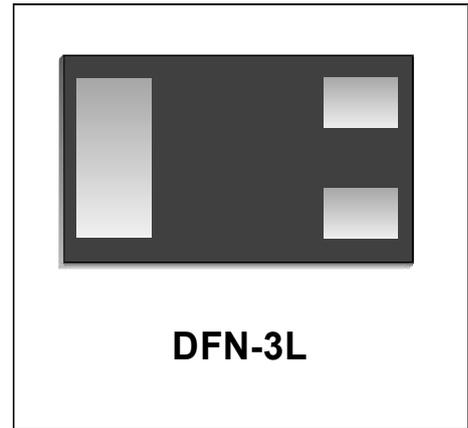


Features

- 50 Watts Peak Power per Line ($t_p = 8/20\mu s$)
- Protects two I/O lines
- Low operating voltage: 5V
- Low Leakage Current
- Solid-state technology

IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD) $\pm 15kV$ (air), $\pm 10kV$ (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 4A (8/20 μs)



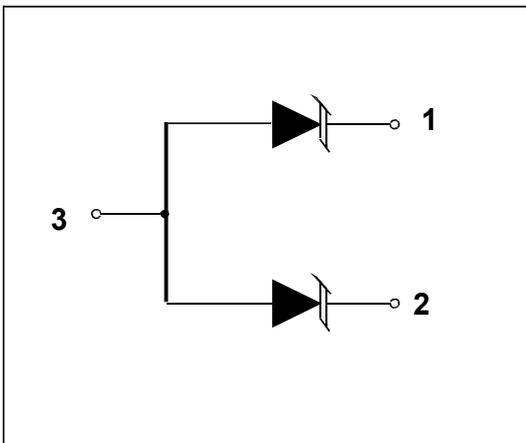
Mechanical Characteristics

- JEDEC DFN-3L package
- Molding compound flammability rating: UL 94V-0
- Marking : Making Code
- Packaging : Tape and Reel per EIA 481
- RoHS Compliant

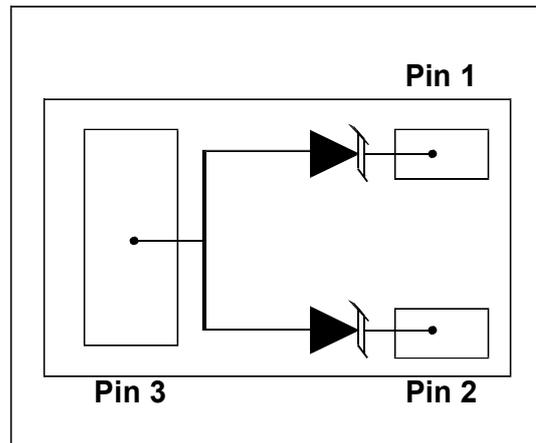
Applications

- FireWire & USB
- Sensitive Analog Inputs
- Portable Electronics
- LAN/WAN equipment
- Video Line Protection
- Microcontroller Input Protection

Circuit Diagram



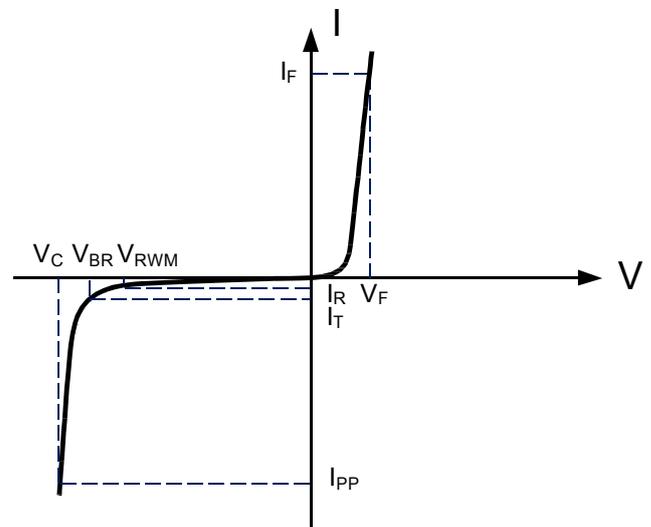
Schematic & PIN Configuration



Absolute Maximum Rating			
Rating	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu s$)	P_{PP}	50	Watts
Peak Pulse Current ($t_p=8/20\mu s$)	I_{PP}	4	A
Lead Soldering Temperature	T_L	260(10sec)	$^{\circ}C$
Operating Temperature	T_J	-55 to + 125	$^{\circ}C$
Storage Temperature	T_{STG}	-55 to +150	$^{\circ}C$

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

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

BDFN3A052U						
Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	V_{RWM}				5.0	V
Breakdown Voltage	V_{BR}	$I_T=1mA$	5.6			V
Reverse Leakage Current	I_R	$V_{RWM}=5V, T=25^{\circ}C$			0.5	nA
Clamping Voltage	V_C	$I_{PP}=1A, t_p=8/20\mu s$			9.5	V
Clamping Voltage	V_C	$I_{PP}=3A, t_p=8/20\mu s$		11	12	V
Junction Capacitance	C_j	Between pin3 and pin1/ pin2, $V_R=0V, f=1MHz$		0.5	0.75	pF
		Between pin1 and pin2, $V_R=0V, f=1MHz$		0.3	0.35	pF

Typical Characteristics

Fig.1 Peak Pulse Power Rating Curve

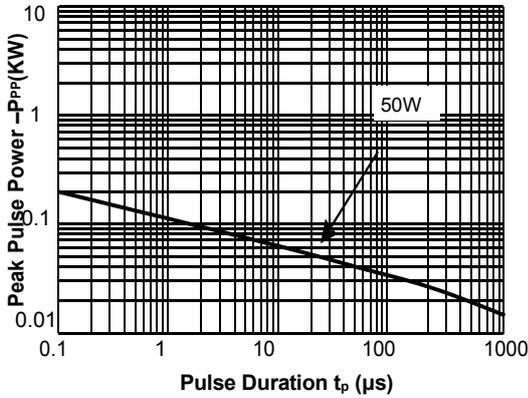


Fig.2 Pulse Derating Curve

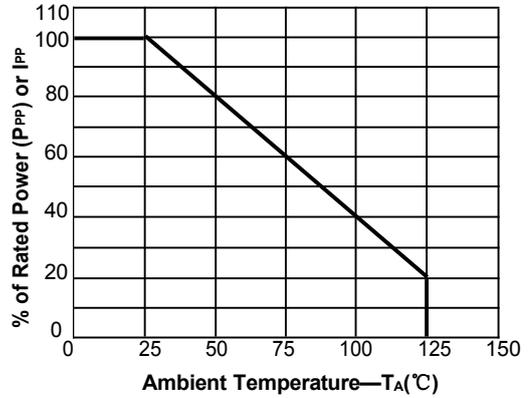


Fig.3 Pulse Waveform-8/20μs

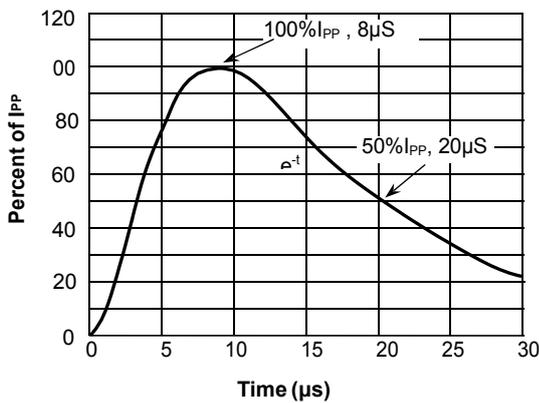


Fig.4 Pulse Waveform-ESD(IEC61000-4-2)

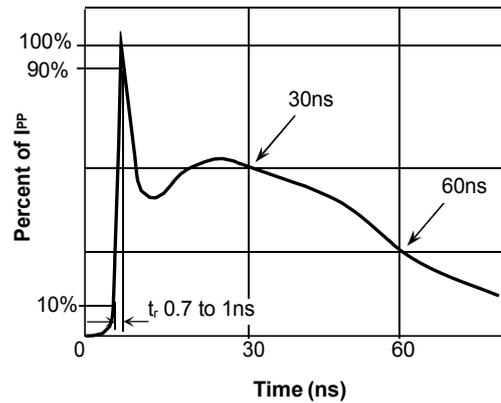


Fig.5 IEC61000-4-2 +8kV Contact Discharge

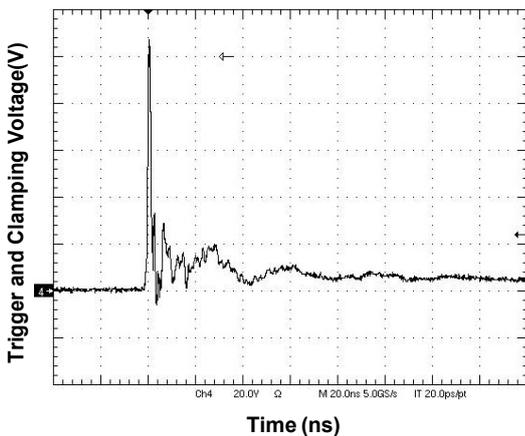
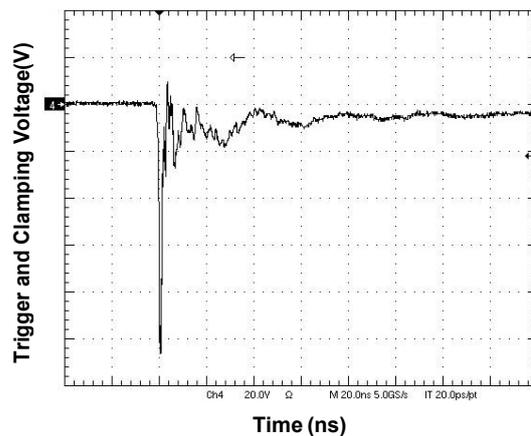
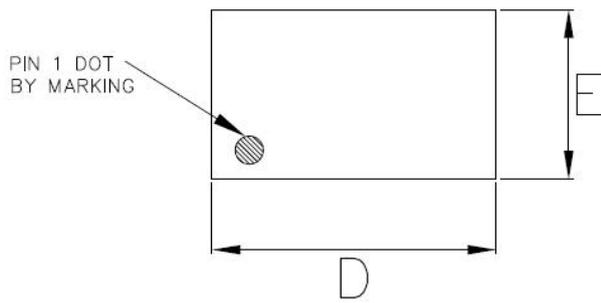


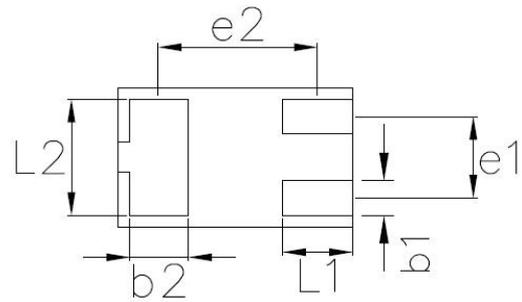
Fig.6 IEC61000-4-2 -8kV Contact Discharge



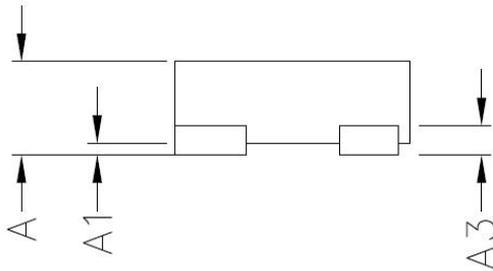
Outline Drawing – DFN-3L



Top View



Bottom View



Side View

Symbol	Dimensions in millimeter		
	Min.	Typ.	Max.
A	0.40	-	0.50
A1	0.00	-	0.05
A3	0.125 REF		
D	0.95	1.00	1.05
E	0.55	0.60	0.65
b1	0.10	0.15	0.20
b2	0.20	0.25	0.30
L1	0.20	0.30	0.40
L2	0.40	0.50	0.60
e1	0.350 BSC		
e2	0.675 BSC		

Marking Codes

Part Number	BDFN3A052U	Marking Code	L
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Package Information

Qty: 10k/Reel

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