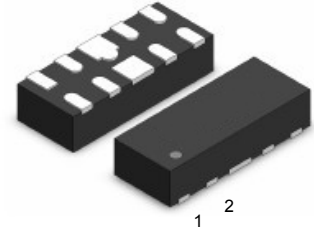


Features

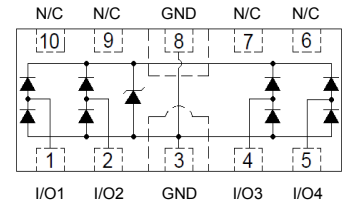
- 25Watts peak pulse power ($t_p=8/20\mu s$)
- DFN2510 package
- Snap-back technology
- Low clamping voltage
- Low leakage current
- Low capacitance (0.3pF typical)
- ESD Protection for high-speed data lines to:
 IEC 61000-4-2 $\pm 10KV$ contact $\pm 12KV$ air
 IEC 61000-4-4 (EFT) 40A (5/50ns)
 IEC 61000-4-5 (Lightning) 5A (8/20 μs)
- RoHS compliant



DFN2510

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



Schematic Diagram

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}	25	W
Peak Pulse Current ($T_p=8/20\mu s$)	I_{PP}	5	A
ESD per IEC61000-4-2 (Contact/Air)	V_{ESD}	10/12	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	Condition	Min	Typ	Max	Unit
Reverse Stand-Off Voltage	V_{RWM}	-	-	-	3.3	V
Holding Voltage	V_H	-	2	-	3.3	V
Reverse Leakage Current	I_R	$V_{RWM}=3.3V, T=25^\circ C$	-	-	500	nA
Clamping Voltage	V_C	$I_{PP}=16A, T_p=100ns$	-	5.3	6	V
Clamping Voltage	V_{CL}	$I_{PP}=5A, T_p=8/20\mu s$	-	-	5	V
Dynamic Resistance	R_{dyn}	$I_R=10A, T_{amb}=25^\circ C$	-	0.3	0.4	Ω
Junction Capacitance	C_J	$V_R=0V, f=1MHz, I/O$ to I/O	-	0.3	-	pF
	C_J	$V_R=0V, f=1MHz, I/O$ to GND	-	0.55	-	pF

Typical Characteristic Curves

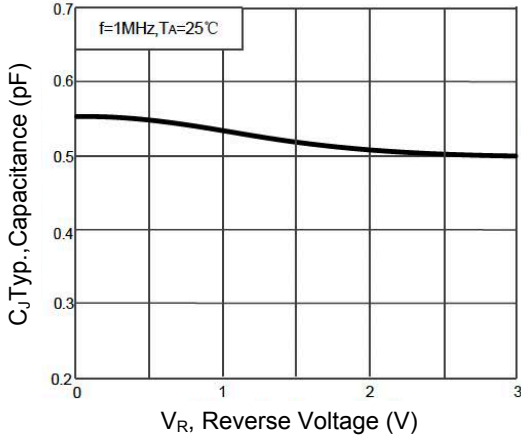


Figure 1. Capacitance vs. Reverse Voltage

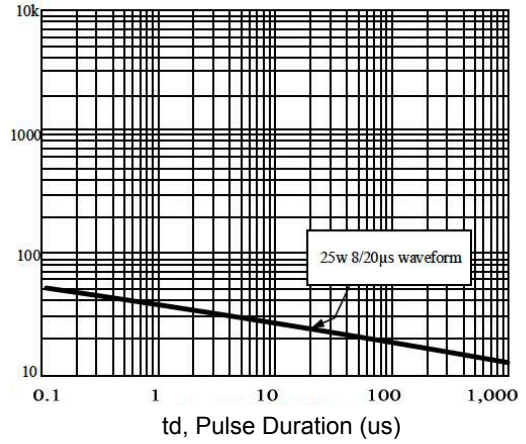
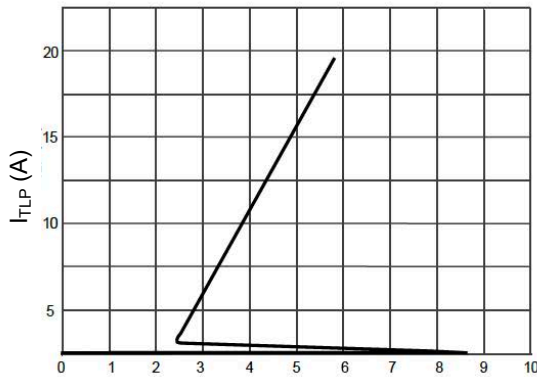


Figure 2. Peak Pulse Power vs. Pulse Time



Transmission Line Pulse (TLP) with Positive Clamping Voltage

Figure 3. Positive Clamping Voltage (TLP)

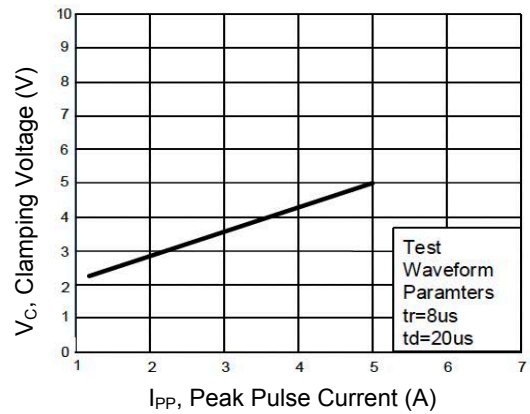


Figure 4. Reverse Clamping Voltage vs. Peak Pulse Current

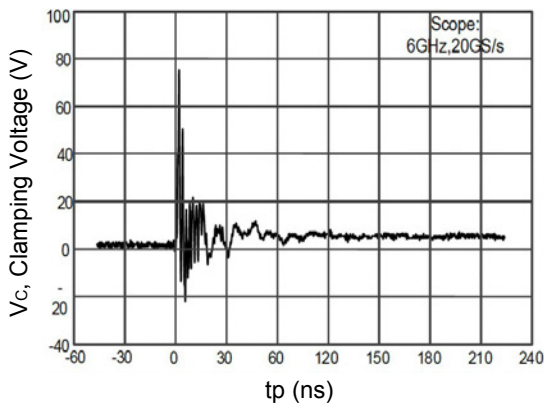


Figure 5. IEC61000-4-2: 8kV Positive Pulse (I/O to GND)

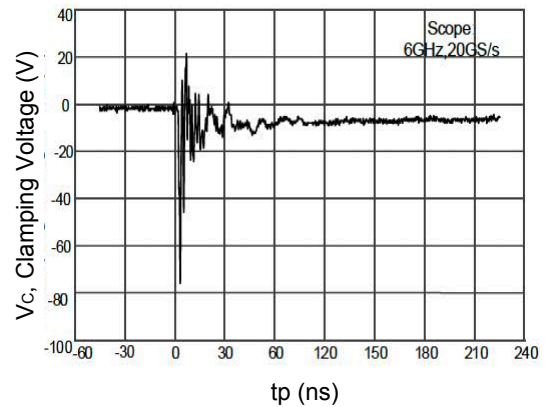
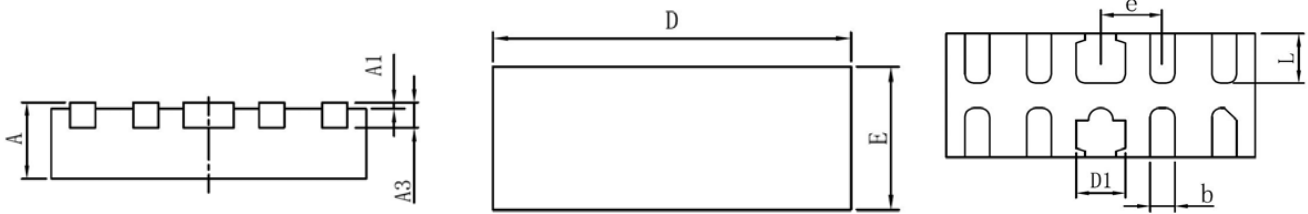


Figure 6. IEC61000-4-2: 8kV Positive Pulse (GND to I/O)

GSECL3U003
Ultra Low Capacitance TVS Diode

Product 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

Device	Package	Marking	Carrier	Quantity
GSECL3U003	DFN2510	324F	Tape & Reel	3,000pcs / Reel