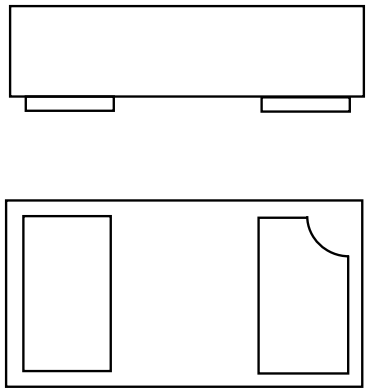
ESD5471X

DFN1006-2L package

Feature

- 100W peak pulse power per line (t_P = 8/20μs)
- DFN1006-2L package
- Replacement for MLV(0402)
- Bidirectional configurations
- Response time is typically < 1ns
- Low clamping voltage
- RoHS compliant
- Transient protection for data lines to
  IEC61000-4-2(ESD) ±15KV(air), ±8KV(contact);
  IEC61000-4-4 (EFT) 40A (5/50ns)



■ **Simplified outline(DFN1006-2L)**

Mechanical Characteristics

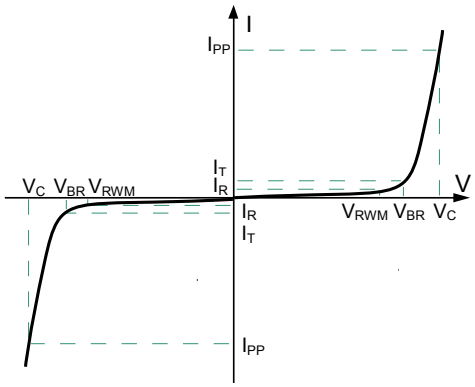
- Lead finish:100% matte Sn(Tin)
- Mounting position: Any
- Qualified max reflow temperature:260℃
- Device meets MSL 1 requirements
- Pure tin plating: 7 ~ 17 um
- Pin flatness:≤3mil

Applications

- Cellular phones
- Portable devices
- Digital cameras
- Power supplies

■ Electronics Parameter

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



■ Electrical characteristics per line@25℃ (unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Peak Reverse Working Voltage	V_{RWM}				5	V
Breakdown Voltage	V_{BR}	I_t = 1mA	5.6		8.5	V
Reverse Leakage Current	I_R	V_{RWM} = 5V T=25℃			1.0	μA
Maximum Reverse Peak Pulse Current	I_{PP}			5.5		A
Clamping Voltage	V_C	I_{PP}=1A			10	V
Clamping Voltage	V_C	I_{PP}=3A			15	V
Clamping Voltage	V_C	I_{PP}=5A			21	V
Junction Capacitance	C_j	V_R=0V f = 1MHz		0.3		pF

■ Absolute maximum rating@25℃

Rating	Symbol	Value	Units
Peak Pulse Power (t_p=8/20μs)	P_{pp}	100	W
Operating Temperature	T_J	-55 to +150	℃
Storage Temperature	T_{STG}	-55 to +150	℃

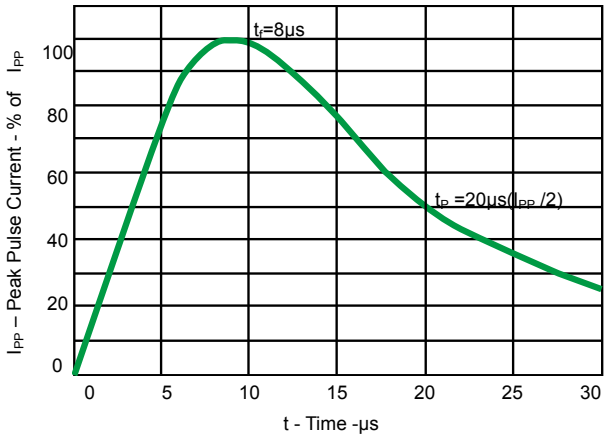


Fig 1.Pulse Waveform

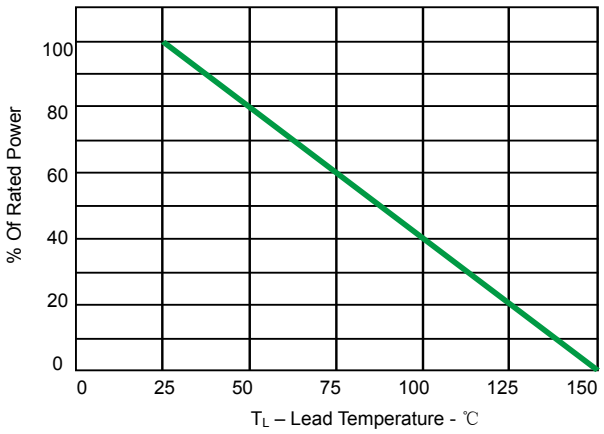


Fig 2.Power Derating Curve

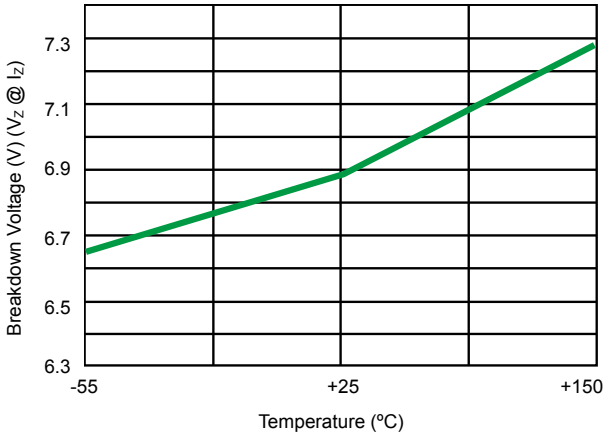


Fig 3.Typical Breakdown Voltage vs. Temperature

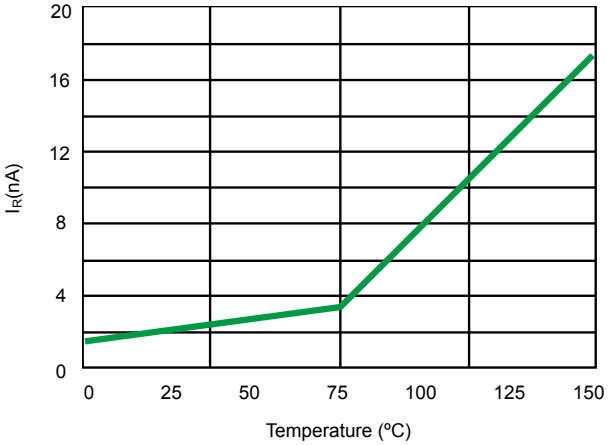


Fig 4.Typical Leakage Current vs. Temperature

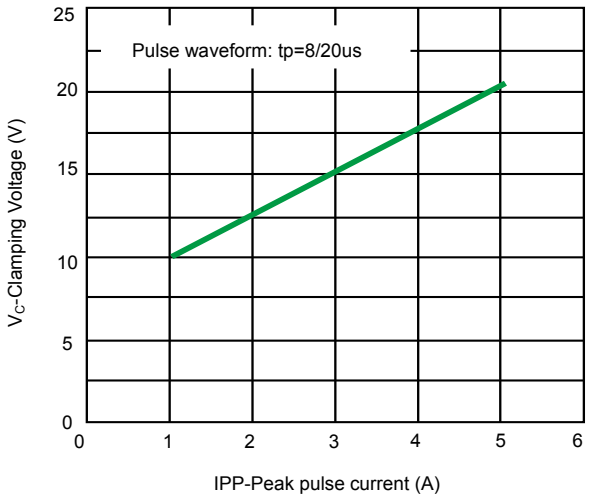


Fig 5. Clamping voltage vs. Peak pulse current

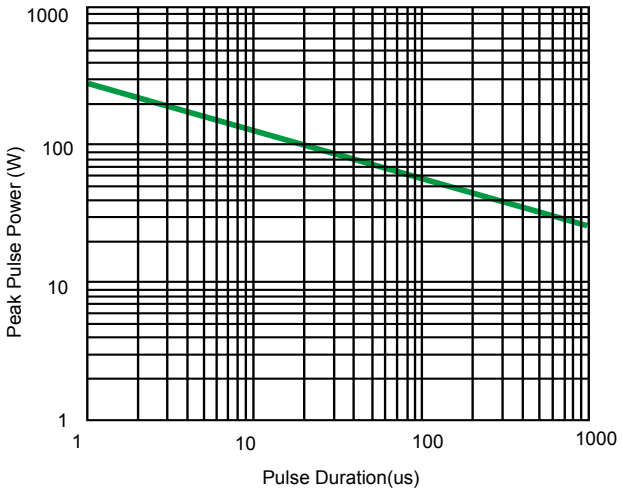
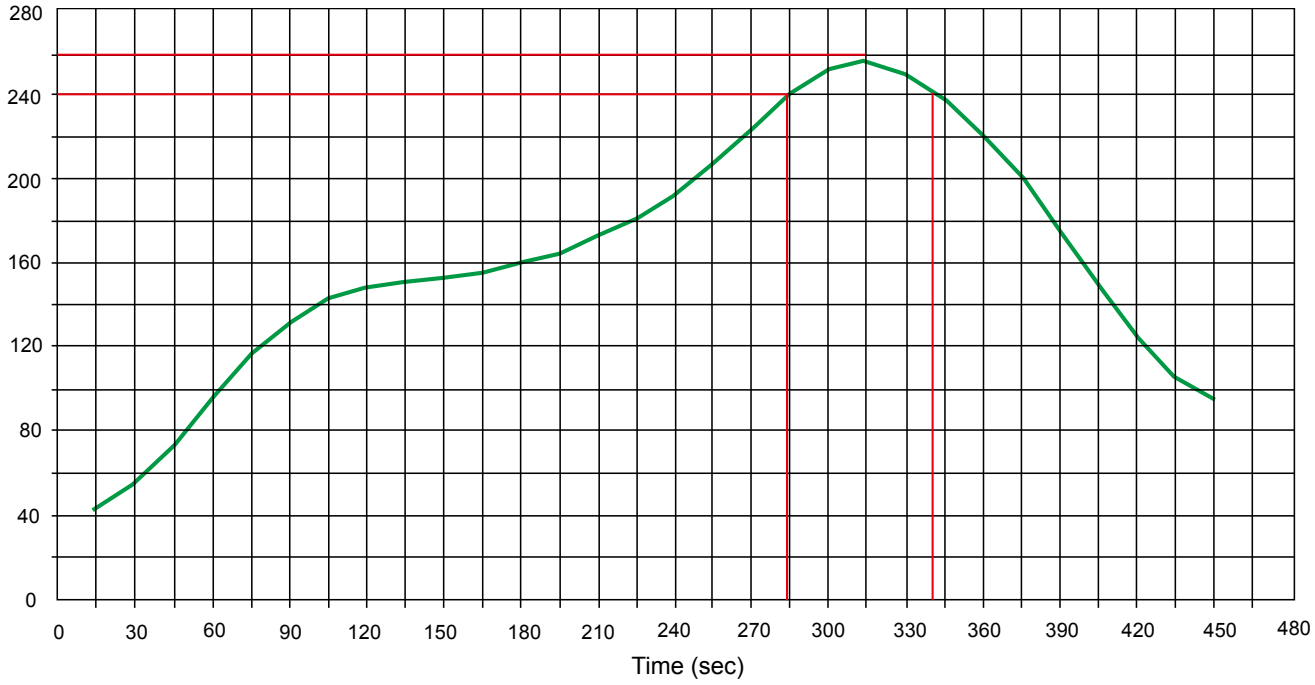


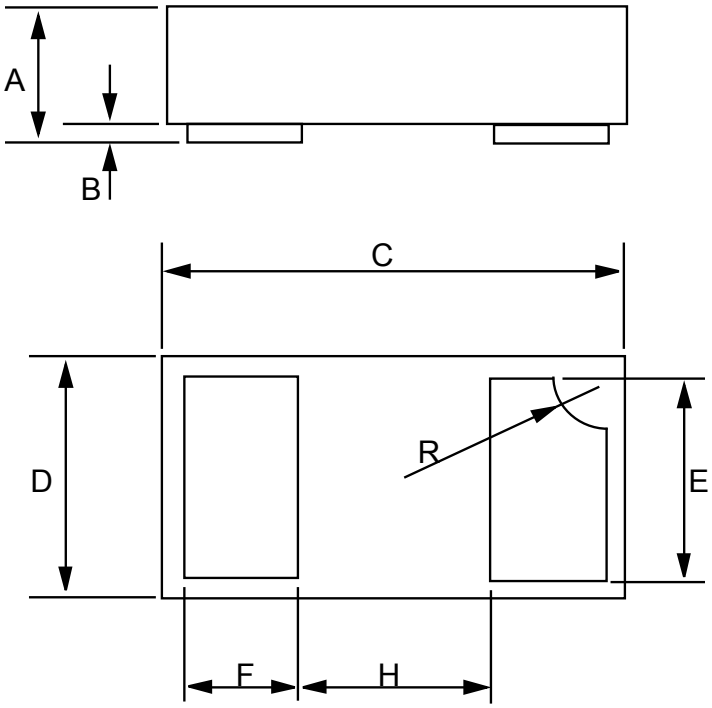
Fig 6. Non-Repetitive Peak Pulse Power vs. Pulse time

■ Solder Reflow Recommendation

Peak Temp=257℃, Ramp Rate=0.802deg. ℃/sec



Package Outline **DFN1006-2L**



Dim	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.013	0.015	0.34	0.40
B	0.000	0.002	0.00	0.05
C	0.037	0.042	0.95	1.075
D	0.021	0.026	0.55	0.675
E	0.017	0.021	0.45	0.55
F	0.007	0.011	0.20	0.30
H	0.015Typ.		0.40Tyo.	
R	0.001	0.005	0.05	0.15