



1. Features

- 2-pin lead-less package
- Junction capacitance (Max value: 6.5pF)
- Peak Pulse current (8/20μs) Max:8A
- IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- Low clamping voltage
- Low leakage current
- Working voltages:3.3V
- RoHS Compliant

2. Mechanical Data

- Case:Molded Plastic,DFN1006-2L.
- Epoxy:UL 94V-0 rate flame retardant.
- Terminals:Plated Leads Solderable per MIL-STD-750, Method-2026.
- Marking:3C
- Marking:marked on body.

DFN1006-2L



Bi-directional

3. Maximum Ratings

Electrical Characteristics Rating at 25°C ambient temperature unless otherwise specified.

Characteristic	Symbol	Value	Unit
Peak Pulse Power (tp=8/20μs waveform)	P_{PP}	40	W
Peak Pulse Current (8/20μs)	I_{PP}	3.5	A
ESD per IEC 61000-4-2 (Air)	V_{ESD}	±15	KV
ESD per IEC 61000-4-2 (Contact)		±8	
Junction Temperature	T_j	-55~+125	°C
Storage Temperature	T_{stg}	-55~+150	°C

4. Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Characteristics	Symbol	Condition	Min	TYP	Max	Unit
Reverse Working Voltage	V_{RWM}		-	-	3.3	V
Reverse Breakdown Voltage	V_{BR}	$I_R = 1\text{mA}$	4.3	-	8.5	V
Reverse Leakage Current	I_R	$V_R = 3.3\text{V}$	-	-	0.1	uA
Clamping voltage	V_C	$I_{PP} = 3.5\text{A}, T_P = 8/20\mu\text{s}$	-	-	12.5	V
Junction capacitance	C_J	$V_R = 0\text{V}, f = 1\text{MHz}$	-	5.7	6.5	pF



5. Rating And Characteristic Curves

FIG1: Power rating derating curve

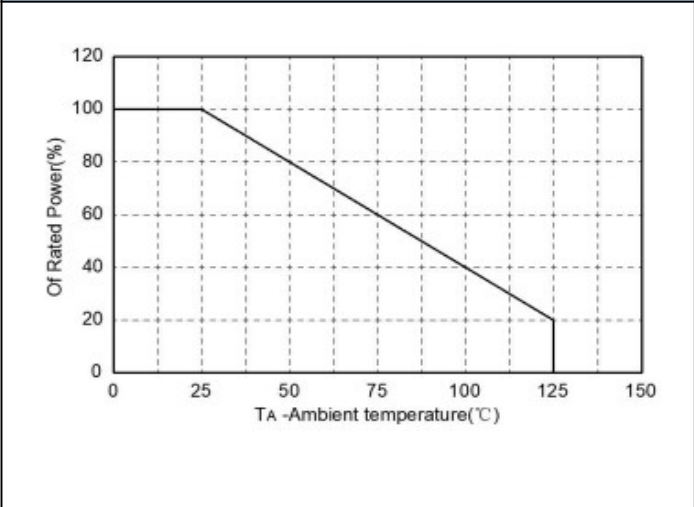


FIG2: pulse Waveform

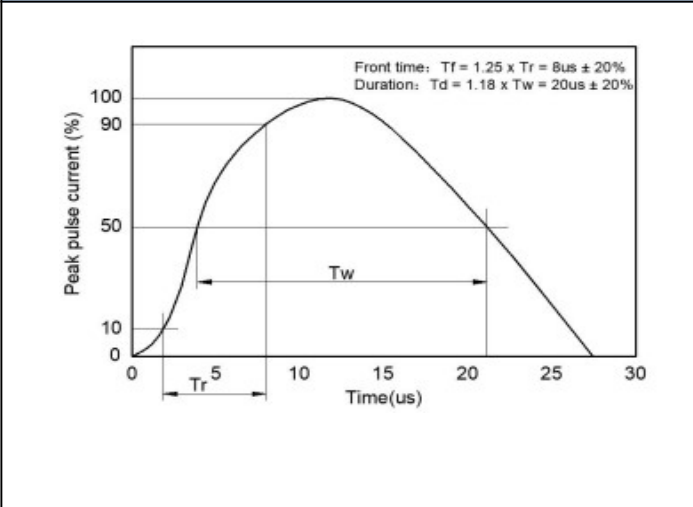


FIG3: Capacitance between

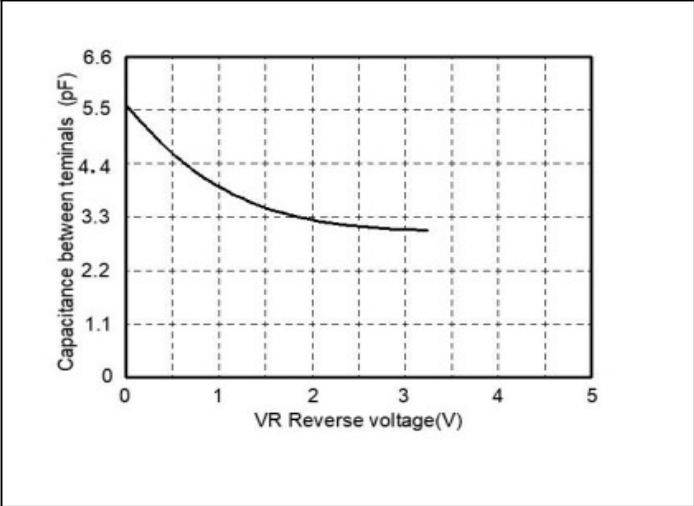
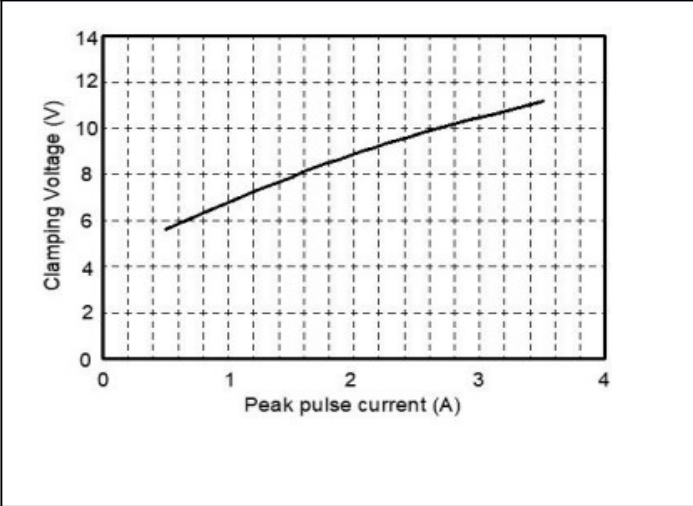
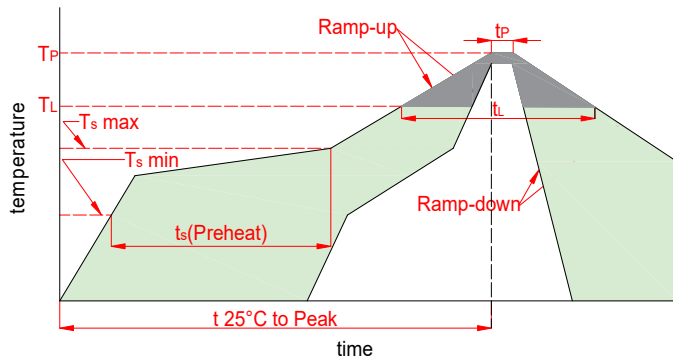


FIG4: Clamping Voltage vs. Peak Pulse Current



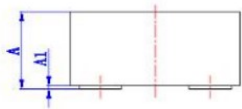
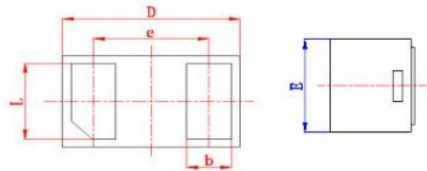


6. Soldering Parameters

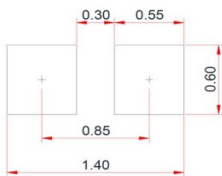


Reflow Condition		Lead-free
Pre Heat	Temp. min(T_s (min))	150℃
	Temp. max(T_s (min))	200℃
	Time(min to max)(t_s)	60~120s
Aver. ramp up rate(Liquidus Temp.)(T_L)to peak		3℃/s max
T_s (max) to T_L -Ramp-up Rate		3℃/s max
Reflow	Temp.(T_L)(Liquidus)	217℃
	Temp.(t_L)(Liquidus)	60~150s
Peak Temp.(T_P)		260 ^{+0/-5} ℃
Time within actual peak Temp.(t_p)		30s max
Ramp-down Rate		6℃/s max
Time 25℃ to peak Tempe.(T_P)		8 minutes max
Do not exceed		260℃

7. Dimensions



Mounting PAD Layout



Symbol	Inches		Millimeters	
	Min	Max	Min	Max
A	0.016	0.020	0.40	0.52
A1	0.000	0.002	0.00	0.05
D	0.035	0.043	0.90	1.10
E	0.022	0.026	0.55	0.65
e	0.026		0.65	
b	0.007	0.013	0.18	0.32
L	0.013	0.022	0.34	0.55

8. Part Numbering System

Part Marking System

Cathode Band



9. Package Information

Package	Part Number	Marking Code	Quantity(pcs)
DFN1006-2L	ESDLC3V301P1B	3C	3000



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