



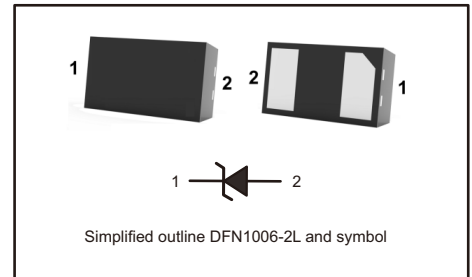
Transient Voltage Suppressors for ESD Protection

General Description

The ESD24V0DS2A is designed to protect voltage sensitive components that require ultra-low capacitance from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium.

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



FEATURES

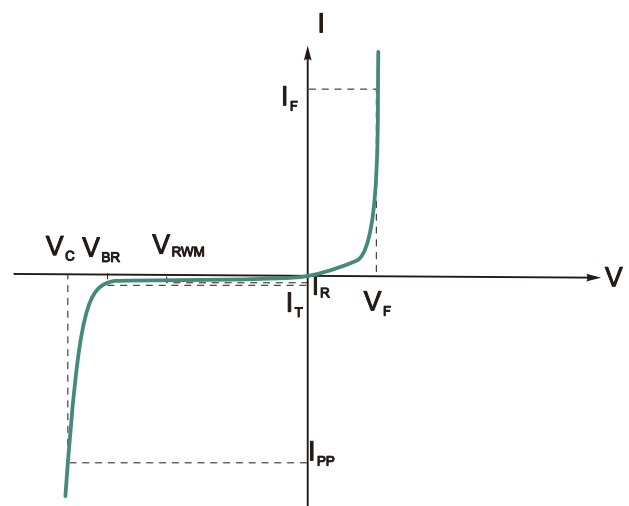
- Working voltages: 24V Max.
- Transient protection for each line according to IEC61000-4-2(ESD): ±25kV (air) ±20kV (contact)
IEC61000-4-5(Lightning): 5A (8/20µs)
- Ultra-low capacitance: $C_j = 25\text{pF typ.}$

Applications

- Computers and peripherals;
- Audio and video equipment;
- Communication systems;
- Portable electronics.

Electronics Parameter

Parameter	Symbol
Maximum Reverse Peak Pulse Current	I_{PP}
Clamping Voltage @ I_{PP}	V_C
Peak Reverse Working Voltage	V_{RWM}
Reverse Leakage Current @ V_{RWM}	I_R
Breakdown Voltage @ I_T	V_{BR}
Test Current	I_T
Forward Current	I_F
Forward Voltage @ I_F	V_F





MAXIMUM RATINGS(Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μS)	Ppk	250	W
Peak Pulse Current	Ipp	5	A
ESD per IEC 61000-4-2(Air)	VESD	±25	KV
ESD per IEC 61000-4-2(Contact)		±20	
Operating Temperature Range	TJ	-40~+125	°C
Storage Temperature Range	Tstg	-55~+150	°C

ELECTRICAL CHARACTERISTICS(Ta=25°C unless otherwise noted)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse Stand-off Voltage	VRWM				24	V
Breakdown Voltage	VBR	IT=1mA	26			V
Reverse Leakage Current	IR	VR=VRWM			0.3	μA
Clamping Voltage	VC	IPP=1A, tp=8/20μs		37	40	V
		IPP=5A, tp=8/20μs		50	55	V
Junction Capacitance	Cj	VR=0V, f=1MHz		25	35	pF



Fig 1. Junction Capacitance

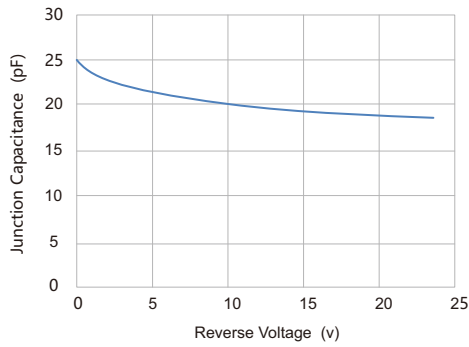


Fig.2 Clamping Voltage vs. Peak Pulse Current

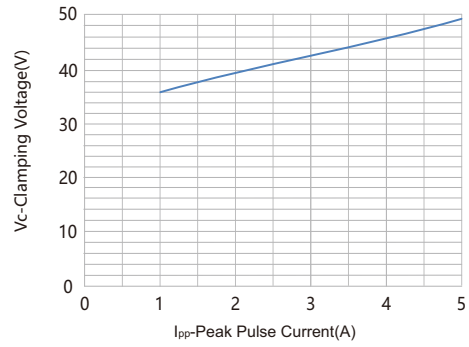


Fig.3 Peak Pulse Power vs. Pulse Time

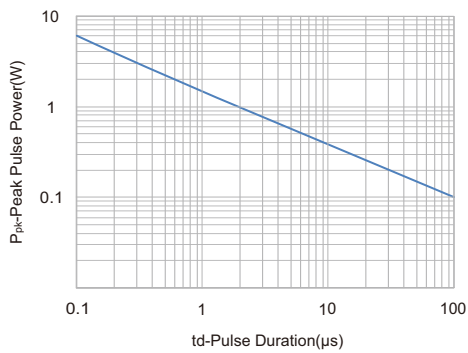


Fig.4 IEC61000-4-2 Pulse Waveform

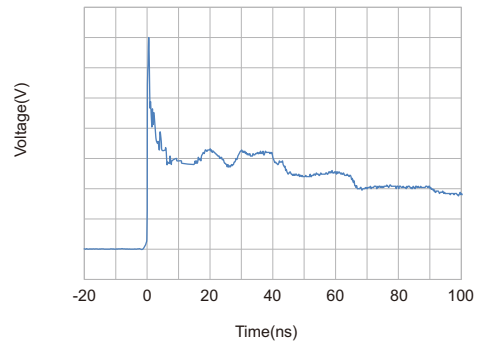


Fig 5. Power Derating Curve

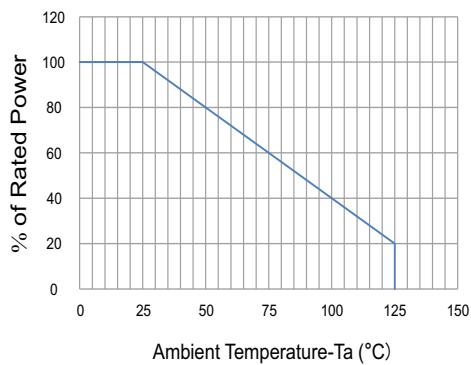
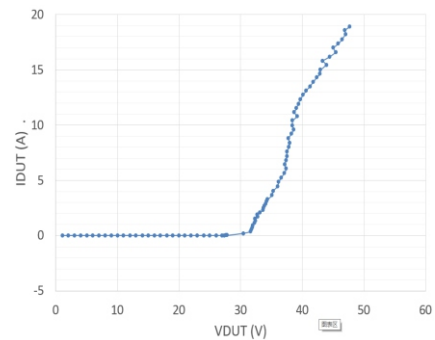
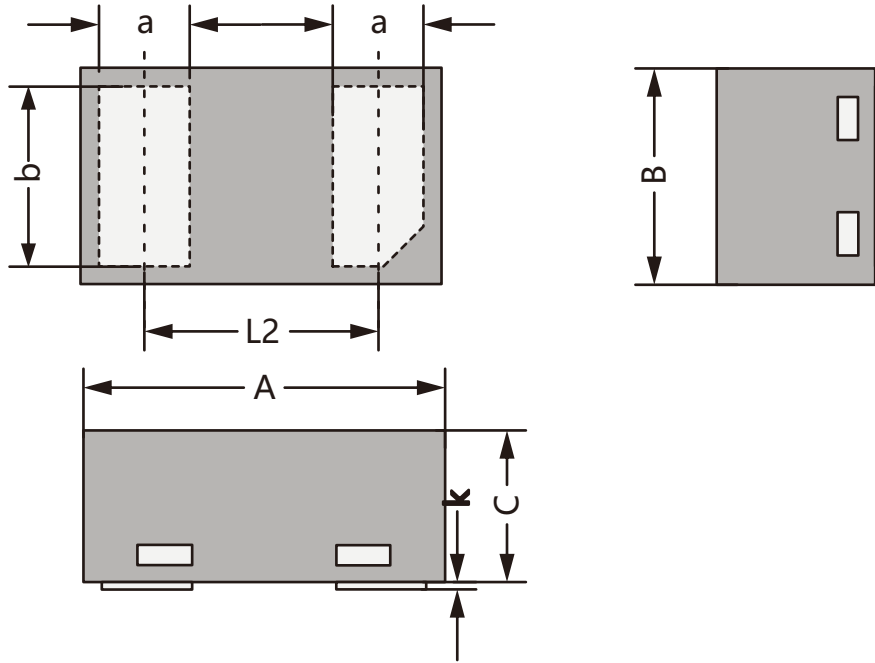


Fig.6 TLP Pulse Waveform





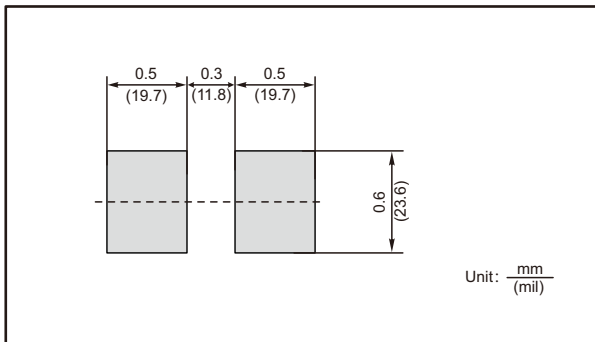
DFN1006-2L Package Outline Dimensions



DFN1006-2L mechanical data

UNIT		A	B	C	L2	a	b	k
mm	max	1.05	0.65	0.55	0.65 REF	0.29	0.54	0.03
	min	0.95	0.55	0.45		0.21	0.46	0.00
mil	max	41.34	25.59	21.65	25.59 REF	11.42	21.26	1.18
	min	37.40	21.65	17.72		8.27	18.11	0.00

The recommended mounting pad size



Marking

Type number	Marking code
ESD24V0DS2A	4P



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