

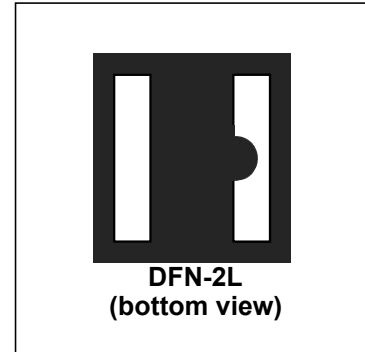
Transient Voltage Suppressor

Features

- 3600 Watts Peak Power ($t_p = 8/20\mu s$)
- Fast Responsetime: Typically $< 1ns$
- Excellent Clamping Capability
- Low Inductance
- Low profile package

IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD) $\pm 30kV$ (air), $\pm 30kV$ (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 110A (8/20 μs)



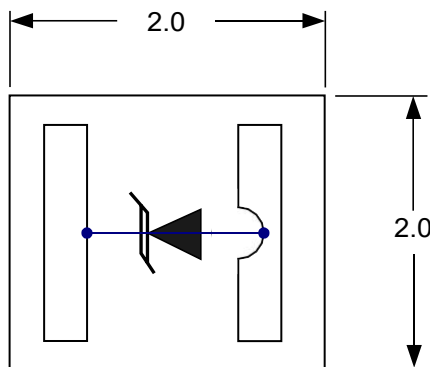
Mechanical Characteristics

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

Applications

- I/O Interfaces
- Power lines
- Automotive and Telecommunication
- Computer & Consumer Electronics
- Industrial Electronics
- Microcontroller Input Protection

PIN Configuration

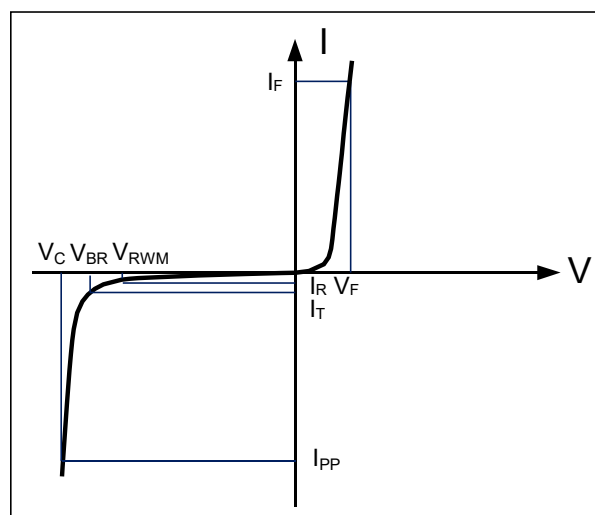


Transient Voltage Suppressor

Absolute Maximum Rating			
Rating	Symbol	Value	Units
Lead Soldering Temperature	T_L	260(10sec)	$^{\circ}\text{C}$
Operating Temperature	T_J	-55 to + 125	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55 to +150	$^{\circ}\text{C}$
Peak Pulse Power ($t_p=8/20\mu\text{s}$)	P_{PP}	3600	Watts
Peak Pulse Current ($t_p=8/20\mu\text{s}$)	I_{PP}	110	A

Electrical Parameters (T=25 $^{\circ}\text{C}$)

Symbol	Parameter
I_{PP}	Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse 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

CSE12UCD2020						
Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	V_{RWM}				12	V
Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$	13		16	V
Reverse Leakage Current	I_R	$V_{RWM}=12\text{V}$ $T=25^{\circ}\text{C}$			200	nA
Peak Pulse Current	I_{PP}	$t_p=8/20\mu\text{s}$			110	A
Clamping Voltage	V_C	$I_{PP}=110\text{A}$, $t_p=8/20\mu\text{s}$			30	V
Junction Capacitance	C_j	$V_R = 0\text{V}$, $f = 1\text{MHz}$		530	540	pF

Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

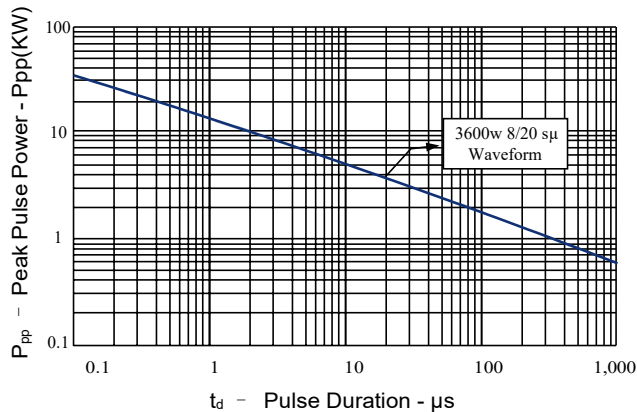


Figure 2: Power Derating Curve

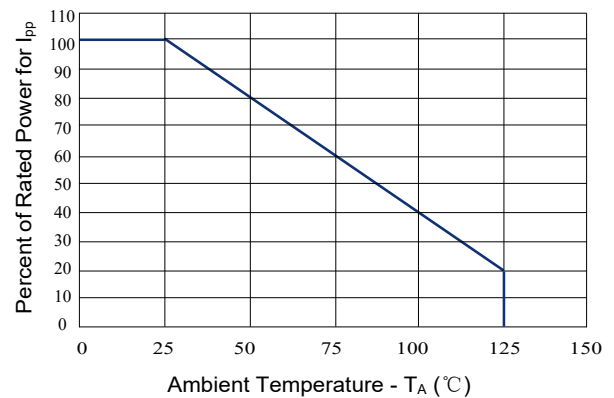


Figure 3: Clamping Voltage vs. Peak Pulse Current

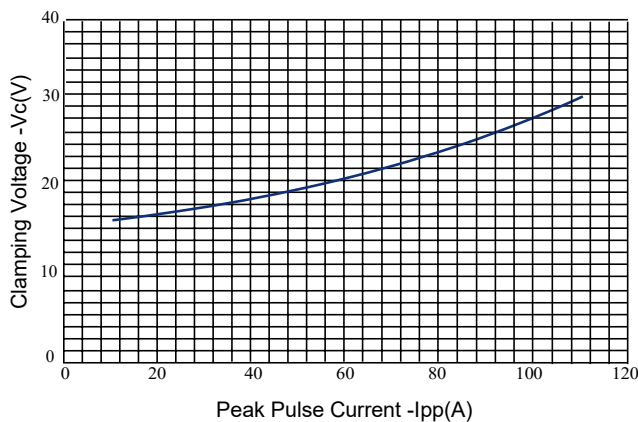


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

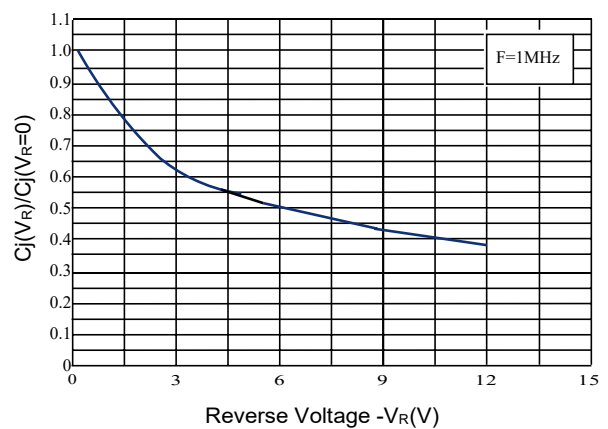
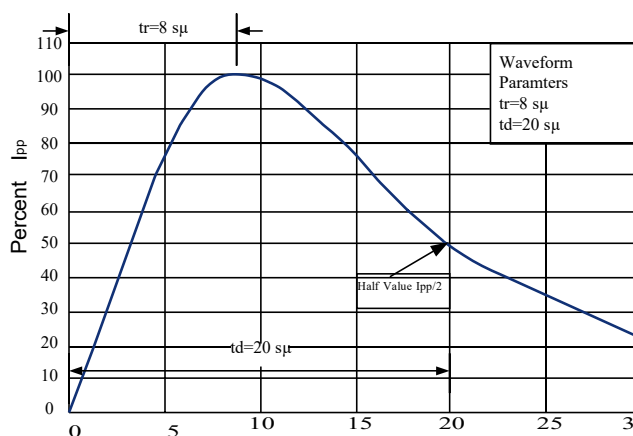
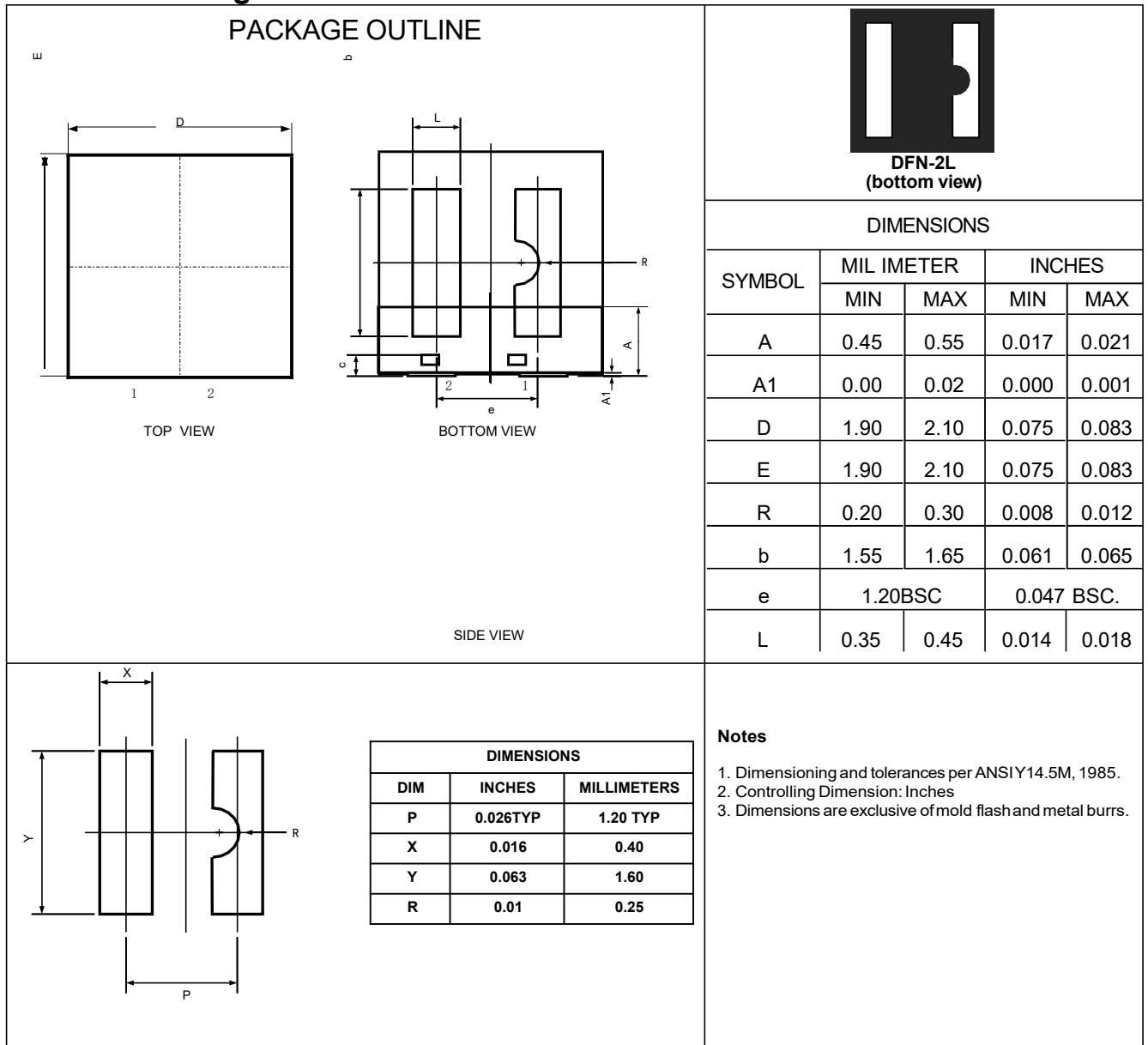


Figure 5: 8/20 μs Pulse Waveform



Outline Drawing–DFN-2L



Package Information

Qty: 3k/Reel

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