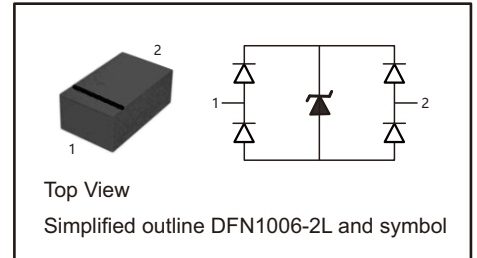




Transient Voltage Suppressors for ESD Protection

General Description

The ESDZULC5V0DS2A is designed to protect voltage sensitive components that require ultra-low capacitance from ESD and transient voltage events. Excellent clamping capability, low capacitance, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium. Because of its low capacitance, it is suited for use in high frequency designs such as USB 2.0 high speed and antenna line applications



FEATURES

- Stand-off voltage: 5V Max.
- Transient protection for each line according to IEC61000-4-2(ESD): $\pm 20\text{kV}$ (contact) $\pm 20\text{kV}$ (air)
- Ultra-low capacitance: $C_J = 0.2\text{pF}$ typ.
- Low leakage current

Applications

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

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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	P_{PK}	56	W
Peak Pulse Current	I_{pp}	4	A
ESD per IEC 61000-4-2(Air)	V_{ESD}	± 20	KV
ESD per IEC 61000-4-2(Contact)		± 20	
Operating Temperature Range	T_J	125	°C
Storage Temperature Range	T_{stg}	-55~+150	°C



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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse Stand-off Voltage	V_{RWM}				5	V
Breakdown Voltage ⁽¹⁾	V_{BR}	$I_T=1mA$	6			V
Reverse Leakage Current	I_R	$V_{RWM}=5V$			100	nA
Clamping Voltage ⁽²⁾	V_{CL}	$I_{PP}=1A, t_p=8/20\mu s$			10	V
		$I_{PP}=4A, t_p=8/20\mu s$			14	V
Junction Capacitance	C_J	$V_R=0V, f=1MHz$		0.2	0.4	pF

Fig 1.Clamping voltage vs.Peak pulse current

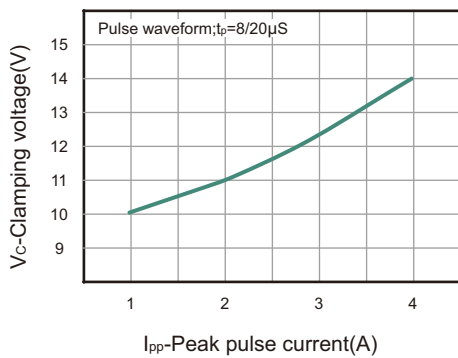
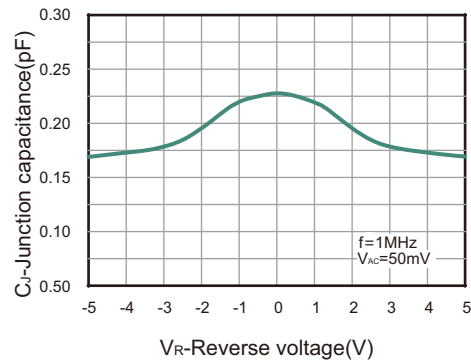
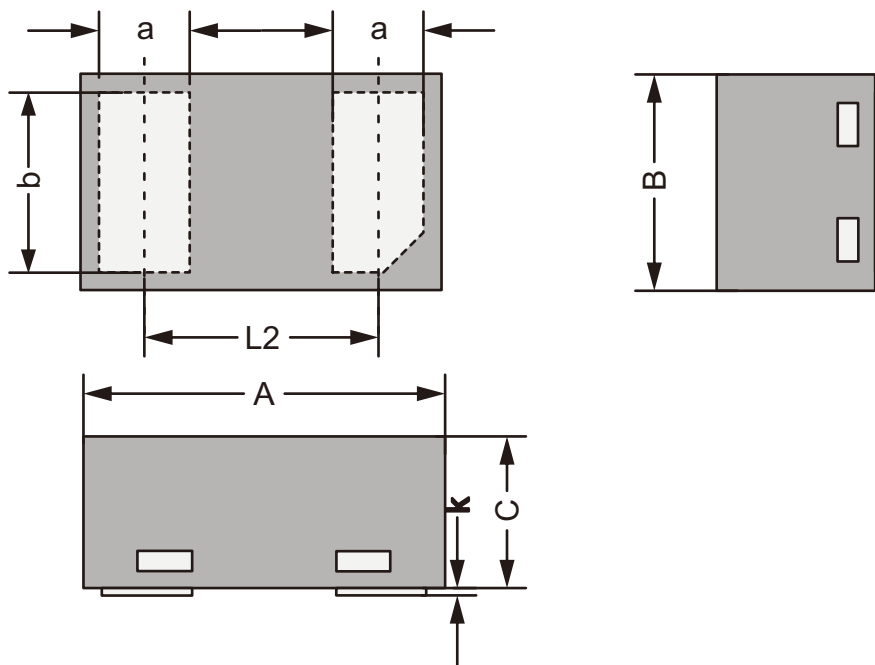


Fig 2.Capacitance vs.Reverse voltage





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

Marking

Type number	Marking code
ESDZULC5V0DS2A	5U



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