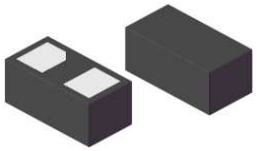
LE3321P0

1-Line Bi-directional ESD Protection Diode

RoHS Device

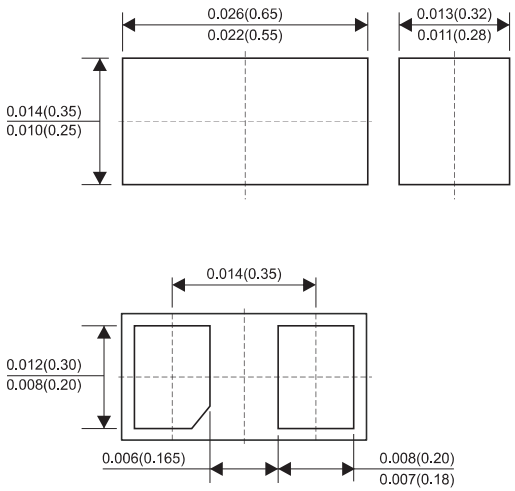
Halogen Free



Features

- Low junction capacitance.
- Working voltage: 3.3V.
- Low clamping voltage.

DFN0603-2L



Dimensions in inches and (millimeter)

Mechanical data

- Case: DFN0603-2L package, molded plastic.
- Lead finish: Matte tin.
- Mounting position: Any.

Circuit Diagram

Maximum Rating (at T_A=25°C, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak pulse power (tp=8/20μs waveform)	P_{PPP}	80	W
Peak pulse current (8/20μs)	I_{PP}	8	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	±30	kV
Operation temperature range	T_J	-55 to +125	°C
Storage temperature range	T_{STG}	-55 to +150	°C

Electrical Characteristics (at T_A=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse working voltage		V_{RWM}			3.3	V
Breakdown voltage	I_T = 1mA	V_{BR}	3.8			V
Reverse leakage current	V_{RWM} = 3.3V	I_R		0.01	0.2	μA
Clamping voltage	I_{PP} = 1A (8x20μs pulse) I_{PP} = 5A (8x20μs pulse) I_{PP} = 8A (8x20μs pulse)	V_C			6 8 10	V
Junction capacitance	V_R = 0V, f = 1MHz	C_J		10	25	pF

Rating and Characteristic Curves

Fig.1 - Junction Capacitance vs. Reverse Voltage

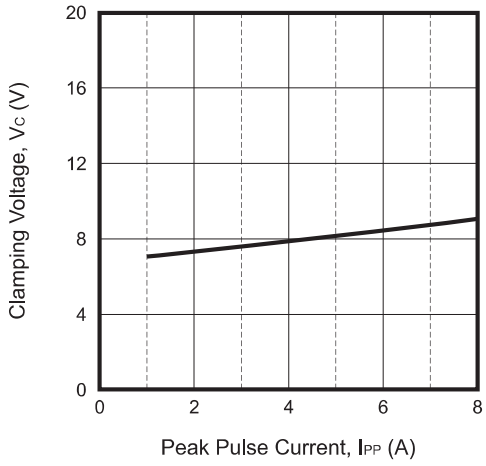


Fig.2 - Peak Pulse Power vs. Pulse Time

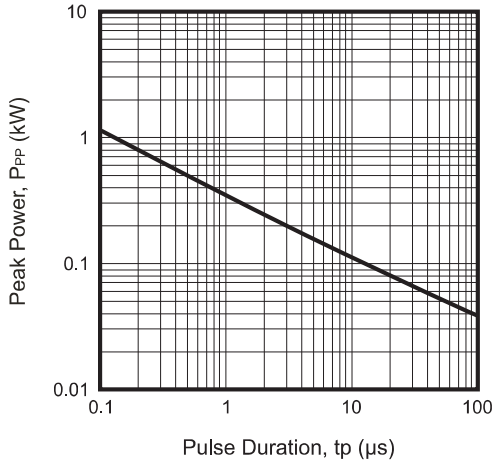


Fig.3 - Clamping Voltage vs. Peak Pulse Current

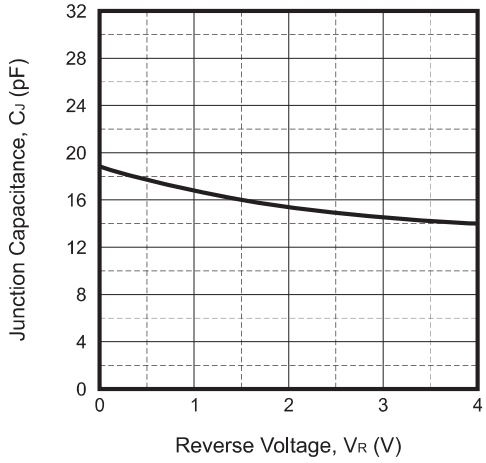


Fig.4 - Power Derating Curve

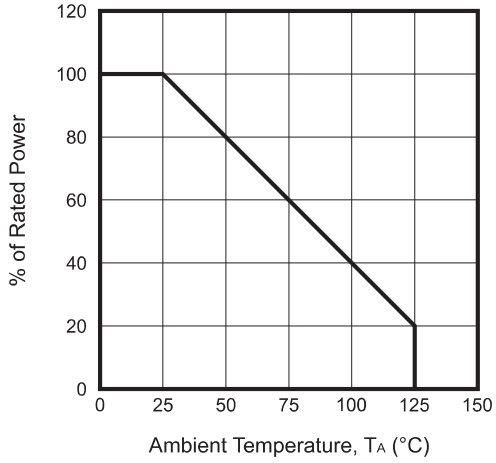
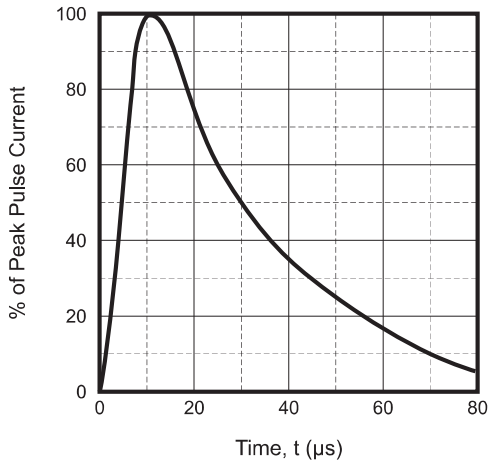
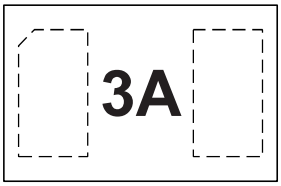


Fig.5 - 8x20μs Pulse Waveform



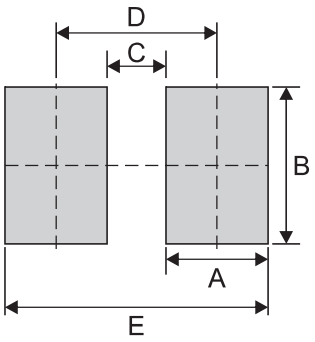
Marking Code

Part Number	Marking Code
LE3321P0	3A



Suggested P.C.B. PAD Layout

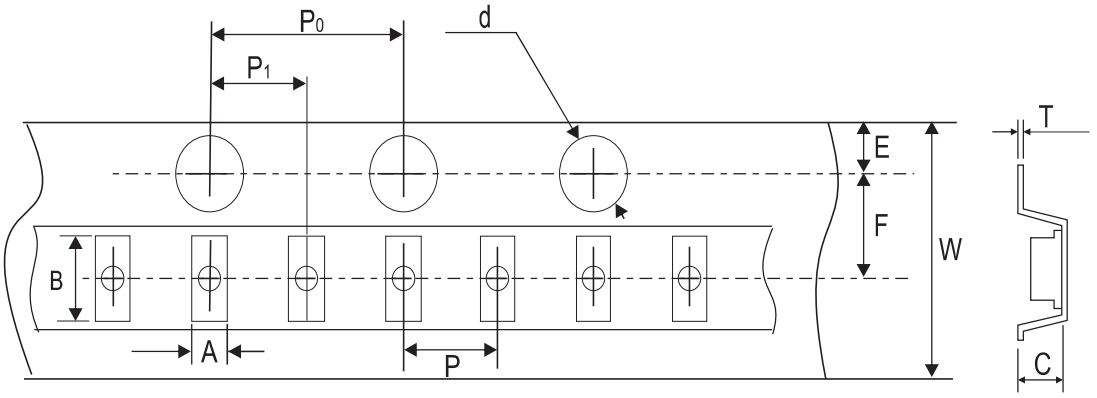
SIZE	DFN0603-2L	
	(mm)	(inch)
A	0.24	0.009
B	0.34	0.013
C	0.16	0.006
D	0.40	0.016
E	0.64	0.025

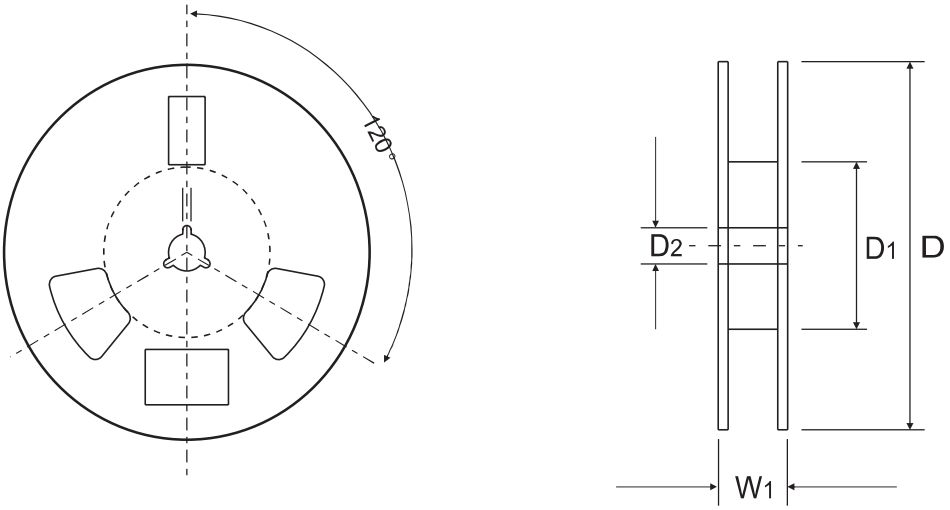


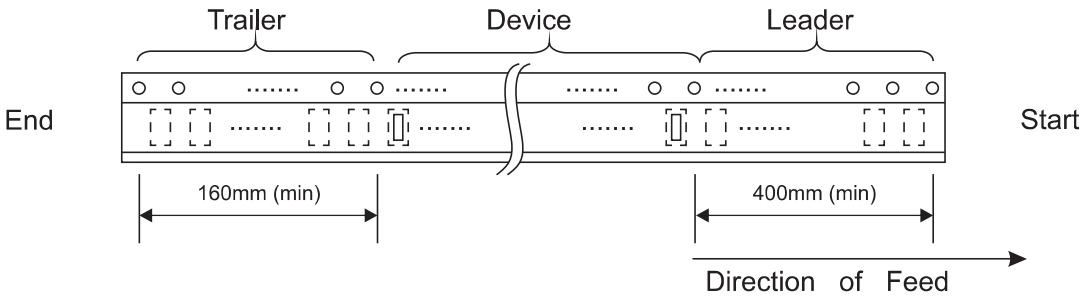
Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
DFN0603-2L	10,000	7

Reel Taping Specification







	SYMBOL	A	B	C	d	D	D1	D2
DFN0603-2L	(mm)	0.41 ± 0.03	0.71 ± 0.03	0.38 ± 0.03	1.50 + 0.10 - 0.00	178.00 ± 1.00	60.00 ± 0.50	13.50 ± 0.20
	(inch)	0.016 ± 0.001	0.028 ± 0.001	0.015 ± 0.001	0.059 + 0.004 - 0.000	7.008 ± 0.039	2.362 ± 0.020	0.531 ± 0.008

	SYMBOL	E	F	P	P0	P1	T	W	W1
DFN0603-2L	(mm)	1.75 ± 0.10	3.50 ± 0.05	2.00 ± 0.05	4.00 ± 0.10	2.00 ± 0.05	0.20 ± 0.02	8.00 + 0.30 - 0.10	12.00 + 0.50 - 0.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.079 ± 0.002	0.157 ± 0.004	0.079 ± 0.002	0.008 ± 0.001	0.315 + 0.012 - 0.004	0.472 + 0.020 - 0.000