

HVGXXV56W-2F Series

ROHS



Transient Voltage Suppressors for ESD Protection

Description

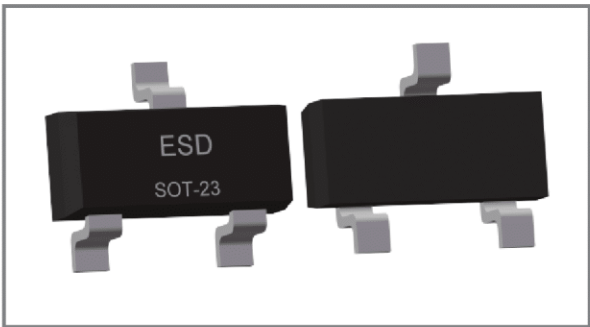
The HVGXXV56W-2F series is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium.

Feature

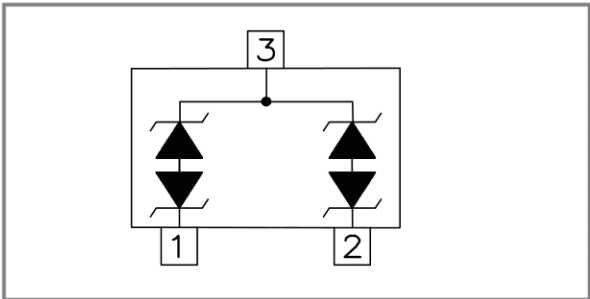
- ◆ 320~450 Watts Peak Pulse Power per Line (tp=8/20μs)
- ◆ Protects two bidirectional I/O lines
- ◆ Working voltage:3.3~36V
- ◆ Low clamping voltage
- ◆ Low leakage current
- ◆ IEC61000-4-2(ESD) ±30kV (air), ±30kV (contact) :3.3V~15V
- ◆ IEC61000-4-2(ESD) ±25kV (air), ±20kV (contact) :18V~36V
- ◆ IEC61000-4-4 (EFT) 40A (5/50ns)

Applications

- ◆ RS-232, RS-422 & RS-423 Data Lines
- ◆ Audio/Video Inputs
- ◆ Wireless Network Systems
- ◆ Digit Video Interface (DVI)
- ◆ Medical Sensors
- ◆ Notebook Computers



Functional Diagram



Mechanical Data

- ◆ JEDEC SOT-23 Package
- ◆ Molding Compound Flammability Rating : UL 94V-O
- ◆ Weight 8.0 Milligrams (Approximate)
- ◆ Lead Finish : Lead Free

Mechanical Characteristics

Parameter	Symbol	Value	Units
Peak Pulse Power (Tp=8/20μs waveform)	P _{pp}	320~450	Watts
Lead Soldering Temperature	T _L	260 (10 sec.)	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C
Operating Junction Temperature Range	T _J	-40 to +125	°C

Electrical Characteristics @ 25°C Unless Otherwise Specified)

Part Number	Device Marking	V_{RWM} (V) (Max.)	V_{BR} (V) (Min.)	I_T (mA)	V_C @1A (Max.)	V_C		I_R (μ A) (Max.)	C (pF) (Typ.)
						(Max.)	(@A)		
HVG3.3V56W-2F	C03	3.3	4.0	1.0	7.5	16	25	40	200
HVG05V56W-2F	C05	5.0	6.0	1.0	9.8	17	24	1	150
HVG08V56W-2F	C08	8.0	8.5	1.0	13.4	20	18	1	100
HVG12V56W-2F	C12	12.0	13.3	1.0	20	30	13	1	50
HVG15V56W-2F	C15	15.0	16.7	1.0	25	36	11	1	45
HVG18V56W-2F	C18	18.0	20.0	1.0	30	40	8	1	42
HVG24V56W-2F	C24	24.0	26.7	1.0	45	50	7	1	40
HVG36V56W-2F	C36	36.0	40.0	1.0	65	75	6	1	25

Characteristic Curves

Fig1. 8/20 μ s Pulse Waveform

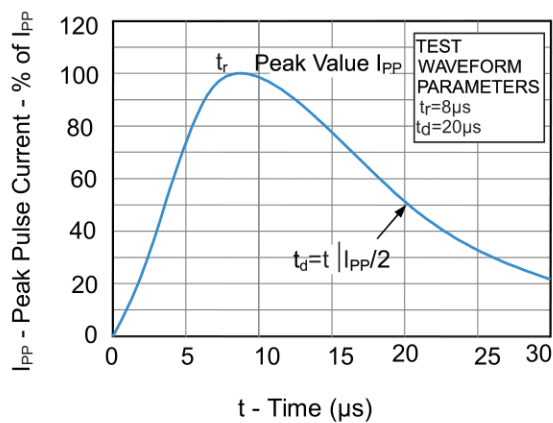


Fig2. Power Rating Derating Curve

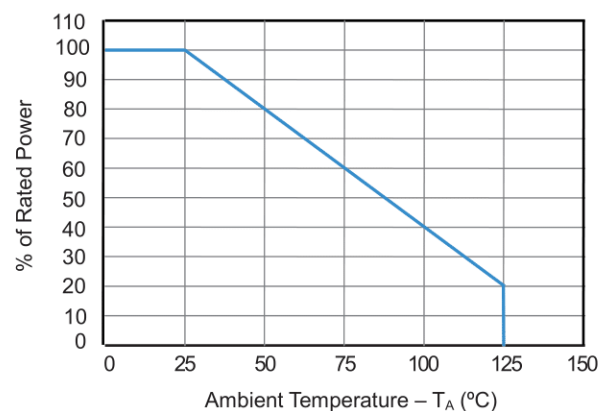
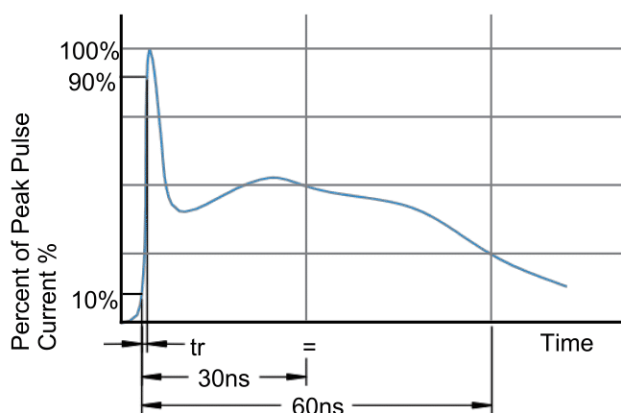
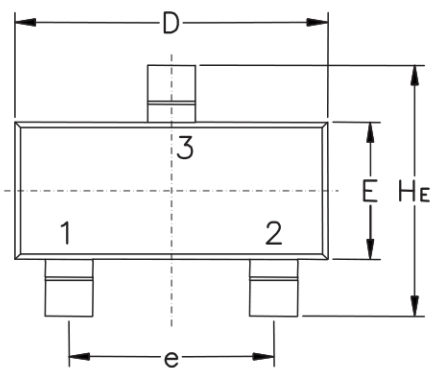


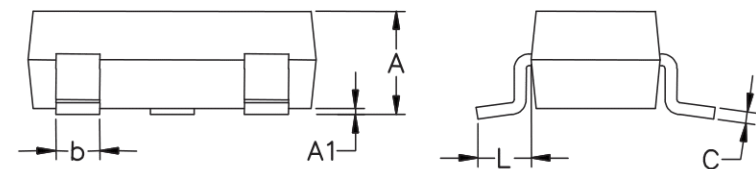
Fig3. ESD Pulse Waveform (according to IEC61000-4-2)



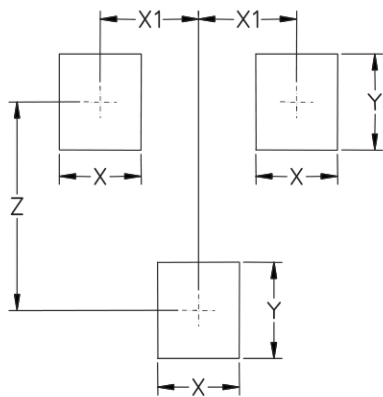
SOT-23 Package Outline & Dimensions



Symbol	Millimeters			Inches		
	Min.	Nom.	Max.	Min.	Nom.	Max.
A	20±;	1.22	1.33	0.057	0.042	0.066
A1	0.01	0.06	0.10	0.001	0.002	0.004
b	0.39	0.44	0.50	0.017	0.019	0.020
C	0.09	0.13	0.3±	0.003	0.005	0.009
D	2.80	2.90	3.04	0.110	0.114	0.120
E	1.40	1.50	1.60	0.069	0.051	0.077
e	1.78	1.90	2.04	0.070	0.075	0.081
L	0.35	0.54	0.69	0.014	0.021	0.027
HE	2.32	2.60	2.86	0.2±5	0.2±6	0.126



Soldering Footprint



Symbol	Millimeters	Inches
X	0.80	0.031
X1	0.97	0.037
Y	0.90	0.035
Z	2.22	0.09±

Ordering Information

Device	Package	Quantity	Reel Size
HVGXXV56W-2F Series	SOT-23	3,000pcs/Reel	7 inch