



Features

- Small Body Outline Dimensions:
0.063"x 0.040"(1.6 mm x 1.0 mm)
- Protects one I/O or power line
- Low Clamping Voltage
- Working Voltage: 5V
- 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) 100A (8/20 μs)

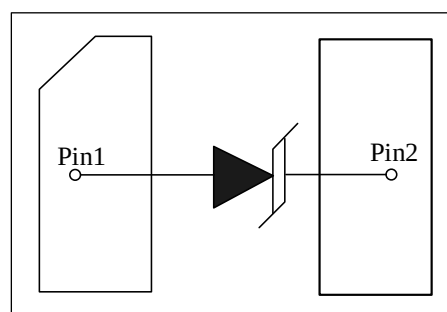
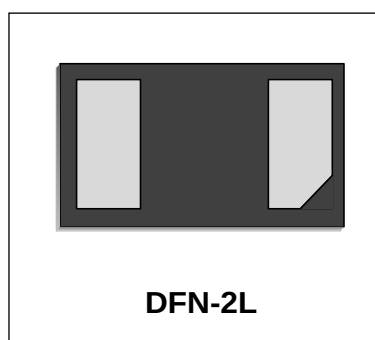
Mechanical Characteristics

- DFN-2L package
- Molding compound flammability rating:
UL 94V-0
- Marking: Marking Code
- Packaging: Tape and Reel per EIA 481
- RoHS Compliant

Applications

- Laptop Computers
- Cellular Phones
- Digital Cameras
- Personal Digital Assistants (PDAs)

Schematic & PIN Configuration

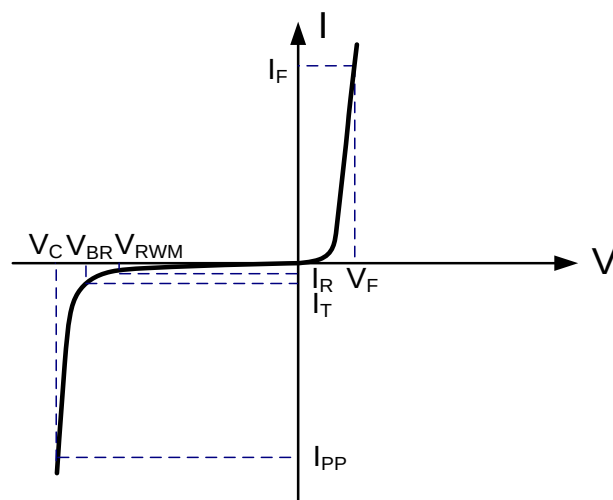


Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu s$)	P_{PP}	2000	Watts
Peak Forward Voltage ($I_F = 1A$, $t_p=8/20\mu s$)	V_{FP}	1.5	V
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
I_F	Forward Current
V_F	Forward Voltage @ I_F



Electrical Characteristics

Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	5.7		7	V
Reverse Leakage Current	I_R	$V_{RWM}=5V, T=25^{\circ}C$			500	nA
Peak Pulse Current	I_{PP}	$t_p=8/20\mu s$			100	A
Clamping Voltage	V_C	$I_{PP}=100A, t_p=8/20\mu s$		15	18	V
Junction Capacitance	C_j	$V_R=0V, f=1MHz$		700	850	pF

Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

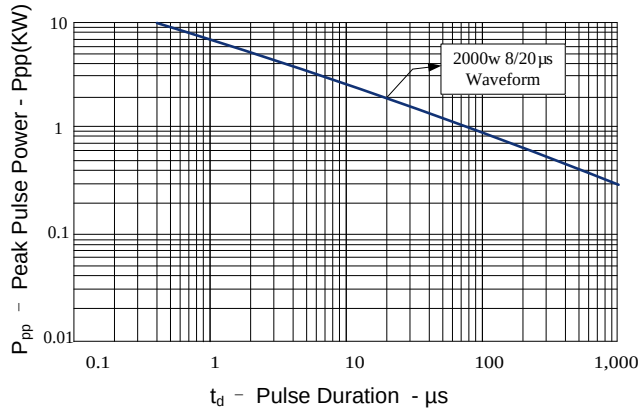


Figure 2: Power Derating Curve

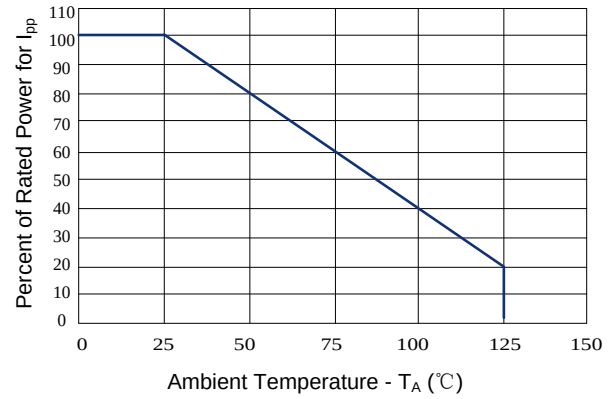


Figure 3: Clamping Voltage vs. Peak Pulse Current

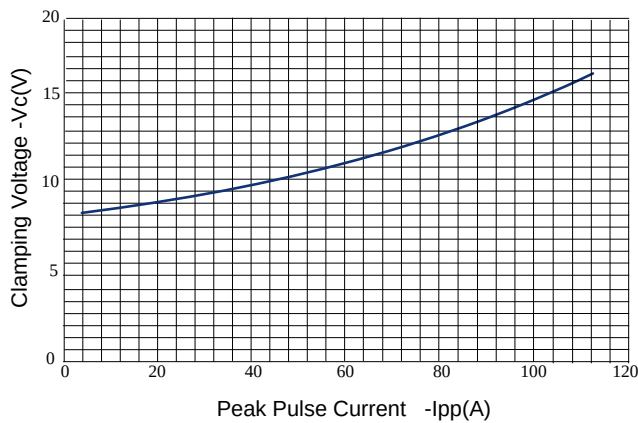


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

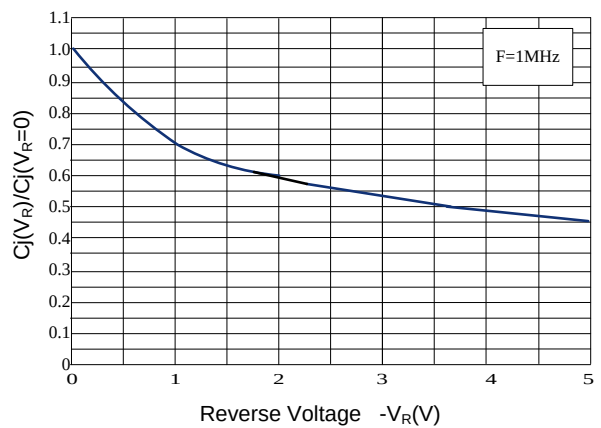
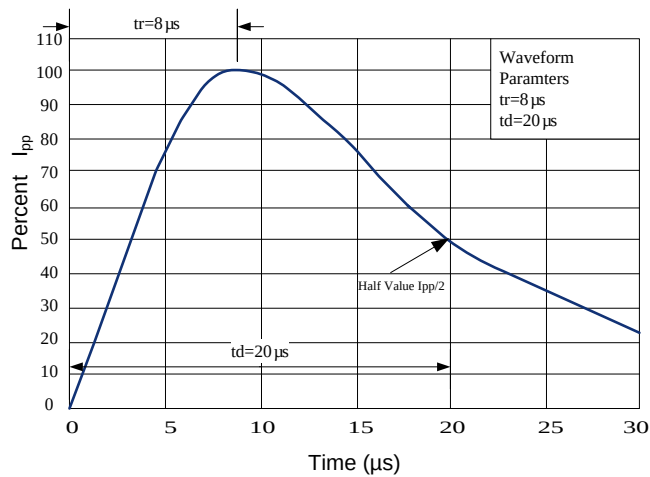
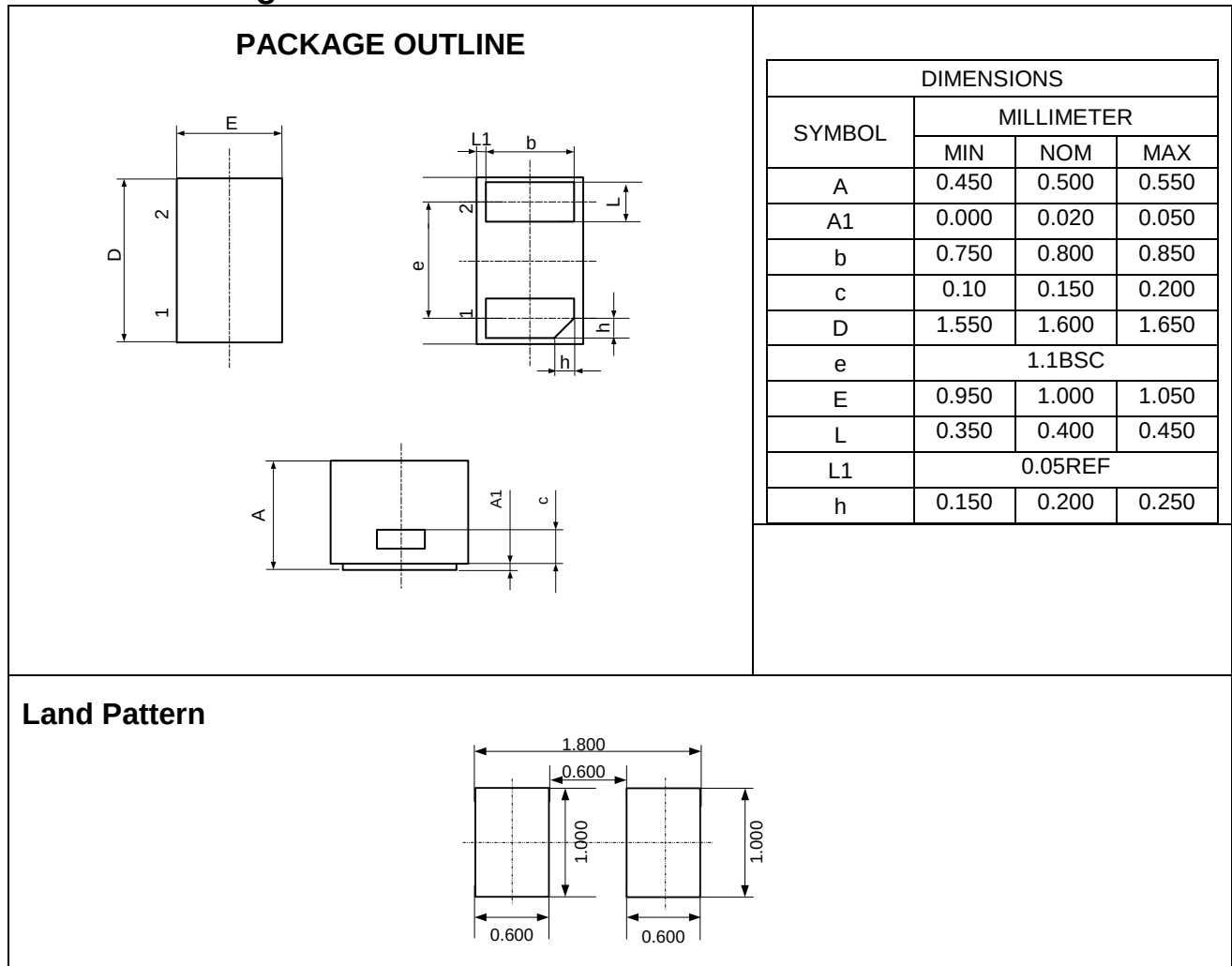


Figure 5: 8/20 μs Pulse Waveform



Outline Drawing –DFN-2L



Marking Codes

Part Number	Marking Code
ES05DP	Pin2 4.5P Pin1

Package Information

Qty: 3k/Reel

Revision History

No.	Version	Date	Revision Item	Request	Function and characteristic checking	Package dimension checking	Typos checking
1	1.0	2016-07	Released Version	Qi Shu Kun	Qi Shu Kun	Liu Jia Ying	Liu Jia Ying