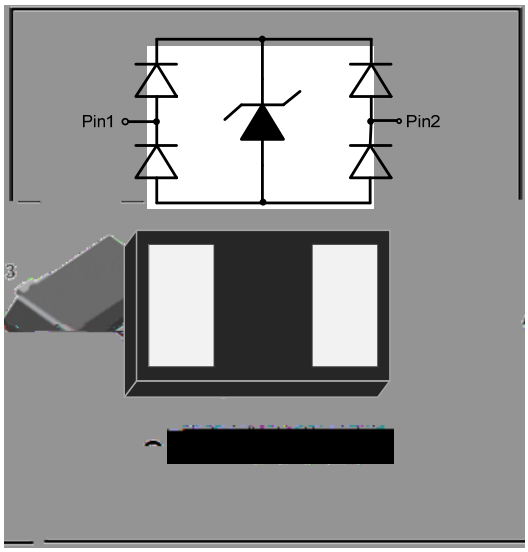
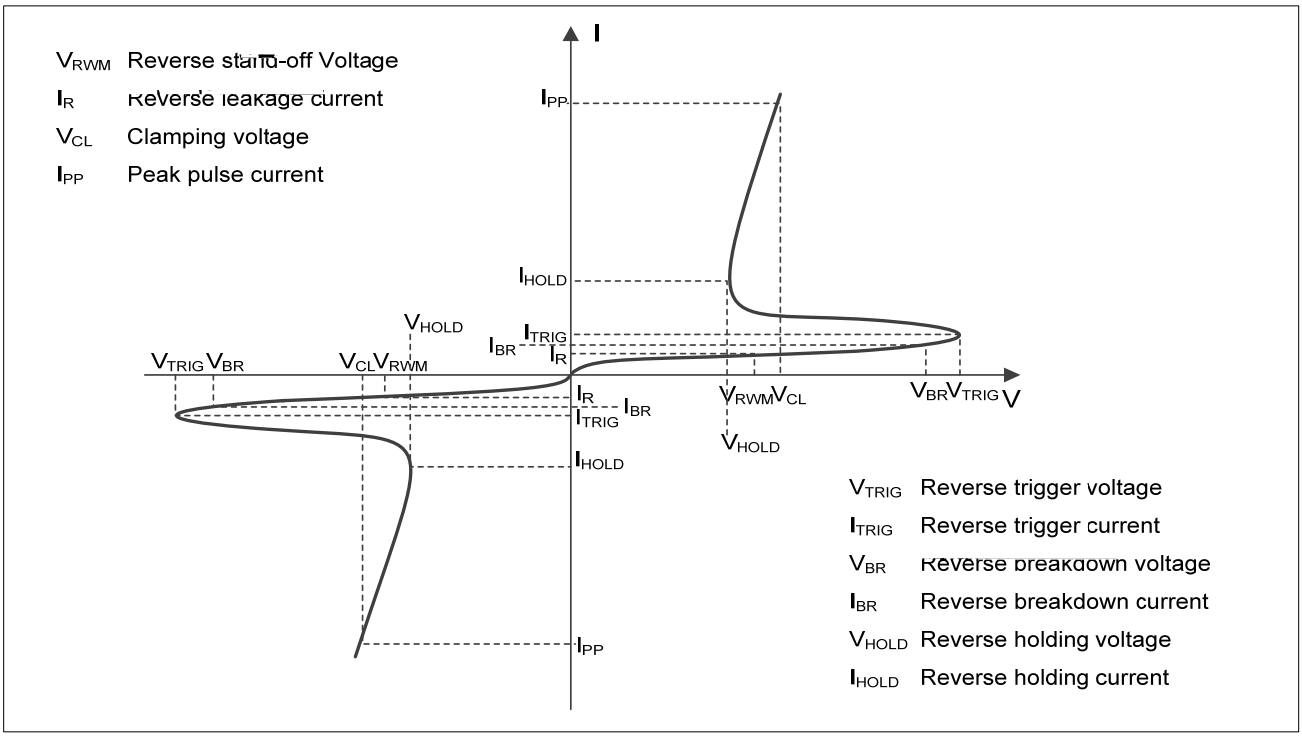
1- Line, Bi-directional, Ultra-low Capacitance Transient Voltage Suppressor



Features

- Stand-off voltage: 3.3V Max
- Transient protection for each line according to IEC61000-4-2(ESD): ±15kV (contact) IEC61000-4-5(surge): 8A (8/20μs)
- Ultra-low capacitance: C_J = 0.8pF typ
- Ultra-low leakage current: I_R < 1nA typ.
- Low clamping voltage: V_{CL} = 6.3V typ. @ I_{PP} = 16A (TLP)
- Solid-state DFN1006-2L

- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102 T lde 162



■Maximum Ratings

PARAMETER	SYMBOL	Rating	UNIT
Peak pulse power (t_p = 8/20μs)	P_{pk}	68	W
Peak pulse current (t_p = 8/20μs)	I_{PP}	7	A
ESD according to IEC61000-4-2 air discharge	V_{ESD}	±30	KV
ESD according to IEC61000-4-2 contact discharge		±30	KV
Junction temperature	T_J	125	°C
Operating temperature	T_{OP}	-40~85	°C
Storage temperature	T_{STG}	-55~150	°C

■Electrical Characteristics T_a=25 Unless otherwise specified

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse maximum working voltage	V_{RWM}	V				3.3
Reverse leakage current	I_R	nA	V_{RWM} =3.3V			50
Reverse breakdown voltage	V_{BR}	V	I_{BR} = 1mA	7.0	10.0	
Clamping voltage 1)	V_{CL}	V	I_{PP} = 16A, t_p = 100ns		6.3	
Dynamic resistance 1)	R_{DYN}	Ω			0.17	
Clamping voltage 2)	V_{CL}	V	V_{ESD} = 8kV		6.3	
Clamping voltage 3)	V_{CL}	V	I_{PP} = 1A, t_p = 8/20μs		3.2	4.5
		V	I_{PP} = 7A,t_p = 8/20μs		6.5	8.5
Junction capacitance	C_J	pF	V_R = 0V, f = 1MHz		0.8	1

(1). TLP parameter: Z_0 = 50Ω, t_p = 100ns, t_r = 2ns, averaging window from 60ns to 80ns. R_{DYN} is calculated from 4A to 16A.

(2). Contact discharge mode, according to IEC61000-4-2.

(3). Non-repetitive current pulse, according to IEC61000-4-5.

■Ordering Information (Example)

PREFERED P/N	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ESDSLC3V3LBA	Approximate 0.9	10000	100000	400000	Tape&reel

■ **Characteristics** (Typical)

8/20 μs waveform per IEC61000-4-5

Contact discharge current waveform per IEC61000-4-2

Clamping voltage vs. Peak pulse current

Capacitance vs. Reverse voltage

Non-repetitive peak pulse power vs. Pulse time

ESD clamping
(+8kV contact discharge per IEC61000-4-2)

ESD clamping
(-8kV contact discharge per IEC61000-4-2)

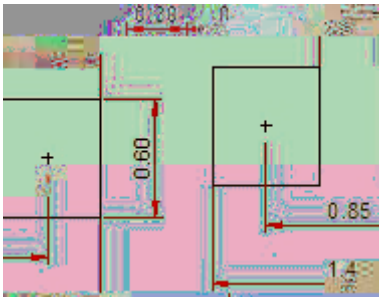
TLP Measurement

[redacted]

■ Outline Dimensions

Sy

■ **Recommend land pattern** (Unit:mm)



Notes:
This recommended land pattern is for reference purposes only. Please consult your manufacturing group to ensure your PCB design guidelines are met

Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of with would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website http:// www.21yangjie.com , or consult your nearest Yangjie's sales office for further assistance.