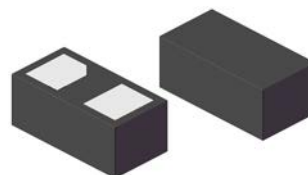


GSESUC5VD0603-2B

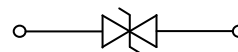
Ultra Low Capacitance ESD TVS

Features

- 100 Watts peak pulse power ($t_p = 8/20 \mu S$)
- DFN0603 package
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Ultra low capacitance ($C_J = 0.2pF$ typ.)
- Protection one data/power line to:
 - IEC 61000-4-2 $\pm 15kV$ contact $\pm 15kV$ air
 - IEC 61000-4-4 (EFT) 40A (5/50 nS)
 - IEC 61000-4-5 (Lightning) 5A (8/20 μS)
- RoHS compliant



DFN0603



Schematic Diagram

Applications

- USB3.0, Firewire, DVI, HDMI, S-ATA
- Thunderbolt, Display Port
- Mobile HDMI Link, MDDI, MIPI, SWP / NFC

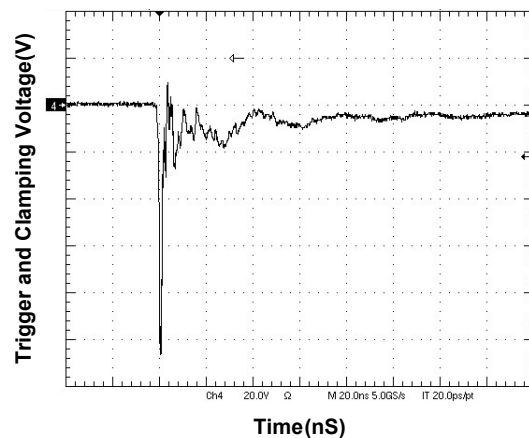
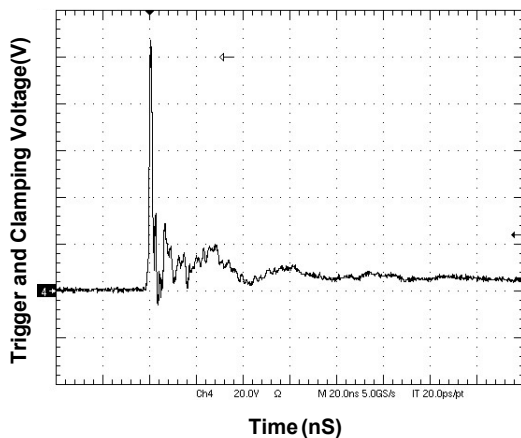
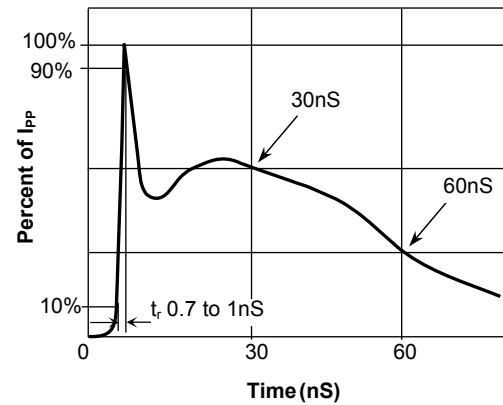
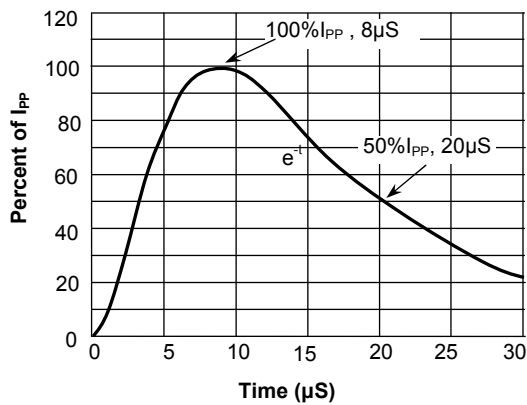
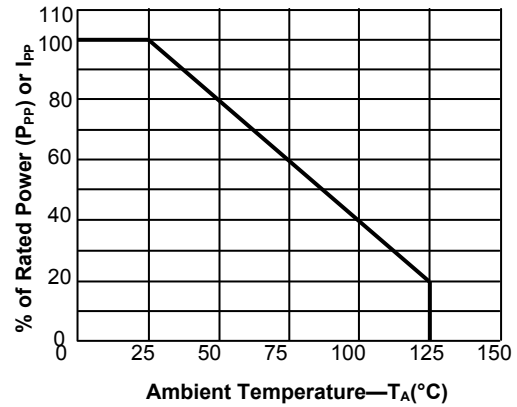
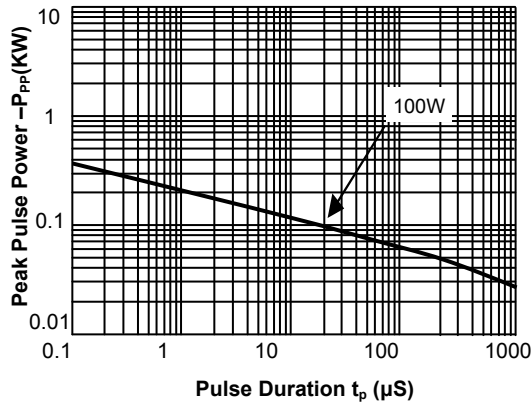
Absolute Maximum Ratings ($T_A = 25^\circ C$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power ($t_p = 8/20 \mu S$)	P_{PP}	100	W
ESD Contact/Air Discharge (IEC-61000-4-2)	V_{ESD}	15/15	kV
Peak Pulse Current ($t_p = 8/20 \mu S$)	I_{PP}	5	A
Junction Temperature	T_J	-55 to +125	$^\circ C$
Storage Temperature	T_{STG}	-55 to +150	$^\circ C$
Maximum Lead Solder Temperature(10 second duration)	T_L	260	$^\circ C$

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

Parameterer	Symbol	Condition	Min	Typ	Max	Unit
Reverse Stand-Off Voltage	V_{RWM}		-	-	5.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1mA$	6.5	8.5	-	V
Reverse Leakage Current	I_R	$V_R = 5.0V$	-	5	100	nA
Clamping Voltage (IEC 61000-4-5)	V_C	$I_{PP} = 5A$	-	-	20.5	V
Dynamic Resistance	R_{DYN}	$I_{TLP} = 0A$ to 20A	-	0.29	-	Ω
Trigger Voltage (IEC 61000-4-2)	V_T	$V_{ESD} = 8kV$	-	135	-	V
Clamping Voltage (IEC 61000-4-2)	V_C	$V_{ESD} = 8kV$	-	20	-	V
Junction Capacitance	C_J	$V_R = 0V$, $f = 1MHz$	-	0.2	0.3	pF

Typical Characteristic Curves



Typical Characteristic Curves

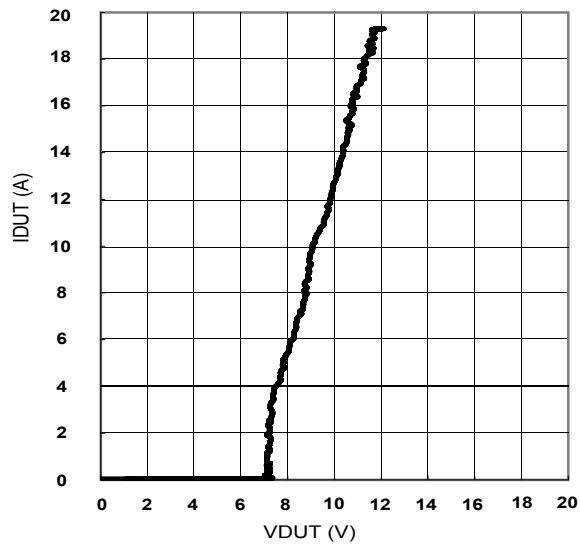


Fig.7 Transmission Line Pulse ($t_p=100$ nS)

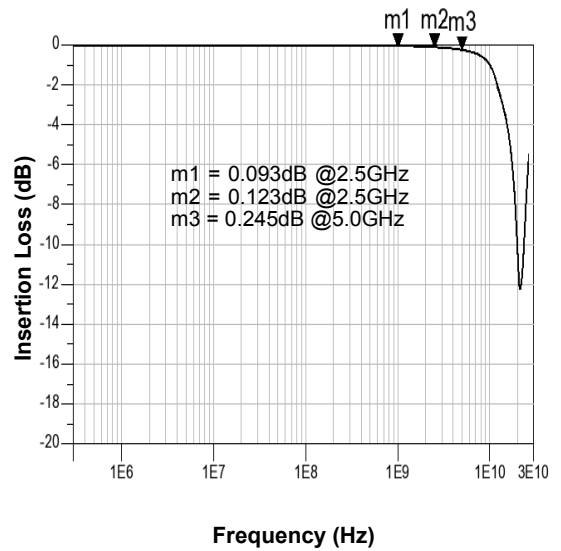
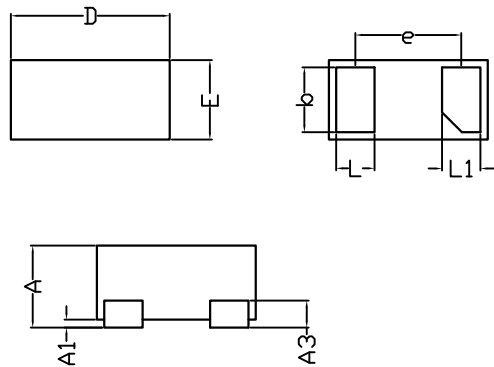


Fig.8 Insertion Loss S_{21}

GSESUC5VD0603-2B

Ultra Low Capacitance ESD TVS

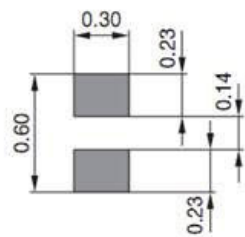
Package Outline Dimensions (DFN0603)



Symbol	Dimensions in millimeters		
	Min	Nom	Max
A	0.23	-	0.33
A1	0.00	-	0.05
A3	0.102 REF		
D	0.55	0.60	0.65
E	0.25	0.30	0.35
b	0.215	0.245	0.275
L	0.160	0.190	0.220
L1	0.160	0.190	0.220
e	0.355 BSC		

Recommended Footprint

Unit: mm



Order Information

Device	Package	Marking	Packaging	SPQ
GSESUC5VD0603-2B	DFN0603	B	Tape & Reel	15,000 Pcs / Reel