

DESCRIPTION

GESD524B4JDO is a four channels low capacitance Bi-directional ESD protection array, GESD524B4JDO is designed for asymmetrical (5V and 24V) protection in multi-point data transmission standard PD (Power Delivery) applications. It complies with IEC 61000-4-2 (ESD) Level 4 ($\pm 15\text{KV}$ air, $\pm 8\text{KV}$ contact discharge), IEC61000-4-4 (electrical fast transient-EFT) (40A,5/50ns), very fast charged device model (CDM) ESD and cable discharge event (CDE) etc.

GESD524B4JDO uses ultra-small DFN2510 package. Each GESD524B4JDO device can protect four high-speed data lines. The combined features of low capacitance, ultra-small size and high ESD robustness make GESD524B4JDO ideal for high-speed data ports and high-frequency line applications. The low clamping voltage of the GESD524B4JDO guarantees a minimum stress on the protected IC.

FEATURES

- ✧ Transient protection for high-speed data lines
IEC 61000-4-2(ESD) $\pm 20\text{KV}$ (Contact)
IEC 61000-4-2(ESD) $\pm 30\text{KV}$ (Air)
IEC 61000-4-4(EFT) 40A (5/50ns)
Cable Discharge Event (CDE)
- ✧ Package optimized for high-speed lines
- ✧ Ultra-small package(2.5mm*1.0mm*0.5mm)
- ✧ Protects two 5V and two 24V data lines
- ✧ Low leakage current
- ✧ Low clamping voltage

MACHANICAL DATA

- ✧ DFN2510 package
- ✧ Flammability Rating: UL 94V-0
- ✧ High temperature soldering guaranteed:
260°C/10s
- ✧ Reel size: 7 inch

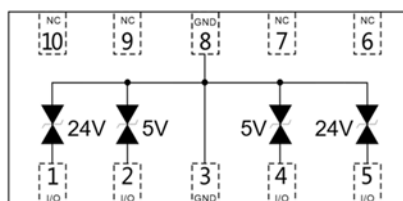
ORDERING INFORMATION

- ✧ Device: GESD524B4JDO
- ✧ Package: DFN2510
- ✧ Marking: 524B0
- ✧ Material: Halogen free& RoHS compliant
- ✧ Packing: Tape & Reel
- ✧ Quantity per reel: 3,000pcs

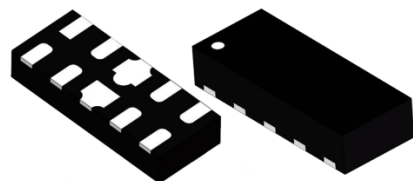
APPLICATIONS

- ✧ PD Charger or Adapter
- ✧ USB Type-C
- ✧ High-speed data lines

PIN CONFIGURATION



PACKAGE OUTLINE

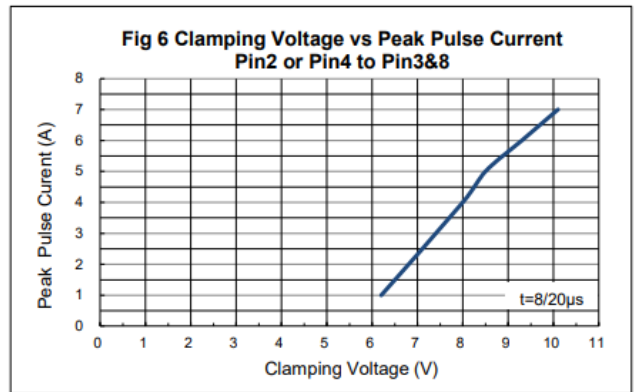
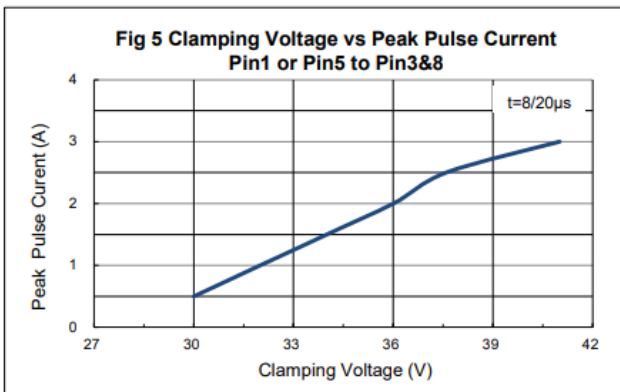
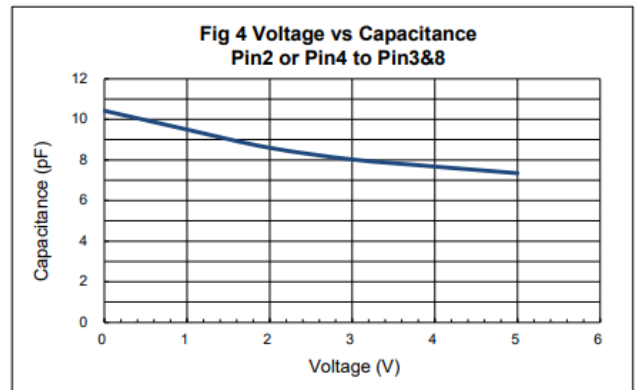
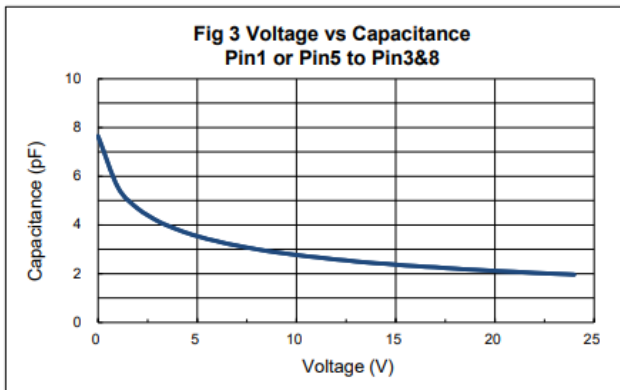
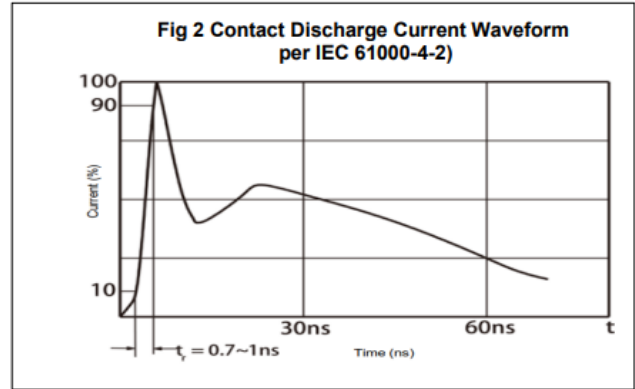
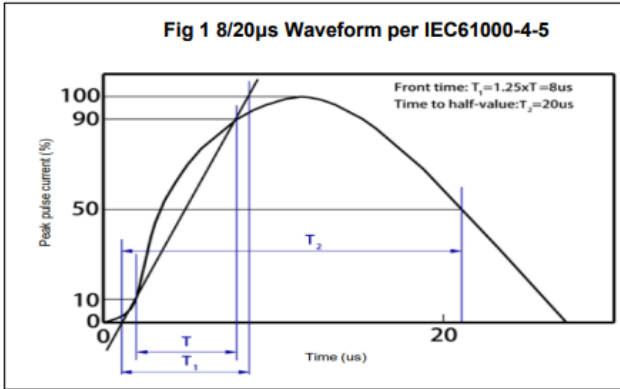


ABSOLUTE MAXIMUM RATING			
Symbol	Parameter	Value	Unit
P _{PP}	Peak Pulse Power (8/20μs) Pin1 or Pin5 to Pin3&8	140	W
	Peak Pulse Power (8/20μs) Pin2 or Pin4 to Pin3&8	90	W
V _{ESD}	ESD per IEC 61000-4-2 (Contact) ESD per IEC 61000-4-2 (Air) Pin1 or Pin5 to Pin3&8	±20 ±30	kV
	ESD per IEC 61000-4-2 (Contact) ESD per IEC 61000-4-2 (Air) Pin2 or Pin4 to Pin3&8	±30 ±30	kV
	Operating Temperature	-55/+125	°C
	Storage Temperature	-55/+150	°C

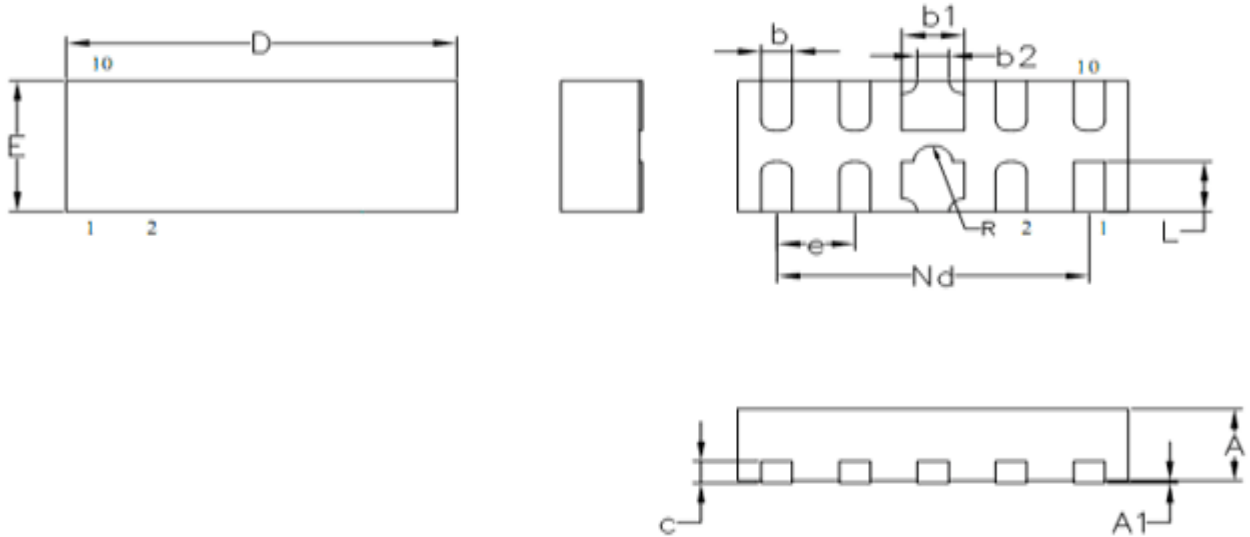
ELECTRICAL CHARACTERISTICS (T _{amb} =25°C)						
Symbol	Parameter	Test Condition	Min	Typ	Max	Unit
V _{RWM}	Reverse Working Voltage	Pin1 or Pin5 to Pin3&8			24	V
		Pin2 or Pin4 to Pin3&8			5	
V _{BR}	Reverse Breakdown Voltage	I _T = 1mA Pin1 or Pin5 to Pin3&8	26			V
		I _T = 1mA Pin2 or Pin4 to Pin3&8	5.6			
I _R	Reverse Leakage Current	V _{RWM} = 24V Pin1 or Pin5 to Pin3&8			0.5	μA
		V _{RWM} = 5V Pin2 or Pin4 to Pin3&8			0.5	μA
V _C	Clamping Voltage	I _{PP} = 2.8A, t _p = 8/20μs Pin1 or Pin5 to Pin3&8			50	V
		I _{PP} = 6A, t _p = 8/20μs Pin2 or Pin4 to Pin3&8			15	V
C _{ESD}	Parasitic Capacitance	V _R = 0V, f = 1MHz Pin1 or Pin5 to Pin3&8			15	pF
		V _R = 0V, f = 1MHz Pin2 or Pin4 to Pin3&8			15	pF

Note: I/O are pin 1/2/4/5; GND are pin 3/8; pin 6/7/9/10 are NC and can be connected with any pin.

ELECTRICAL CHARACTERISTICS CURVE



DFN2510 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions (mm)		
	Min.	Nom.	Max.
D	2.45	2.50	2.55
E	0.95	1.00	1.05
b1	0.35	0.40	0.45
b2	0.20REF		
b	0.15	0.20	0.25
L	0.33	0.38	0.43
Nd	2.00BSC		
e	0.50BSC		
R	0.10	0.125	0.15
A	0.45	0.50	0.55
c	0.15REF		
A1	0.00	-	0.05