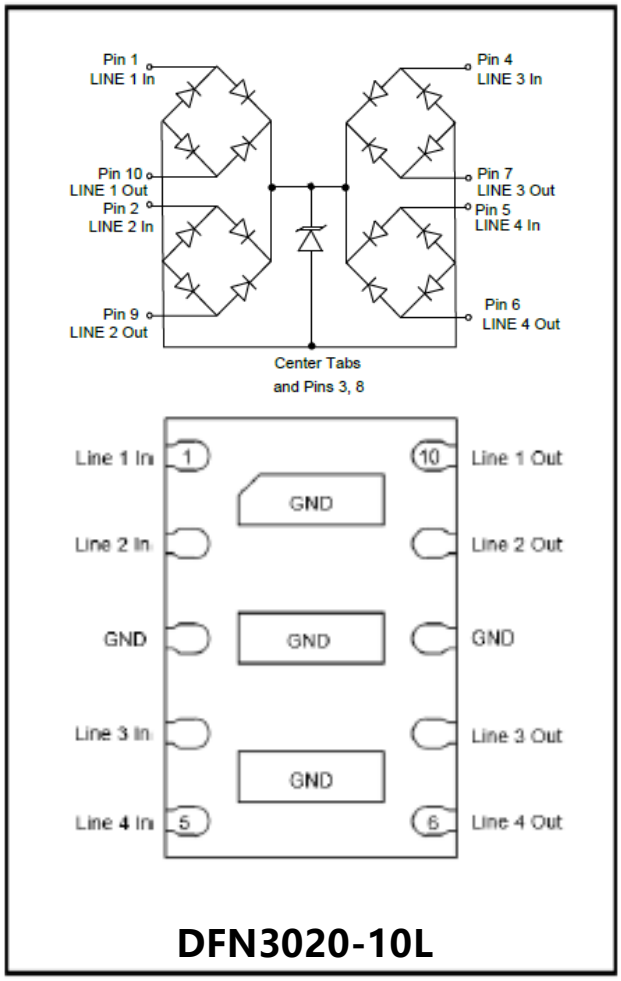
4-Line, Uni-directional, low Capacitance TVS Diode Array



Features

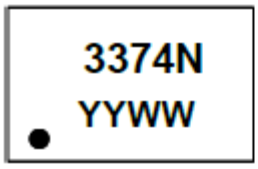
- Stand-off voltage: 3.3V Max
- Transient protection for each line according to
  IEC61000-4-2(ESD): ±30kV (contact)
  IEC61000-4-5(surge): 40A (8/20μs)
- Ultra-low capacitance: C_J = 1.7 pF typ
- Low leakage current
- Low clamping voltage
- RoHS Compliant

Applications

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

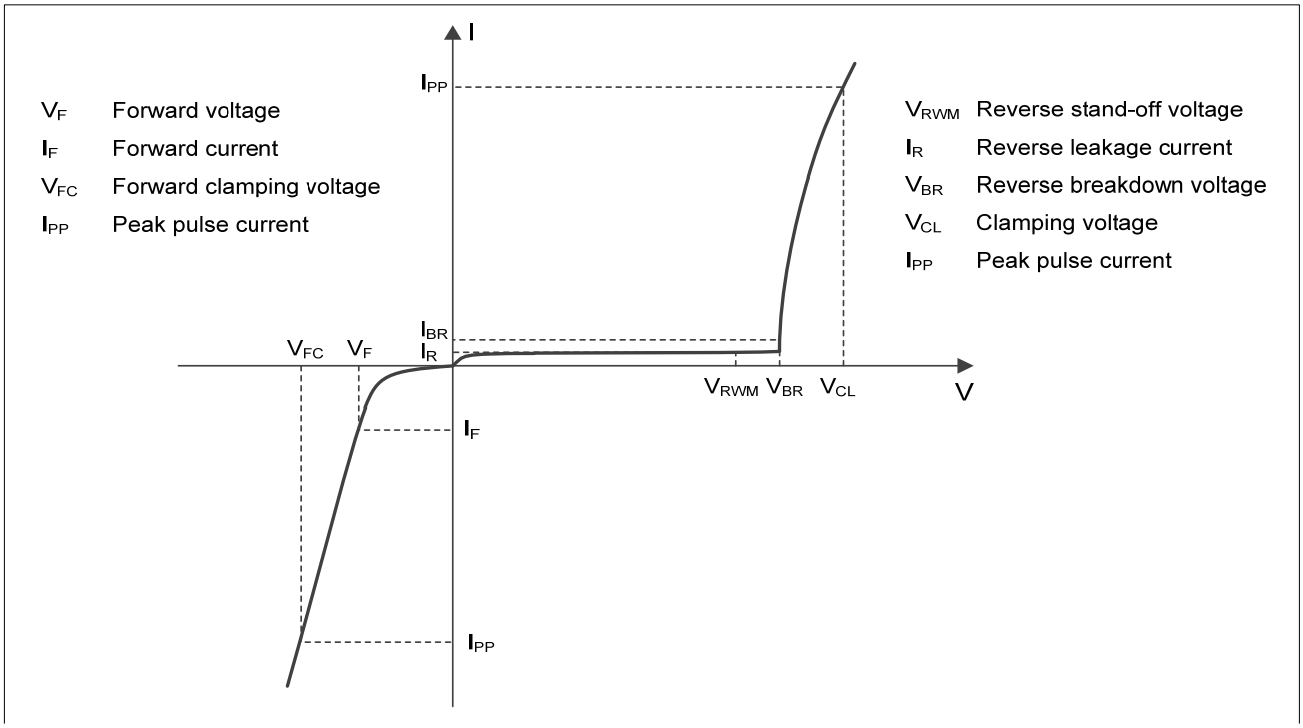
Mechanical Characteristics

- 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

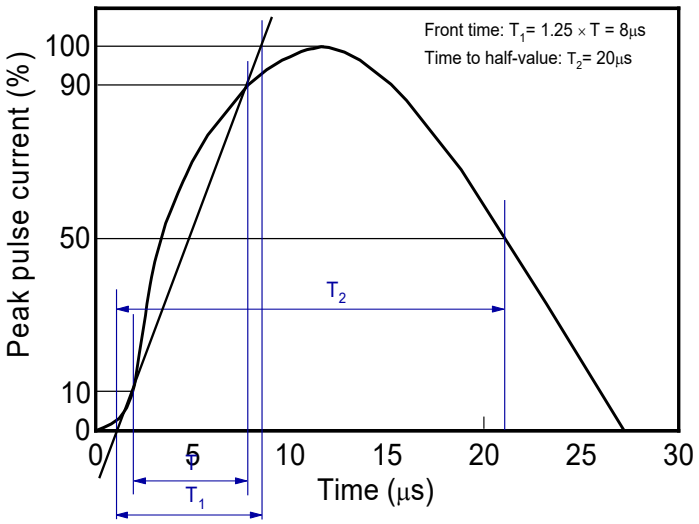


Fig.2 Contact discharge current waveform per IEC61000-4-2

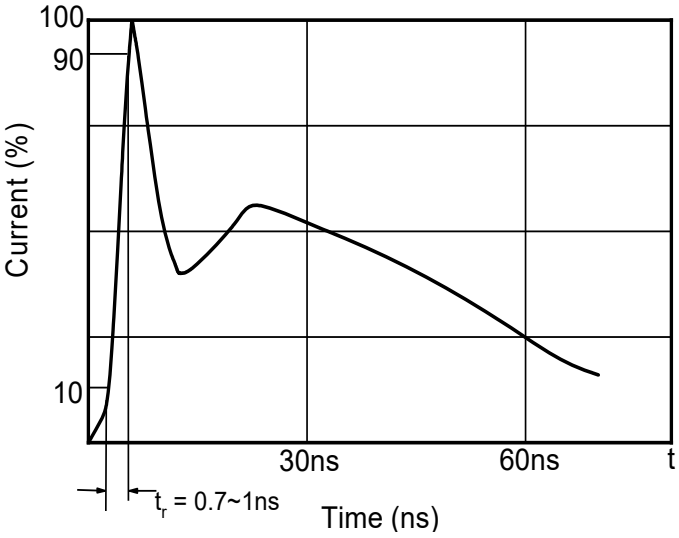


Fig.3 Clamping voltage vs. Peak pulse current

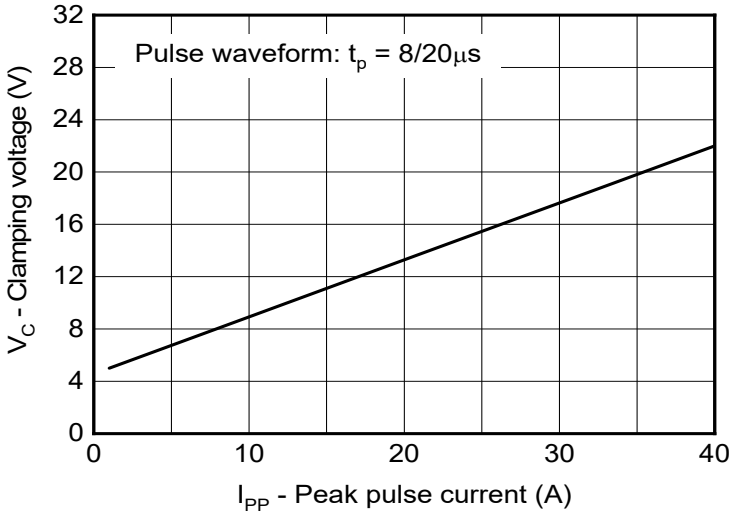


Fig.4 Capacitance vs. Reverse voltage

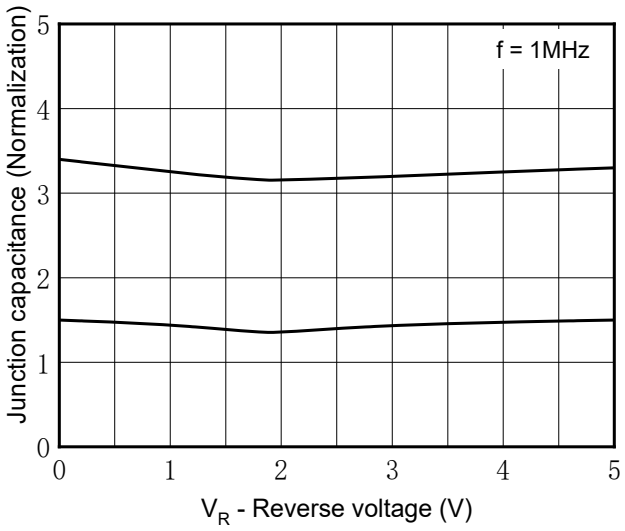


Fig.5 Non-repetitive peak pulse power vs. Pulse time

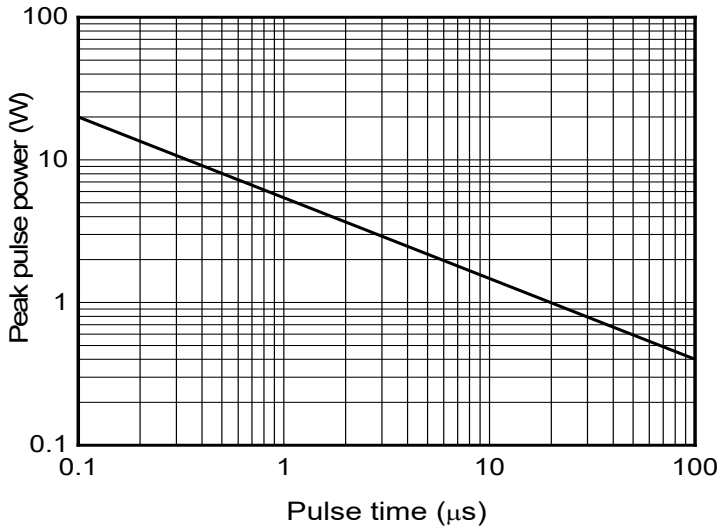


Fig.6 Power derating vs. Ambient temperature

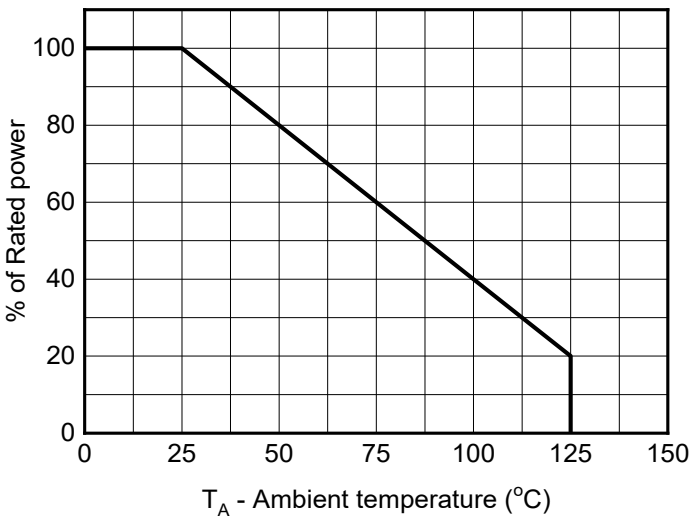
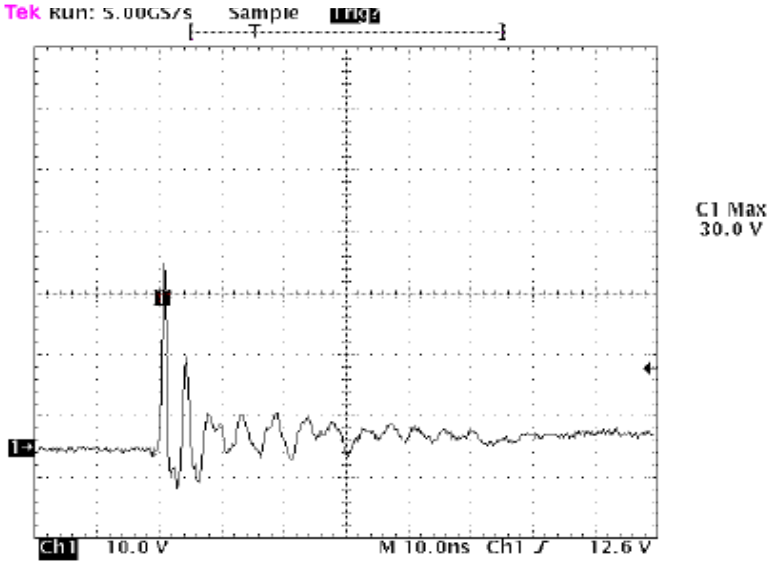
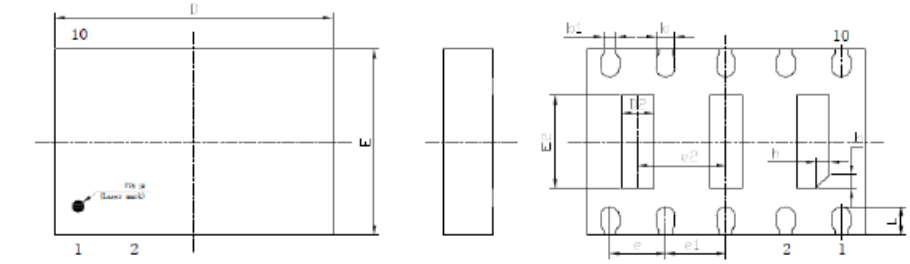


Fig.7 ESD clamping - I/O to GND
(+8kV contact discharge per IEC61000-4-2

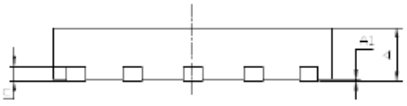


■SOT-23 6L Package Outline Drawing



TOP VIEW

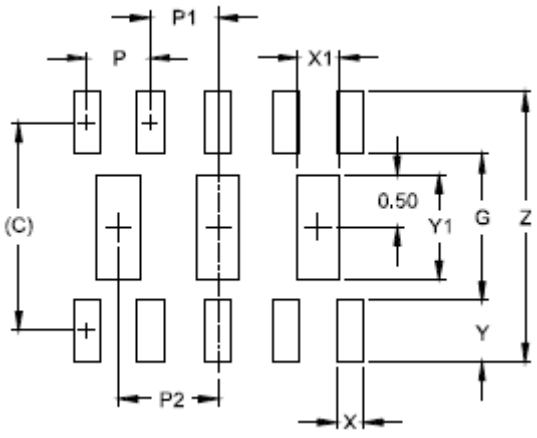
BOTTOM VIEW



SIDE VIEW

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

Notice

All products, product specifications and data are subject to change without notice to improve reliability, function or design or otherwise. Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in STARSEA's terms and conditions of sale for such products, STARSEA assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of STARSEA products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.