

FEATURES:

1. High quality silicon GPP chip structure.
2. Fast recovery time.
3. High current and high voltage design.
4. High surge current capability.
5. Epoxy resin molded in vacuum.
6. Have anticorrosion in the surface.
7. UL94 V-0 Rated material.

APPLICATIONS:

1. AC to DC conversion.
2. Other high voltage rectifier circuits.

MECHANICAL DATA:

1. Case: Epoxy resin molding.
2. Terminal: Copper M3 # nut.
3. Polarity : Polarity symbols marked on case.
4. Mounting position : Any
5. Net weight: 410 gram (approx).

MARKING:

HVQL20MB151F ← HVGT Part Number
 3526 HVGT Semi ← HVGT Logo
 ↑
 Week / Year
 + - ~ ~ ← Polarity Symbol

SHAPE REFERENCE IMAGE:



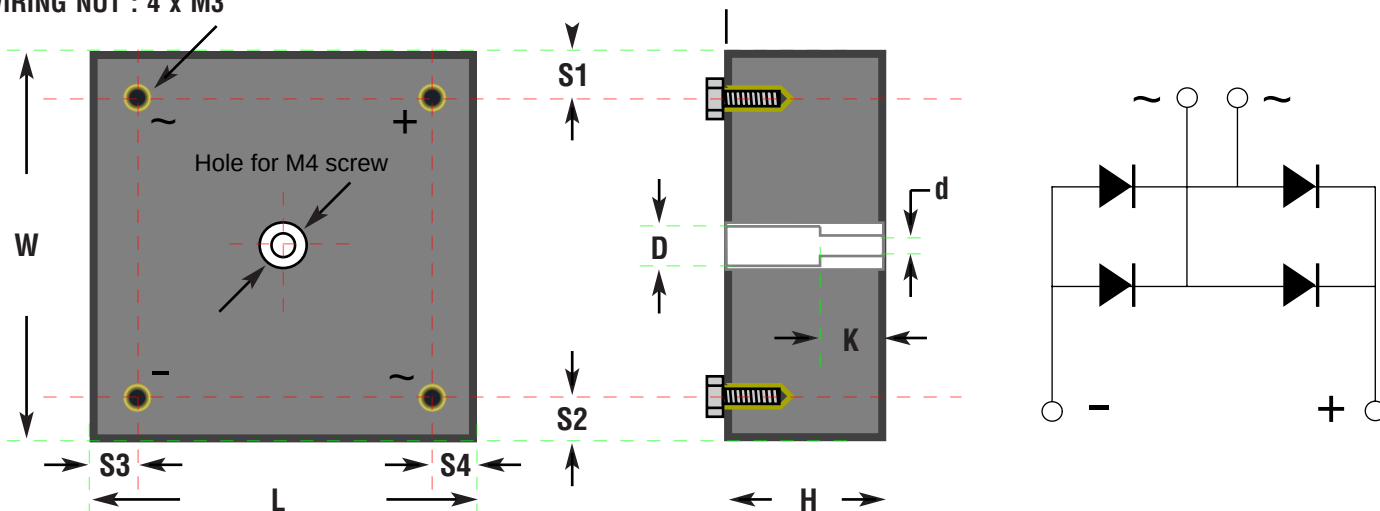
PRIMARY CHARACTERISTICS:

Per Leg Simple Data:		
IF (AV)	3.0	A
VRRM	15	kV
IFSM	60	A
IRM	2.0	uA
VFM	21.6	V
T_{RR}	75	nS
T_J (max.)	150	° C

CASE OUTLINE AND DIMENSIONS :

HVQ-1010E Series

WIRING NUT : 4 x M3



UNIT:	CODE:	W	L	H	S1 to S4	D	d	K
MM		100 ±2.54	100 ±2.54	25.0 ±2.54	10.0 ±1.27	7.78 ±0.51	4.31 ±0.25	6.35 ±1.27
INCHES		3.94 ±0.10	3.94 ±0.10	0.98 ±0.10	0.39 ±0.05	0.31 ±0.02	0.17 ±0.01	0.25 ±0.05

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

Items	Symbols	Condition	Data Value	Units
Maximum Repetitive Reverse Voltage	VRRM	--	15	kV
Non-Repetitive Peak Reverse Voltage	VRSM	--	18	kV
Maximum Average Forward Current	IFAVM	Tc = 55° C	3.0	A
		TOIL= 55° C	4.5	A
Non-Repetitive Forward Surge Current	IFSM	60Hz Half-Sine Wave; 8.3mS	90	A
Maximum Junction Temperature	TJ		150	° C
Allowable Operation Case Temperature	Tc		-40~150	° C
Storage Temperature	TSTG		-55~175	° C

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

Items	Symbols	Condition	Data Value	Units
Maximum Forward Voltage Drop	VFM	At IFAVM	21.6	V
Maximum Reverse Current	IR1	At VRRM, TA =25° C	1.0	uA
	IR2	At VRRM, TOIL=100° C	20	uA
Maximum Reverse Recovery Time	TRR	IF =0.5IR ; IR = -IFAVM ; IRR = -0.25IR	75	nS
Typical Junction Capacitance	CJ	At VR = 0VDC, f = 1MHz	--	pF

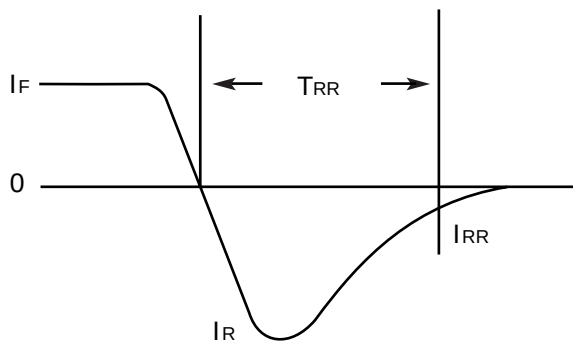
PART NUMBER NAMING RULES:

HVGT Part Number	IFAVM	Device Structure	VRRM	TRR
HVQL	30	MB	150	F
High Voltage Bridge Rectifier Series	3.0A	(MB)=Single-phase (MT)=Three-phase	15kV	(D)= Standard Recovery Time (G)= 100nS (F)= 75nS (U)= 50nS (S)= 40nS

Note: Specifications subject to change without notice. Photo is representation only.
The electrical data on this page is the data for each leg of the part number.

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FIGURE 01 Reverse Recovery Measurement Waveform



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

FIGURE 02 Forward Current Derating Curve

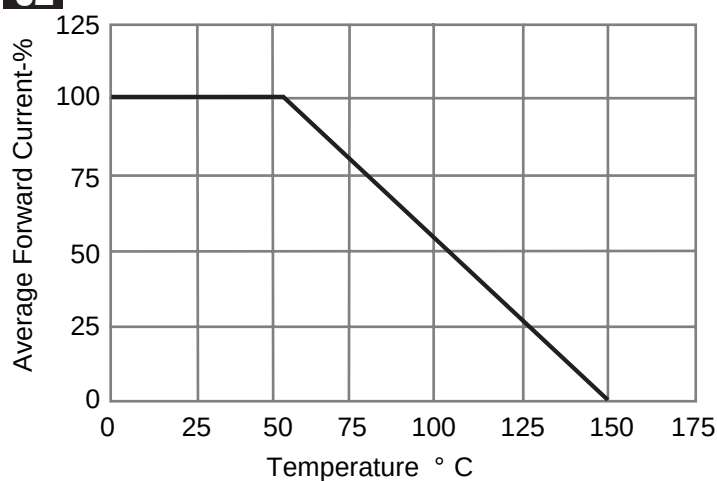


FIGURE 03 Forward Characteristics

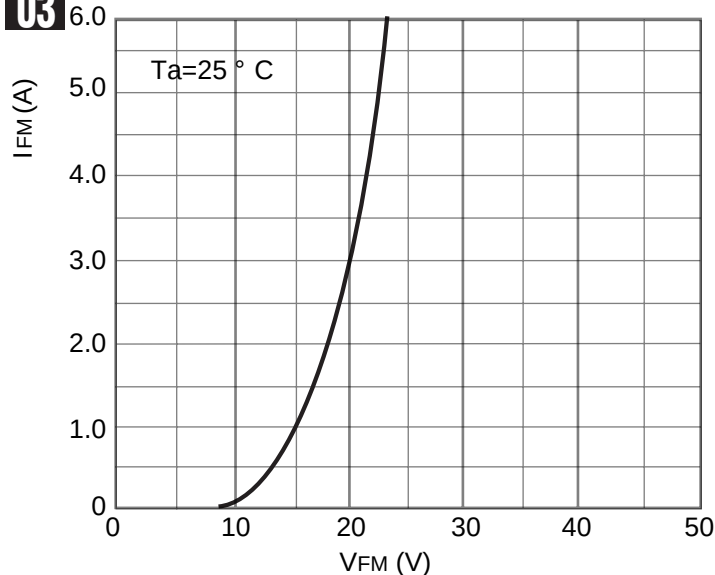


FIGURE 04 Reverse Characteristics

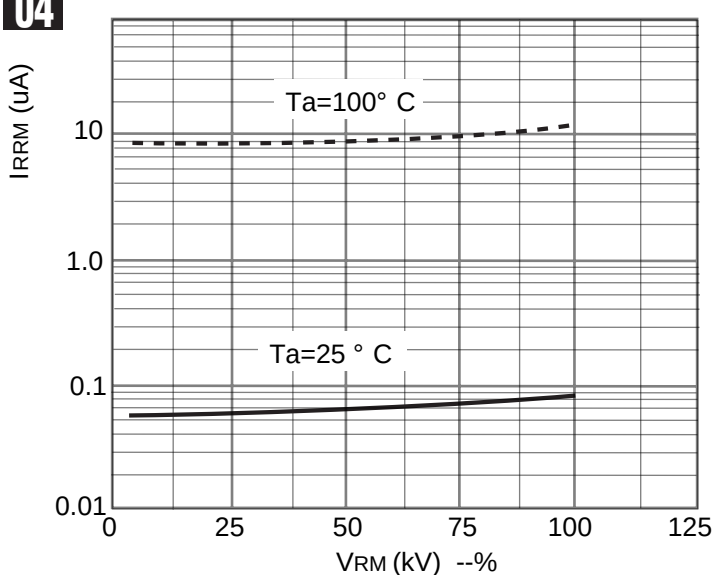
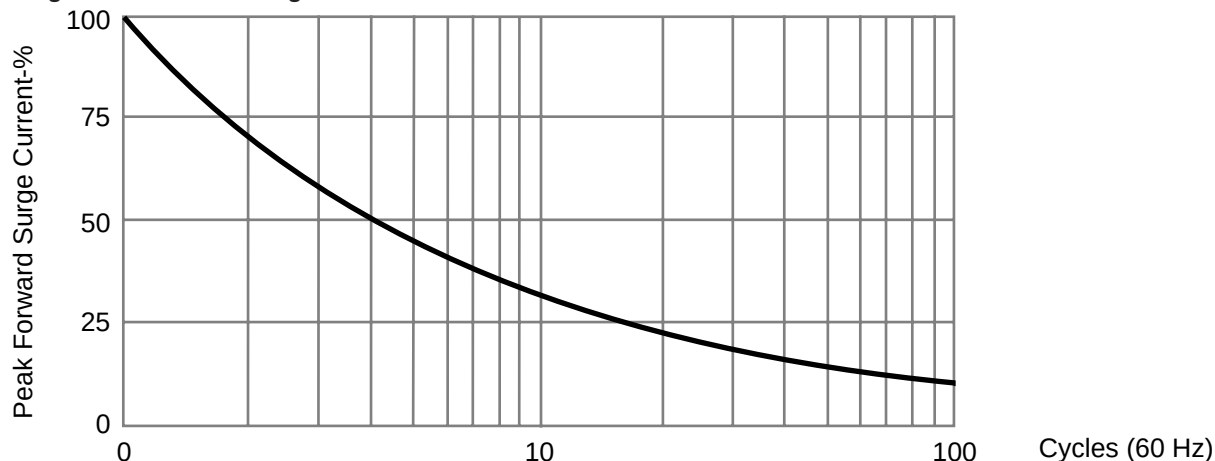


FIGURE 05 Repetitive Surge Current Derating Curve



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