

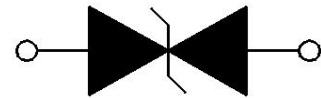
Features

- Protects one bi-directional I/O line
- Package optimized for high-speed lines
- Ultra-small package
- Low leakage current and low clamping voltage
- Low Capacitance: 0.4pF Max
- IEC61000-4-2 (ESD) $\pm 20\text{kV}$ (Air), $\pm 15\text{kV}$ (Contact)
- IEC61000-4-5 (Lightning) 2A (8/20 μs)
- Compliant to Halogen-free



Applications

- Local Area Network (LAN) equipment
- FireWire
- Computers and peripherals
- Communication systems
- High-speed data lines



Bi-directional

Mechanical Characteristics

- Package: DFN-2L(0402)
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound.
- UL Flammability Classification Rating 94V-0
- Marking Code : 15BU

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

Parameters	Symbol	Value	Unit
Peak Pulse Power ($t_p = 8/20\mu\text{s}$ waveform)	P_{PP}	70	W
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	± 20 ± 15	KV
Operating Temperature Range	T_{OPT}	-55 to $+125$	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to $+150$	$^\circ\text{C}$

Electrical Characteristics ($T_A = 25^\circ\text{C}$, unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit.
Reverse Working Voltage	V_{RWM}				15	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	16			V
Reverse Leakage Current	I_R	$V_{RWM} = 15\text{V}$			0.5	μA
Clamping voltage	V_C	$I_{PP} = 1\text{A}, T_P = 8/20\mu\text{s}$			25	V
Clamping voltage	V_C	$I_{PP} = 2\text{A}, T_P = 8/20\mu\text{s}$			35	V
Junction capacitance	C_J	$V_R = 0\text{V}, f = 1\text{MHz}$		0.25	0.4	pF

Typical Characteristics

Fig 1 Power Derating Curve

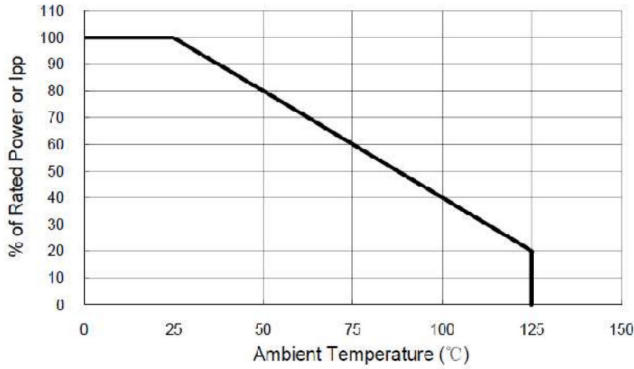


Fig 2 8/20μs Waveform per IEC61000-4-5

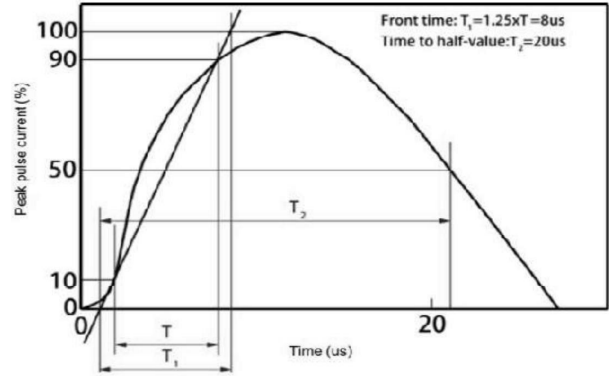


Fig 3 Clamping Voltage vs Peak Pulse Current

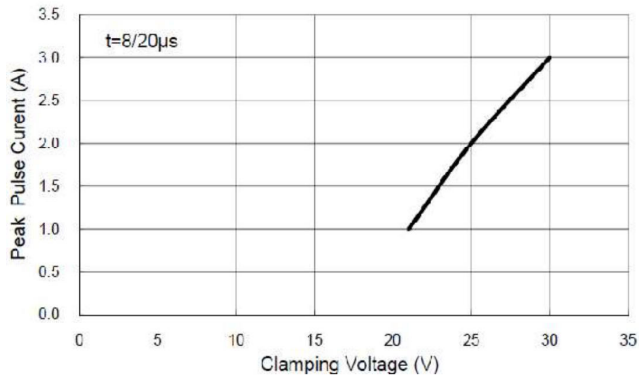


Fig 4 Voltage vs Capacitance

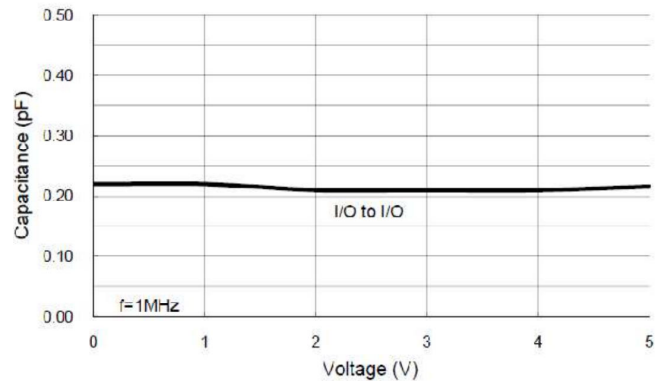


Fig 5 ESD Clamping of I/O to GND
(+8kV Contact per IEC 61000-4-2)

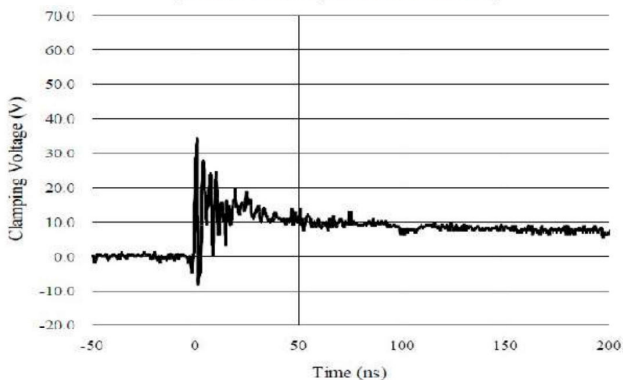
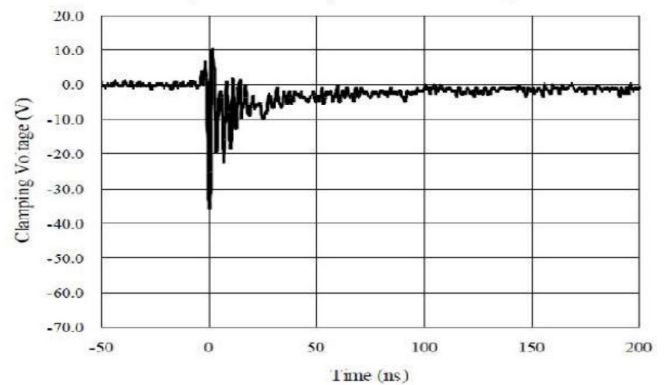
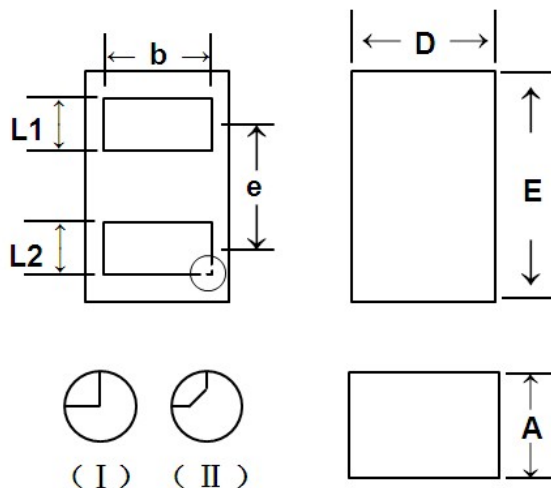


Fig 6 ESD Clamping of I/O to GND
(-8kV Contact per IEC 61000-4-2)



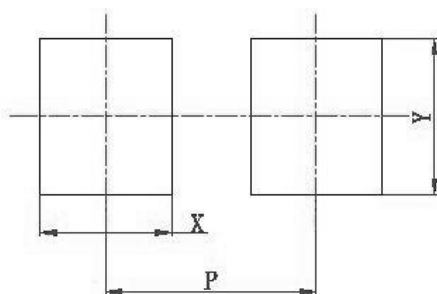
Package Outline Dimensions



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		

Suggested Land Pattern



Symbol	Dimension in Millimeters
	typ.
X	(0.5)
Y	(0.7)
P	(0.65)