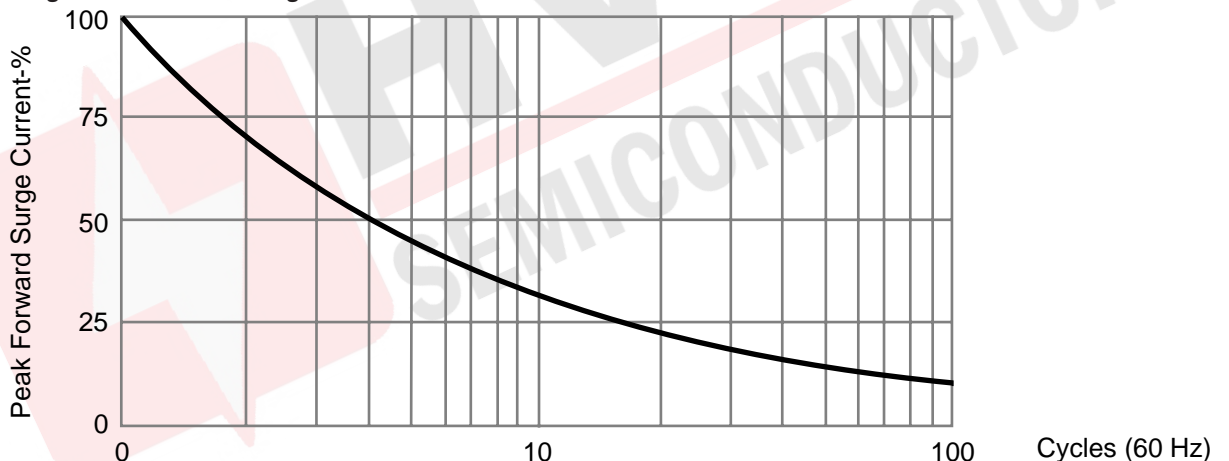
**FIGURE 03** Forward Characteristics



**FIGURE 04** Reverse Characteristics



**FIGURE 05** Repetitive Surge Current Derating Curve



This curve represents the percentage of published maximum surge rating as a function of surge repetition.