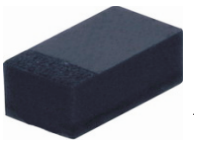
SMD ESD Protection Diode

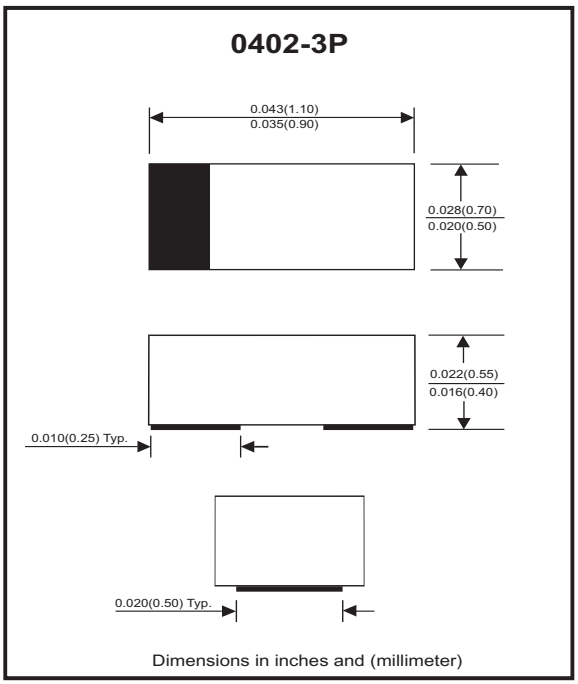
CPDQR3-5V0UP

RoHS Device



Features

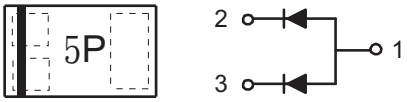
-Uni-directional ESD protection.
-(15kV) IEC 61000-4-2 rating.
-Surface mount package.
-Ultra small SMD package:0402-3P.
-High component density.



Mechanical data

-Case: 0402-3P standard package, molded plastic.
-Terminals: Nipd,solderable per MIL-STD-750,method 2026.
-Marking Code: CPDQR3-5V0UP: 5P
-Mounting position: Any.
-Weight: 0.001 gram(approx.).

-MARKING:



Maximum Ratings (at T_A=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak pulse power (tp = 8/20 us)	P_{PP}	25	W
Peak pulse current (tp = 8/20 us)	I_{PP}	2	A
ESD per IEC 61000-4-2(Air) **ESD per IEC 61000-4-2(Contact)**	ESD	20 15	kV
Operating temperature	T_J	-55 to +125	°C
Storage temperature	T_{STG}	-55 to +150	°C

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse stand-Off voltage		V_{RWM}			5	V
Diode breakdown voltage	I_R = 1mA	V_{BD}	6	7.1	8	V
Reverse leakage current	V_R = 5V	I_R		0.06	0.25	uA
Forward voltage	I_F = 10mA	V_F		1	1.2	V
Clamping voltage	I_{PP} = 2A,T_P=8/20us	V_C			12.5	V
Junction capacitance	V_R = 0V, f=1MHz	C_T			10	pF
	V_R = 3.3V, f=1MHz			4.5		

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RATING AND CHARACTERISTIC CURVES (CPDQR3-5V0UP)

Fig. 1 - Non-Repetitive Peak Pulse Power vs. Pulse Time

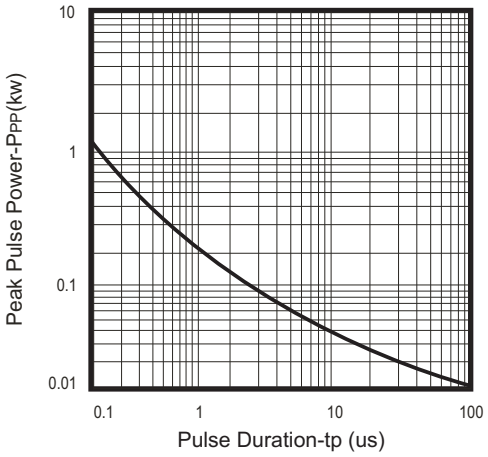


Fig. 2 - Power rating derating curve

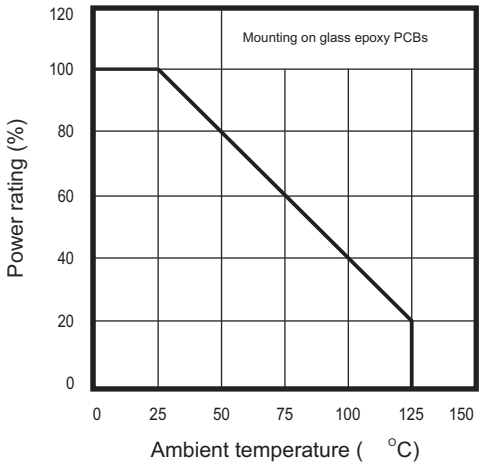


Fig. 3 - Clamping volatage vs. peak pulse current

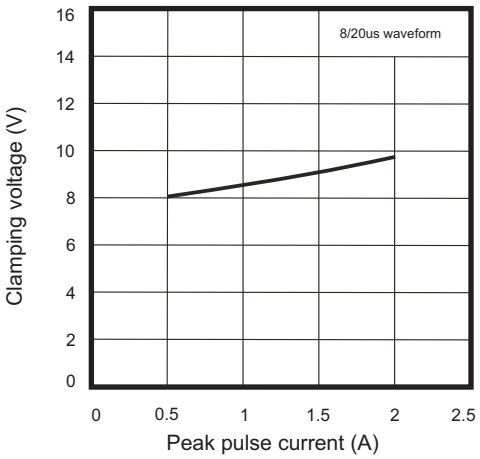


Fig. 4 - Forward voltage vs. forward current

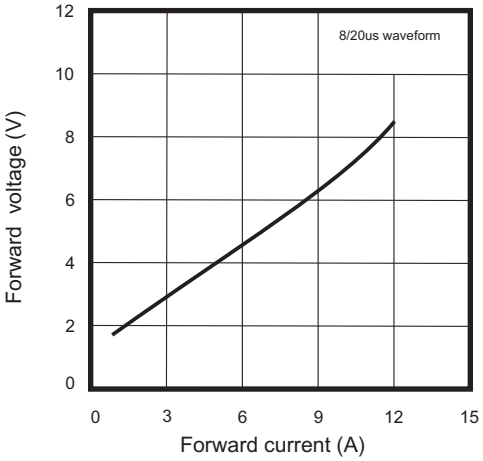
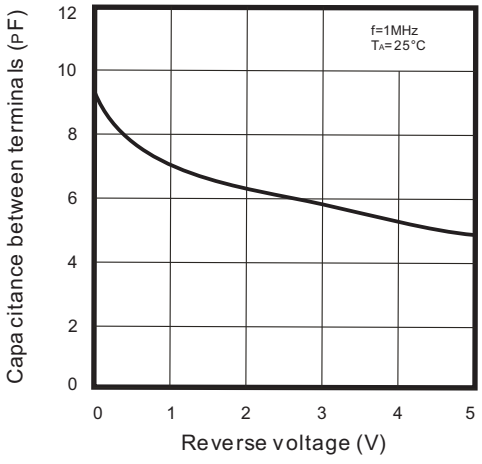


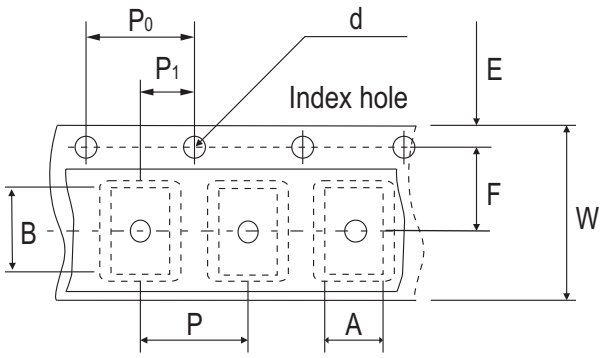
Fig. 5 - Capacitance between terminals characteristics

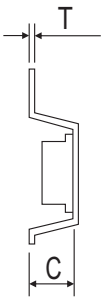


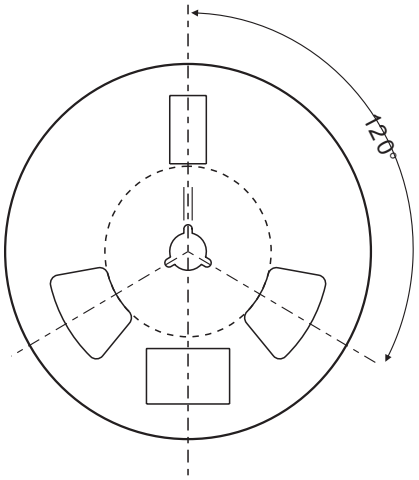
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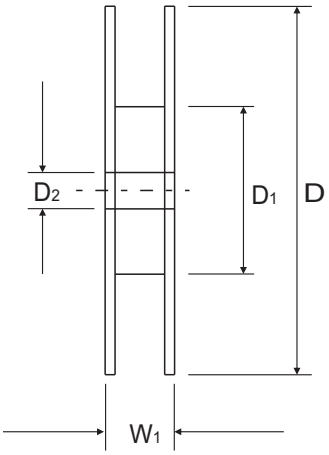
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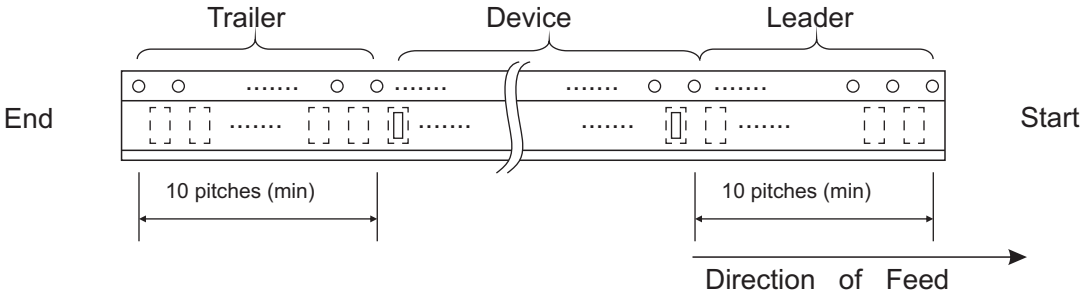
Reel Taping Specification











	SYMBOL	A	B	C	d	D	D_1	D_2
0402	(mm)	0.69 ± 0.10	1.19 ± 0.10	0.66 ± 0.10	1.50 ± 0.10	178 ± 1	60.0 MIN.	13.0 ± 0.20
	(inch)	0.027 ± 0.004	0.047 ± 0.004	0.026 ± 0.004	0.059 ± 0.004	7.008 ± 0.04	2.362 MIN.	0.512 ± 0.008

	SYMBOL	E	F	P	P_0	P_1	T	W	W_1
0402	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.254 ± 0.02	8.00 ± 0.30	13.5 MAX.
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.01 ± 0.001	0.315 ± 0.012	0.531 MAX.

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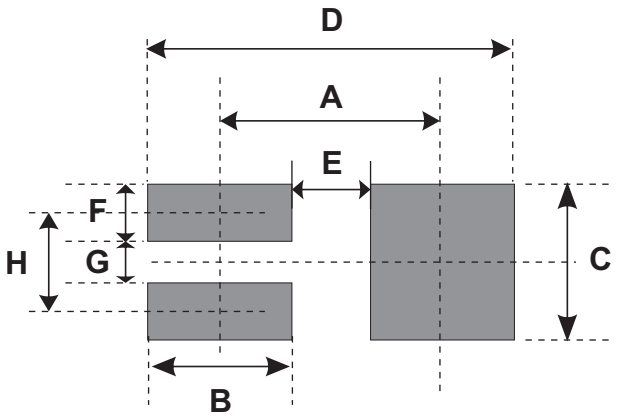
Marking Code

Part Number	Marking Code
CPDQR3-5V0UP	5P



Suggested PAD Layout

SIZE	0402-3P	
	(mm)	(inch)
A	0.700	0.028
B	0.400	0.016
C	0.600	0.024
D	1.100	0.043
E	0.300	0.012
F	0.200	0.008
G	0.150	0.006
H	0.350	0.014



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
0402-3P	3,000	7

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