

Low Capacitance TVS/ESD Protection Diode

DESCRIPTION

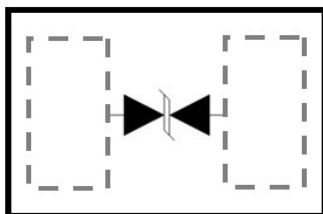
GESD0701OC is a low-capacitance Transient Voltage Suppressor (TVS) designed to provide electrostatic discharge (ESD) protection for data, control or power lines. With maximum capacitance of 30pF only, GESD0701OC is designed to protect parasitic-sensitive systems against over-voltage and over-current transient events. It complies with IEC 61000-4-2 (ESD), Level 4 ($\pm 15\text{kV}$ air, $\pm 8\text{kV}$ contact discharge), very fast charged device model (CDM) ESD and cable discharge event (CDE), etc.

GESD0701OC uses ultra-small DFN1006 package. Each GESD0701OC device can protect one data line. It offers system designers flexibility to protect single data line where space is a premium concern..

ORDERING INFORMATION

- ✧ Device: GESD0701OC
- ✧ Package: DFN1006
- ✧ Marking: HOC
- ✧ Material: Halogen free
- ✧ Packing: Tape & Reel
- ✧ Quantity per reel: 10,000pcs

PIN CONFIGURATION



FEATURES

- ✧ Peak Power Dissipation 150 W (8/20 μs)
- ✧ Stand-off voltage:7V
- ✧ Low capacitance 30pF(Maximum)
- ✧ Replacement for MLV(0402)
- ✧ Protects I/O Port
- ✧ Low Clamping Voltage
- ✧ Low Leakage
- ✧ Low Capacitance
- ✧ Response Time is <1ns
- ✧ Meets MSL 1 Requirements
- ✧ ROHS compliant

MACHANICAL DATA

- ✧ DFN1006 package
- ✧ Flammability Rating: UL 94V-0
- ✧ Packaging: Tape and Reel
- ✧ Reel size: 7 inch

APPLICATIONS

- ✧ Serial and Parallel Ports
- ✧ Notebooks, Desktops, Servers
- ✧ Projection TV
- ✧ Cellular handsets and accessories
- ✧ Portable instrumentation
- ✧ Peripherals
- ✧ MP3 Players

PACKAGE OUTLINE



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ABSOLUTE MAXIMUM RATING(Tamb=25°C)

Symbol	Parameter	Value	Unit
V _{ESD}	ESD per IEC 61000-4-2 (Air)	±25	kV
	ESD per IEC 61000-4-2 (Contact)	±25	
P _{PPP}	Peak Pulse Power(tp=8/20us waveform)	150	watts
T _L	Lead Soldering Temperature	260(10sec.)	°C
T _J	Operating Temperature Range	-55~125	°C
T _{STG}	Storage Temperature Range	-55~150	°C
T _L	Lead Solder Temperature-Maximum (10 Second Duration)	260	°C

ELECTRICAL CHARACTERISTICS (Tamb=25°C)

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V _{RWM}	Reverse Working Voltage				7.0	V
V _{BR}	Reverse Breakdown Voltage	I _T = 1mA	7.5			V
I _R	Reverse Leakage Current	V _{RWM} = 7V			0.2	μA
V _C	Clamping Voltage	I _{PP} = 1A, t _p = 8/20μs			12	V
		I _{PP} = 8A, t _p = 8/20μs			19	V
C _J	Junction Capacitance	V _R = 0V, f = 1MHz		25	30	pF

ELECTRICAL CHARACTERISTICS CURVE

Fig 1 8/20 μ s Waveform per IEC61000-4-5

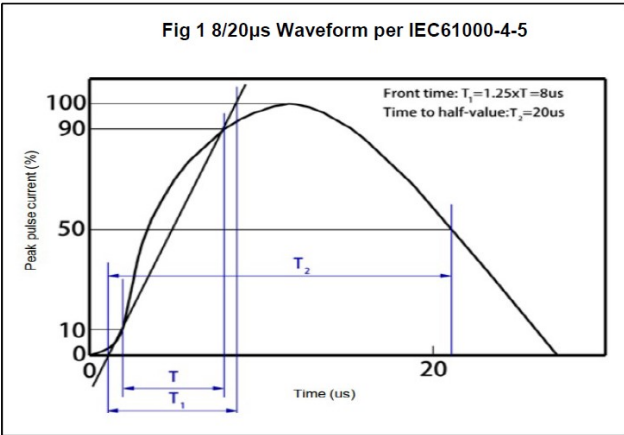


Fig 2 Contact Discharge Current Waveform per IEC 61000-4-2)

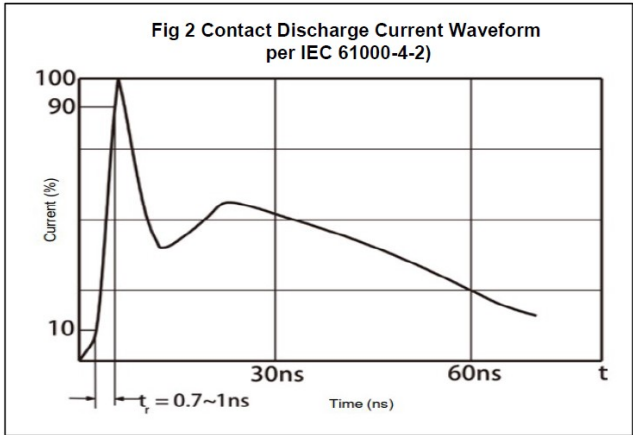


Fig 3 Voltage vs Capacitance

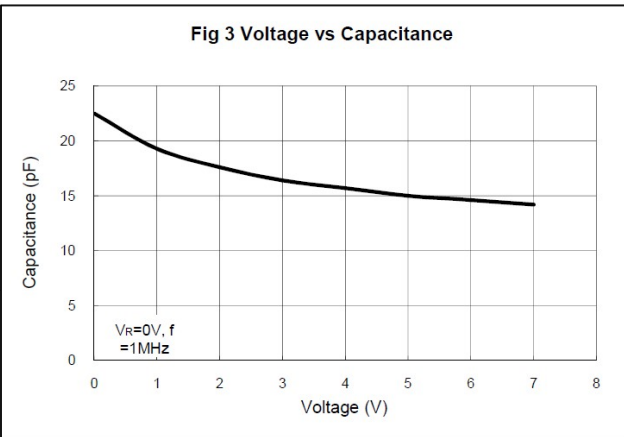
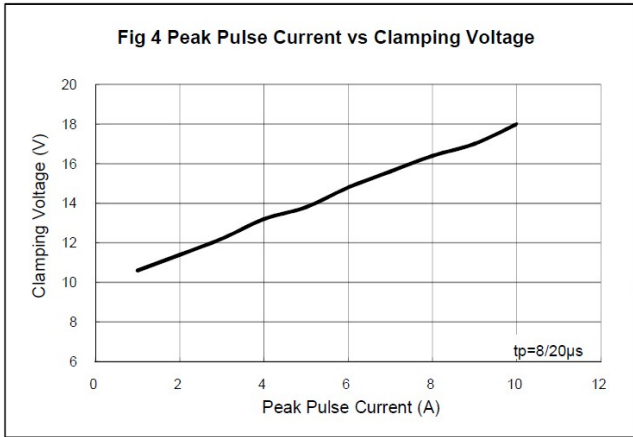
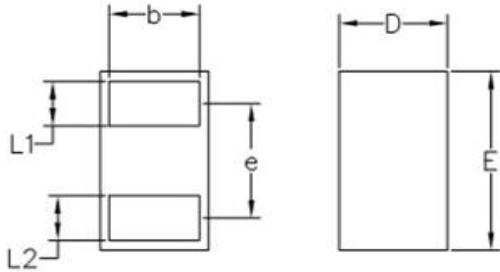


Fig 4 Peak Pulse Current vs Clamping Voltage

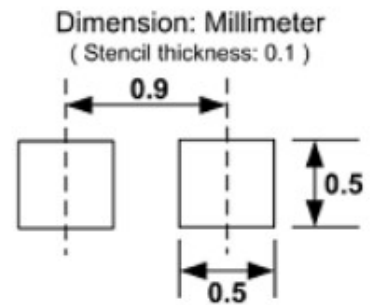


DFN1006 PACKAGE OUTLINE DIMENSIONS



NOTE: ALL DIMENSIONS IN MM

	MIN	NOM	MAX
D	0.55	0.60	0.65
E	0.95	1.00	1.05
L1	0.20	0.25	0.30
L2	0.20	0.25	0.30
A	0.45	0.50	0.55
b	0.45	0.50	0.55
e		0.64BSC	



Soldering Footprint