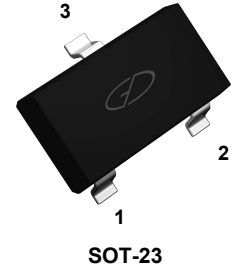


GSEC5U004

Ultra Low Capacitance ESD TVS Array

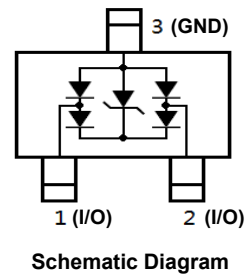
Features

- 35Watts peak pulse power ($t_p=8/20\mu s$)
- Low clamping voltage
- Low leakage current
- Ultra low capacitance
- ESD Protection for high-speed data lines to:
 - IEC 61000-4-2 $\pm 16KV$ contact $\pm 20KV$ air
 - IEC 61000-4-4 (EFT) 40A (5/50ns)
 - IEC 61000-4-5 (Lightning) 3.5A (8/20 μs)



Applications

- USB 3.0, USB 2.0, MHL
- HDMI 2.0, display port 1.3, eSATA
- Unified display interface (UDI)
- Digital visual interface (DVI)
- High speed serial interfaces



Absolute Maximum Ratings ($T_A=25^\circ C$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power ($t_p=8/20\mu S$)	P_{PP}	35	W
Peak Pulse Current ($t_p=8/20\mu S$)	I_{PP}	3.5	A
Junction Temperature	T_J	-55 to +125	$^\circ C$
Storage Temperature	T_{STG}	-55 to +150	$^\circ C$

Electrical Characteristics ($T_A=25^\circ C$ unless otherwise specified)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse Stand-off Voltage	V_{RWM}	-	-	-	5	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	6	6.8	-	V
Reverse Leakage Current	I_R	$V_R=5V$	-	0.5	1	μA
Clamping Voltage	V_C	$I_{PP}=3.5A, T_P=8/20\mu S, I/O$ to GND	-	10	-	V
Junction Capacitance	C_J	$V_R=0V, F=1MHz, I/O$ to I/O	-	0.4	-	pF
	C_J	$V_R=0V, F=1MHz, I/O$ to GND	-	0.8	-	pF

Typical Characteristic Curves

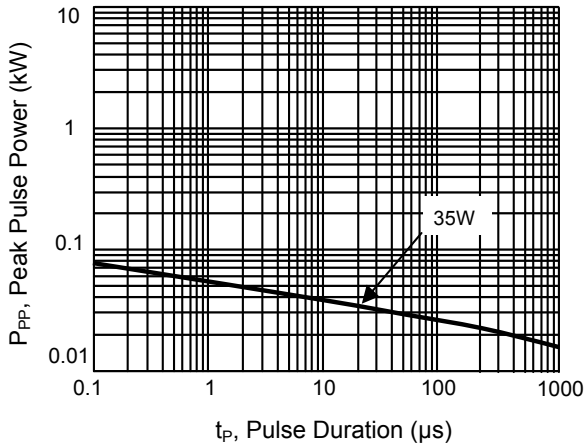


Figure 1. Peak Pulse Power Rating Curve

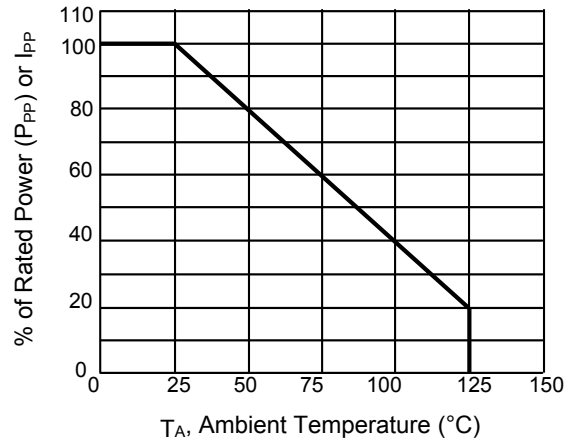


Figure 2. Pulse Derating Curve

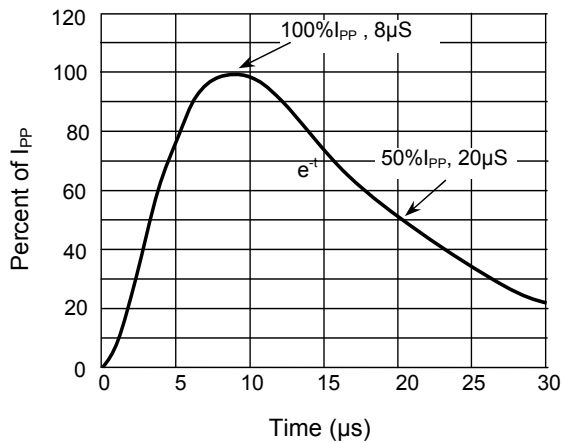


Figure 3. Pulse Waveform-8/20μs

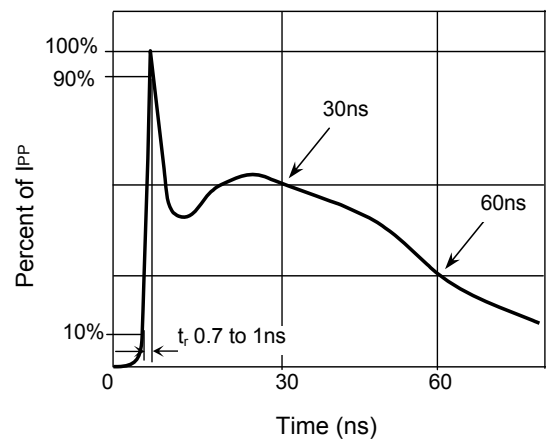
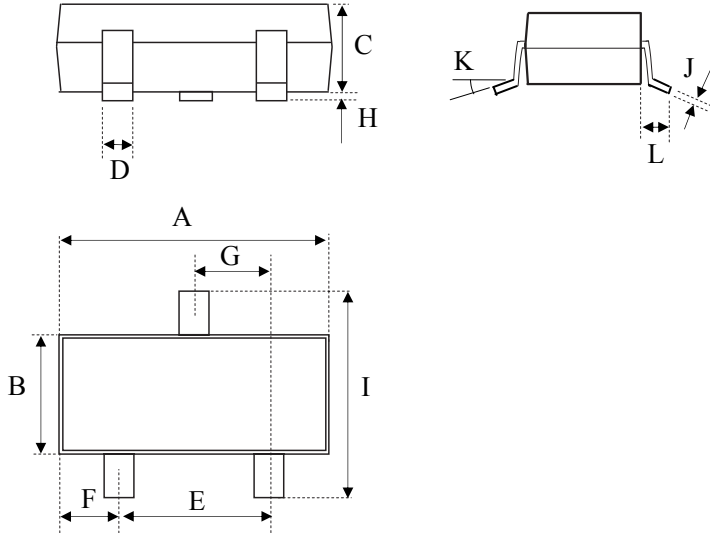


Figure 4. Pulse Waveform-ESD (IEC61000-4-2)

Ultra Low Capacitance ESD TVS Array

Package Outline Dimensions (SOT-23)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.800	3.000	0.110	0.118
B	1.200	1.400	0.047	0.055
C	0.890	1.110	0.035	0.044
D	0.300	0.500	0.012	0.020
E	1.780	2.040	0.070	0.080
F	0.450	0.600	0.018	0.024
G	0.890	1.020	0.035	0.040
H	0.013	0.100	0.001	0.004
I	2.250	2.550	0.089	0.100
J	0.085	0.177	0.003	0.007
K	0°	10°	0°	10°
L	0.450	0.600	0.018	0.024

Order Information

Device	Package	Marking	Carrier	Quantity
GSEC5U004	SOT-23	5ML	Tape & Reel	3,000pcs / Reel