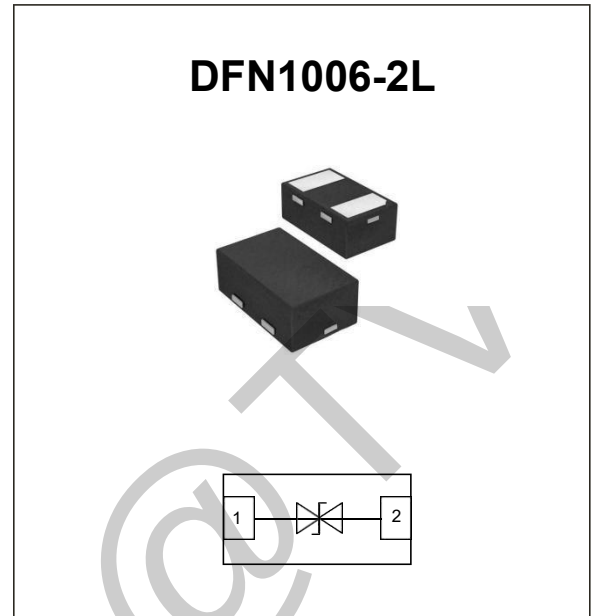


1-Line Bi-directional TVS Diode
Features

- 1-Line, Bi-directional TVS
- Working voltage: $\pm 5.0\text{V}$ Max
- ESD withstand: IEC 61000-4-2 $\pm 30\text{kV}$ (contact & air)
- Lighting withstand: IEC 61000-4-5 5.5A (8/20 μs)
- Solid-state silicon technology
- Low leakage current
- Device meets MSL 1 requirements
- Pb-Free, Halogen Free, RoHS Compliant

Mechanical Data

- Package: DFN1006-2L
- Pb-Free, Halogen Free, RoHS Compliant
- MSL 1 per J-STD-020


Applications

- Notebooks and Smartphone
- Computer and Peripheral Devices
- Portable Electronics

Ordering information

Ordercode	Marking	Package	Packaging option	Basequantity	Packaging specification
DCE0510A05LC	M*	DFN1006-2L	Tape and reel	10000pcs / reel	EIA STD RS-481

Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

Parameter	Symbol	Value	Unit
Peak Pulse Power ($T_P=8/20\mu\text{s}$)	P_{PP}	55	W
ESD contact/air discharge (IEC-61000-4-2)	V_{ESD}	$\pm 30/\pm 30$	kV
Peak Pulse Current ($T_P = 8/20\mu\text{s}$)	I_{PP}	5.5	A
Junction Temperature	T_J	-55 to +125	°C
Operation temperature	T_{OP}	-55 to +125	°C
Lead temperature	T_L	260	°C
Storage temperature	T_{STG}	-55 to +150	°C

1-Line Bi-directional TVS Diode

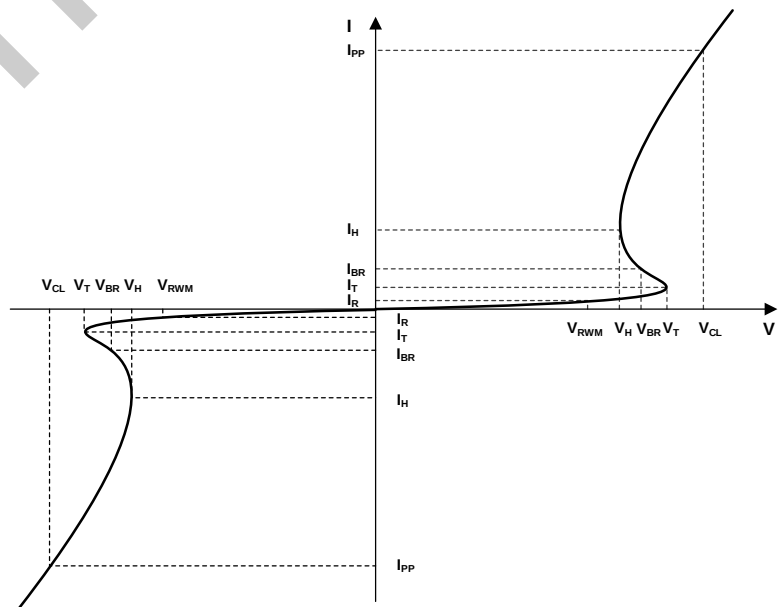
Electrical Characteristics

 (T_A = 25 °C unless otherwise specified)

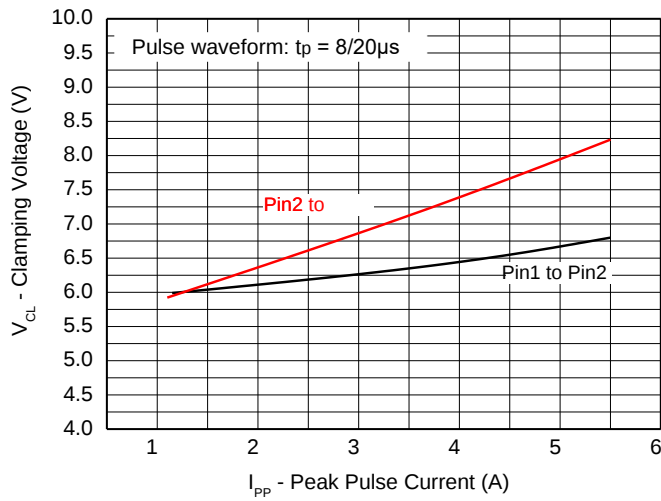
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse stand-off Voltage	V _{RWM}		-	-	±5.0	V
Holding Voltage	V _{BR}	I _T = 1mA	5.8	-	9.5	V
Reverse Leakage Current	I _R	V _{RWM} = 5.0V	-	-	0.2	uA
Holding Voltage	V _H	I _H = 80mA	5.2	-	-	V
Clamping Voltage(TLP)	V _{CL}	I _{PP} = 16A, t _p = 100ns	-	9	-	V
Dynamic resistance	R _{DYN}		-	0.22	-	Ω
Clamping Voltage(ESD)	V _{CE}	V _{ESD} = ±8kV Contact	-	9	-	V
Clamping Voltage	V _C	I _{PP} = 1A, t _p = 8/20μs	5.8	-	7.5	V
Clamping Voltage	V _C	I _{PP} = 5.5A, t _p = 8/20μs	8	-	10	V
Junction Capacitance	C _J	V _R = 0V, f = 1MHz	-	0.3	0.4	pF

Electrical Characteristics

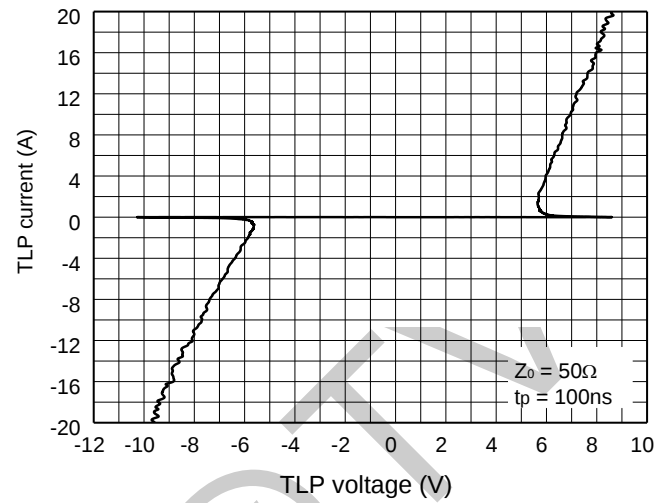
Symbol	Parameter
V _{BR}	Reverse Breakdown Voltage
I _{BR}	Reverse Breakdown Current
V _{RWM}	Reverse Stand-off Voltage
I _R	Reverse Leakage Current
V _H	Holding Voltage
I _H	Holding Current
V _T	Trigger Voltage
I _T	Trigger Current
I _{PP}	Peak Pulse Current
V _{CL}	Clamping Voltage



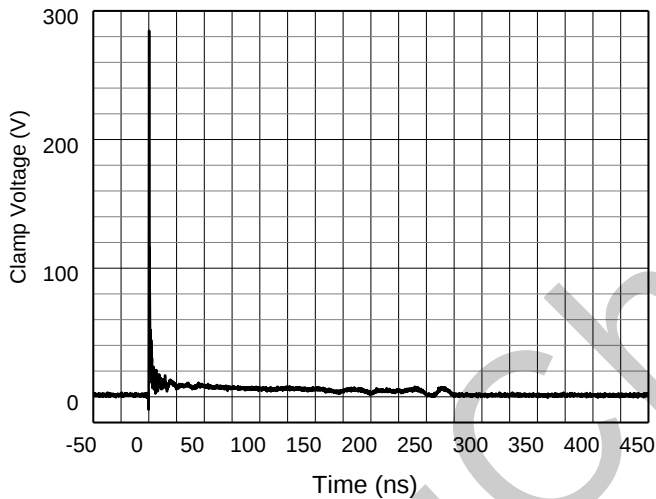
1-Line Bi-directional TVS Diode



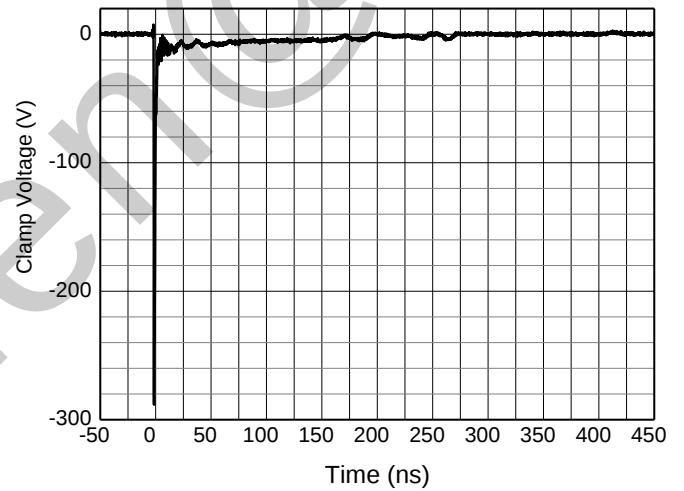
Clamping Voltage vs. Peak Pulse Current



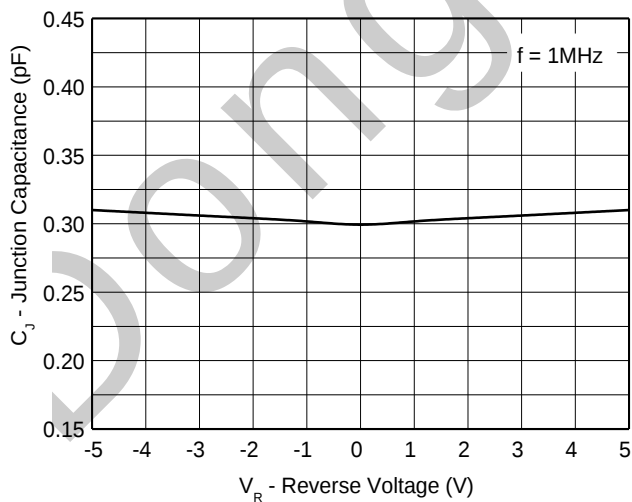
TLP IV Curve



+8kV contact discharge per IEC61000-4-2

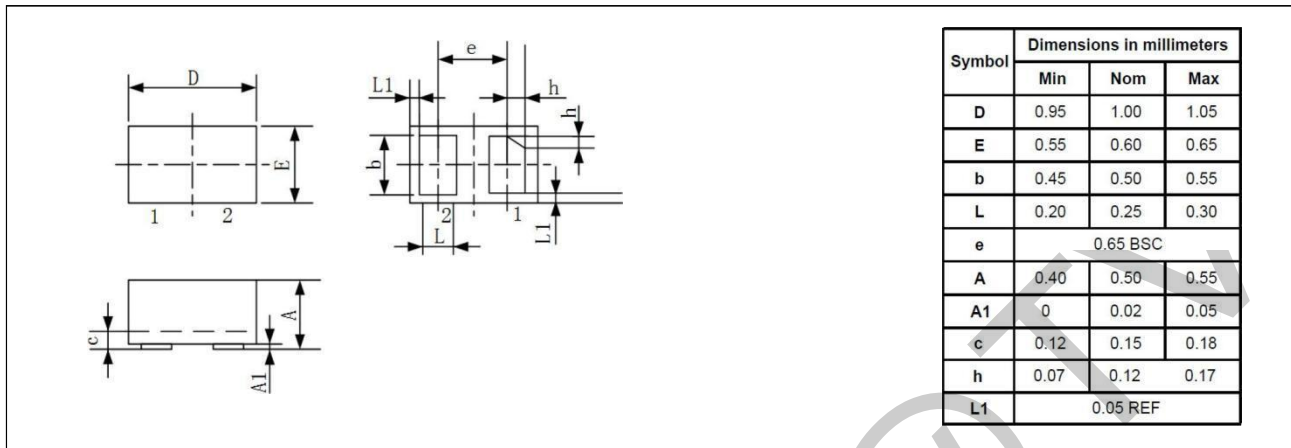


-8kV contact discharge per IEC61000-4-2

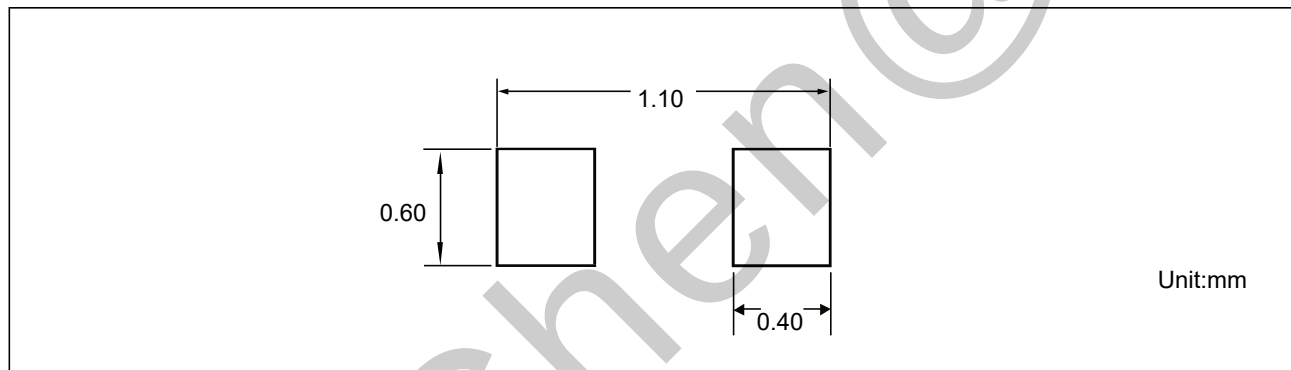


Capacitance vs. Reverse Voltage

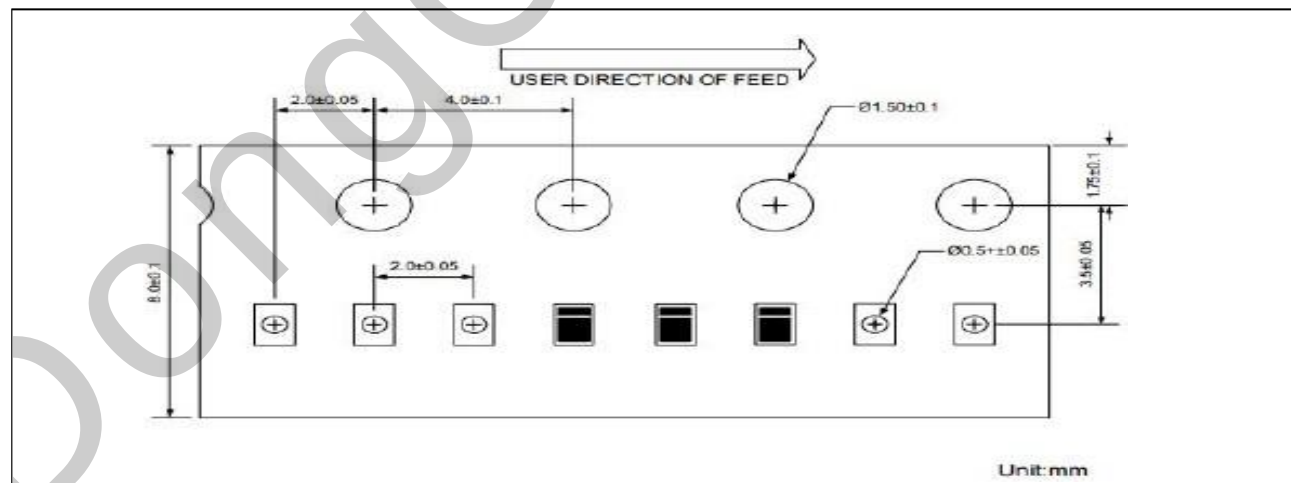
Package Dimensions



Pad Dimensions



Tape and Reel Specification



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