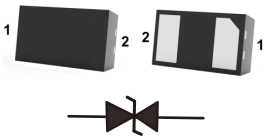
Transient Voltage Suppressors for ESD Protection



Top View

Simplified outline DFN1006-2L and symbol

Automotive Grade

FEATURES

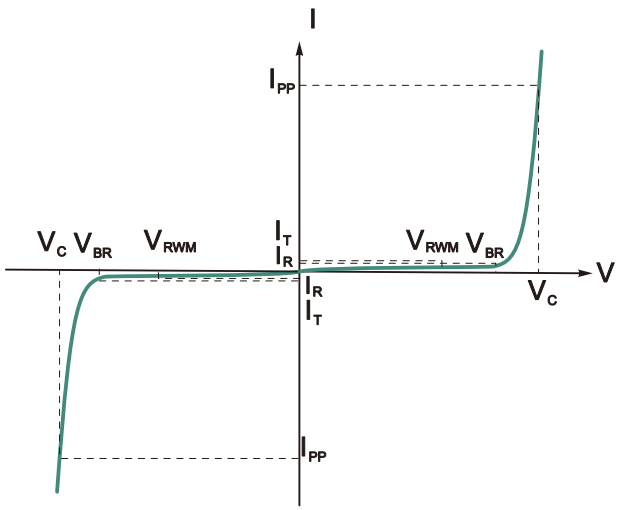
- Stand-off voltage: ±4.5V Max.
- Transient protection for each line according to
  IEC61000-4-2(ESD): ±30kV (contact)
  IEC61000-4-4 (EFT): 40A (5/50ns)
  IEC61000-4-5(surge): 40A (8/20μs)
- Ultra-low capacitance: CJ = 65pF typ.
- Low leakage current
- Solid-state silicon technology
- HF Product
- Qualified to AEC-Q101 Standards for High Reliability

Applications

- Cellular handsets
- Tablets
- Laptops
- Other portable devices
- Network communication devices

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 Viltage @ I_T	V_{BR}
Test Current	I_T



MAXIMUM RATINGS(Ta=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μS)	Ppk	400	W
Peak Pulse Current	Ipp	40	A
ESD per IEC 61000-4-2 (Air)	VESD	±30	KV
ESD per IEC 61000-4-2 (Contact)		±30	
Operating Temperature Range	TJ	-55~ +125	°C
Storage Temperature Range	Tstg	-55~ +150	°C

ELECTRICAL CHARACTERISTICS(Ta=25℃ unless otherwise noted)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse stand-off voltage	VRWM				4.5	V
Breakdown Voltage	VBR	IT=1mA	4.6			V
Reverse Leakage Current	IR	V=VRWM，Ta=25°C			1	uA
Clamping Voltage	VC	IPP=1A，tp=8/20us		4.9	6	V
		IPP=20A，tp=8/20us		6.5	8	
		IPP=40A，tp=8/20us		9	10	
Junction Capacitance	Cj	VR=0V，f=1MHz		65	75	pF

Fig.1 Pulse Waveform

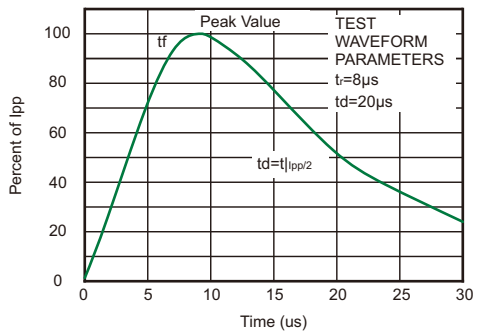
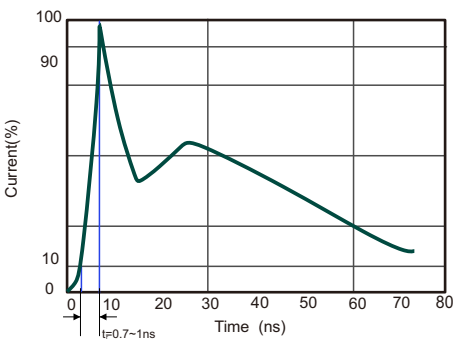
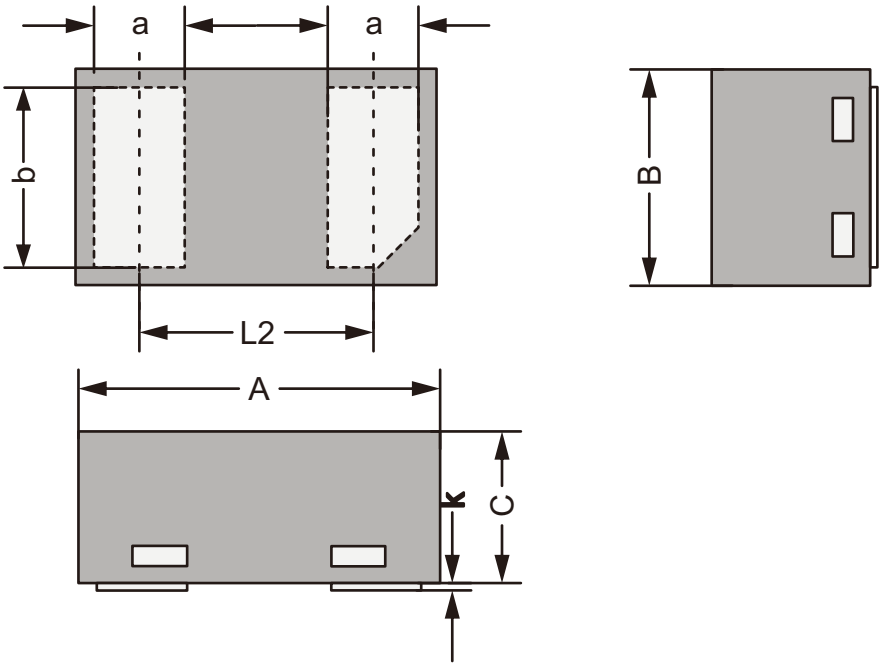


Fig.2 Contact discharge current waveform per IEC61000-4-2



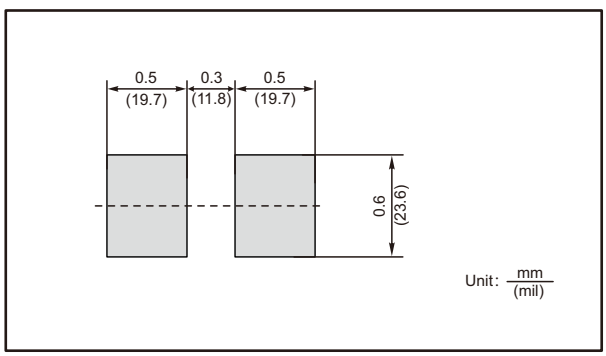
DFN1006-2L Package Outline Dimensions



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	55.12
	min	37.40	21.65	17.72		8.27	18.11	1.18

The recommended mounting pad size



Marking

Type number	Marking code
ESDB4V5DS2A	4G

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