



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: $C_j = 65\text{pF}$ (Typ)
- Low clamping voltage $V_C = 9.0\text{ V}@30\text{A}$ (Typ)
- Low leakage current: nA Level
- ESD protection up to 30 kV
- IEC 61000-4-2; level 4 (ESD)
- IEC 61000-4-5 (surge); $I_{PPM} = 30\text{ A}$

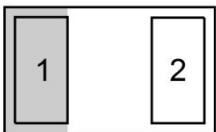
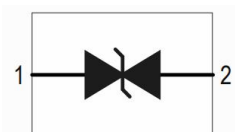
Application information

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

Ordering information

Device	Package	Packaging
SLESD8B5.0C	DFN1006-2L	10000/Tape & Reel

Schematic & Pin configuration

Simplified outline	Graphic symbol
	

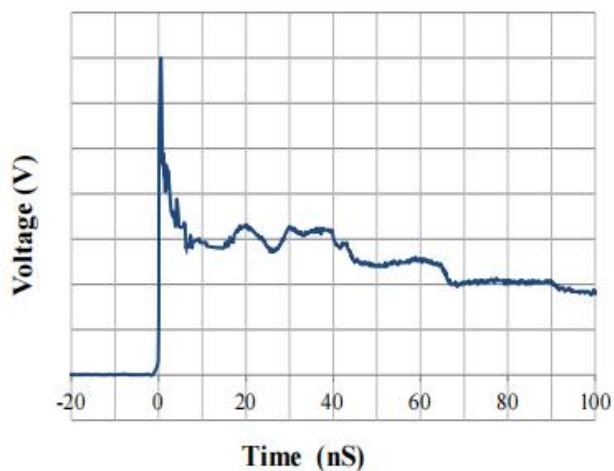
Maximum Ratings ($T_A = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power ($T_p = 8/20\text{ }\mu\text{s}$)	P_{PPM}	300	W
Rated Peak Pulse Current ($T_p = 8/20\text{ }\mu\text{s}$)	I_{PPM}	30	A
Maximum lead temperature for soldering during 10s	T_L	260	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^{\circ}\text{C}$
Operating Temperature Range	T_{OP}	-40 to +125	$^{\circ}\text{C}$
ESD voltage IEC 61000-4-2 (air discharge)	V_{ESD}	30	kV
ESD voltage IEC 61000-4-2 (contact discharge)	V_{ESD}	30	kV

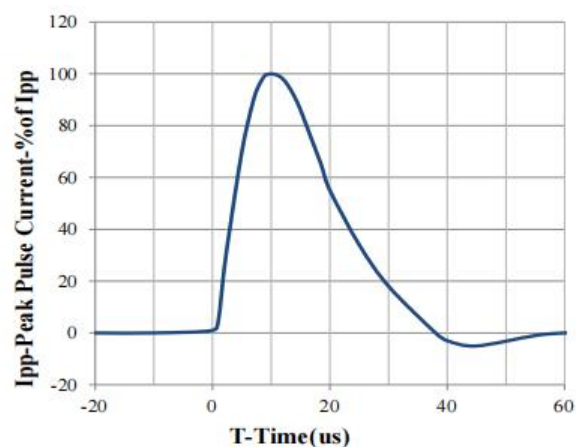
Electrical Characteristics ($T_A = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Condition
Reverse Working Voltage	V_{RWM}	--	--	5.0	V	
Breakdown Voltage	V_{BR}	5.6	--	7.0	V	$I_T = 1\text{mA}$
Leakage Current I_{Leak}	I_R	--	--	100	nA	$V_{RWM} = 5\text{V}$
Clamping Voltage	V_C	--	6.5	7.0	V	$I_{pp} = 10\text{A}, T_p = 8/20\mu\text{s}$
Clamping Voltage	V_C	--	9	10	V	$I_{pp} = 30\text{A}, T_p = 8/20\mu\text{s}$
Junction Capacitance	C_j	--	65	80	pF	$V_R = 0\text{V}, f = 1\text{MHz}$

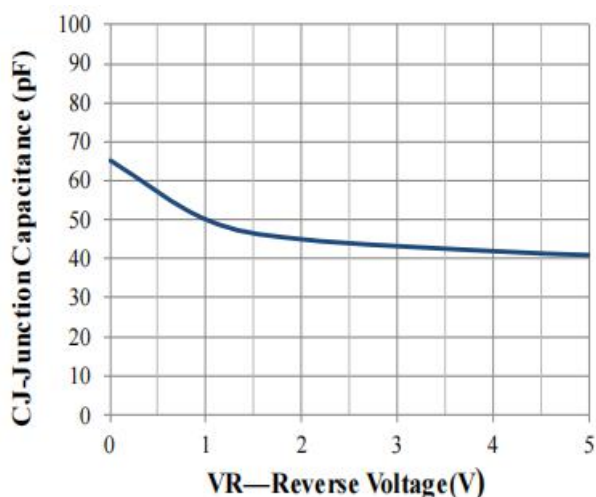
Typical Performance Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise Specified)



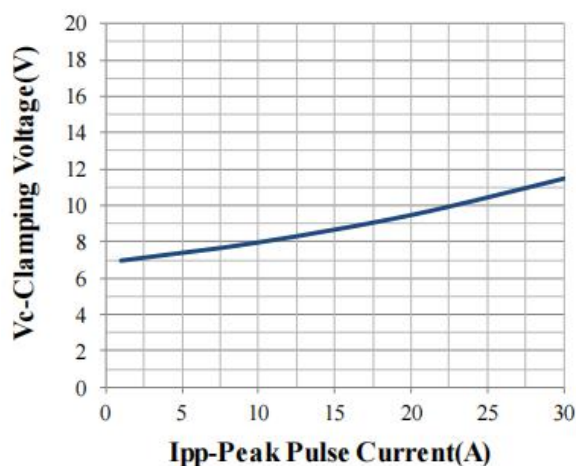
IEC61000-4-2 Pulse Waveform



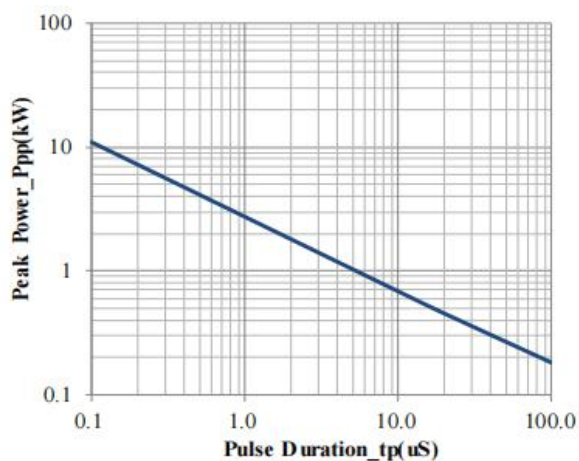
8 X 20us Pulse Waveform



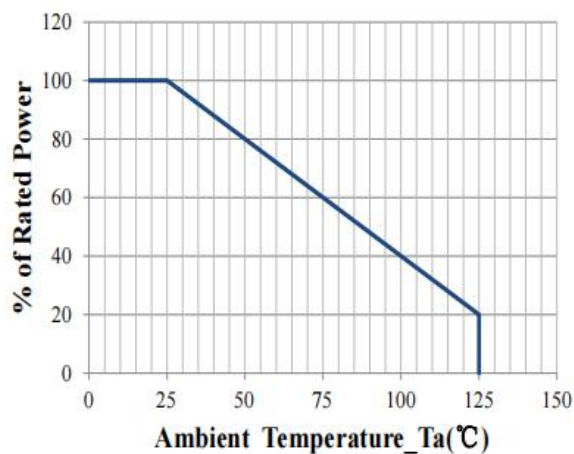
Junction Capacitance vs. Reverse Voltage



Clamping Voltage vs. Peak Pulse Current



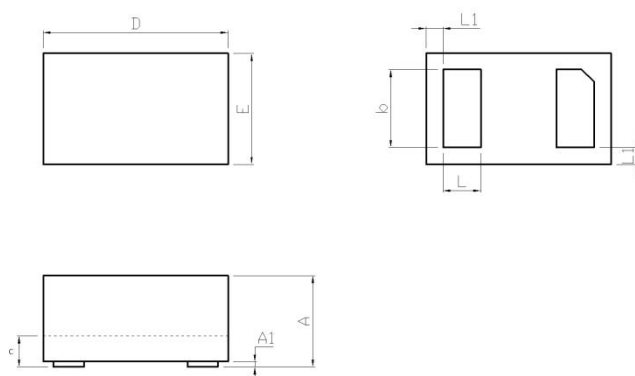
Peak Pulse Power vs. Pulse Time



Power Derating Curve

Package Outline Dimensions

DFN1006-2L



DFN1006-2L (mm)		
Dim	Min	Max
A	0.35	0.55
A1	0	0.05
b	0.40	0.60
D	0.95	1.08
E	0.55	0.68
L	0.20	0.30
L1	0.035	0.065