

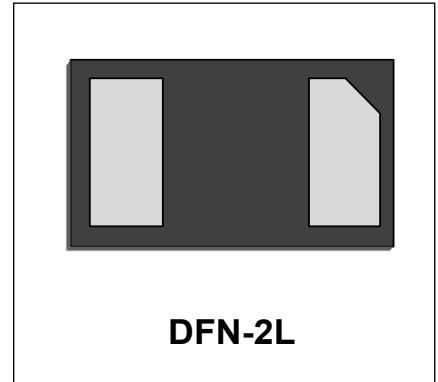


## Features

- Small Body Outline Dimensions:
- Protects one I/O line
- Working Voltage: 12 V
- 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) 5A (8/20 $\mu\text{s}$ )



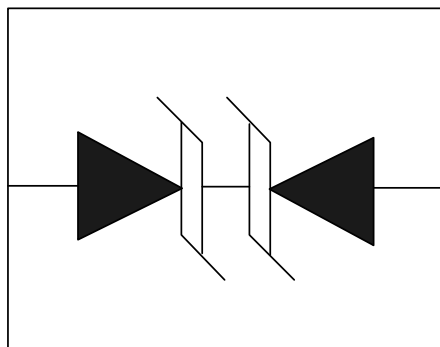
## Mechanical Characteristics

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

## Applications

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

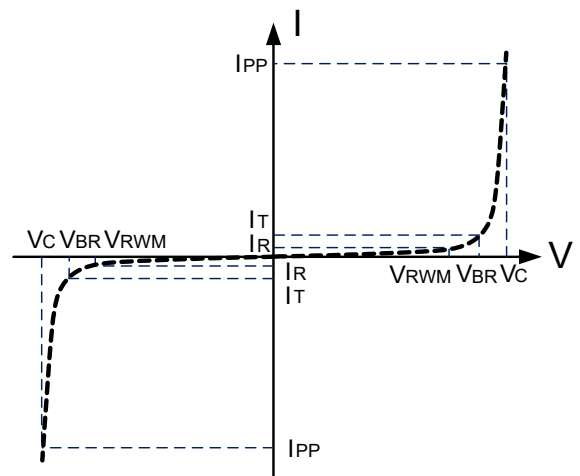
## Schematic & PIN Configuration



Absolute Maximum Rating			
Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu s$ )	$P_{PP}$	150	Watts
Peak Pulse Current ( $t_p = 8/20\mu s$ )	$I_{PP}$	5	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 @ $I_{PP}$
$V_{RWM}$	Working Peak Reverse Voltage
$I_R$	Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current



### Electrical Characteristics

DW12DF-B-E						
Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	$V_{RWM}$				12.0	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	13.3			V
Peak Pulse Current	$I_{PP}$	$t_p=8/20\mu s$			5	A
Clamping Voltage	$V_C$	$I_{PP}=1A, t_p=8/20\mu s$			20	V
Clamping Voltage	$V_C$	$I_{PP}=5A, t_p=8/20\mu s$			26	V
Reverse Leakage Current	$I_R$	$V_{RWM}=12V, T=25^\circ C$			200	nA
Junction Capacitance	$C_j$	$V_R = 0V, f = 1MHz$		11		pF

**Note1:** ESD Pulse Waveform according to IEC 61000-4-2 , see Table1 and Figure1

**Note2:** ESD tests Setup see Figure2.

**Note3:** The clamping Voltage data is taken with a 100x attenuator.

## Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

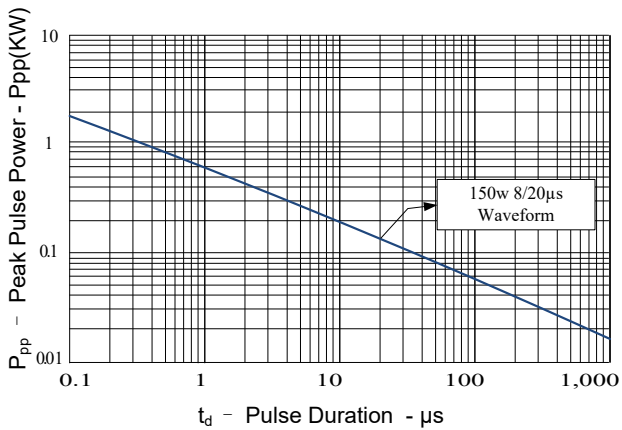


Figure 2: Power Derating Curve

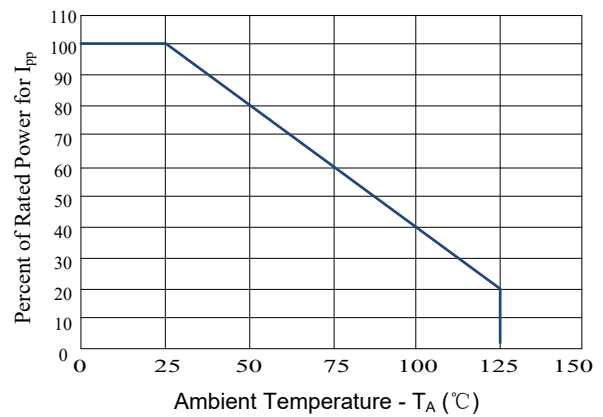


Figure 3: Clamping Voltage vs. Peak Pulse Current

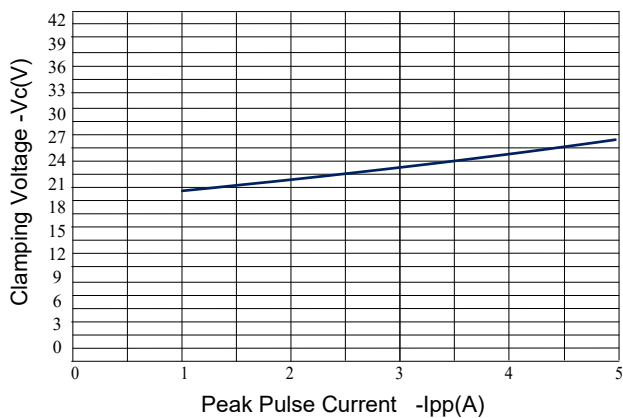


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

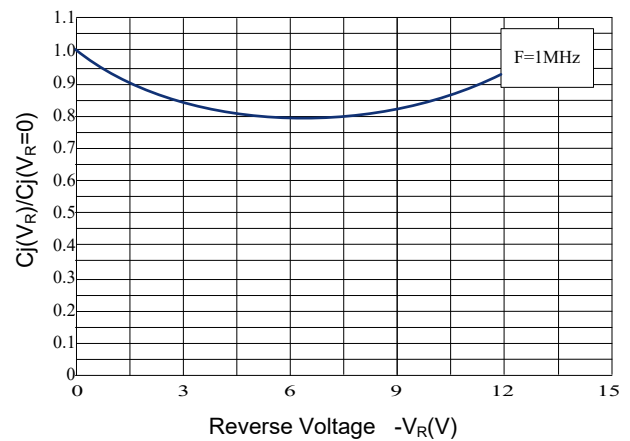


Figure 5: 8/20μs Pulse Waveform

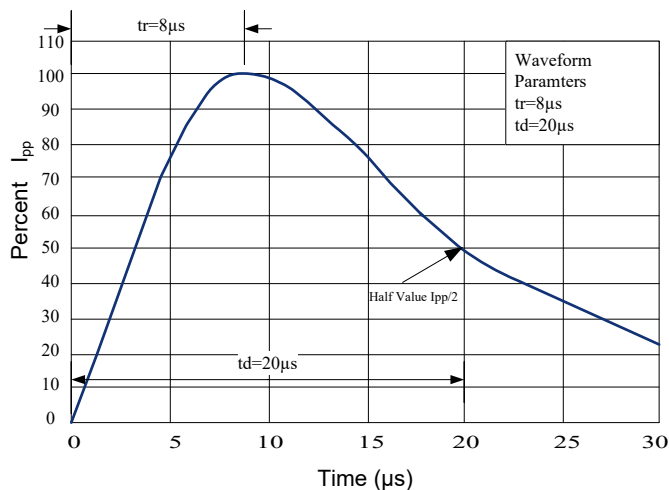
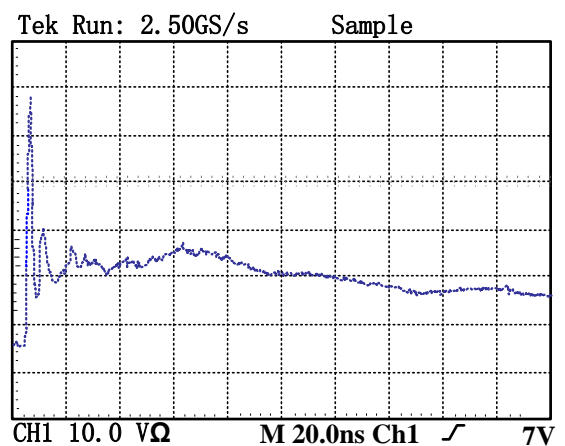
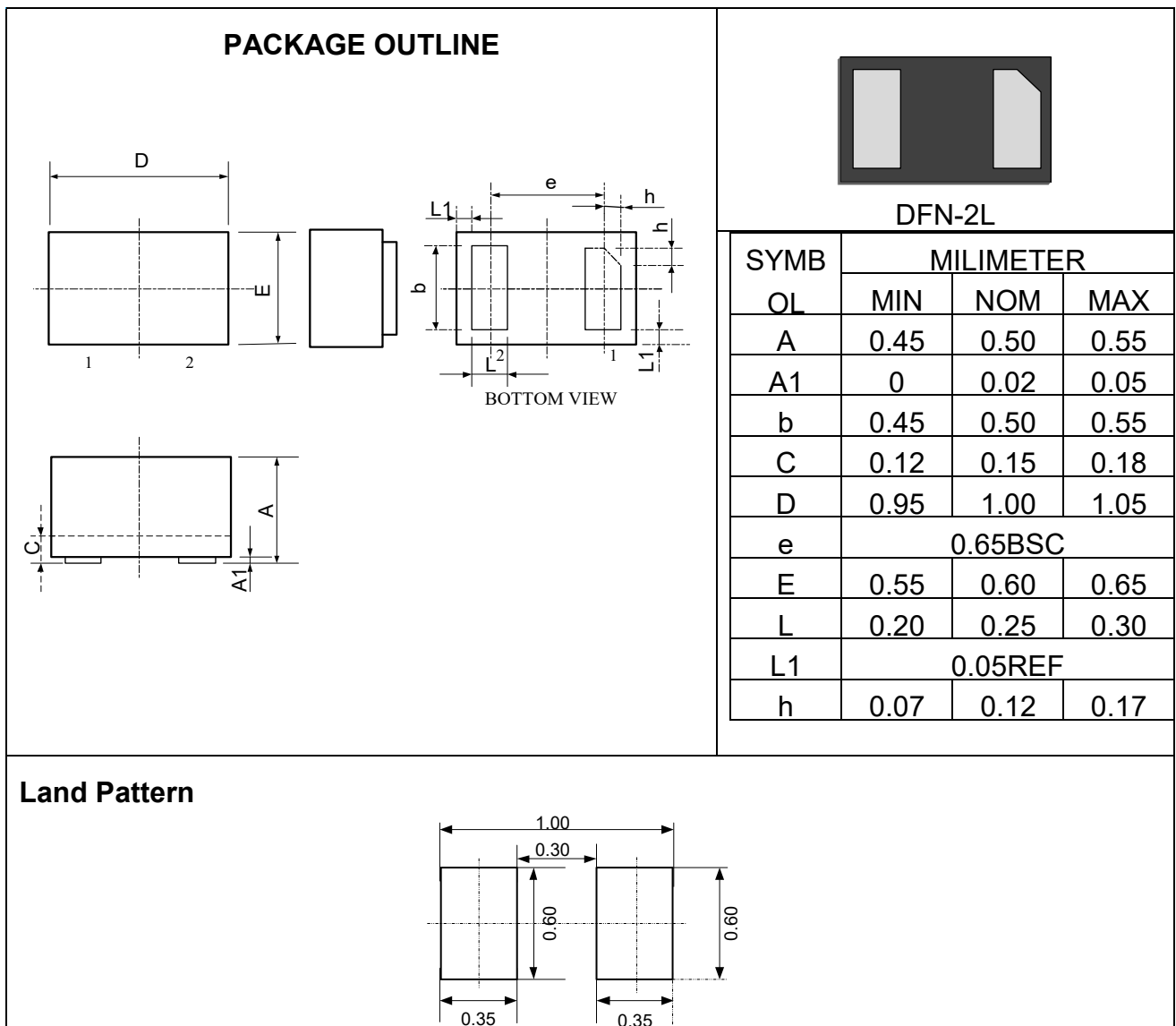


Figure 6: ESD Clamping (8kV Contact per IEC 61000-4-2)



## Outline Drawing –DFN-2L



## Marking Codes

Part Number	DW12DF-B-E	Marking Code	AF
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## Package Information

Qty: 10k/Reel