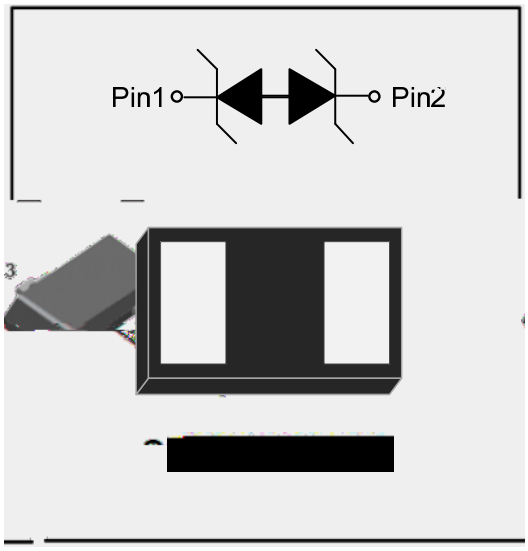
1-Line, Bi-directional, Transient Voltage Suppressor



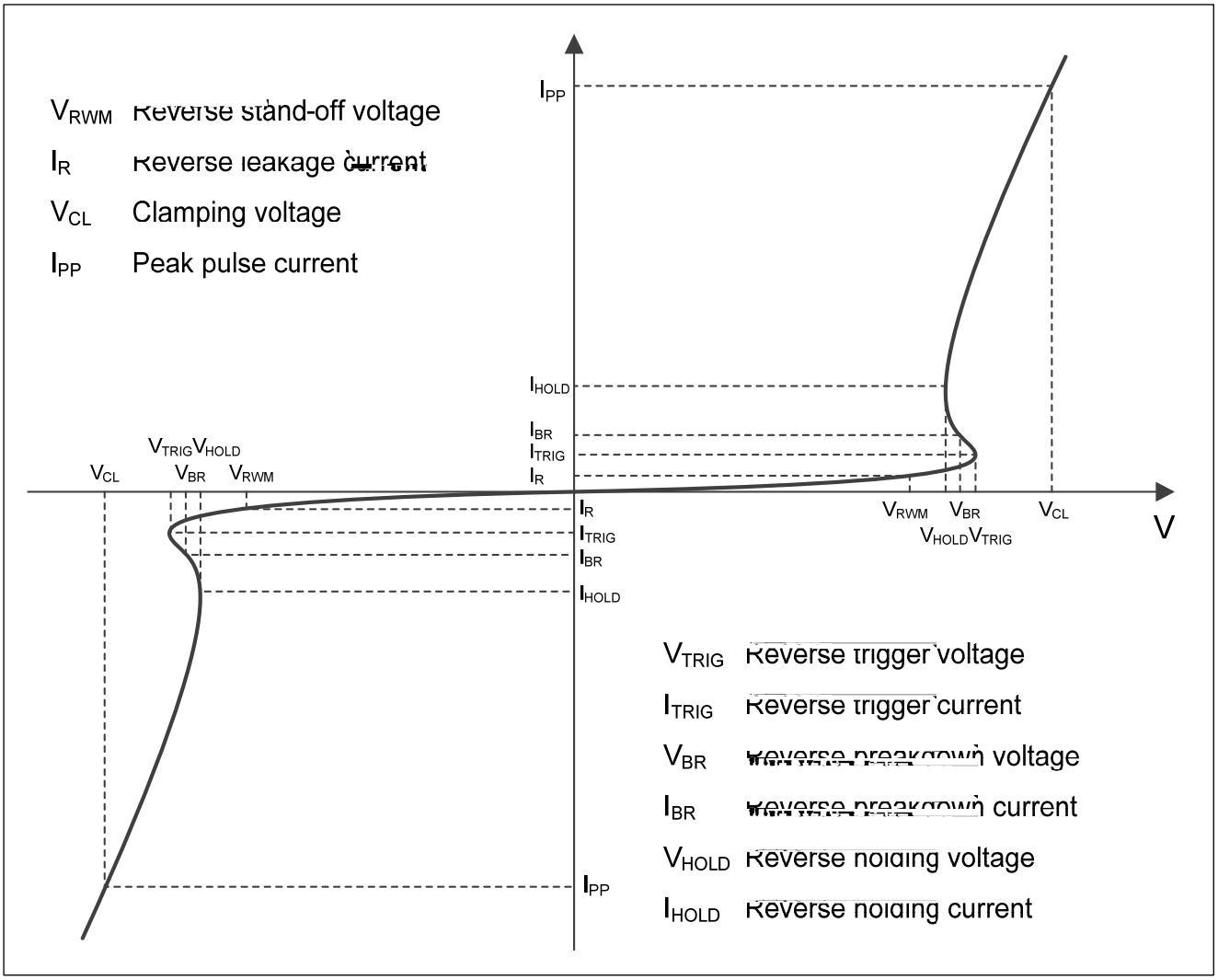
Features

Stand-off voltage: ±4.5V Max
Transient proection for each line accord IEC61000-4-2(ESD): ±30kV (contact)
IEC61000-4-4 (EFT): 40A (5/50ns)
IEC61000-4-5(surge): 40A (8/20 s)
Ultra-low capacitance: C_J = 65pF typ
Low leakage current
Low clamping voltage: V_{CL} =7.0V typ. @ I_{PP} = 16A (TLP)
Solid-state silicon technology

Mechanical Data

Package: DFN1006-2L
Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
Polarity: No marking on bi-directional types
Marking: 4G

Definitions of electrical characteristics



Maximum Ratings

PARAMETER	SYMBOL	Rating	UNIT
Peak pulse power (t_p = 8/20 s)	P_{pk}	400	W
Peak pulse current (t_p = 8/20 s)	I_{PP}	40	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				±4.5
Reverse leakage current	I_R	uA	V_{RWM} =± 4.5V			1
Reverse breakdown voltage	V_{BR}	V	I_{BR} = 1mA	4.6		
Clamping voltage 1)	V_{CL}	V	I_{PP} = 16A, t_p = 100ns		7	
Dynamic resistance 1)	R_{DYN}				0.09	
Clamping voltage 2)	V_{CL}	V	V_{ESD} = 8kV		9	
Clamping voltage 3)	V_{CL}	V	I_{PP} = 1A, t_p = 8/20 s		4.9	6
		V	I_{PP} = 20A, t_p = 8/20 s		6.5	8
		V	I_{PP} = 40A, t_p = 8/20 s		9	10
Junction capacitance	C_J	pF	V_R = 0V, f = 1MHz		65	75

(1). TLP parameter: Z_0 = 50 , 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.

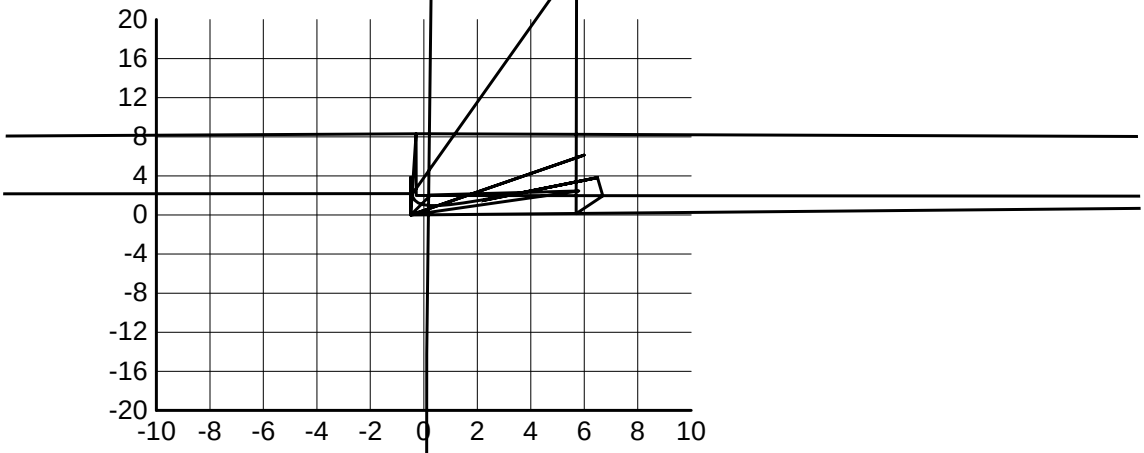
Ordering Information (Example)

PREFERED P/N	UNIT WEIGHT(mg)	MINIMUM PACKAGE (pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ESD4V5LBA	Approximate 0.9	10000	100000	400000	Tape & reel

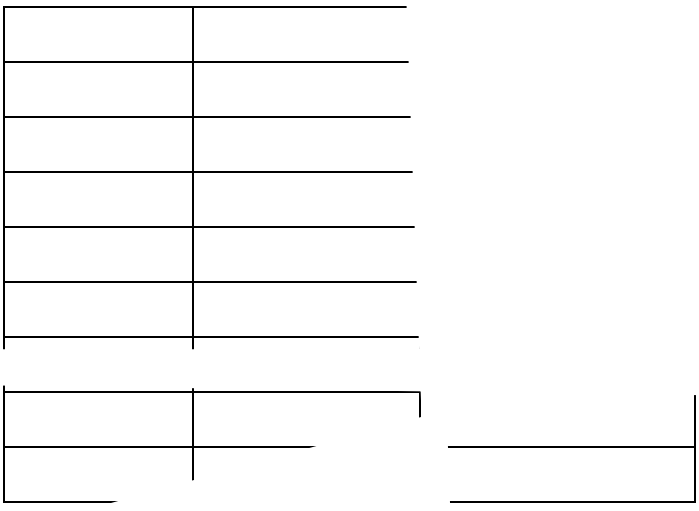
ESD clamping
(+8kV contact discharge per IEC61000-4-2)

ESD cl
(-8kV contact discha

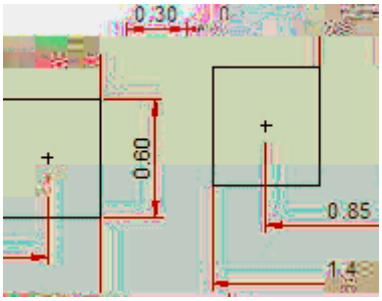
TLP Measurement



Outline Dimensions



vRecommend land pattern (Unit:mm)



Notes:

Disclaimer

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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 requireequiel.ptrh l[uir6-8.9(el3(orove reli4-6.2(abil)14.)-1).5(t))-8.7(y)-8abily ormat.4(eq)-75(l)-1(e)-1(n)-1(t)-1(s)-1(a)-1(s)-1(w)-1(b)-1