GOOD-ARK SEMICONDUCTOR

GSEZ5B003
Ultra Low Capacitance TVS Diode

Features

- 70 Watts Peak Pulse Power (T_p = 8/20μs)
- Bi-Directional Configuration
- Snap-Back Technology
- Low Clamping Voltage
- Low Leakage Current
- Ultra Low Capacitance (0.30pF typical)
- ESD Protection for High-Speed Data Lines to:
  IEC 61000-4-2 ±16KV Contact, ±20KV Air
  IEC 61000-4-4 (EFT) 40A (5/50ns)
  IEC 61000-4-5 (Lightning) 10A (8/20μs)
- RoHS Compliant



DFN1006



Schematic Diagram

Applications

- USB 3.0, USB 2.0, MHL
- HDMI 2.0, Display Port 1.3, eSATA
- Unified Display Interface (UDI)
- Digital Visual Interface (DVI)
- 1G/2.5G/5G/10G Ethernet

Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (T_P=8/20μS)	P_{PP}	70	W
Peak Pulse Current (T_P=8/20μS)	I_{PP}	10	A
Junction Temperature	T_J	-55 To +125	°C
Storage Temperature	T_{STG}	-55 To +150	°C

Electrical Characteristics (T_A=25°C unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage	V_{RWM}	-	-	-	5	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	5.5	6.5	8.6	V
Reverse Leakage Current	I_R	V_R=5.0V	-	0.01	0.05	μA
Trigger Voltage	V_T	I_{PP}=10A, T_P=8/20μS	-	9.0	-	V
Clamping Voltage	V_C	I_{PP}=10A, T_P=8/20μS	-	7.0	-	V
Clamping Voltage (TLP 8A)	V_C	IEC 61000−4−2 Level 2 (±4 kV Contact, ±4 kV Air)	-	4.5	-	V
Clamping Voltage (TLP 16A)	V_C	IEC 61000−4−2 Level 4 (±8 kV Contact, ±8 kV Air)	-	6.0	-	V
Dynamic Resistance	R_{dyn}	I_T=0 to 30A, T_P=TLP	-	0.25	-	Ω
Junction Capacitance	C_J	V_R=0V, f=1MHz, I/O to GND	-	0.3	0.50	pF

Typical Characteristic Curves

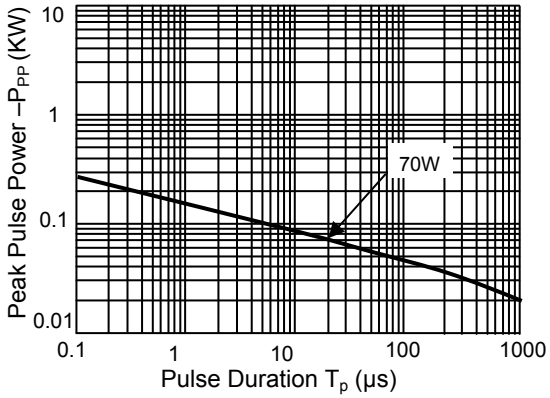


Figure 1. Peak Pulse Power Rating Curve

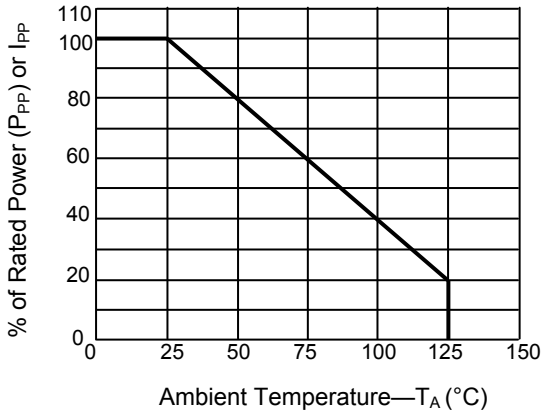


Figure 2. Pulse Derating Curve

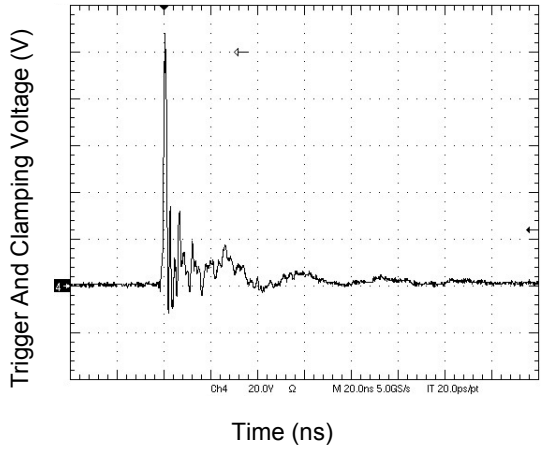


Figure 3. IEC61000-4-2 +8kV Contact Discharge

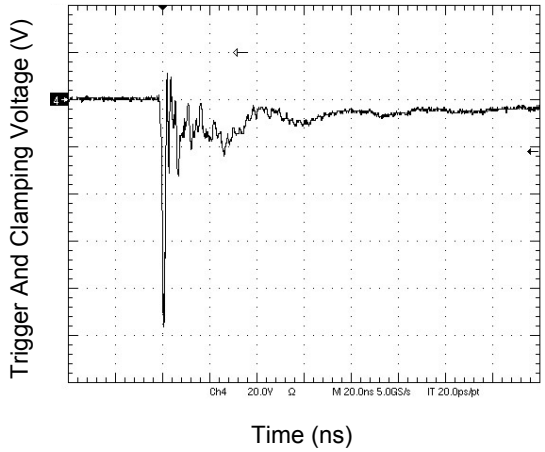


Figure 4. IEC61000-4-2 -8kV Contact Discharge

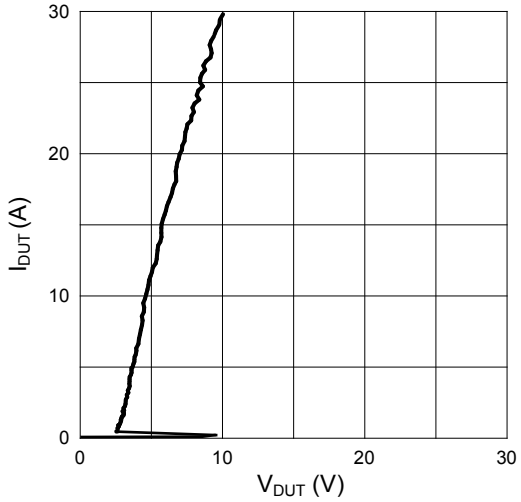


Figure 5. Transmission Line Pulse (T_p=100ns)

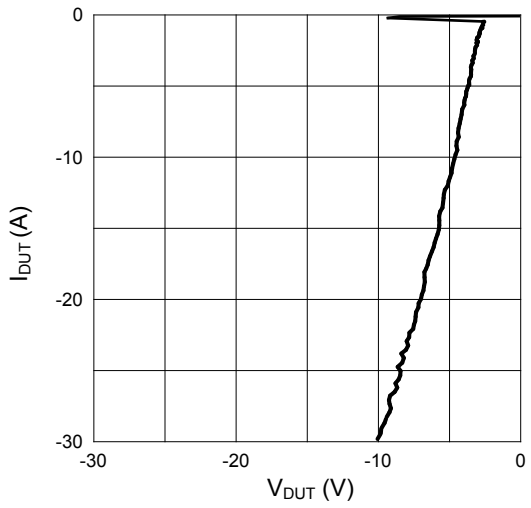
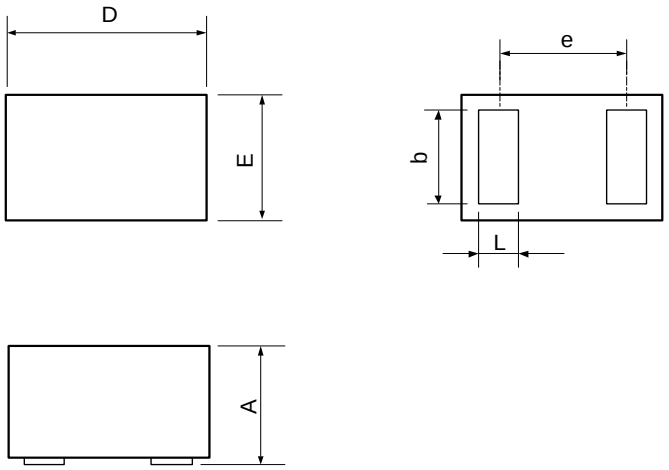


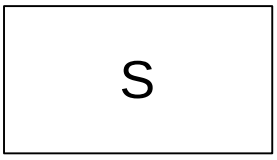
Figure 6. Transmission Line Pulse (T_p=100ns)

Product Dimensions DFN1006



Symbol	Milimeter		
	min	nom	max
D	0.95	1.00	1.05
E	0.55	0.60	0.65
A	0.45	0.50	0.55
b	0.45	0.50	0.55
L	0.20	0.25	0.30
e	0.65BSC		

Marking



Order Information

Device	Package	Marking	Carrier	Quantity	HSF Status
GSEZ5B003	DFN1006	S	Tape & Reel	10,000pcs	RoHS Compliant

Unikeyic Electronics

Global Electronic Components Distributor

Click to view pricing, inventory, delivery, and lifecycle information:

GOOD-ARK:

GS2M GSFB0305 SK3C0B GSFH60R570 GSHS1OB SB240 1N758A BZT52C13 F7A SK34 SK54A BC807-40 GSFA95R500 GSFH5020 GSFL2004 MMBT619 SMAJ7.0CA BZX84C24 GSM3Z5V6BW HS2MA BZX84C3V3 GSFC0601 GSFP0380 FS2BH SK36B SMBJ100CA BZT52B4V3S MMBT4401 MUR1040CT SMCJ33A