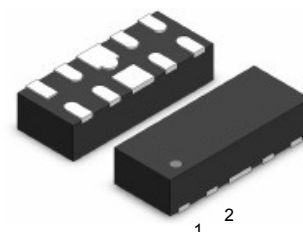


GSECL3B004

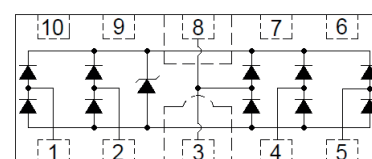
Ultra Low Capacitance TVS Diode Array

Features

- 30Watts peak pulse power ($t_p=8/20\mu s$)
- DFN2510 package
- 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 $\pm 10KV$ contact $\pm 15KV$ air
IEC 61000-4-4 (EFT) 40A (5/50ns)
IEC 61000-4-5 (Lightning) 4.5A (8/20 μs)
- RoHS compliant



DFN2510



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)
- 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}	30	W
Peak Pulse Current ($t_p=8/20\mu s$)	I_{PP}	4.5	A
ESD per IEC61000-4-2 (Contact/Air)	V_{ESD}	10/15	kV
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	Conditions	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage	V_{RWM}	-	-	-	3.3	V
Holding Voltage	V_H	$I_T=I_H$	2.2	-	-	V
Holding Current	I_H	-	15	-	-	mA
Reverse Leakage Current	I_R	$V_{RWM}=3.3V$, $T=25^\circ C$	-	-	200	nA
Clamping Voltage	V_C	$I_{PP}=4.5A$, $t_p=8/20\mu s$	-	5.6	7	V
Trigger Voltage	V_T	-	8	16	19	V
Dynamic Resistance	R_{dyn}	$I_T=0$ to 20A, $t_p=TLP$	-	0.45	-	Ω
Junction Capacitance	C_J	$V_R=1.5V$, $f=1MHz$, I/O to I/O	-	0.30	-	pF
		$V_R=1.5V$, $f=1MHz$, I/O to GND	-	0.4	-	pF

Typical Characteristic Curves

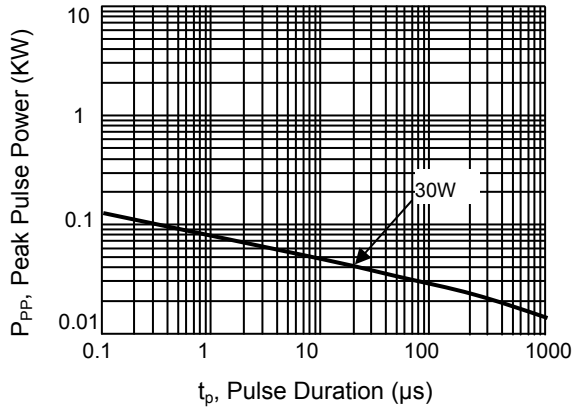


Figure 1. Peak Pulse Power Rating Curve

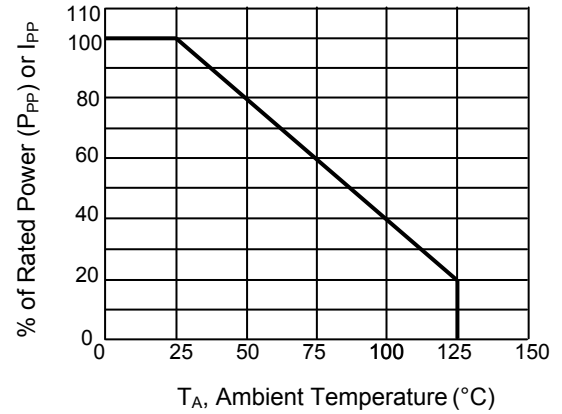


Figure 2. Pulse Derating Curve

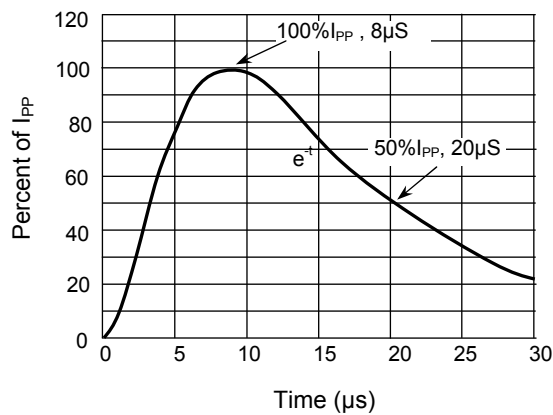


Figure 3. Pulse Waveform-8/20 μs

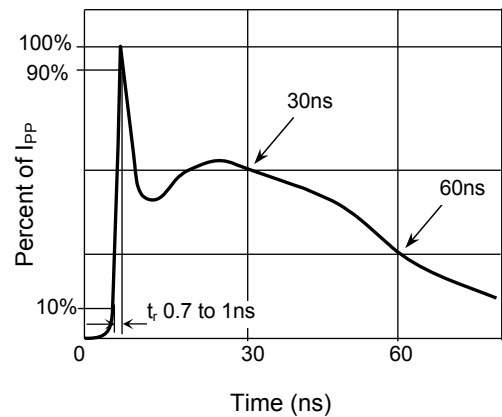


Figure 4. Pulse Waveform-ESD (IEC61000-4-2)

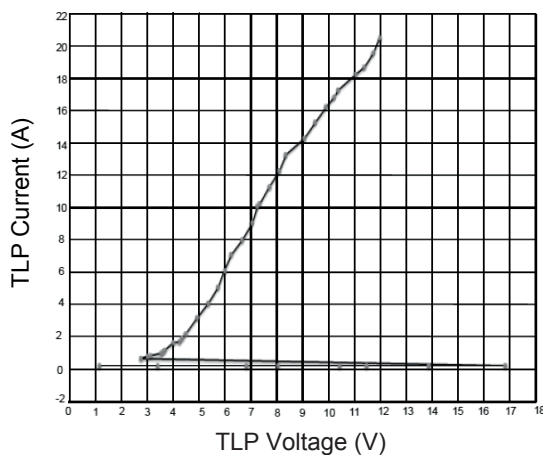


Figure 5. Transmission Line Pulse ($t_p=100ns$)

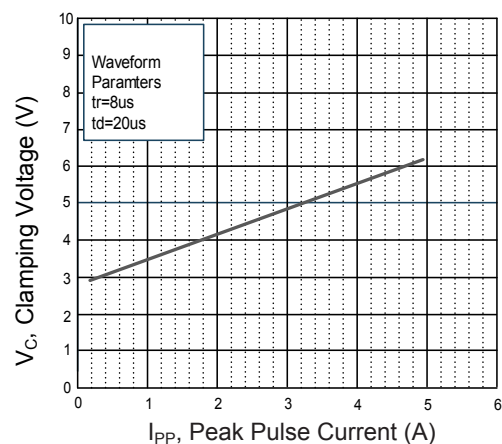
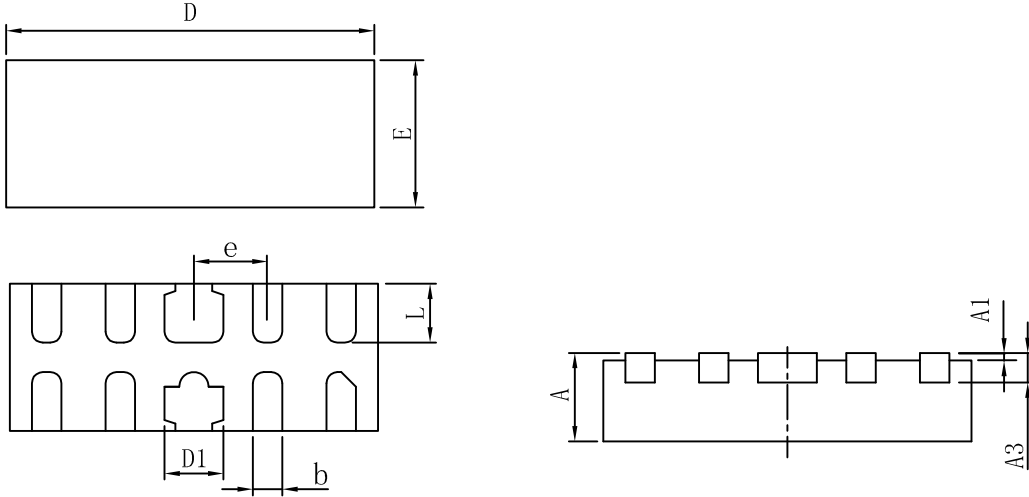


Figure 6. Clamping Voltage vs. Peak Pulse Current

Package Outline Dimensions (DFN2510)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.450	0.600	0.018	0.024
A1	-	0.050	-	0.002
A3	0.100	0.200	0.004	0.008
D	2.450	2.550	0.096	0.100
E	0.950	1.050	0.037	0.041
D1	0.350	0.450	0.014	0.018
b	0.150	0.250	0.006	0.010
e	0.500 BSC		0.020 BSC	
L	0.350	0.450	0.014	0.018

Order Information

MPN	Package	Marking	Carrier	Quantity
GSECL3B004	DFN2510	324D	Tape & Reel	3,000pcs / Reel