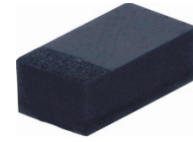


CPDQR5V0UP (RoHS Device)

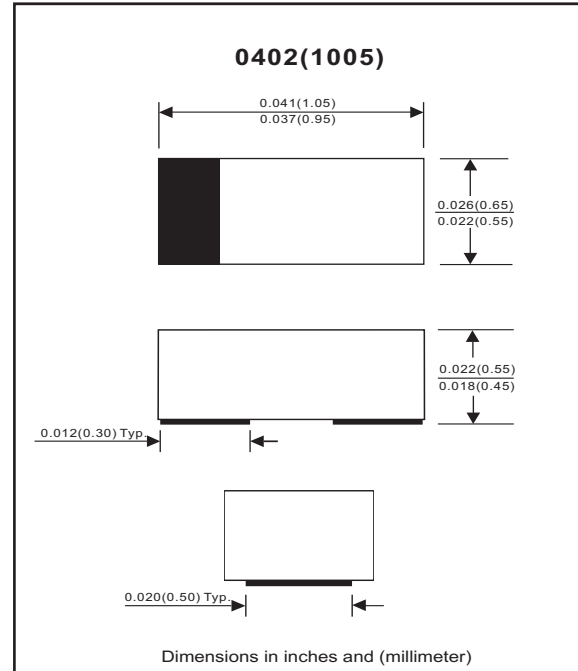


Features

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

Mechanical data

- Case: 0402(1005) standard package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750,method 2026.
- Marking Code:
CPDQR5V0UP: 5P
- Mounting position: Any.
- Weight: 0.001 gram(approx.).



Maximum Rating (at TA=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak pulse power (tp = 8/20 us)	PPP	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 TA=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		

RATING AND CHARACTERISTIC CURVES (CPDQR5V0UP)

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

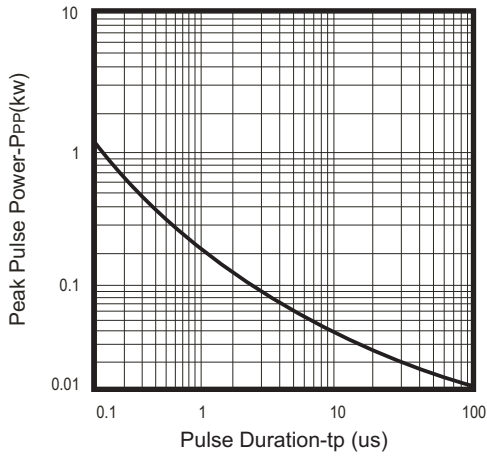


Fig. 2 - Power rating derating curve

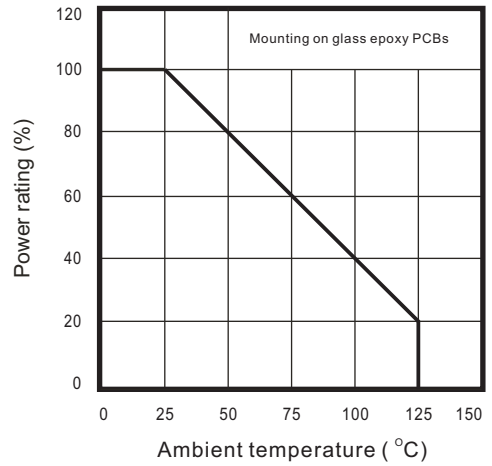


Fig. 3 - Clamping voltage vs. peak pulse current

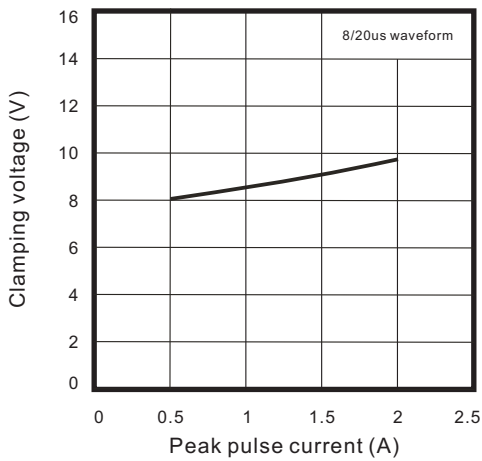


Fig. 4 - Forward voltage vs. forward current

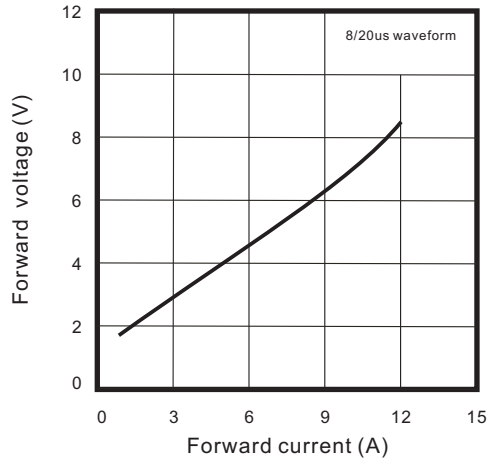
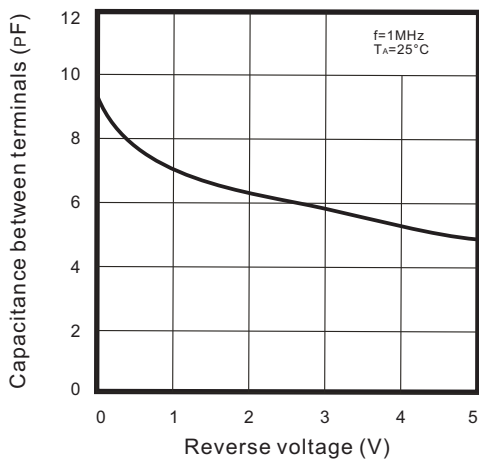


Fig. 5 - Capacitance between terminals characteristics



Reel Taping Specification



QR/0402	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(mm)	0.75 ± 0.10	1.15 ± 0.10	0.60 ± 0.10	1.55 ± 0.10	178 ± 1	60.0 MIN.	13.0 ± 0.20
	(inch)	0.026 ± 0.004	0.045 ± 0.004	0.024 ± 0.004	0.061 ± 0.004	7.008 ± 0.04	2.362 MIN.	0.512 ± 0.008

QR/0402	SYMBOL	E	F	P	P ₀	P ₁	T	W	W ₁
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.22 ± 0.05	8.00 ± 0.20	13.5 MAX.
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.009 ± 0.002	0.315 ± 0.008	0.531 MAX.

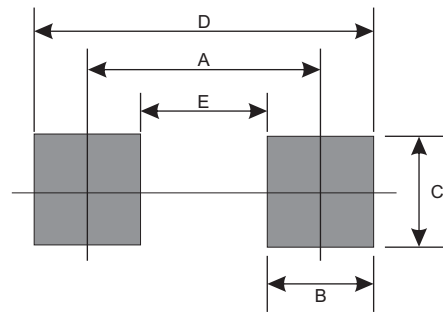
Marking Code

Part Number	Marking Code
CPDQR5V0UP	5P



Suggested PAD Layout

SIZE	QR/0402	
	(mm)	(inch)
A	0.750	0.030
B	0.500	0.020
C	0.700	0.028
D	1.250	0.049
E	0.250	0.010



Standard Package

Case Type	Qty per Reel	Reel Size
	(Pcs)	(inch)
QR/0402	5000	7