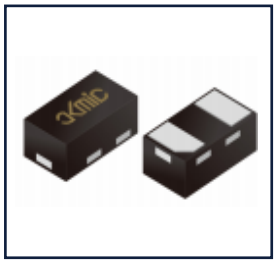
DFN1006-2L 1-Line Bidirectional ESD Protection Diode

General description

Low capacitance bidirectional ElectroStatic Discharge (ESD) protection diode in a DFN1006(SOD882) leadless ultra small Surface-Mounted Device (SMD) plastic package designed to protect one signal line from the damage caused by ESD and other transients.

Features and benefits

- Bidirectional ESD protection of one line
- Femtofarad capacitance: Cj = 15pF (Typ)
- Low clamping voltage VC = 10 V@5A
- Low leakage current: nA Level
- ESD protection up to 30 kV
- IEC 61000-4-2; level 4 (ESD)
- IEC 61000-4-5 (surge); IPPM =5A



DFN1006-2L

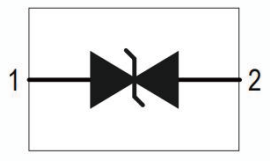
Application information

- Portable electronics
- Computers and peripherals
- Audio and video equipment
- Cellular handsets and accessories
- Communication systems
- Power supplies

Ordering information

Device	Package	Reel Size	Qty(PCS)
PESD5V0V1BL	DFN1006-2L	7 Inch	10000

Ordering information

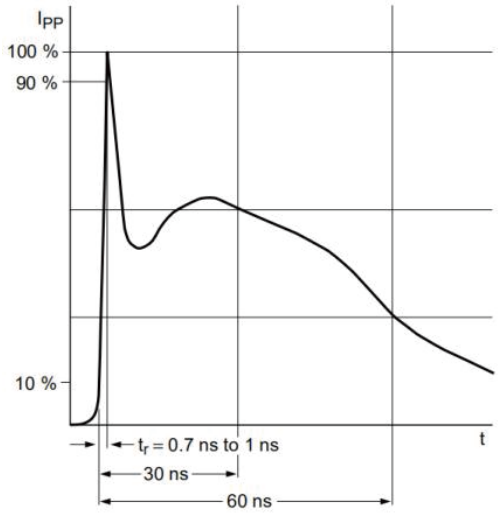
Marking	Graphic symbol
PB 5C	

Maximum Ratings (T_A = 25 °C, unless otherwise specified)

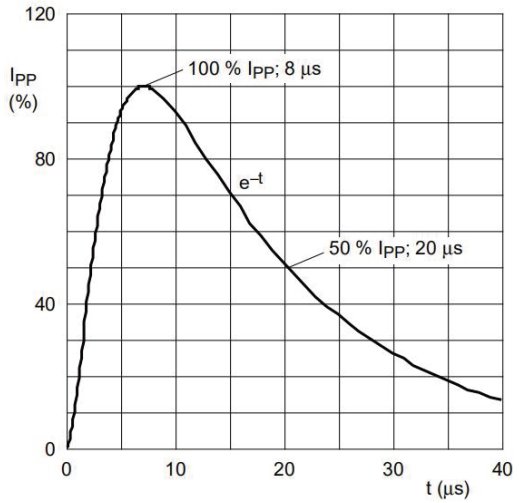
Parameter	Symbol	Value	Unit
Peak Pulse Power (tp = 8/20μs)	P_{PPM}	90	W
Peak Pulse Current(tp = 8/20μs)	I_{PPM}	5	A
Maximum lead temperature for soldering during 10s	T_L	260	°C
Storage Temperature Range	T_{stg}	-55 to +150	°C
Operating Temperature Range	T_{OP}	-40 to +125	°C
Maximum junction temperature	T_j	150	°C
ESD voltage IEC 61000-4-2 (air discharge)	V_{ESD}	30	kV
ESD voltage IEC 61000-4-2 (contact discharge)	V_{ESD}	30	kV

Electrical Characteristics (T_A = 25 °C, unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Condition
Reverse Working Voltage	V_{RWM}	--	--	5.0	V	
Breakdown Voltage	V_{BR}	5.8	--	8.2	V	I_T=1mA
Leakage Current ILeak	I_R	--	--	100	nA	V_{RWM}=5V
Clamping Voltage	V_C	--	--	10.0	V	I_{PP}=5A,Tp=8/20μs
Junction Capacitance	C_J	--	15	20	pF	V_R=0V, f=1MHz

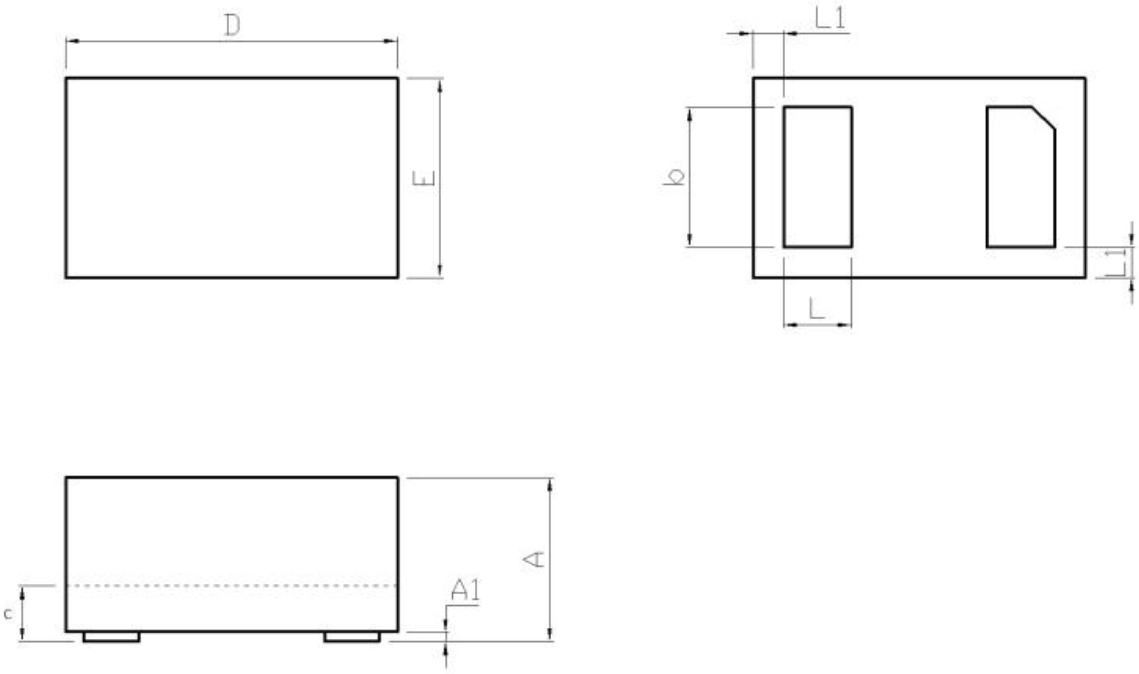


IEC61000−4−2 Waveform



IEC 61000-4-5 Waveform(8/20μs pulse)

DFN1006-2L Package Outline Dimensions



DFN1006-2L (mm)			
DIM	MIN	TYP.	MAX
A	0.40	0.50	0.55
A1	0	0.02	0.05
b	0.45	0.5	0.55
c	0.1	0.15	0.18
D	0.95	1.00	1.05
E	0.55	0.60	0.65
L	0.20	0.25	0.30
L1	0.035	0.05	0.065