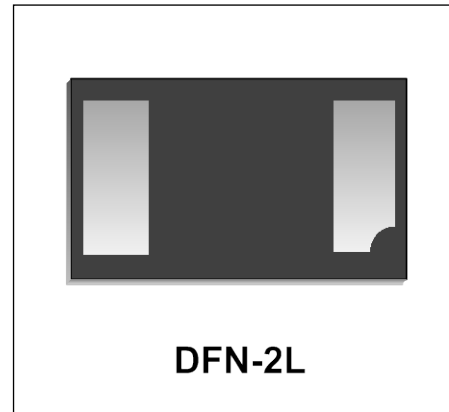


WSxxD01F1(-B) Series

Transient Voltage Suppressor

Features

- 500 Watts Peak Pulse Power per Line ($t_p = 8/20\mu s$)
- Replacement for MLV (0805)
- Unidirectional & Bidirectional Configurations
- Protects one I/O or power line
- Low Clamping Voltage
- Working Voltage: 3.3V, 5V, 12V, 15V and 24V
- Low Leakage Current
- Response Time is Typically < 1 ns



IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD) ± 15 kV (air), ± 8 kV (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 24A (8/20 μs)

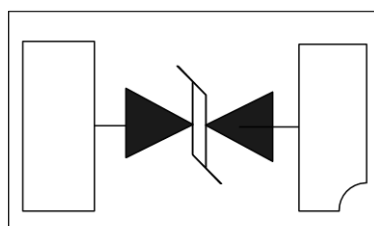
Mechanical Characteristics

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

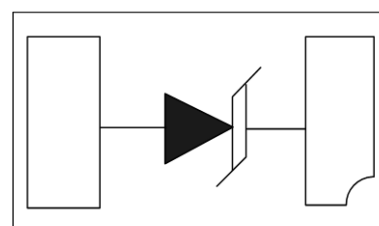
Applications

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

Schematic & PIN Configuration



Bidirectional

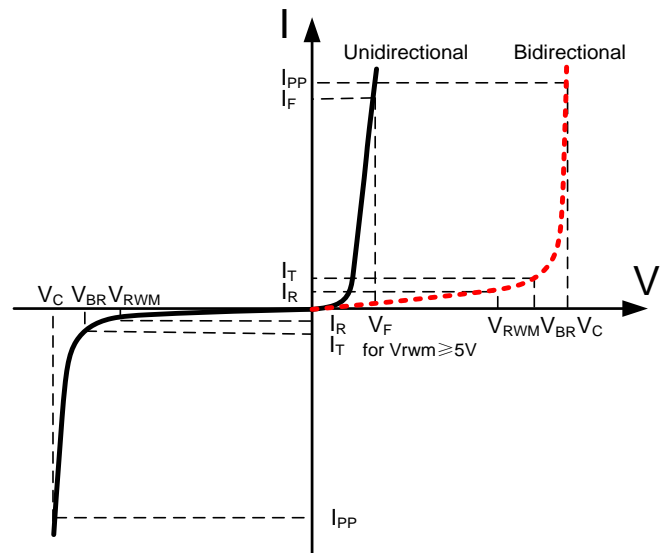


Unidirectional

Absolute Maximum Rating			
Rating	Symbol	Value	Units
Unidirectional Peak Pulse Power ($t_p = 8/20\mu s$)-See Figure 1	P_{PP}	500	Watts
Bidirectional Peak Pulse Power ($t_p = 8/20\mu s$)-See Figure 1	P_{pp}	400	Watts
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}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum 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

Part Number	Reverse Stand off Voltage V_{RWM} (Volts)	Minimum Breakdown Voltage $V_{BR}@1mA$ (Volts)	Maximum Clamping Voltage $V_C @I_{PP}$ (Volts)	Maximum Peak Pulse Current I_{pp} (Amps)	Maximum Reverse Leakage $I_R@V_{RWM}$ (μA)	Typical Capacitance DC=0V CJ@ 1 MHz (pF)
WS03D01F1	3.3	4.0	17	27	70	200
WS03D01F1-B	3.3	4.0	18	24	70	100
WS05D01F1	05	6.0	20	25	1	150
WS05D01F1-B	05	6.0	24	20	1	75
WS12D01F1	12	13.3	35	15	1	50
WS12D01F1-B	12	13.3	39	12	1	25
WS15D01F1	15	16.7	42	12	1	40
WS15D01F1-B	15	16.7	55	9	1	20
WS24D01F1	24	26.7	60	8	1	30
WS24D01F1-B	24	26.7	67	6	1	15

Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

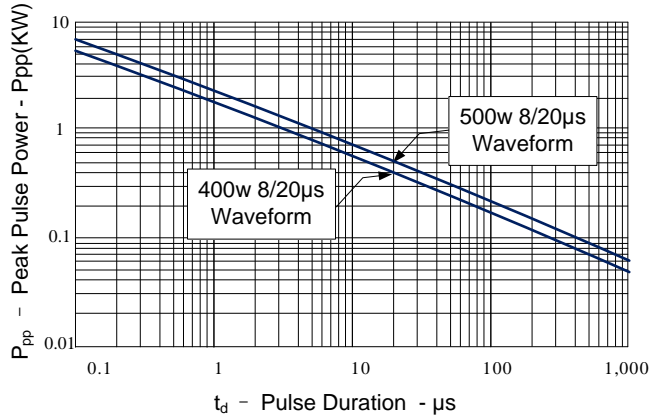


Figure 2: Power Derating Curve

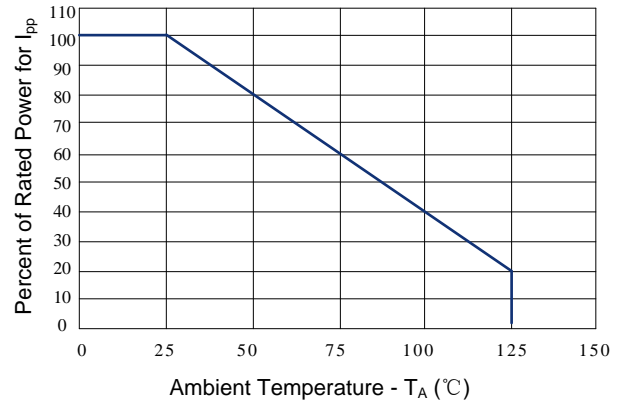


Figure 3: Pulse Waveform

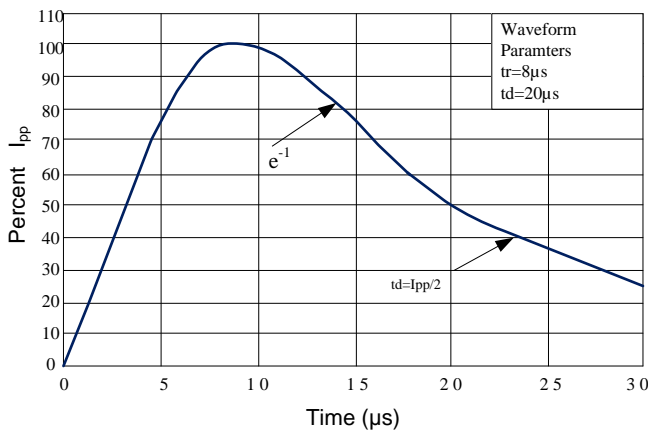


Figure 4: Clamping Voltage vs. Peak Pulse Current

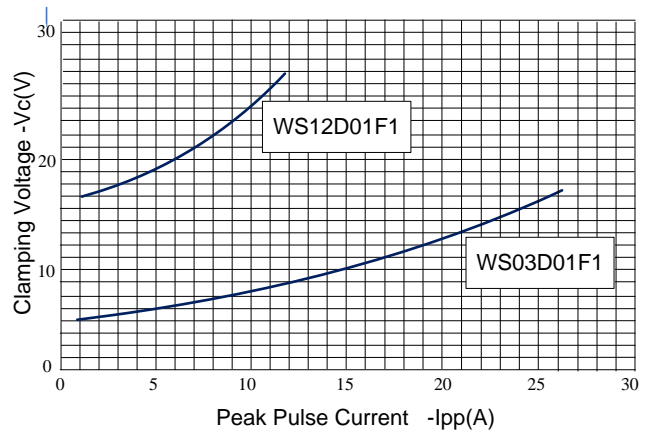
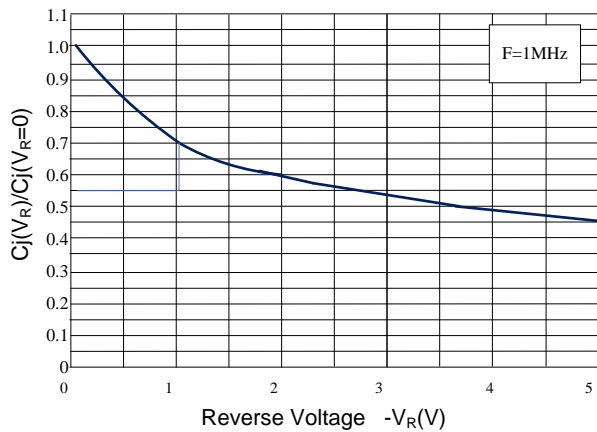
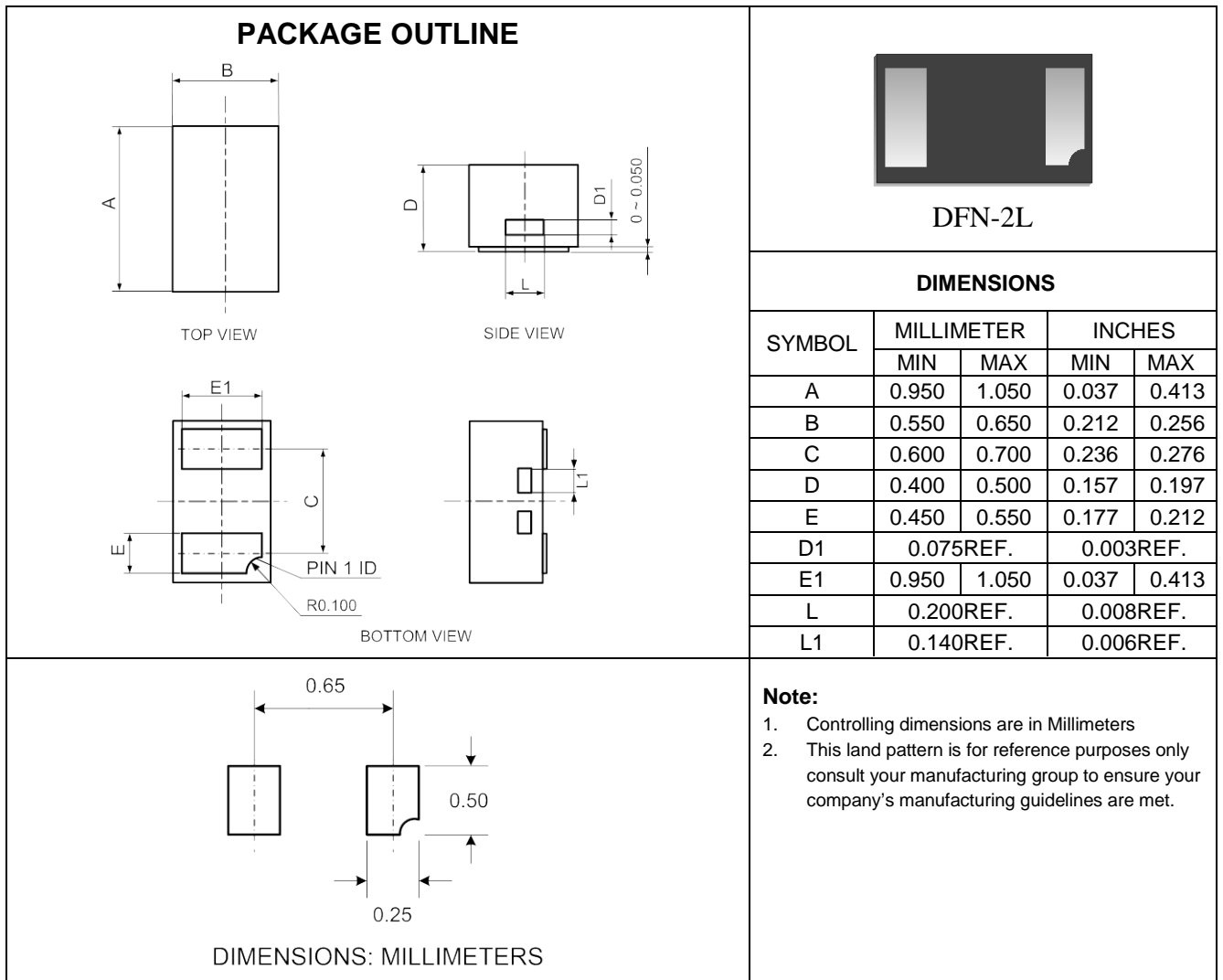


Figure 5: Normalized Junction capacitance vs. Reverse Voltage



Outline Drawing –DFN-2L



Marking Codes

Part Number	WSxxD01F1	WSxxD01F1-B
Marking Code		