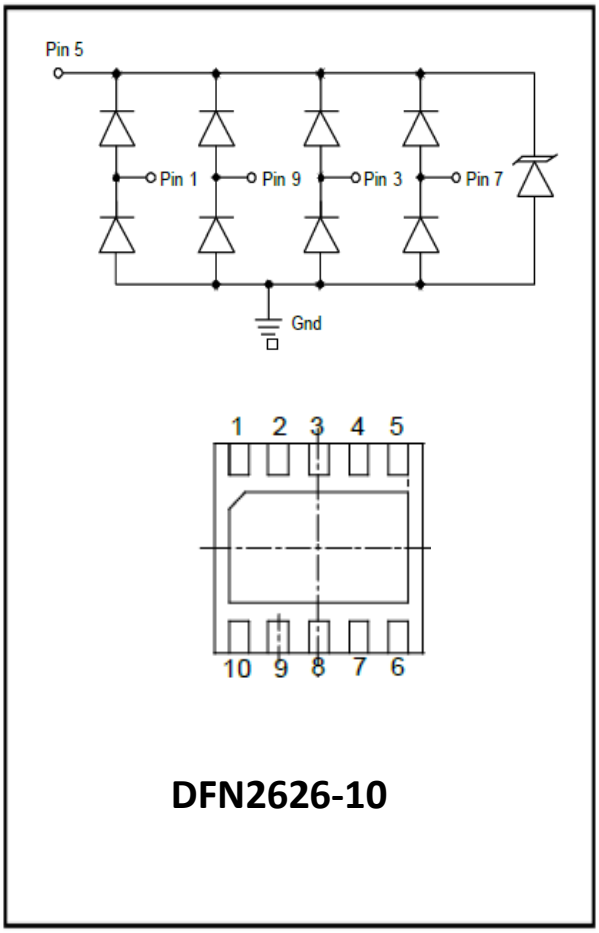
4-Line Uni-directional , Ultra-low Capacitance， Transient Voltage Suppressor



Features

- Ultra small package
- Stand-off voltage: 3.3V
- Transient protection for each line according to
  IEC61000-4-2(ESD): ±15kV (contact)
  IEC61000-4-5(surge):24A (8/20μs)
- Low clamping voltage
- RoHS Compliant

Applications

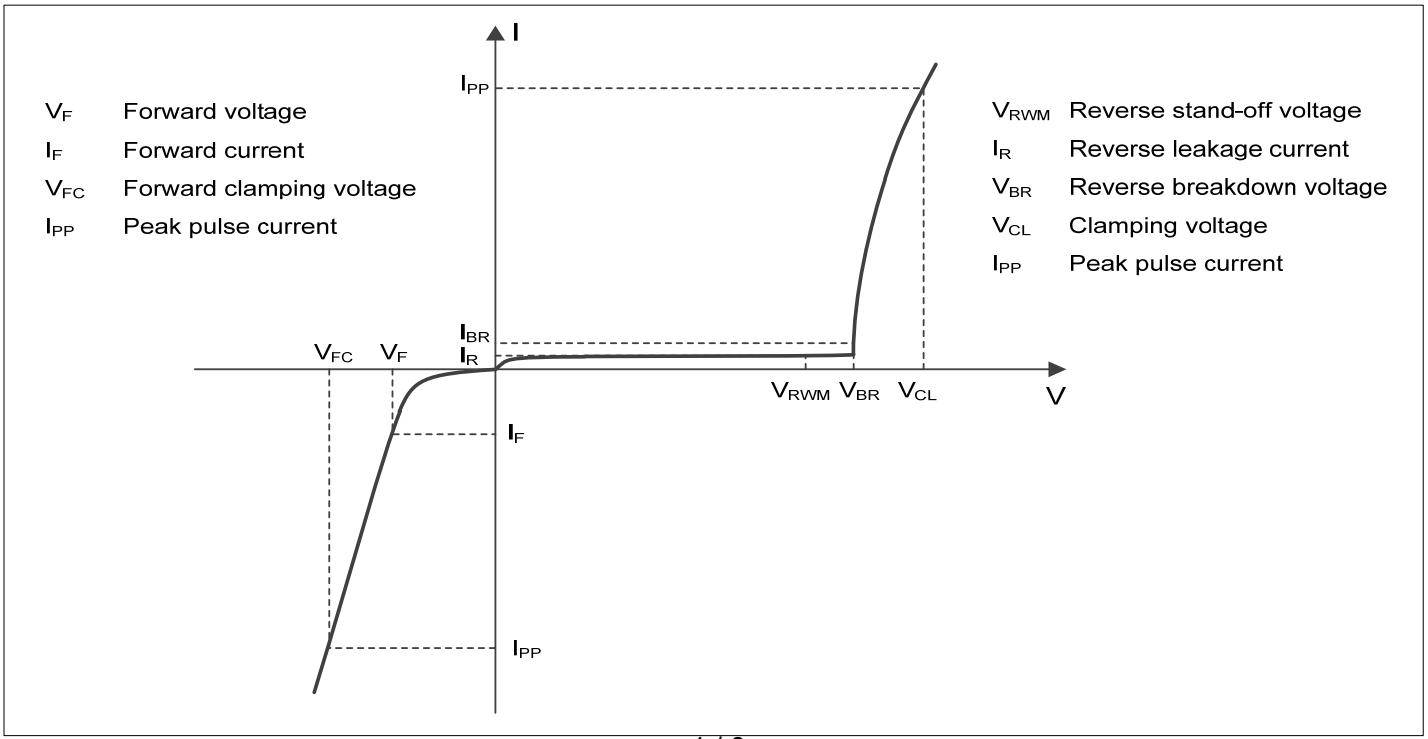
- Analog Video
- RJ-45 Connectors
- T1/E1 Secondary Protection
- T3/E3 Secondary Protection
- 10/100/1000 Ethernet

Mechanical Characteristics

- Package: DFN2626-10L
- Case Material: “Green” Molding Compound.
- Moisture Sensitivity: Level 3 per J-STD-020
- Marking Information: See Below

3304 = Device Marking Code
YYWW = Date Code
Dot denotes Pin1

■Definitions of electrical characteristics



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

PARAMETER	SYMBOL	LIMITS	UNIT
Peak pulse power (t_p = 8/20μs)	P_{pk}	450	W
Peak pulse current (t_p = 8/20μs)	I_{PP}	24	A
ESD according to IEC61000-4-2 air discharge	V_{ESD}	±25	kV
ESD according to IEC61000-4-2 contact discharge		±15	
Operating Temperature Range	T_J	-55~125	℃
Storage Temperature Range	T_{STG}	-55~150	℃

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

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse maximum working voltage	V_{RWM}	V				3.3
Reverse leakage current	I_R	μA	V_{RWM} = 3.3V			0.5
Punch-Through Voltage	V_{PT}	V	I_{PT} = 2μA	3.5		
Snap-Back Voltage	V_{SB}	V	I_{SB} = 50mA	2.8		
Clamping voltage [1)]	V_{CL}	V	IPP = 1A, (8 x 20μs pulse), any I/O to GND			5.5
Clamping voltage [1)]	V_{CL}	V	IPP = 24A, (8 x 20μs pulse), any I/O to GND			18.5
Junction capacitance	C_J	pF	V_R = 0V, f = 1MHz between I/O pins		2	
Junction capacitance	C_J	pF	V_R = 0V, f = 1MHz any I/O to GND		3.2	5

Notes:

(1). Non-repetitive current pulse, according to IEC61000-4-5. (8/20μs current waveform).

■Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ESDSLC3304P8	F1	Approximate 13	3000	30000	120000	7” reel

■Typical Performance Characteristics (T_a=25℃ unless otherwise Specified)

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

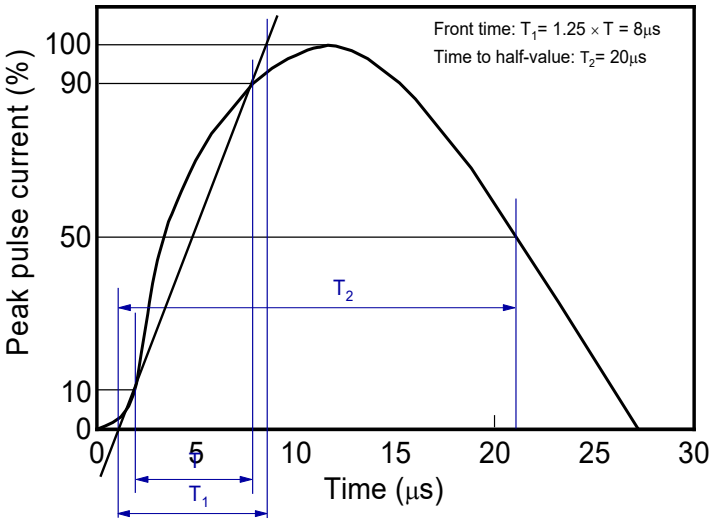


Fig.2 Contact discharge current waveform per IEC61000-4-2

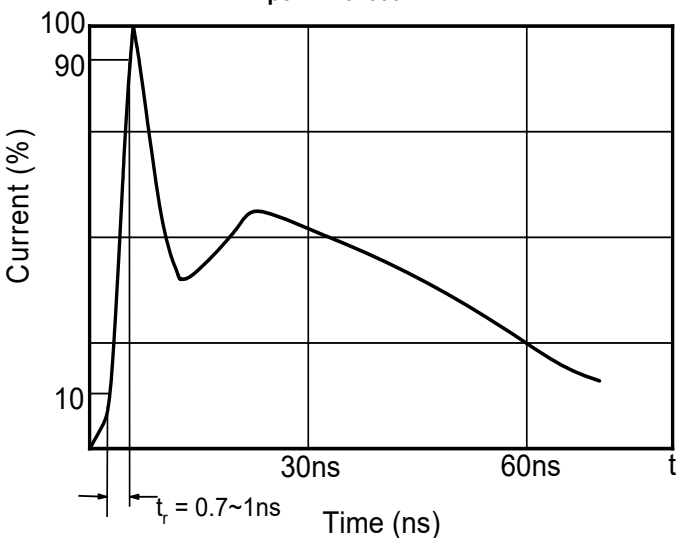


Fig.3 Clamping voltage vs. Peak pulse current

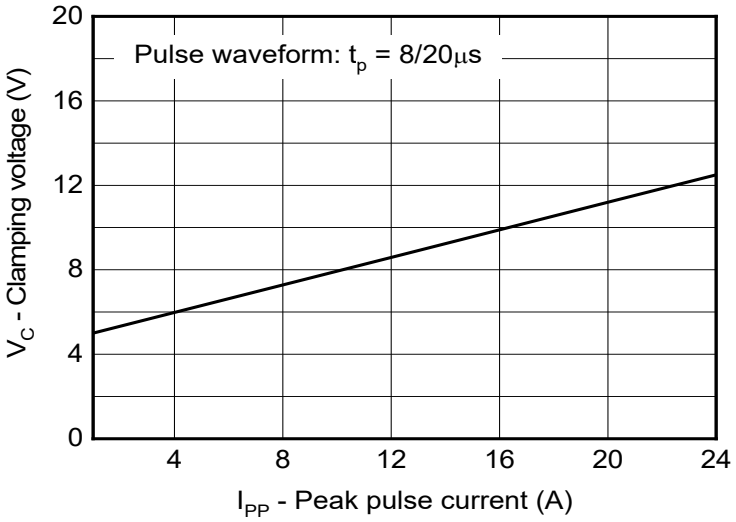


Fig4. Capacitance vs. Reverse voltage

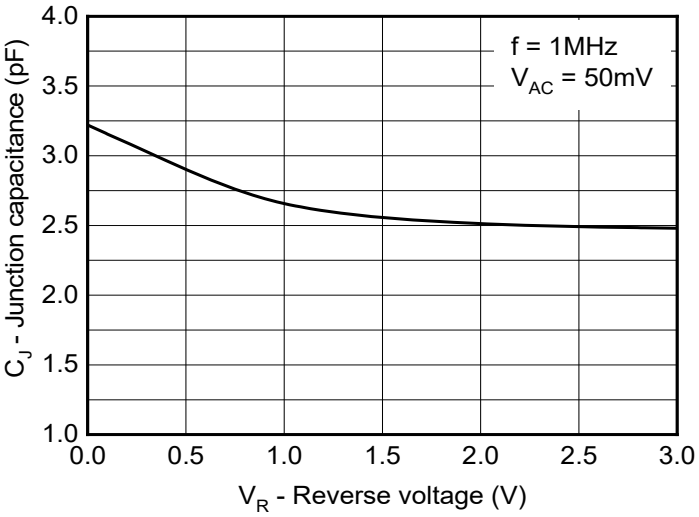


Fig.5 Non-repetitive peak pulse power vs. Pulse time

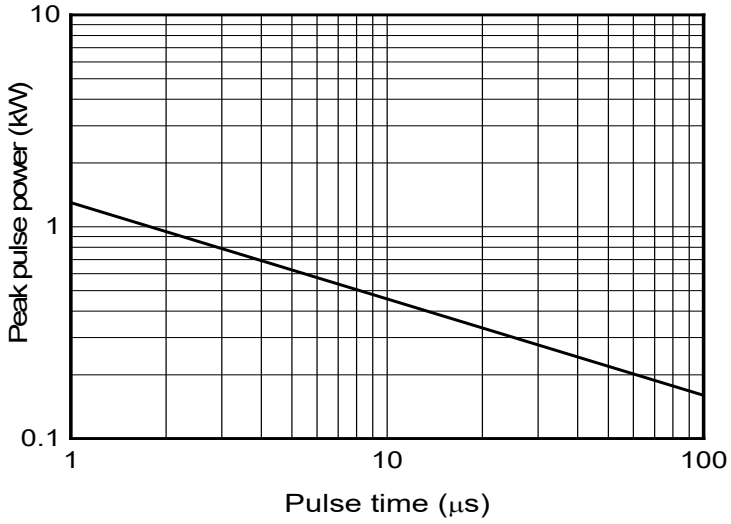


Fig.6 Power derating vs. Ambient temperature

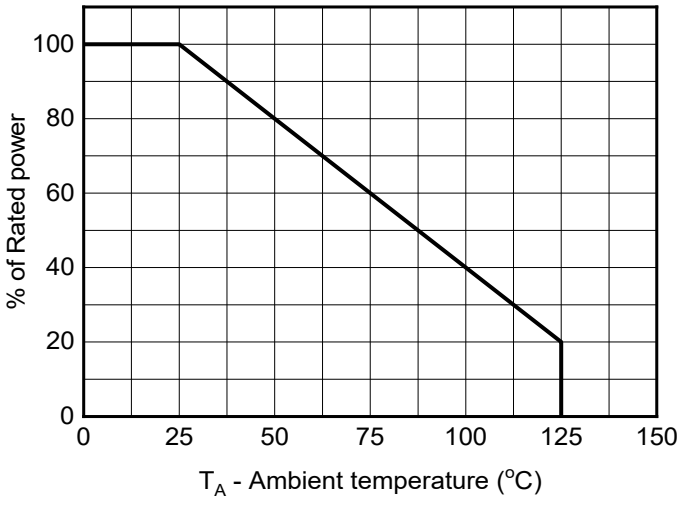


Fig.7 ESD clamping
(+8kV contact discharge per IEC61000-4-2)

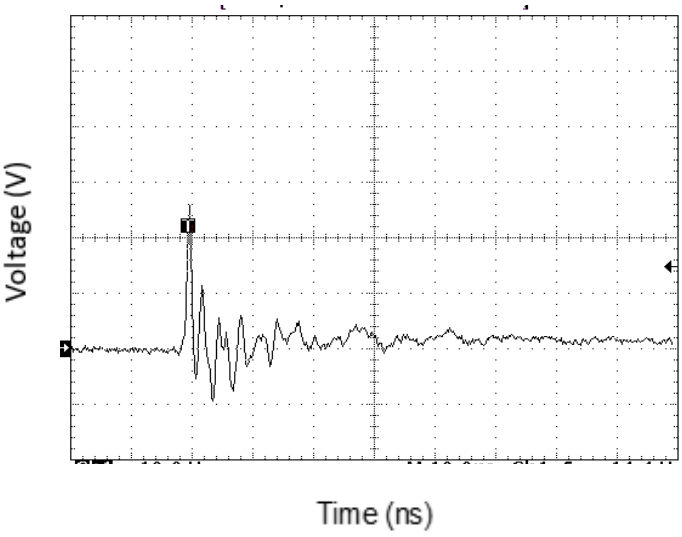
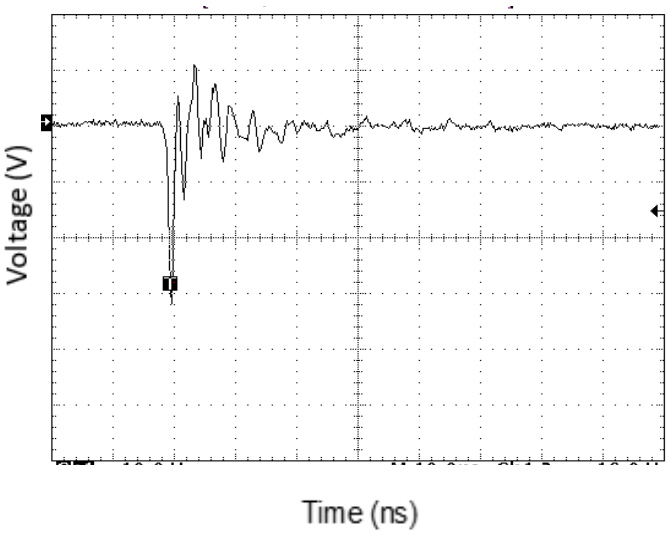
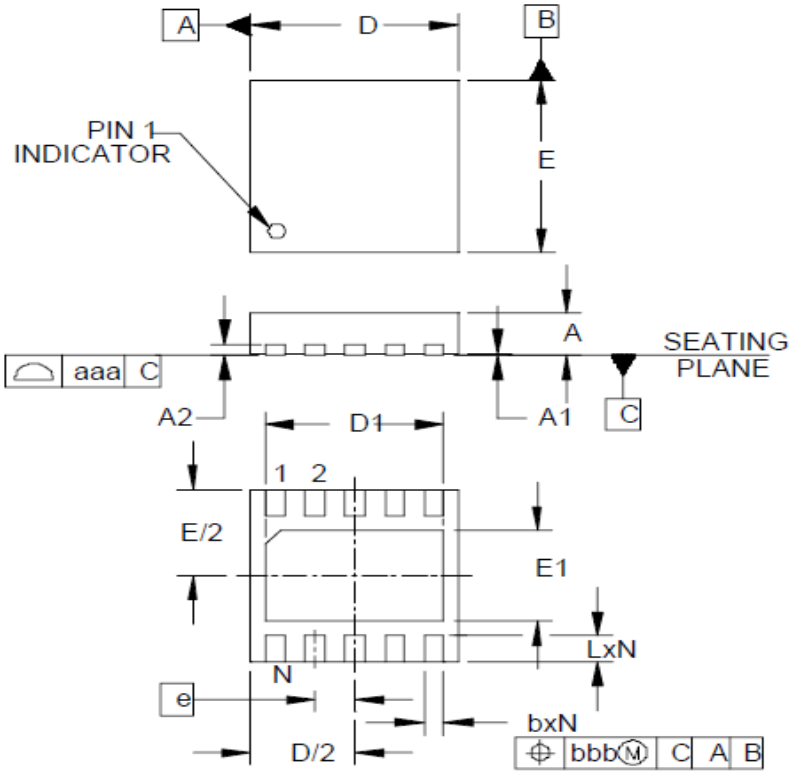


Fig.7 ESD clamping
(-8kV contact discharge per IEC61000-4-2)



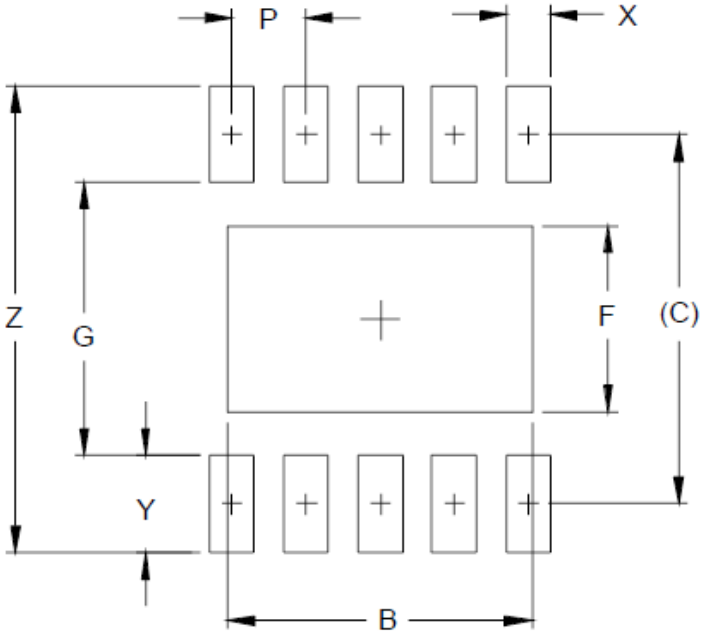
■Outline Dimensions



DIM	INCHES			MILLIMETERS		
	MIN	NOM	MAX	MIN	NOM	MAX
A	.020	.022	.024	0.50	0.55	0.60
A1	.000	.001	.002	0.00	0.03	0.05
A2		(.007)			(0.17)	
b	.007	.010	.012	0.20	0.25	0.30
D	.098	.102	.106	2.50	2.60	2.70
D1	.079	.085	.089	2.00	2.15	2.25
E	.098	.102	.106	2.50	2.60	2.70
E1	.044	.050	.054	1.11	1.26	1.36
e		.020 BSC			0.50 BSC	
L	.011	.014	.016	0.30	0.35	0.40
N		10			10	
aaa		.003			0.08	
bbb		.004			0.10	

NOTES:
1. CONTROLLING DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).
2. COPLANARITY APPLIES TO THE EXPOSED PAD AS WELL AS THE TERMINALS.

■Recommend land pattern (Unit:mm)



DIM	INCHES	MILLIMETERS
B	.081	2.05
C	.100	2.50
F	.050	1.26
G	.073	1.85
P	.020	0.50
X	.012	0.30
Y	.025	0.65
Z	.124	3.15

Notes:
This recommended land pattern is for reference purposes only. Please consult your manufacturing group to ensure your PCB design guidelines are met.

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