

E24SBPD1A

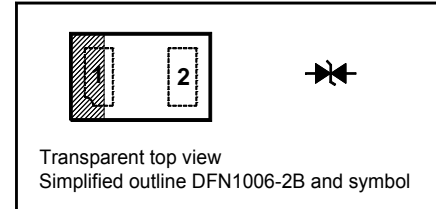
ESD Protection Diode

Features

- Low capacitance
- Low leakage current

PINNING

PIN	DESCRIPTION
1	Anode
2	Anode



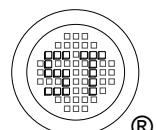
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Peak Pulse Power ($t_p = 8/20 \mu\text{s}$)	P_{PK}	100	W
Peak Pulse Current ($t_p = 8/20 \mu\text{s}$)	I_{PP}	2	A
ESD (IEC61000-4-2)	Air Contact V_{ESD}	± 13 ± 8	KV
Operating Junction Temperature Range	T_j	- 40 to + 85	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage	V_{RWM}	-	-	24	V
Reverse Breakdown Voltage at $I_R = 1 \text{ mA}$	$V_{(BR)R}$	26.5	-	33	V
Reverse Current at $V_{RWM} = 24 \text{ V}$	I_R	-	-	100	nA
Clamping Voltage at $I_{PP} = 1 \text{ A}$, $t_p = 8/20 \mu\text{s}$ at $I_{PP} = 2 \text{ A}$, $t_p = 8/20 \mu\text{s}$	V_C	-	-	45 50	V
ESD Clamping Voltage at $I_{TLP} = 4 \text{ A}$, $t_p = 0.2/100 \text{ ns}$ at $I_{TLP} = 16 \text{ A}$, $t_p = 0.2/100 \text{ ns}$	V_{CL}	-	35.8 39.7	-	V
Junction Capacitance at $V_R = 0 \text{ V}$, $f = 1 \text{ MHz}$	C_j	-	-	20	pF
Dynamic Resistance ¹⁾	R_{dyn}	-	0.33	-	Ω

¹⁾ Dynamic Resistance calculated from $I_{TLP} = 4 \text{ A}$ to $I_{TLP} = 16 \text{ A}$.



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Electrical Characteristics Curves

Fig 1. Pulse Waveform

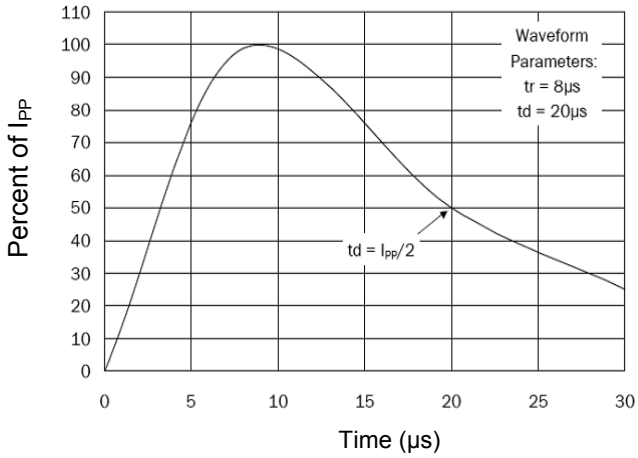


Fig 2. Power Derating Curve

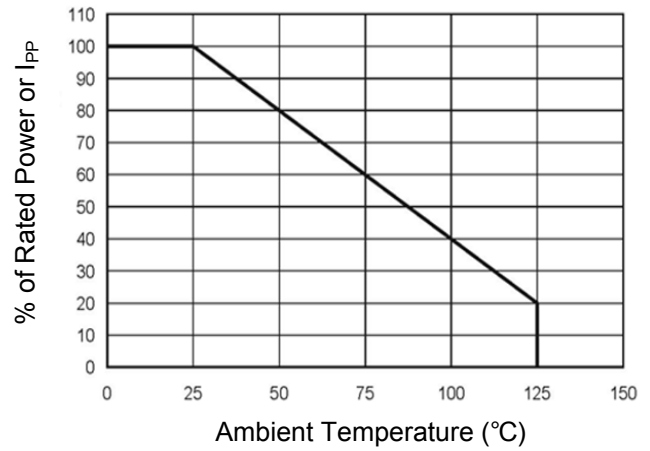


Fig 3. Clamping Voltage Curve

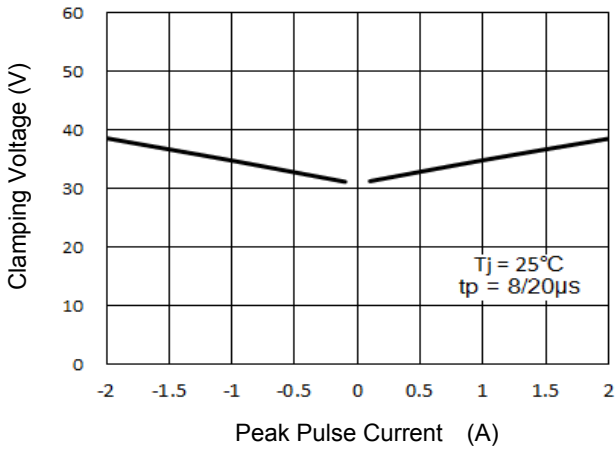


Fig 4. Junction Capacitance

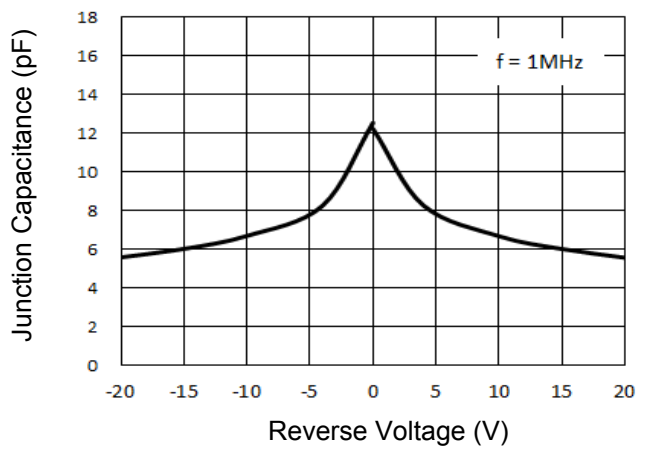


Fig 5 Clamped - 8 kV pulse waveform

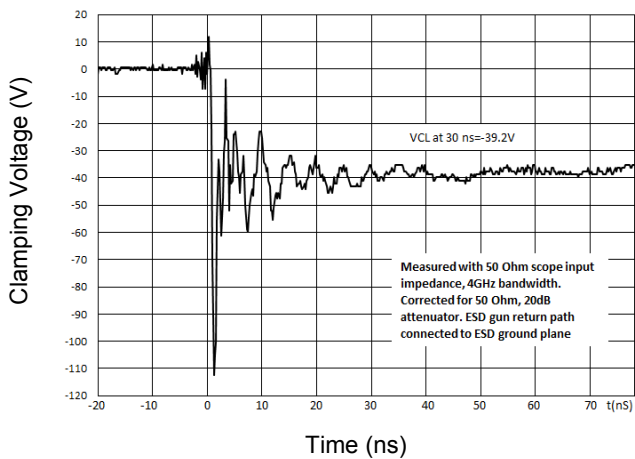
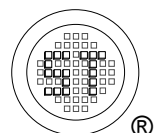
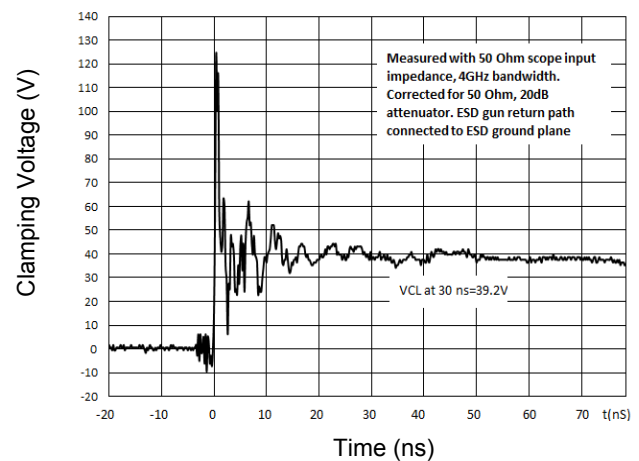


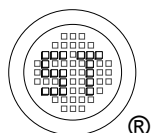
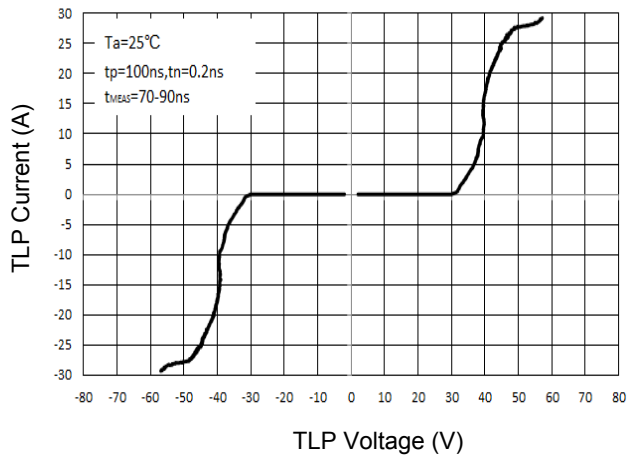
Fig 6 Clamped + 8 kV pulse waveform



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Electrical Characteristics Curves

Fig. 7 TLP Curve

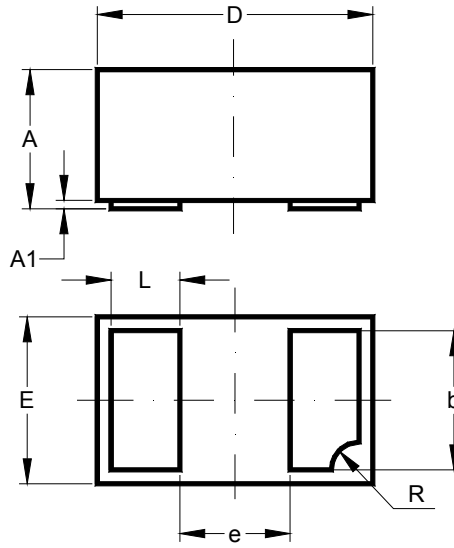


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PACKAGE OUTLINE

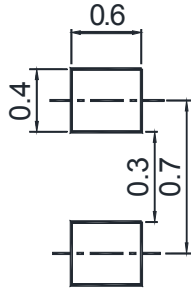
Plastic surface mounted package; 2 leads

DFN1006-2B



UNIT	A	A1	b	D	E	e	L	R
mm	0.40	0.05	0.55	1.05	0.65	0.4	0.3	0.15
	0.36	0	0.45	0.95	0.55	0.4	0.2	0.05

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
DFN1006-2B	8	2 ± 0.1	0.079 ± 0.004	178	7	10,000

Marking information

" 4K = Part No.

" III " = Marking line

Font type: Arial



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