HVR5520U10

Ultra Fast Recovery High Voltage Silicon Assembly

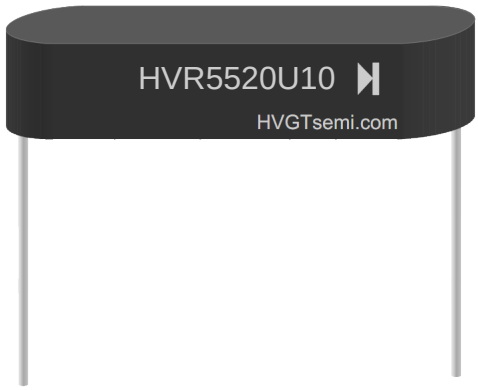
2.0A 10kV 75nS

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.

REFERENCE SHAPE:

RoHS COMPLIANT



HVGT Name: HVR-101255H

FEATURES:

- ▶Built in glass passivation chip.
- ▶Ultra fast recovery time.
- ▶High current.
- ▶High voltage design.
- ▶High reliability design.
- ▶Have anticorrosion in the surface.
- ▶UL94V-0 rated material epoxy resin vacuum forming.

APPLICATIONS:

- ▶X-ray power supply.
- ▶Laser generator power supply.
- ▶Voltage doubling circuit.
- ▶Microwave transmission power supply.
- ▶Other high voltage rectifier circuits.

PRIMARY CHARACTERISTICS:

$I_{F(AV)}$	2.0	A
V_{RRM}	10	kV
I_{FSM}	50	A
I_{RM}	1.0	uA
V_{FM}	15	V
T_{RR}	75	nS
T_J (max.)	125	° C

MECHANICAL DATA:

- Case: Epoxy resin molding.
- Terminal: Radial welding of lead wires.
- Net weight: 13.5 grams (approx).

MARKING:



PART NUMBER NOTE:

TYPE	CHIP	I_{FAVM}	T_{RR}	V_{RRM}
HVR	55	2.0	U	10
Radial Lead Assembly Series	GPP Chip Structure	2.0 A	S = Standard Recovery Time F = 100nS U = 75nS	10 kV

Note: Specifications subject to change without notice. Photo is representation only.
Standard package quantity:250PCS/in Box.

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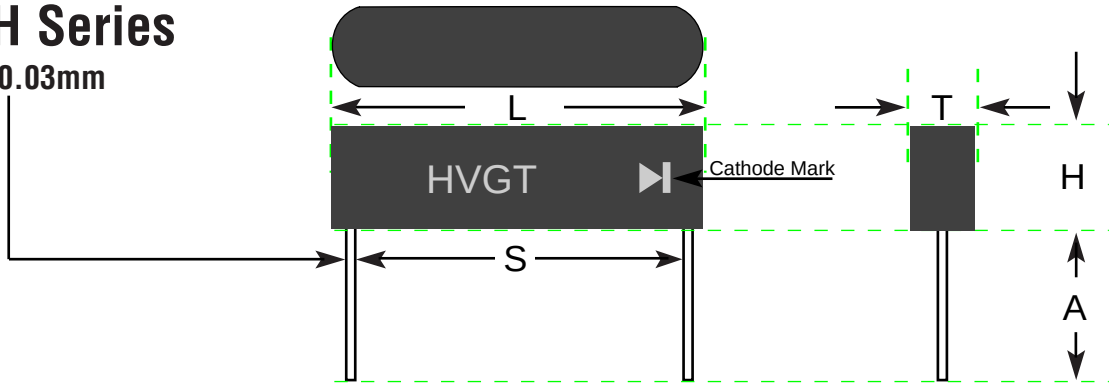
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PACKAGE SIZE:

HVR-101255H Series

Lead Diameter 1.20±0.03mm



Dim.	Millimeters			Inches			Dim.	Millimeters			Inches		
	Value	Min.	Max.	Value	Min.	Max.		Value	Min.	Max.	Value	Min.	Max.
H	12.0	11.5	12.5	0.472	0.453	0.492	**T**	10.0	9.8	10.2	0.394	0.386	0.402
L	55.0	53.0	57.0	2.165	2.087	2.244	**S**	50.0	48.0	52.0	1.969	1.890	2.047
A	20.0	20.0	--	0.787	0.787	--							

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

Items	Symbols	Condition	Data Value	Units
Maximum Repetitive Reverse Voltage	V_{RRM}	--	10	kV
Non-Repetitive Peak Reverse Voltage	V_{RSM}	--	12	kV
Maximum Average Forward Current	I_{FAVM}	T_A = 55° C	2.0	A
		T_{OIL}= 55° C	3.0	A
Non-Repetitive Forward Surge Current	I_{FSM}	60Hz Half-Sine Wave; 8.3mS	50	A
Maximum Junction Temperature	T_J		125	° C
Allowable Operation Case Temperature	T_C		-40~125	° C
Storage Temperature	T_{STG}		-55~150	° C

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

Items	Symbols	Condition	Data Value	Units
Maximum Forward Voltage Drop	V_{FM}	At I_{FAVM}	15	V
Maximum Reverse Current	I_{R1}	At V_{RRM}, T_A =25° C	1.0	uA
	I_{R2}	At V_{RRM}, T_A =100° C	20	uA
Maximum Reverse Recovery Time	T_{RR}	I_F =0.5I_R ; I_R= - I_{FAVM} ; I_{RR} = - 0.25I_R	75	nS
Typical Junction Capacitance	C_J	At V_R = 0VDC, f = 1MHz	--	pF

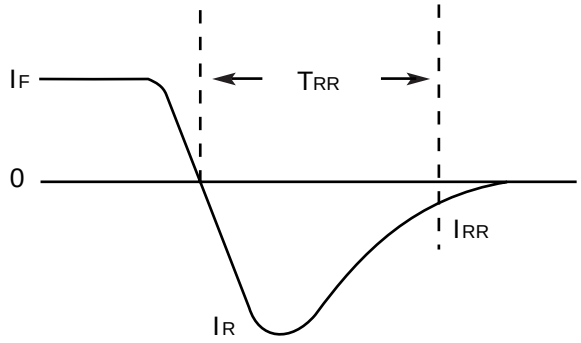
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FIGURE 01 Reverse Recovery Measurement Waveform



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

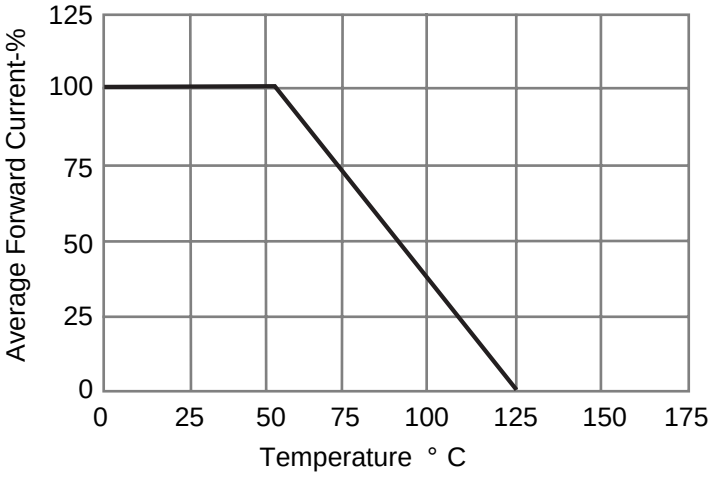


FIGURE 03 Forward Characteristics

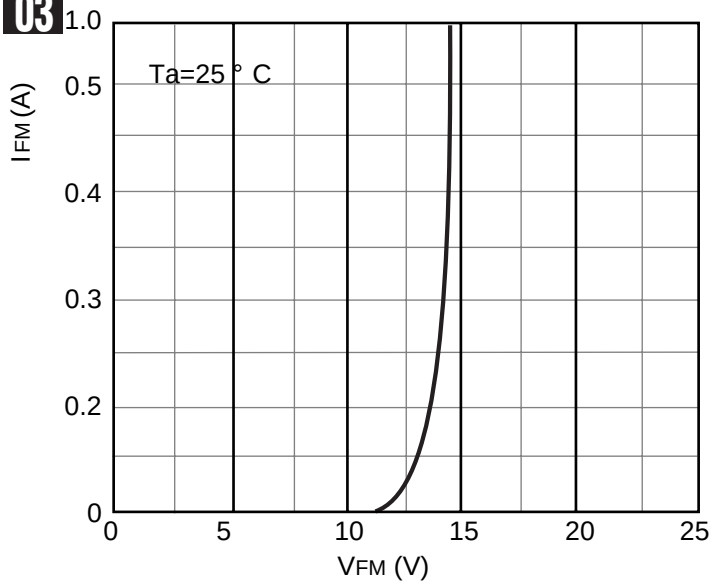


FIGURE 04 Reverse Characteristics

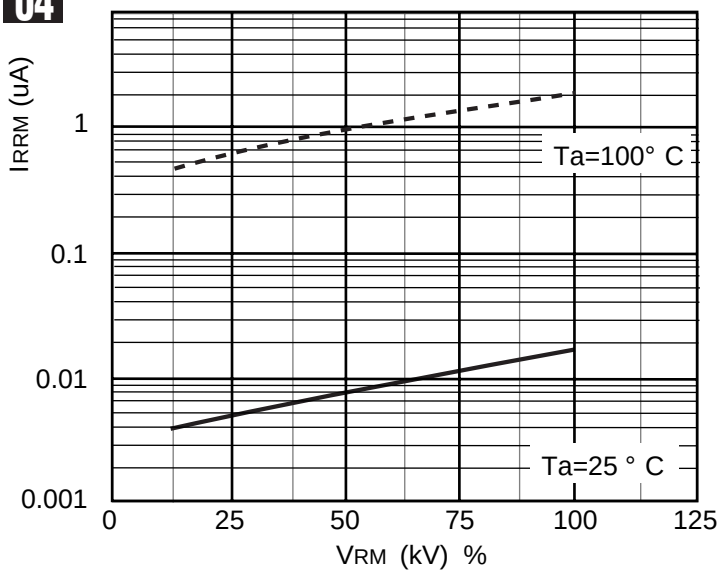
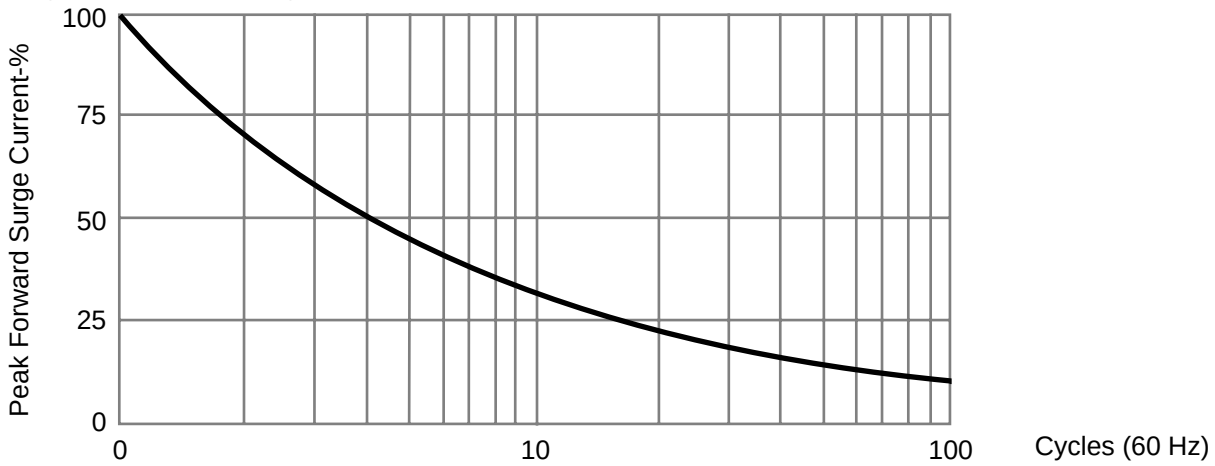


FIGURE 05 Repetitive Surge Current Derating Curve



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

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