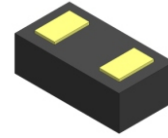


CPDWL5V0SPC-HF

Ultra small SMD package

RoHS Device

Halogen Free

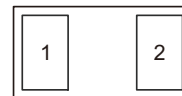


Case 01005

Features

- Bi-directional ESD protection.
- Surface mount package.
- High component density.
- Low clamping voltage.
- Low leakage.
- Ultra-low capacitance: < 0.3 pF.

Outline



Circuit Diagram



Mechanical data

- Case: 01005 package, molded plastic.
- Mounting position: Any.

Part number	Package	Reel	Reel size	Marking code
CPDWL5V0SPC-HF	01005	10,000	7 inch	A

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

Parameter	Conditions	Symbol	Value	Unit
Peak pulse power	$T_P = 8/20\mu s$	P_{PP}	35	W
Peak pulse current	$T_P = 8/20\mu s$ (Note 1)	I_{PP}	2.5	A
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact) (Note 2)	ESD	± 15 ± 12	kV
Operating temperature range		T_J	-40 to +125	°C
Storage temperature range		T_{STG}	-55 to +150	°C

Notes: 1. Stress pulse: 8/20 μs current waveform according to IEC 61000-4-5.
2. ESD according to IEC 61000-4-2.

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Working peak reverse voltage		V_{RWM}			5	V
Breakdown voltage	$I_T = 1mA$	V_{BR}	6			V
Reverse leakage current	$V_{RWM} = 5V$	I_R		1	100	nA
Clamping voltage	$I_{PP} = 1A, T_P = 8/20\mu s$	V_C			11	V
	$I_{PP} = 2.5A, T_P = 8/20\mu s$ (Note 1)				14	
Junction capacitance	$V_R = 0V, f = 1MHz$	C_J		0.2	0.3	pF

Notes: 1. Stress pulse: 8/20 μs current waveform according to IEC 61000-4-5.

Typical Rating and Characteristic Curves (CPDWL5V0SPC-HF)

Fig.1 - 8/20μs Peak Pulse Current
Waveform Acc. IEC 61000-4-5

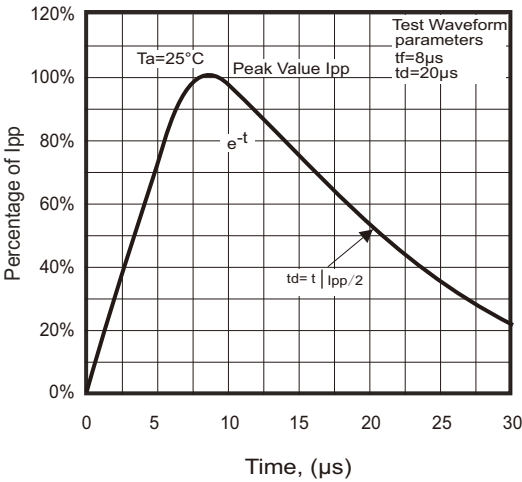


Fig.2 - Power Rating Derating Curve

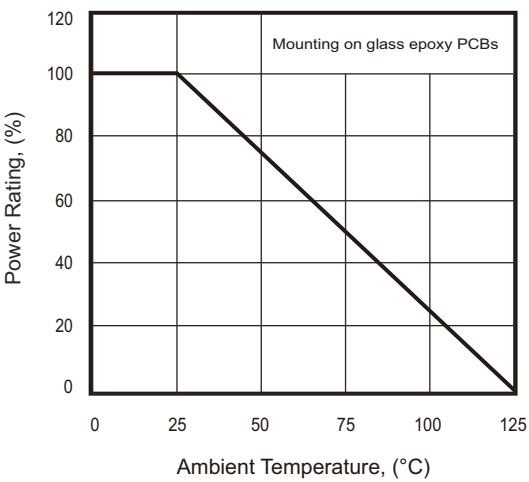


Fig.3 - Typical Capacitance Between
Terminals Characteristics

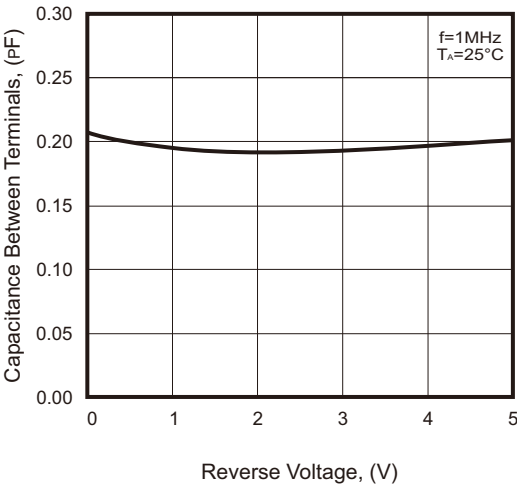
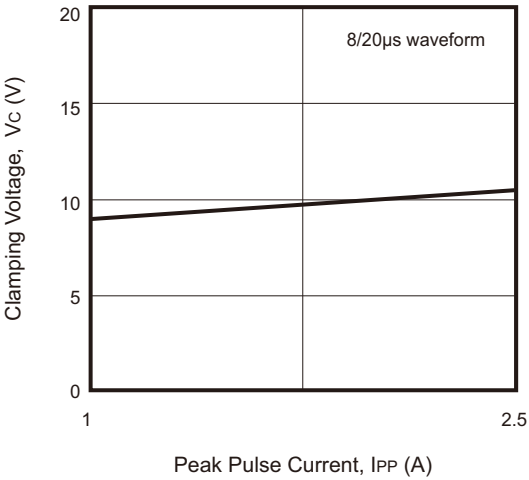
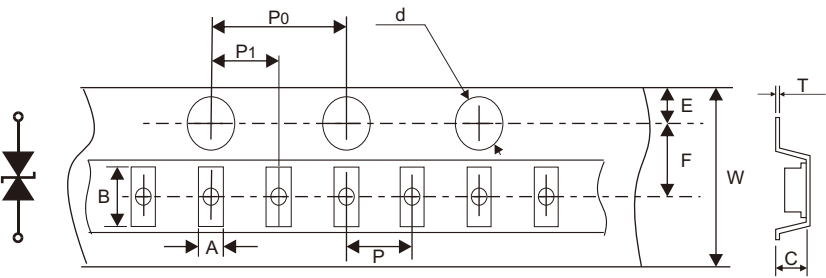


Fig.4 - Typical Clamping Voltage Vs.
Peak Pulse Current

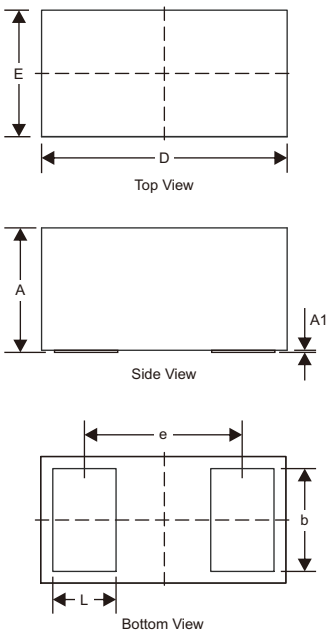


Taping Specification



SIZE	01005
	(mm)
A	0.27±0.02
B	0.49±0.02
C	0.215±0.02
P	2.00±0.05
P0	4.00±0.10
P1	2.00±0.05
d	1.50±0.10
E	1.75±0.10
F	3.50±0.05
W	8.00+0.30/-0.10
T	0.20±0.05

Package Dimensions

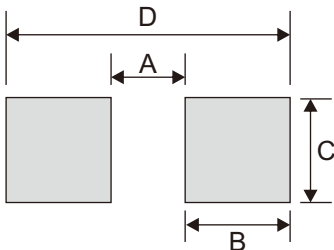


WL, 0.42x0.22, 0.26P

Case 01005

Symbol	Millimeters		
	Min	Nom	Max
A	0.15	0.17	0.20
A1	-	-	0.01
b	0.13	0.16	0.17
D	0.40	0.42	0.44
E	0.20	0.22	0.24
e	-	0.26	-
L	0.07	0.10	0.11

Suggested P.C.B. PAD Layout



Size	01005	
	(mm)	(inch)
A	0.12	0.005
B	0.17	0.007
C	0.17	0.007
D	0.46	0.018