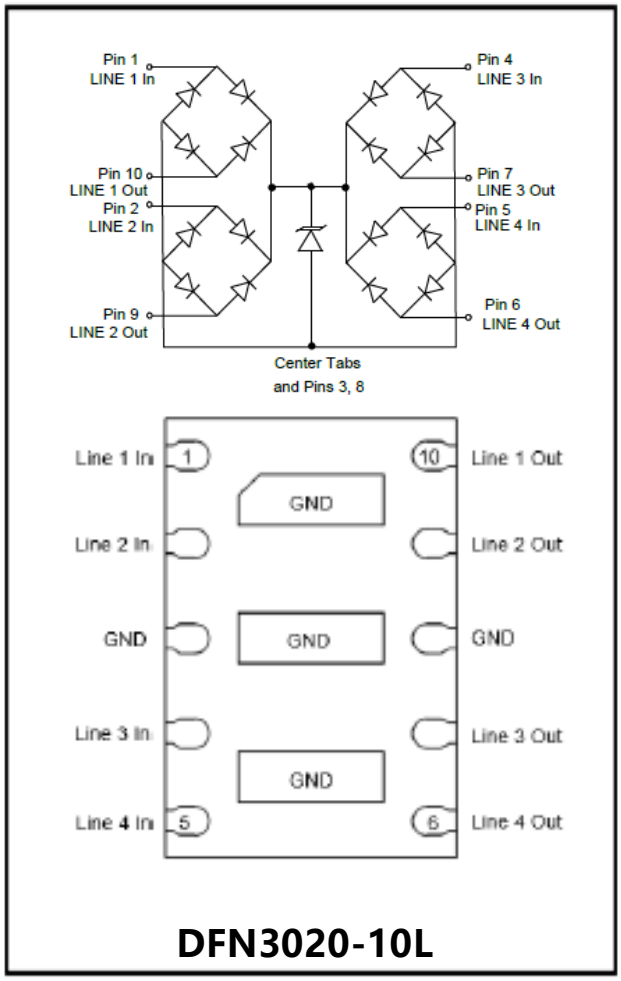
4-Line, Uni-directional, low Capacitance TVS Diode Array



Features

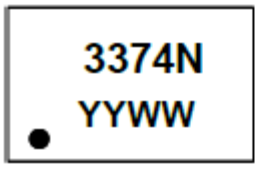
- Stand-off voltage: 3.3V Max
- Transient protection for each line according to
  IEC61000-4-2(ESD): ±30kV (contact)
  IEC61000-4-5(surge): 40A (8/20μs)
- Ultra-low capacitance: C_J = 1.7 pF typ
- Low leakage current
- Low clamping voltage
- RoHS Compliant

Applications

- LVDS Interfaces
- Networking Equipment
- Notebook/Desktops/Service
- Switching Systems
- 10/100/1000 Ethernet
- Audio/Video Inputs

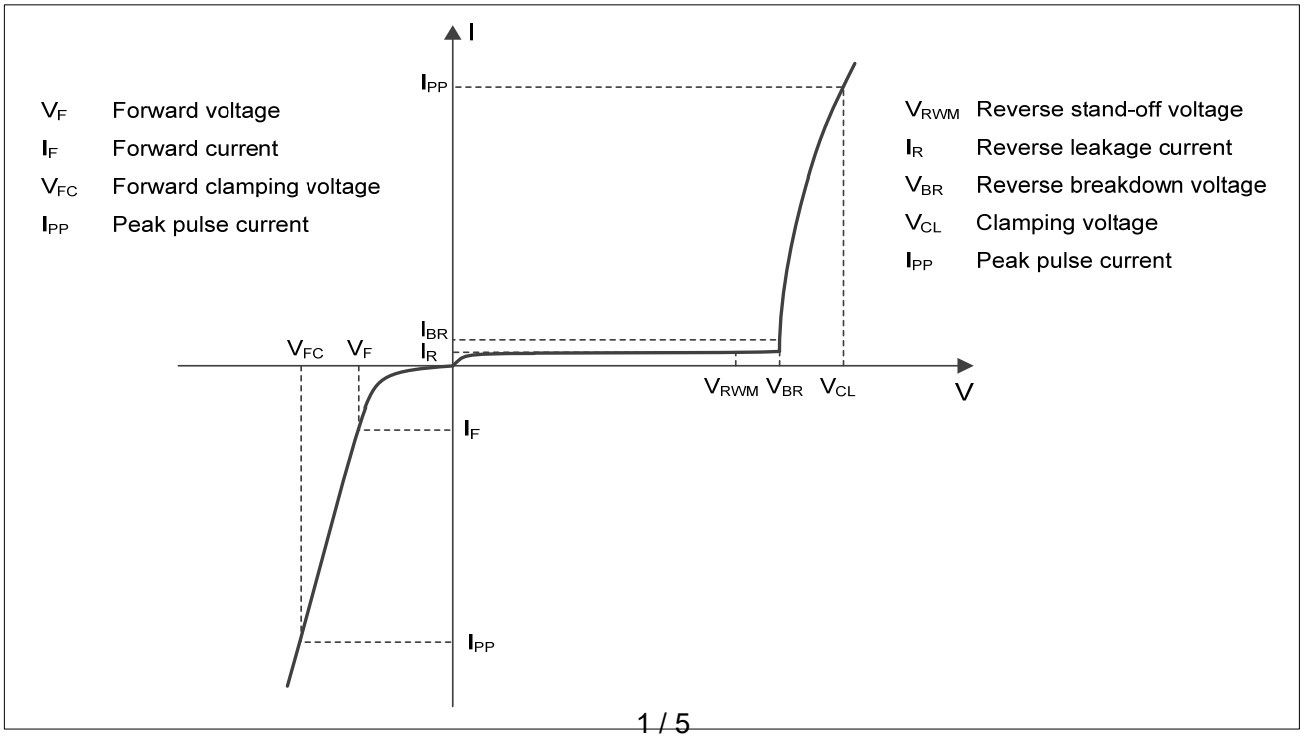
Mechanical Characteristics

- Package: DFN3020-10L
- Lead Finish: Matte Tin
- Case Material: “Green” Molding Compound.
- Moisture Sensitivity: Level 3 per J-STD-020
- Marking Information: See Below



3374N = Device Marking Code
YYWW = Date Code

■Definitions of electrical characteristics



■Absolute Maximum Ratings (Ta=25°C unless otherwise specified)

PARAMETER	SYMBOL	Rating	UNIT
Peak pulse power (t_p = 8/20μs)	P_{pk}	1000	W
Peak pulse current (t_p = 8/20μs)	I_{PP}	40	A
ESD according to IEC61000-4-2 air discharge	V_{ESD}	±30	KV
ESD according to IEC61000-4-2 contact discharge		±30	KV
Junction temperature	T_J	-55~125	℃
Storage temperature	T_{STG}	-55~150	℃

■Electrical Characteristics（Ta=25℃ Unless otherwise specified）

I/O Pins

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse maximum working voltage	V_{RWM}	V	Any I/O Pin to ground			3.3
Reverse leakage current	I_R	μA	V_{RWM} =5V, any I/O Pin to ground			0.5
Breakdown Voltage	V_{PT}	V	IT = 2μA, any I/O pin to ground	3.5		
Snap-Back Voltage	V_{SB}	V	IT = 50mA, any I/O pin to ground	2.8		
Clamping voltage [3]	V_{CL}	V	I_{PP} = 1A, t_p = 8/20μs, any I/O pin to ground			5.5
		V	I_{PP} = 10A, t_p = 8/20μs, any I/O pin to ground			10.5
		V	I_{PP} = 25A, t_p = 8/20μs, any I/O pin to ground			18
		V	I_{PP} = 40A, t_p = 8/20μs, any I/O pin to ground			25
Junction capacitance	C_J	pF	VR = 0V, f = 1MHz, between I/O pins		1.7	2.5
Junction capacitance	C_J	pF	VR = 0V, f = 1MHz, any I/O pin to ground		3.8	5

■Ordering Information (Example)

PREFERED P/N	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ESDLC3304P9	Approximate 11	3000	30000	120000	Tape & reel

■Typical Performance Characteristics (Ta=25°C unless otherwise Specified)

Fig.1 8/20μs waveform per IEC61000-4-5

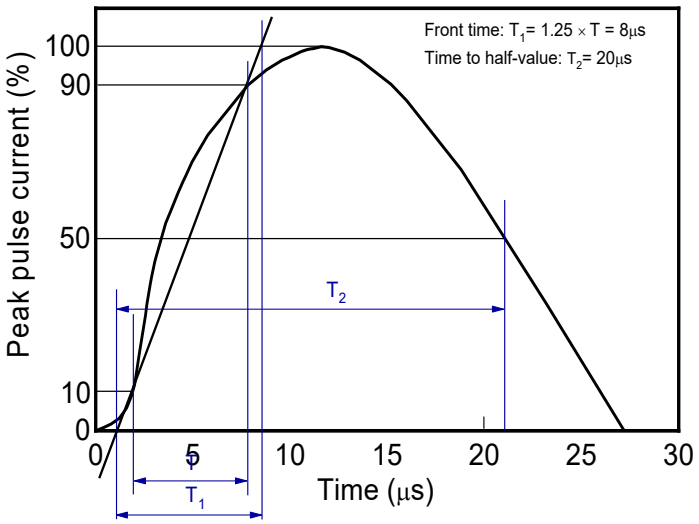


Fig.2 Contact discharge current waveform per IEC61000-4-2

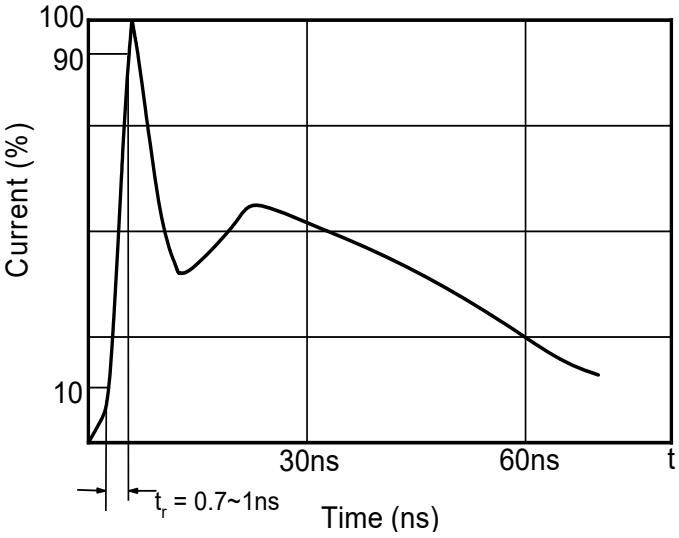


Fig.3 Clamping voltage vs. Peak pulse current

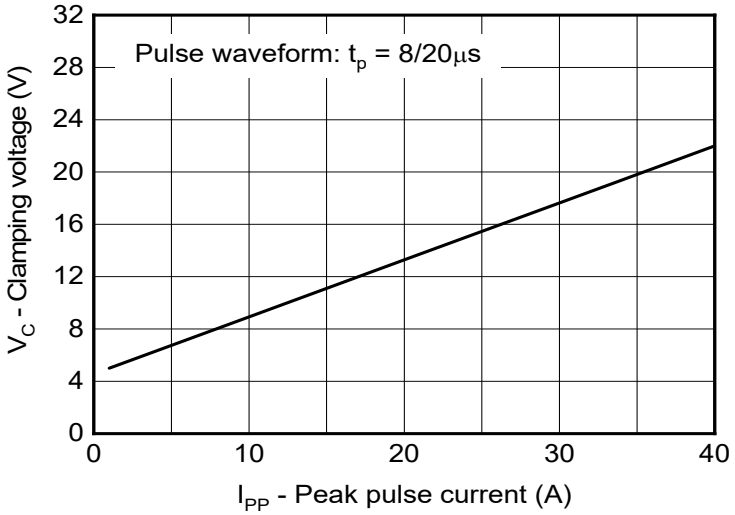


Fig.4 Capacitance vs. Reverse voltage

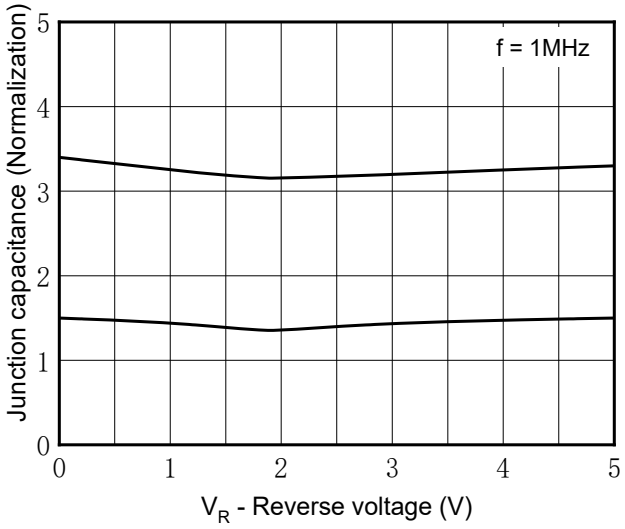


Fig.5 Non-repetitive peak pulse power vs. Pulse time

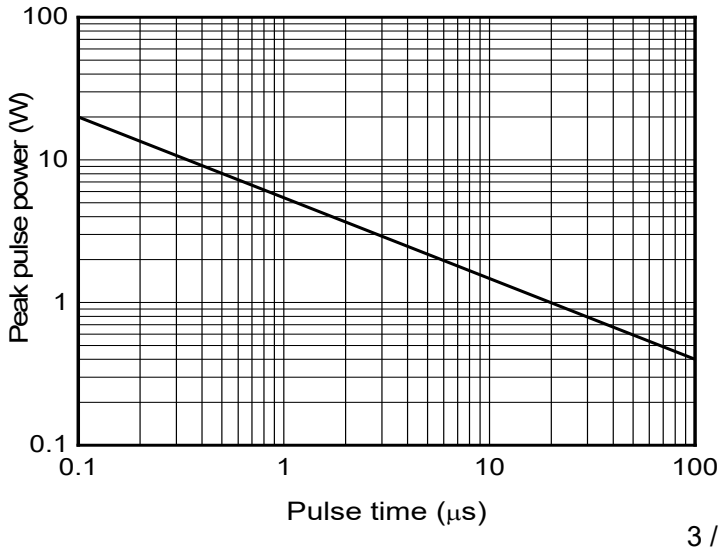


Fig.6 Power derating vs. Ambient temperature

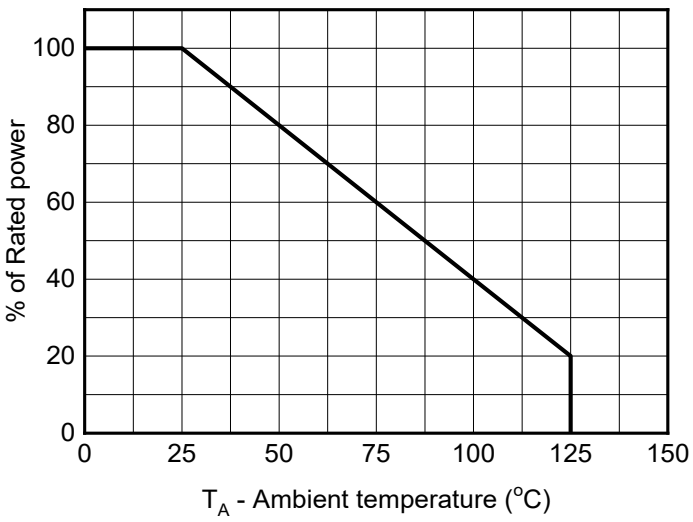
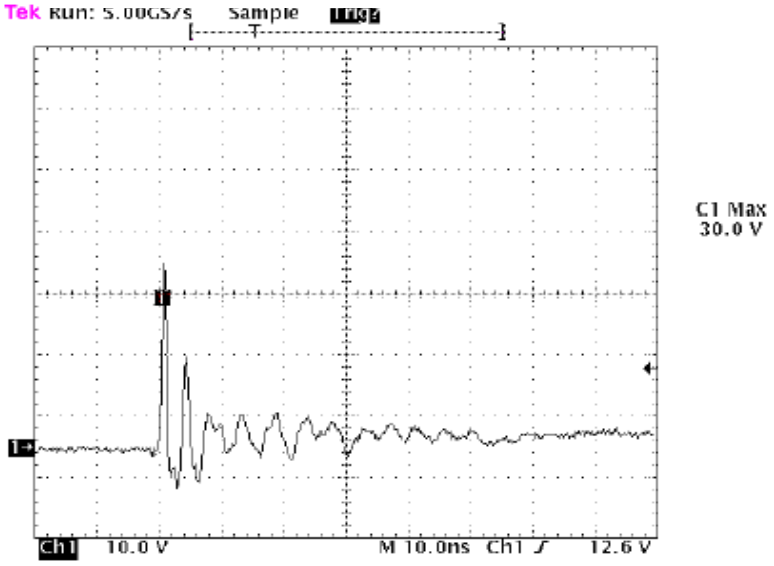
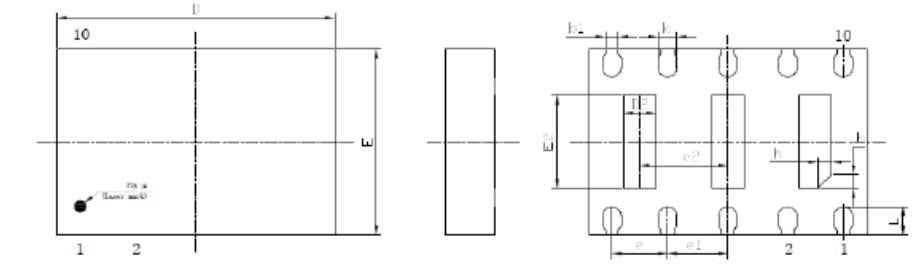
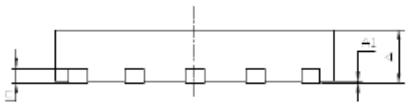


Fig.7 ESD clamping - I/O to GND
(+8kV contact discharge per IEC61000-4-2



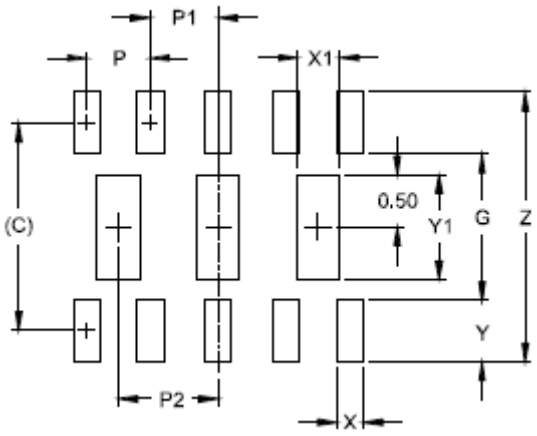
■SOT-23 6L Package Outline Drawing





SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	0.50	0.55	0.60
A1	0.00	0.02	0.05
b	0.15	0.20	0.25
b1	0.14REF		
c	0.15REF		
D	2.90	3.00	3.10
D2	0.30	0.35	0.40
e	0.60BSC		
e1	0.65BSC		
e2	0.95BSC		
E	1.90	2.00	2.10
E2	0.95	1.00	1.05
L	0.25	0.30	0.35
h	0.10	0.15	0.20

■ Recommended PCB Layout



DIMENSIONS	
DIM	MILLIMETERS
C	(1.98)
G	1.40
P	0.60
P1	0.65
P2	0.95
X	0.25
X1	0.40
Y	0.58
Y1	1.00
Z	2.56

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