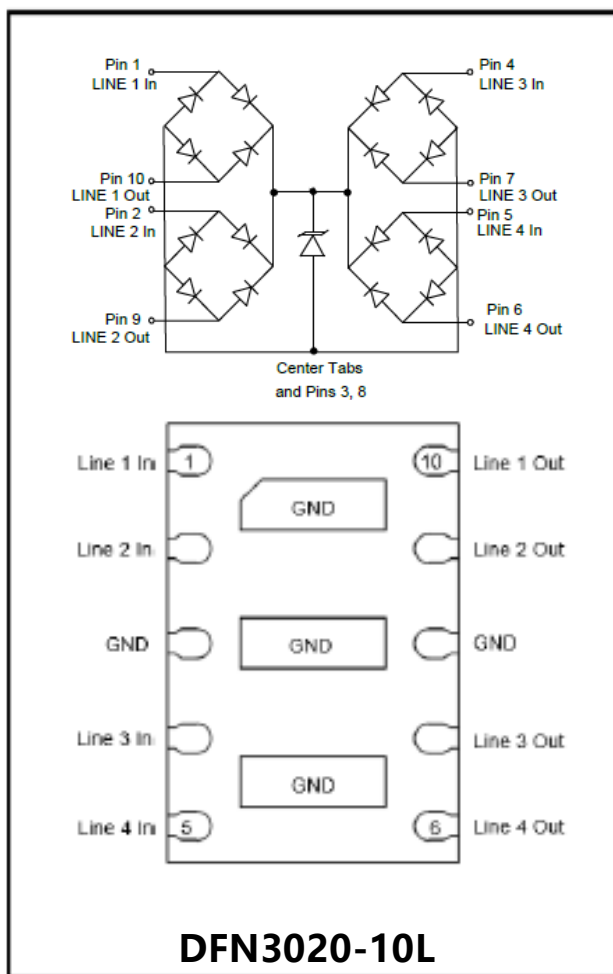


4-Line, Uni-directional, low Capacitance TVS Diode Array



Features

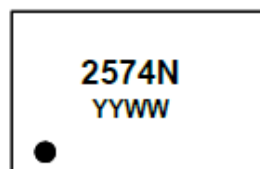
- Stand-off voltage: 2.5V Max
- Transient protection for each line according to IEC61000-4-2(ESD): $\pm 30\text{kV}$ (contact)
IEC61000-4-5(surge): 40A (8/20 μs)
- Ultra-low capacitance: $C_J = 1.7\text{ pF typ}$
- Low leakage current
- Low clamping voltage
- Compliant

Applications

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

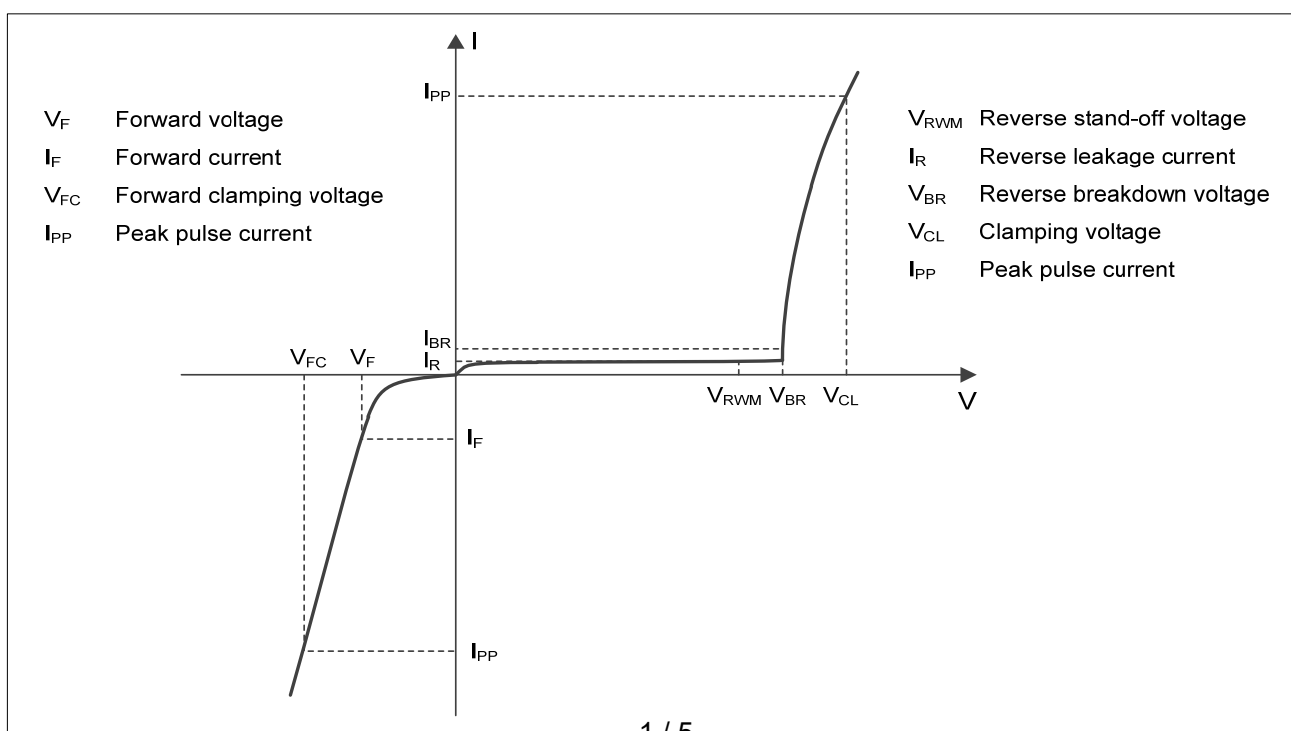
Mechanical Characteristics

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



2574N = Device Marking Code
YYWW = Date Code
Dot denotes pin1

Definitions of electrical characteristics



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

PARAMETER	SYMBOL	Rating	UNIT
Peak pulse power ($t_p = 8/20\mu s$)	P_{pk}	1000	W
Peak pulse current ($t_p = 8/20\mu s$)	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	°C
Storage temperature	T_{STG}	-55~150	°C

■Electrical Characteristics (Ta=25°C 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			2.5
Reverse leakage current	I_R	μA	$V_{RWM} = 2.5V$, any I/O Pin to ground			0.5
Breakdown Voltage	V_{PT}	V	$I_T = 2\mu A$, any I/O pin to ground	2.7		
Snap-Back Voltage	V_{SB}	V	$I_T = 50mA$, any I/O pin to ground	2.0		
Clamping voltage ³⁾	V_{CL}	V	$I_{PP} = 1A$, $t_p = 8/20\mu s$, any I/O pin to ground			4.5
		V	$I_{PP} = 10A$, $t_p = 8/20\mu s$, any I/O pin to ground			7.5
		V	$I_{PP} = 25A$, $t_p = 8/20\mu s$, any I/O pin to ground			12
		V	$I_{PP} = 40A$, $t_p = 8/20\mu s$, any I/O pin to ground			25
Junction capacitance	C_J	pF	$V_R = 0V$, $f = 1MHz$, between I/O pins		1.7	2.5
Junction capacitance	C_J	pF	$V_R = 0V$, $f = 1MHz$, any I/O pin to ground		3.8	5

■Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ESDLC2E04P9	F1	Approximate 11	3000	30000	120000	7" reel

■ Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise Specified)

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

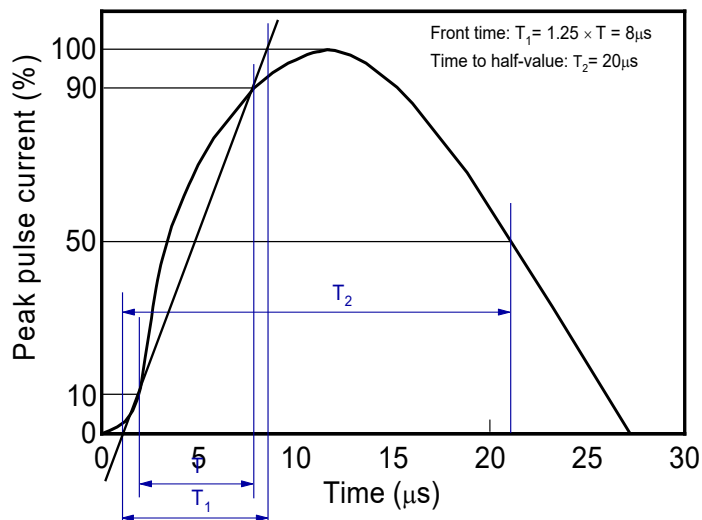


Fig.2 Contact discharge current waveform per IEC61000-4-2

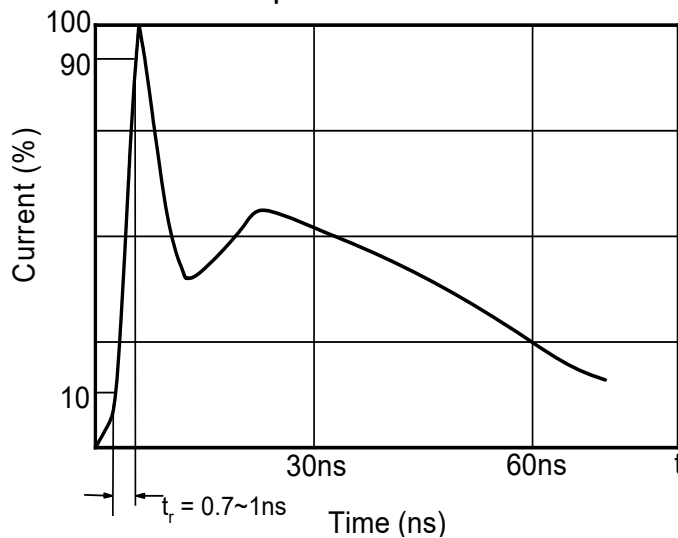


Fig.3 Clamping voltage vs. Peak pulse current

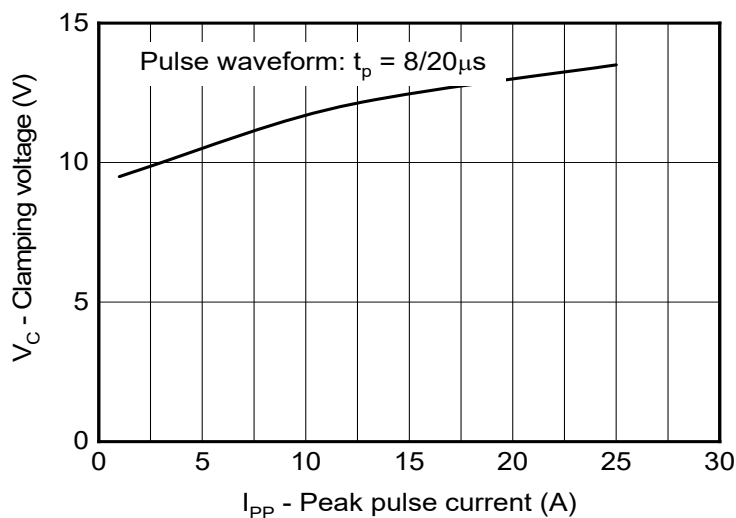


Fig.4 Capacitance vs. Reverse voltage

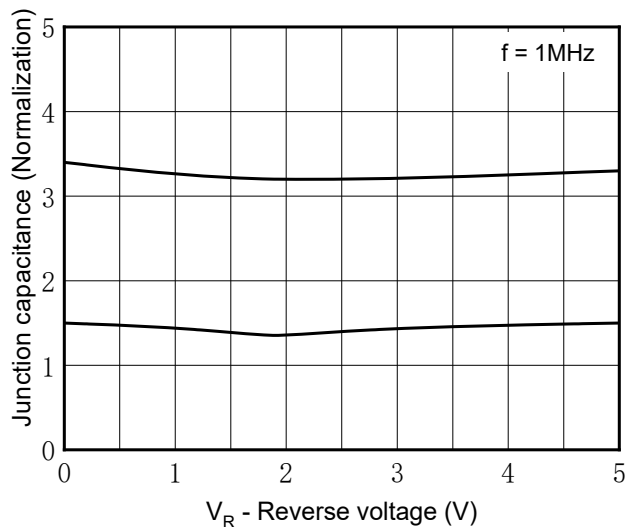


Fig.5 Non-repetitive peak pulse power vs. Pulse time

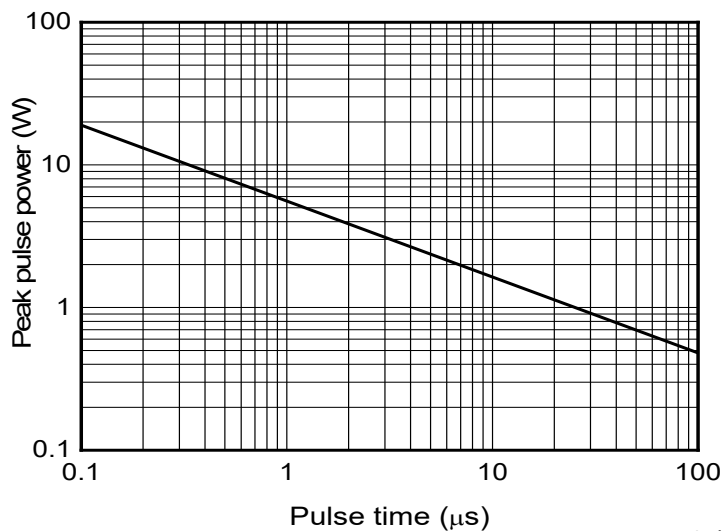


Fig.6 Power derating vs. Ambient temperature

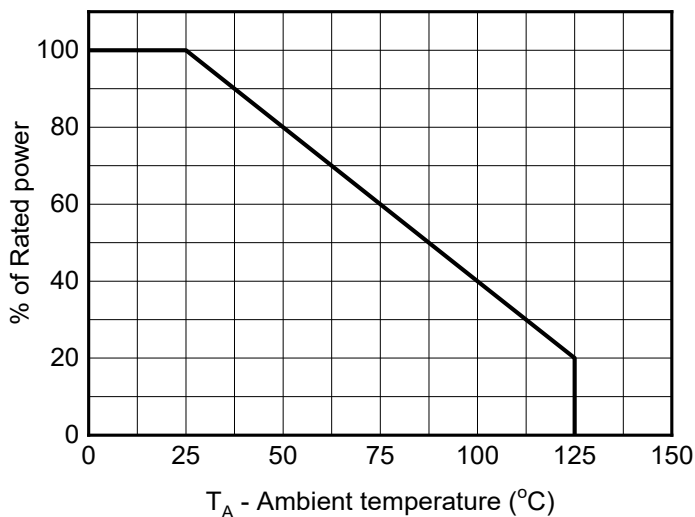
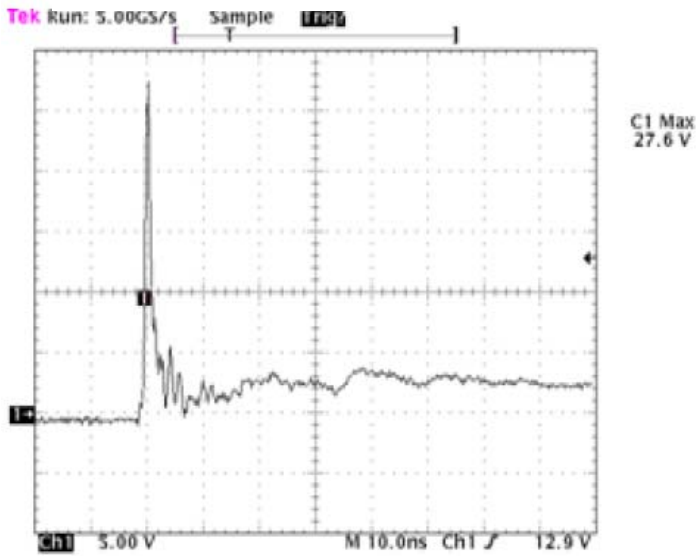
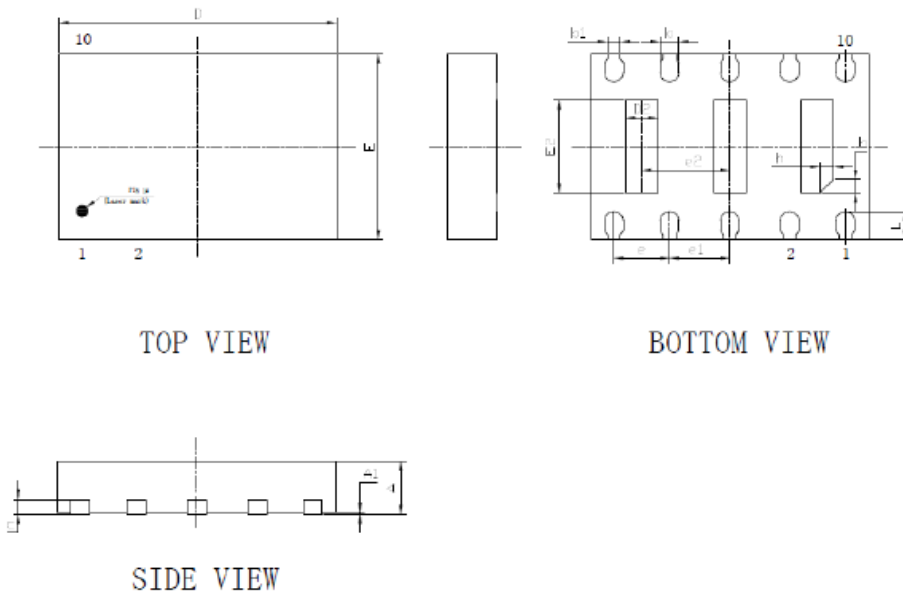


Fig.7 ESD clamping - I/O to GND
(+8kV contact discharge per IEC61000-4-2)

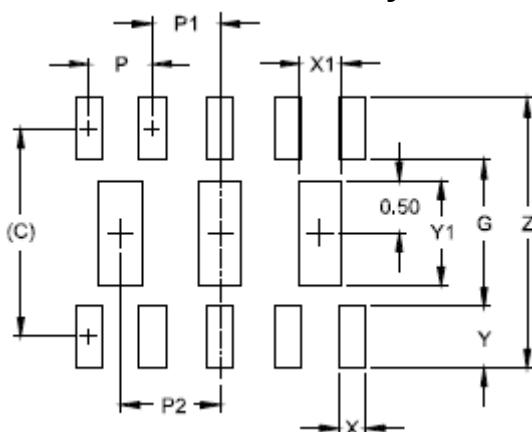


■ SOT-23 6L Package Outline Drawing



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

Disclaimer

The information presented in this document is for reference only. Shanghai Sunco Electronics Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Russiansunco or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.russiansunco.com](http://www.russiansunco.com) , or consult your nearest Russiansunco's sales office for further assistance.