

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.

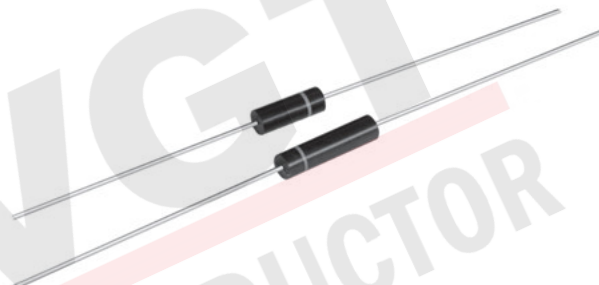
FEATURES:

1. High quality silicon chip construction.
2. Fast recovery time.
3. High voltage and low current design
4. Epoxy resin molded in vacuum.
5. Have anticorrosion in the surface.
6. UL94 V-0 Rated Material.

APPLICATIONS:

1. Air purification, negative ions.
2. Electrostatic voltage doubling circuit.
3. Copier and X-ray.
4. Other high voltage rectifier circuits.

REFERENCE SHAPE:



MECHANICAL DATA:

1. Case: Epoxy resin molding.
2. Terminal: Axis soft lead.
3. Net weight: See the table below.

SIMPLIFIED DATA SHEET

Part No. Items	GT02F10	GT02F12	GT02F14	GT02F16	GT02F18	GT02F20	GT05F20
IFAVM (mA)	20						50
VRRM (kV)	10	12	14	16	18	20	20
IFSM (A)	3.0						
IR (uA)	2.0						
VFM (V)	20.0	23.0	25.0	30.0	35.0	40	40
Tj max.	125° C						
TRR (nS)	150(MAX)						
Package Name	DO-310			DO-312			
Net Weight Gram/PCS	0.30			0.34			
Cj (pF)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Cathode Mark							GT05F20 
Sketch Map	 The Pattern Is Cathode Band(blue) ↑						

Maximum Ratings And Characteristics: (25° C ambient temperature unless stated otherwise.)

HVGT Part	V _{RRM}	V _{RSM}	I _{FAVM}	V _{FM}	I _{R1}	I _{R2}	I _{FSM}	T _{RR}	C _J	HVGT Package
Number	kV	kV	mA	V	uA	uA	A	nS	pF	Dimensions
GT02F10	10.0	12.0	20	20	2.0	20.0	3.0	150	1.0	DO-310
GT02F12	12.0	14.4	20	23	2.0	20.0	3.0	150	1.0	DO-310
GT02F14	14.0	16.8	20	25	2.0	20.0	3.0	150	1.0	DO-310
GT02F16	16.0	19.2	20	30	2.0	20.0	3.0	150	1.0	DO-312
GT02F18	18.0	21.6	20	35	2.0	20.0	3.0	150	1.0	DO-312
GT02F20	20.0	24.0	20	40	2.0	20.0	3.0	150	1.0	DO-312
GT05F20	20.0	24.0	50	40	2.0	20.0	3.0	150	1.0	DO-312

Temperature:

Storage Temperature: -55 to 150 ° C

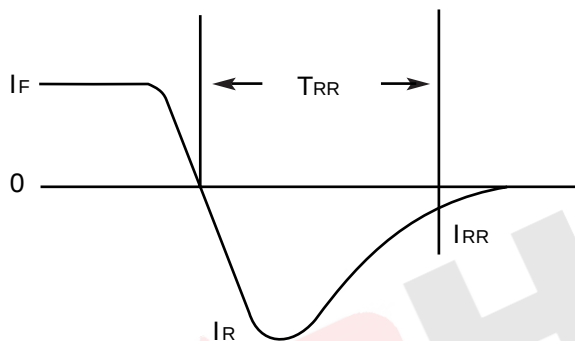
Operating Temperature: -40 to 125° C

Maximum Junction Temperature: 125 ° C

Specification Definitions:

Symbols	Items	Condition
V _{RRM}	Maximum Repetitive Reverse Voltage	--
V _{RSM}	Non-Repetitive peak reverse voltage	--
I _{FAVM}	Maximum Average Forward Current	At T _A =25° C
V _{FM}	Maximum Forward Voltage Drop	At I _{FAVM}
I _{R1}	Maximum Leakage Current	At V _{RRM} , T _A =25° C
I _{R2}	Maximum Leakage Current	At V _{RRM} , T _A =100° C
I _{FSM}	Maximum Surge Current	At 8.3 mS, Single Half Sine, 60Hz
T _{RR}	Maximum Reverse Recovery Time	I _F =10mA; I _R = 20mA; I _{RR} = 5mA GT02F10~GT02F20
		I _F =20mA; I _R = 40mA; I _{RR} = 10mA GT05F20
C _J	Typical Junction Capacitance	At V _R = 0VDC, f = 1MHz

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

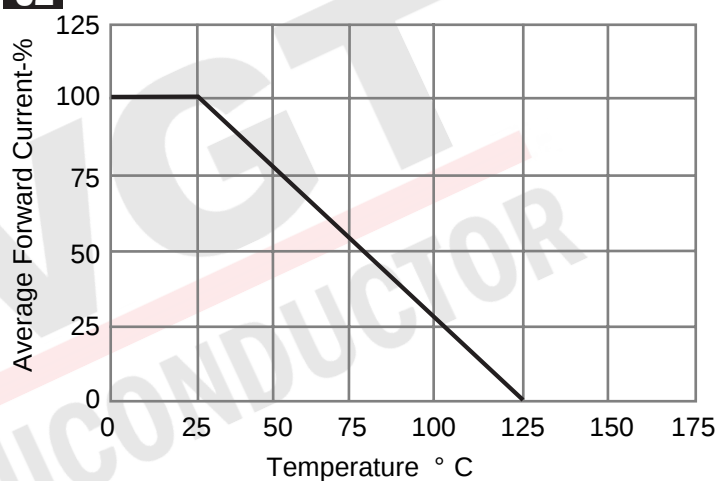


FIGURE 03 Typical T_{RR} Setup for Higher Current Diodes

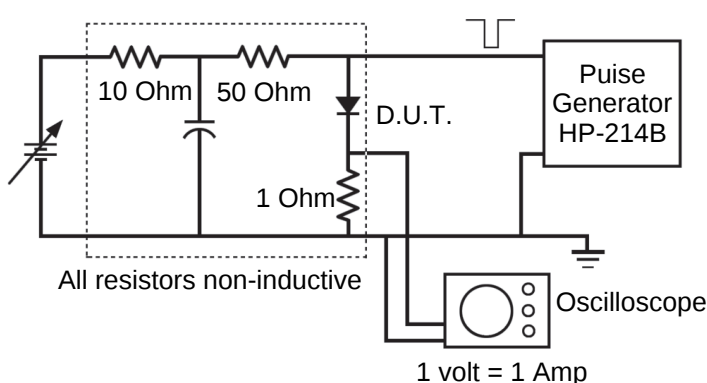


FIGURE 04 Typical T_{RR} Setup for Lower Current Diodes

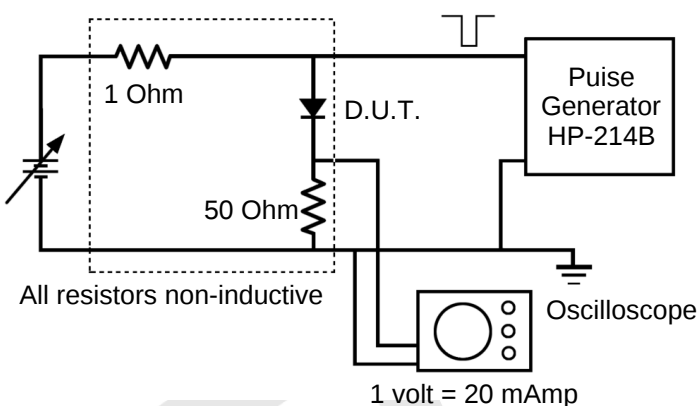
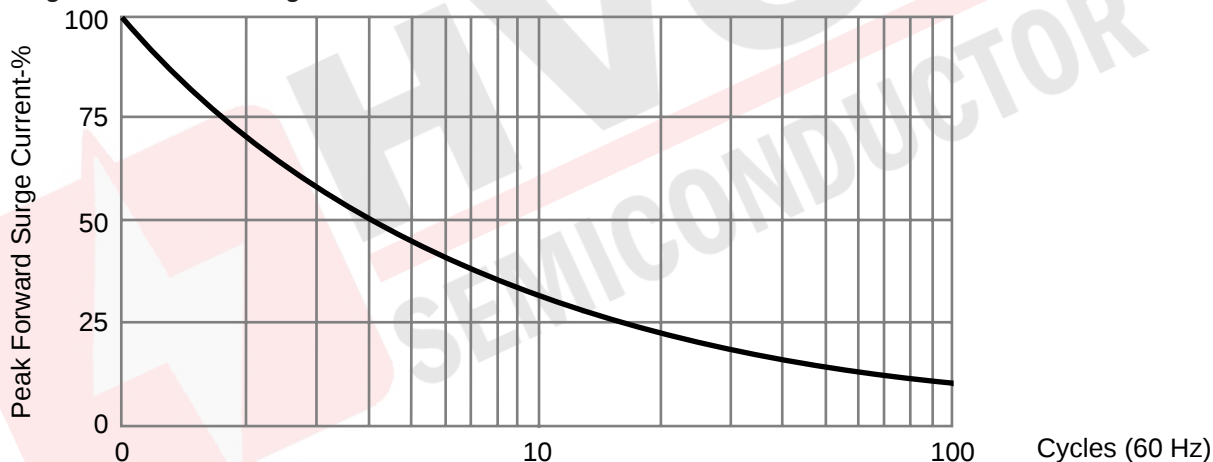


FIGURE 05 Repetitive Surge Current Derating Curve

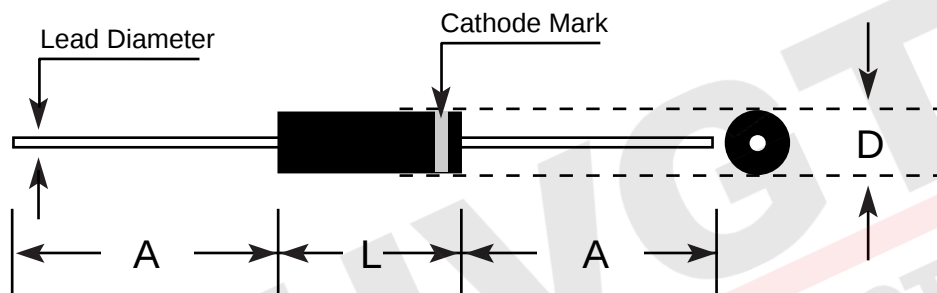


This curve represents the percentage of published maximum surge rating as a function of surge repetition.

Note: Order part number representation:

"TR" stands for Tape Roll Packaging, No "TR" indicates bulk film bag packaging.

Package Size:



DO-310 Series

Lead Diameter 0.6 ± 0.03

Dim.	Millimeters			Inches		
	Value	Min.	Max.	Value	Min.	Max.
D	3.0	2.8	3.2	0.118	0.110	0.126
L	10.0	9.8	10.2	0.394	0.386	0.402
A	25.4	25.4	--	1.0	1.0	--

DO-312 Series

Lead Diameter 0.6 ± 0.03

Dim.	Millimeters			Inches		
	Value	Min.	Max.	Value	Min.	Max.
D	3.0	2.8	3.2	0.118	0.110	0.126
L	12.0	11.8	12.2	0.472	0.464	0.480
A	25.4	25.4	--	1.0	1.0	--