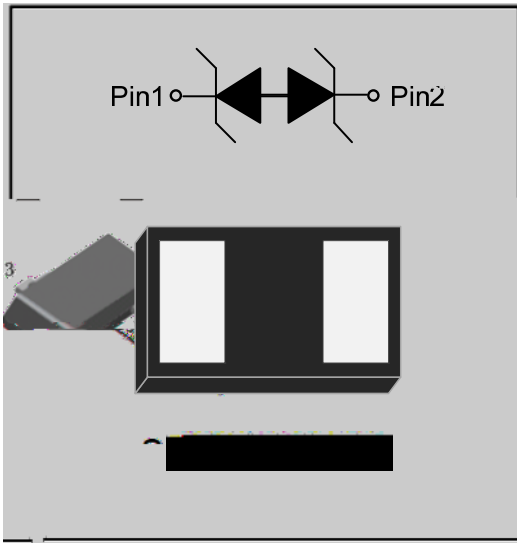


1-Line, Bi-directional, Transient Voltage Suppressor



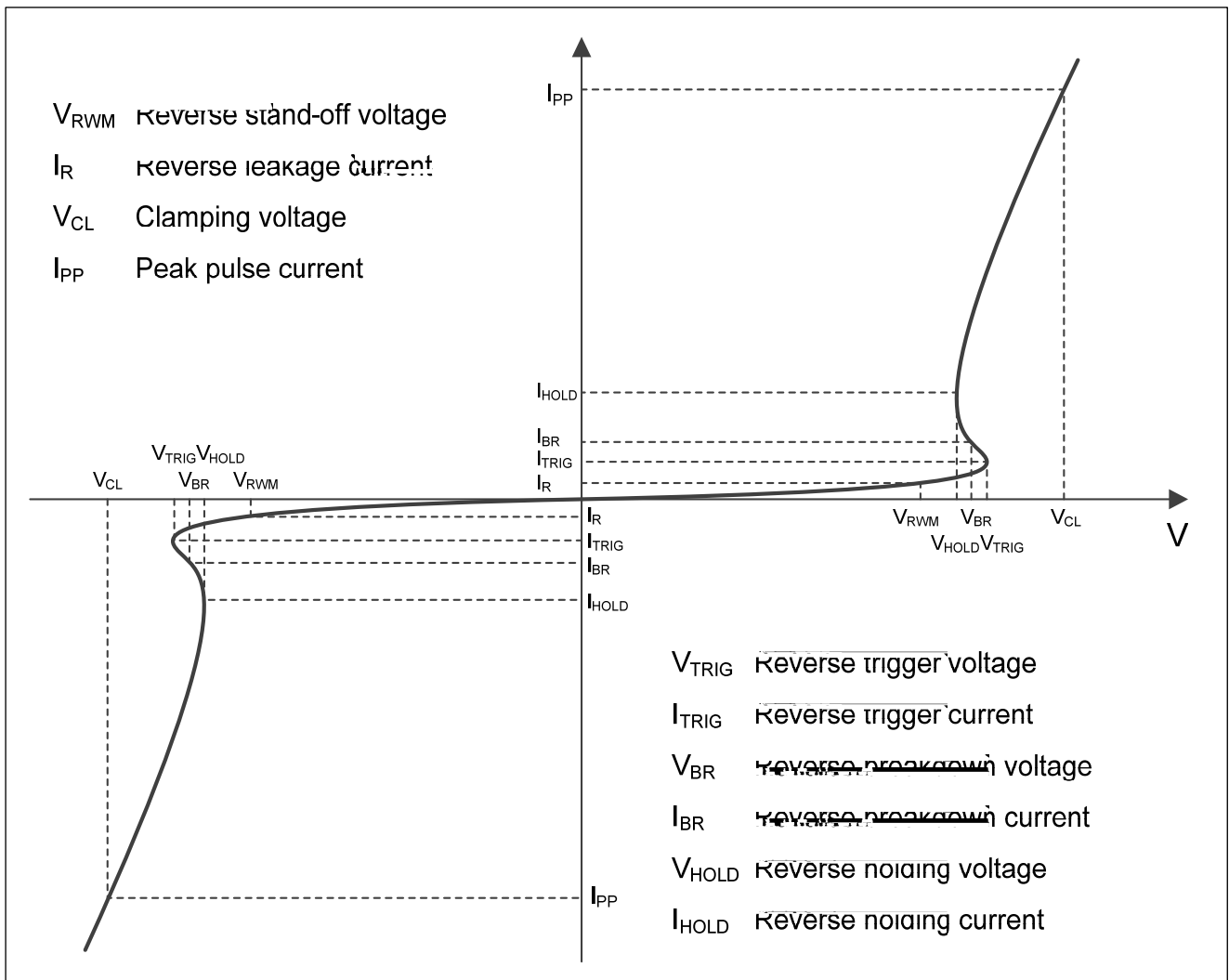
Features

- Stand-off voltage: $\pm 4.5\text{V}$ Max
- Transient protection for each line accord
- IEC61000-4-2(ESD): $\pm 30\text{kV}$ (contact)
- IEC61000-4-4 (EFT): 40A (5/50ns)
- IEC61000-4-5(surge): 40A (8/20 s)
- Ultra-low capacitance: $C_j = 65\text{pF}$ typ
- Low leakage current
- Low clamping voltage: $V_{CL} = 7.0\text{V}$ typ. @ $I_{PP} = 16\text{A}$ (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





ESD4V5LBA

Maximum Ratings

PARAMETER	SYMBOL	Rating	UNIT
Peak pulse power ($t_p = 8/20 \text{ s}$)	P_{pk}	400	W
Peak pulse current ($t_p = 8/20 \text{ s}$)	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	$^{\circ}\text{C}$
Operating temperature	T_{OP}	-40~85	$^{\circ}\text{C}$
Storage temperature	T_{STG}	-55~150	$^{\circ}\text{C}$

Electrical Characteristics $T_a=25^{\circ}\text{C}$ Unless otherwise specified

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse maximum working voltage	V_{RWM}	V				± 4.5
Reverse leakage current	I_R	μA	$V_{RWM} = \pm 4.5\text{V}$			1
Reverse breakdown voltage	V_{BR}	V	$I_{BR} = 1\text{mA}$	4.6		
Clamping voltage ¹⁾	V_{CL}	V	$I_{PP} = 16\text{A}$, $t_p = 100\text{ns}$		7	
Dynamic resistance ¹⁾	R_{DYN}				0.09	
Clamping voltage ²⁾	V_{CL}	V	$V_{ESD} = 8\text{kV}$		9	
Clamping voltage ³⁾	V_{CL}	V	$I_{PP} = 1\text{A}$, $t_p = 8/20 \text{ s}$		4.9	6
		V	$I_{PP} = 20\text{A}$, $t_p = 8/20 \text{ s}$		6.5	8
		V	$I_{PP} = 40\text{A}$, $t_p = 8/20 \text{ s}$		9	10
Junction capacitance	C_J	pF	$V_R = 0\text{V}$, $f = 1\text{MHz}$		65	75

(1). TLP parameter: $Z_0 = 50 \Omega$, $t_p = 100\text{ns}$, $t_r = 2\text{ns}$, 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.

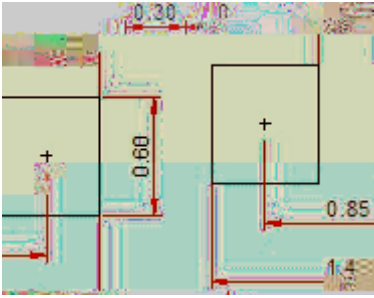
Ordering Information (Example)

PREFERRED 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





vRecommend land pattern (Unit:mm)



Notes:



ESD4V5LBA

Disclaimer

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