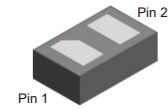


CPDWZ5V0SBP-HF

RoHS Device

Halogen Free



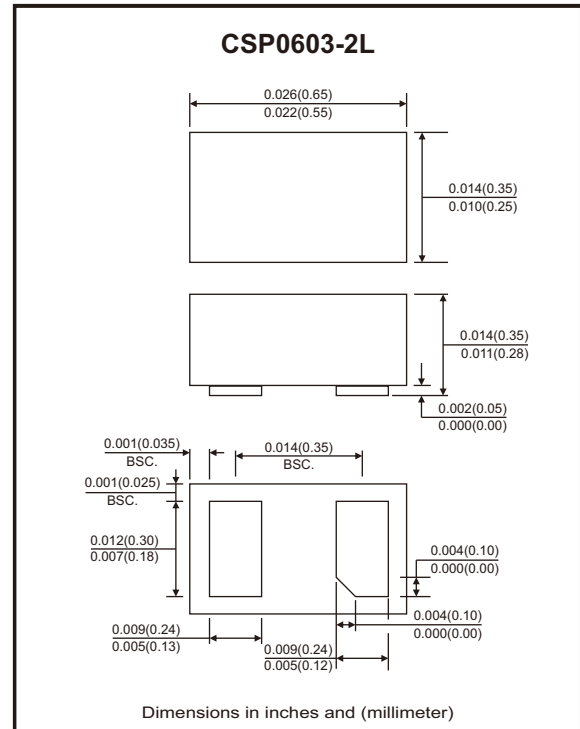
Features

- IEC 61000-4-2 (ESD) $\pm 10\text{kV}$ (air), $\pm 8\text{kV}$ (contact)
- IEC 61000-4-5 (Lightning) 2.5A (8/20 μs)
- Response time is typically $< 1\text{ns}$.
- Bidirectional configurations.
- Low clamping voltage.

Mechanical data

- Case: CSP0603-2L package.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Mounting position: Any.

Circuit Diagram



Maximum Rating (at $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Conditions	Symbol	Value	Unit
Peak pulse power	$T_P = 8/20\mu\text{s}$	P_{PP}	20	W
Peak pulse current	$T_P = 8/20\mu\text{s}$	I_{PP}	2.5	A
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD	± 10 ± 8	kV
Lead soldering temperature		T_L	260 (10 sec)	$^\circ\text{C}$
Junction and storage temperature range		T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

Electrical Characteristics (at $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Peak reverse working voltage		V_{RWM}			5	V
Breakdown voltage	$I_T = 1\text{mA}$	V_{BR}	6		9	V
Reverse leakage current	$V_{RWM} = 5\text{V}$	I_R			1	μA
Clamping voltage	$I_{PP} = 2.5\text{A}$, $t_p = 8/20\mu\text{s}$	V_C		6.0	8.0	V
Junction capacitance	$V_R = 0\text{V}$, $f = 1\text{MHz}$	C_J		0.15	0.19	pF

Typical Rating and Characteristic Curves (CPDWZ5V0SBP-HF)

Fig.1 - Pulse Waveform (8/20 μ s)

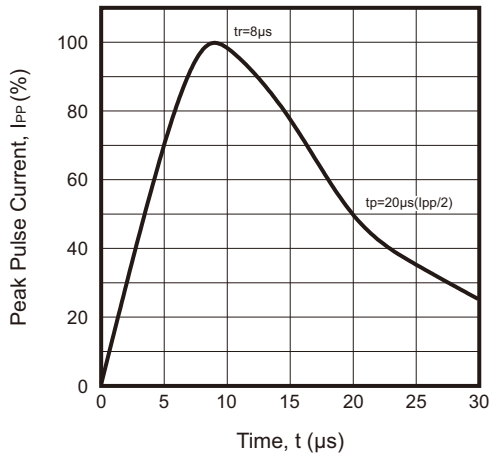


Fig.2 - Power Derating Curve

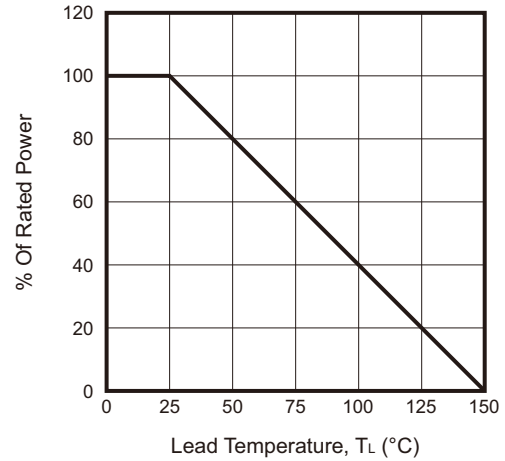


Fig.3 - Typical Clamping Voltage vs. Peak Pulse Current

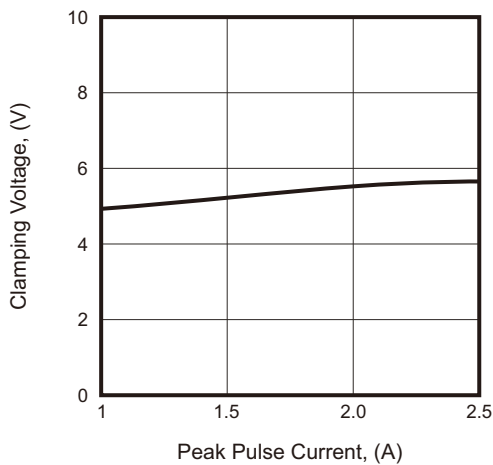


Fig.4 - Capacitance vs. Reverse Voltage

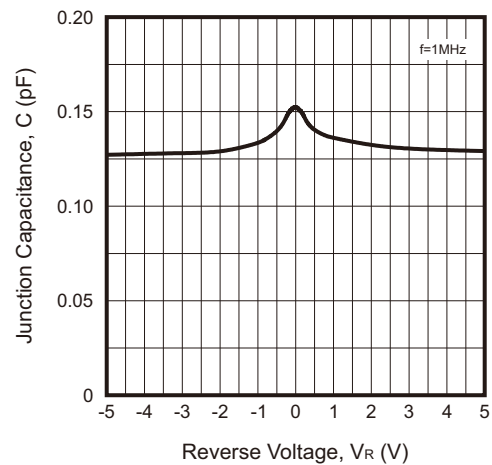


Fig.5 - Non Repetitive Peak Pulse Power vs. Pulse Time

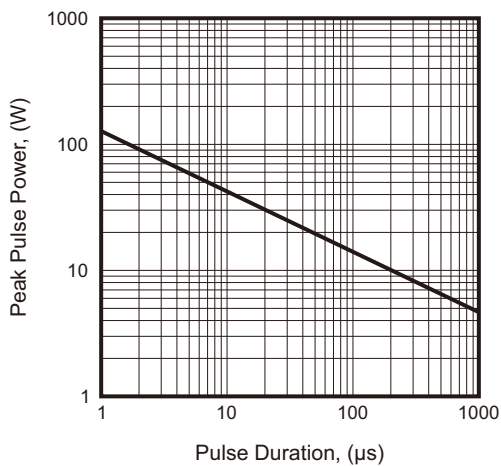
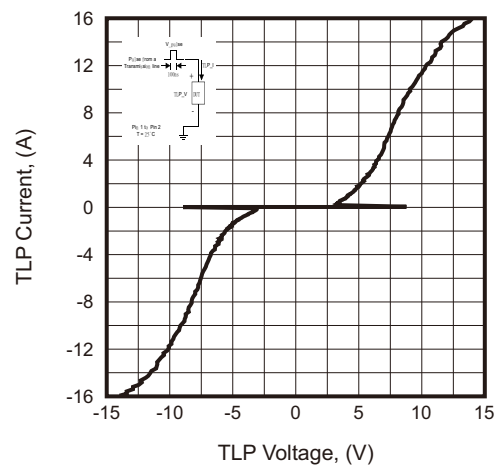
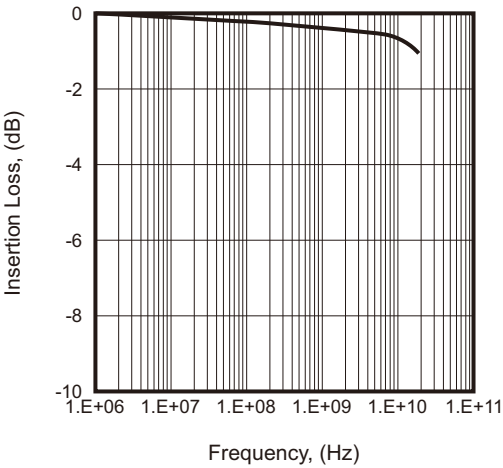


Fig.6 - TLP Measurement

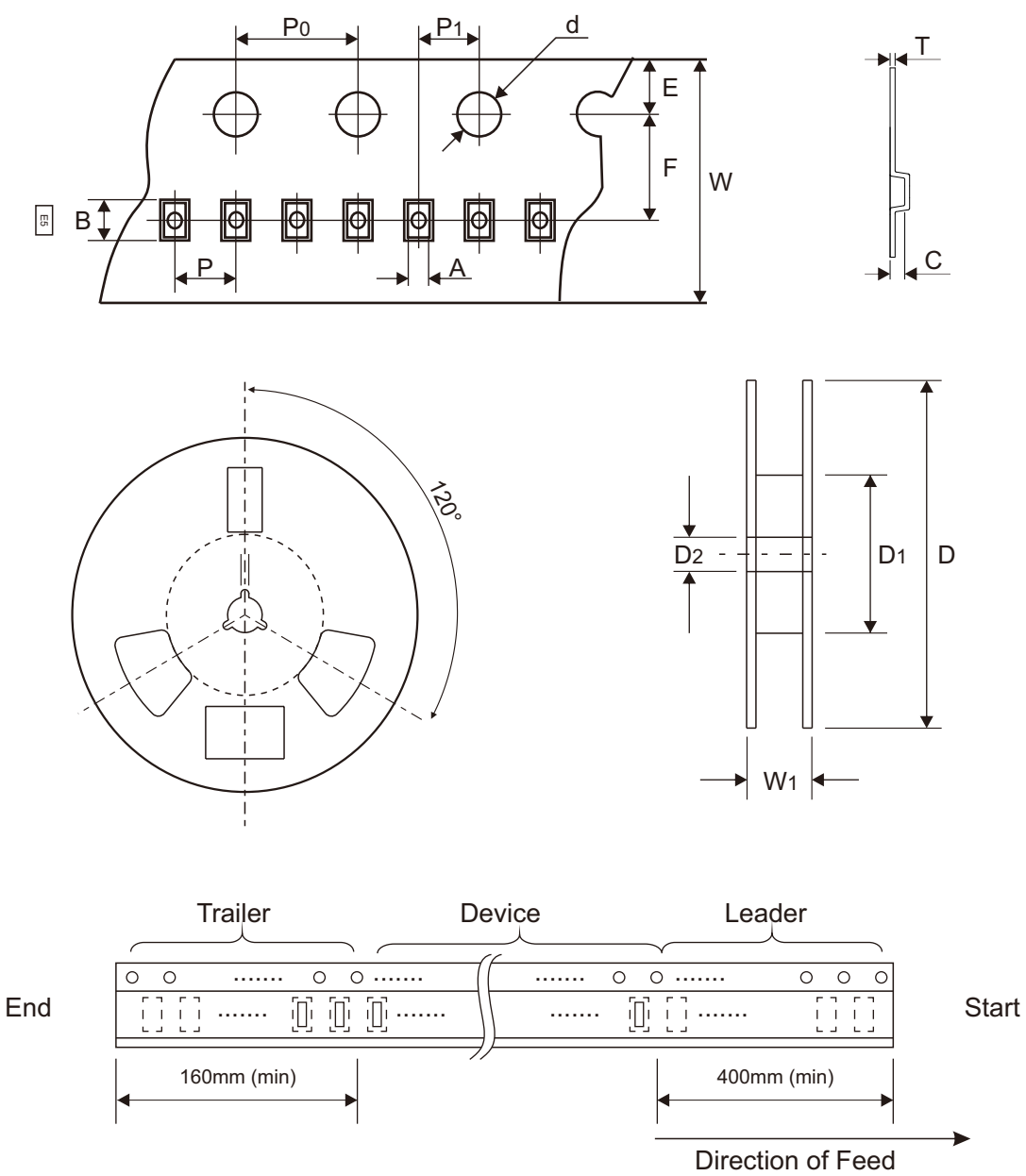


Typical Rating and Characteristic Curves (CPDWZ5V0SBP-HF)

Fig.7 - Insertion loss S21



Reel Taping Specification



CSP0603-2L	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	0.39 ± 0.03	0.70 ± 0.03	0.38 ± 0.02	1.55 ± 0.05	180.00 ± 1.00	54.40 ± 1.00	13.00 + 0.50 - 0.20
	(inch)	0.015 ± 0.001	0.028 ± 0.001	0.015 ± 0.001	0.061 ± 0.002	7.087 ± 0.039	2.142 ± 0.039	0.512 + 0.020 - 0.008

CSP0603-2L	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.03	2.00 ± 0.03	4.00 ± 0.05	2.00 ± 0.03	0.20 + 0.01 - 0.02	8.00 ± 0.10	12.00 ± 1.30
	(inch)	0.069 ± 0.004	0.138 ± 0.001	0.079 ± 0.001	0.157 ± 0.002	0.079 ± 0.001	0.008 + 0.0004 - 0.001	0.315 ± 0.004	0.472 ± 0.051

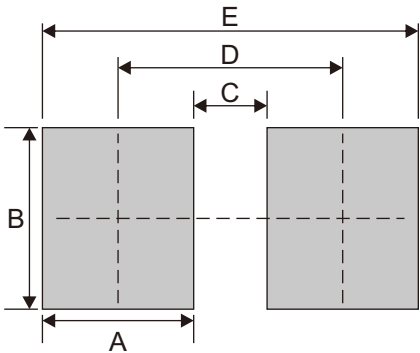
Marking Code

Part Number	Marking Code
CPDWZ5V0SBP-HF	E5



Suggested P.C.B. PAD Layout

SIZE	CSP0603-2L	
	(mm)	(inch)
A	0.25	0.010
B	0.32	0.013
C	0.15	0.006
D	0.40	0.016
E	0.65	0.026



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
CSP0603-2L	12,000	7