



Features

- Protects one I/O or Power Line
- Low Clamping Voltage
- Working Voltage: 3.3V
- Low Leakage Current
- Response Time is Typically < 1 ns

IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD) $\pm 30\text{kV}$ (air), $\pm 30\text{kV}$ (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 7A (8/20 μs)

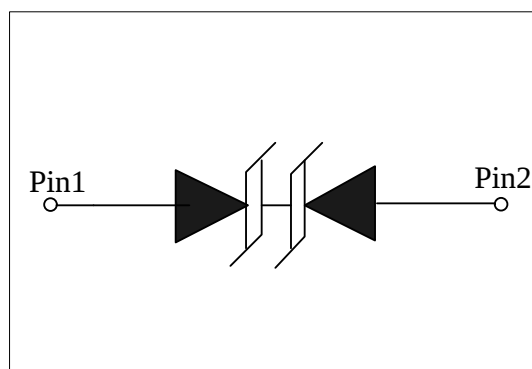
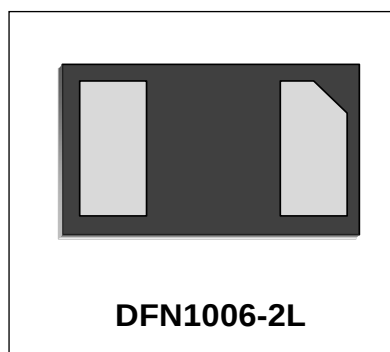
Mechanical Characteristics

- DFN1006-2L package
- Molding compound flammability rating:
UL 94V-0
- Marking : Marking Code
- RoHS Compliant

Applications

- Cellular Handsets & Accessories
- Personal Digital Assistants (PDAs)
- Notebooks & Handhelds
- Portable Instrumentation
- Digital Cameras
- MP3 Players

Schematic & PIN Configuration

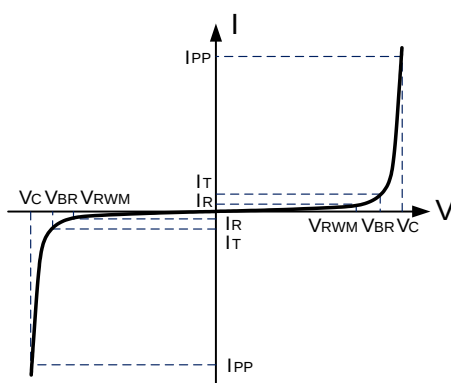


Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PP}	100	Watts
Peak Pulse Current ($t_p = 8/20\mu s$)	I_{PP}	7	A
Operating Temperature	T_J	-55 to + 125	°C
Storage Temperature	T_{STG}	-55 to +150	°C

Electrical Parameters (T=25°C)

Symbol	Parameter
I_{PP}	Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Reverse Stand-Off Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current



Electrical Characteristics

Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	V_{RWM}				3.3	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	3.7			V
Reverse Leakage Current	I_R	$V_{RWM}=3.3V, T=25^{\circ}C$			0.5	μA
Clamping Voltage	V_C	$I_{PP}=7A, t_p=8/20\mu s$		9	11	V
ESD Clamping Voltage ¹	V_C	$I_{PP} = 4A$ $t_p = 0.2/100ns$		6.5		V
ESD Clamping Voltage ¹	V_C	$I_{PP} = 16A$ $t_p = 0.2/100ns$		9.9		V
Dynamic Resistance ^{1,2}	R_{DYN}	TLP=0.2/100ns		0.28		Ω
Junction Capacitance	C_j	$V_R=0V, f=1MHz$		10		pF

Note: 1、TLP Setting : $t_p=100ns, t_r=0.2ns, I_{TLP}$ and V_{TLP} sample window: $t_1=70ns$ to $t_2=90ns$.

2、Dynamic resistance calculated from $I_{PP}=4A$ to $I_{PP}=16A$ using “Best Fit”

Typical Characteristics

Figure 1: Peak Pulse Power Vs Pulse Time

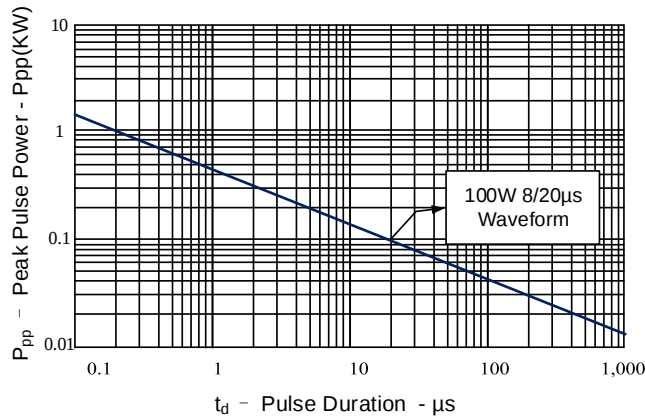


Figure 2: Power Derating Curve

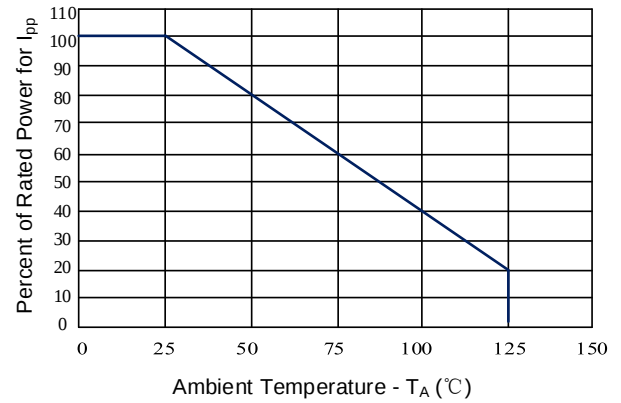


Figure 3: Clamping Voltage vs. Peak Pulse Current

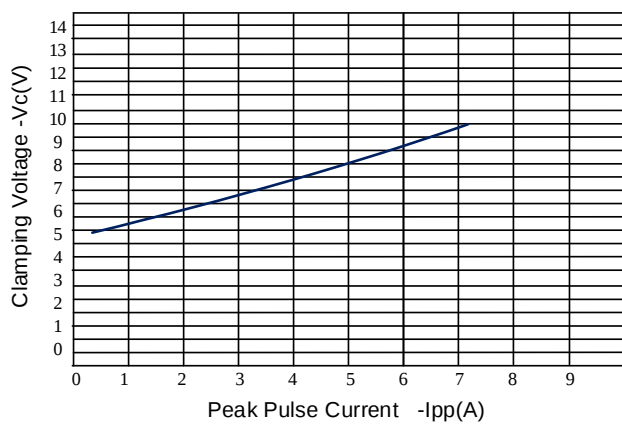


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

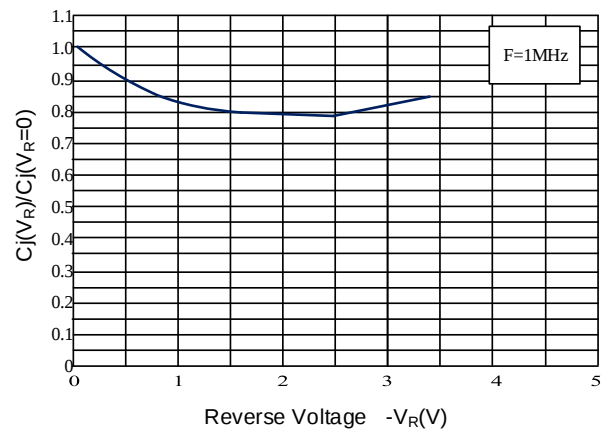


Figure 5: 8/20μs Pulse Waveform

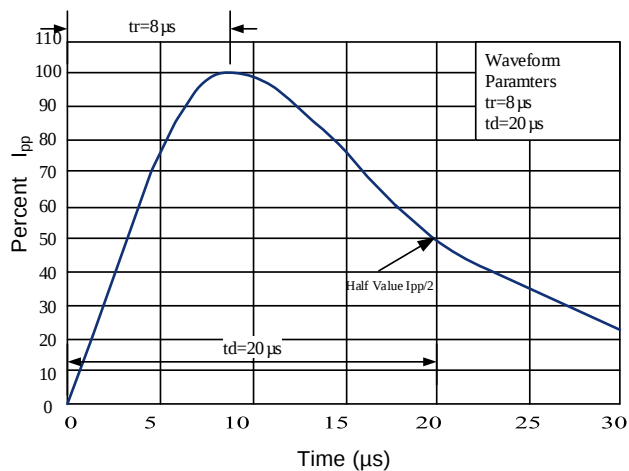
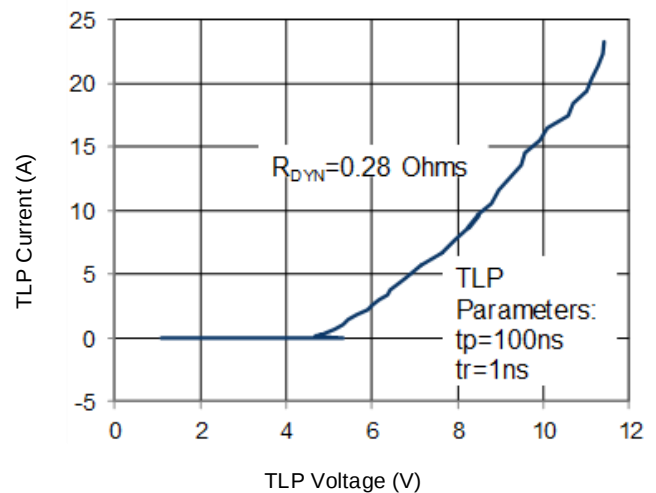
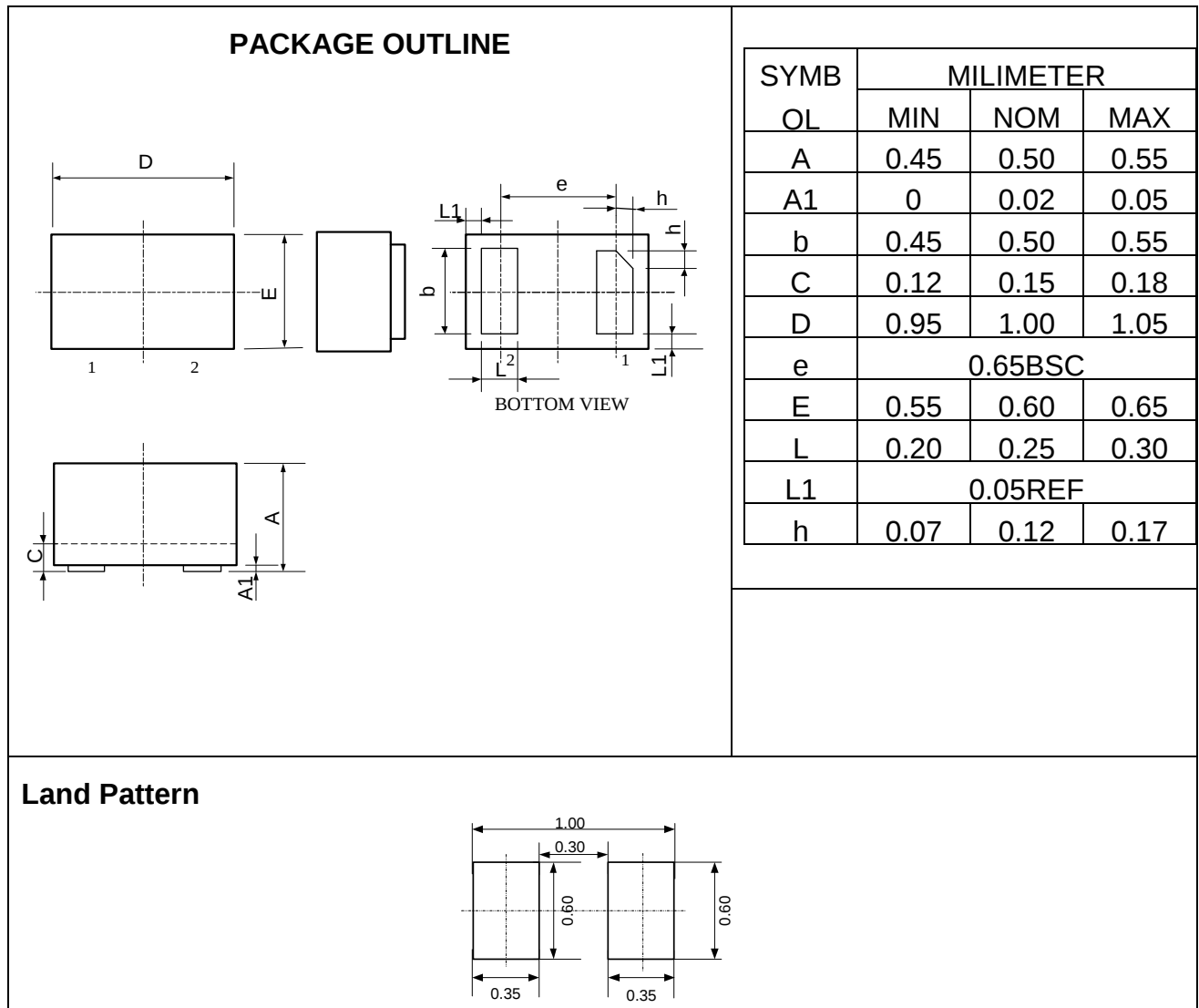


Figure 6: TLP I-V Curve



Outline Drawing –DFN1006-2L



Marking Codes

Part Number	E33DFB	Marking Code	3B
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Package Information

Qty: 10k/Reel

Revision History

NO.	Version	Date	Revision Item	Revision History	Confirm
1	1.0	2018-10-26	Released Version		