

CPDWZ5V0SBPA-E5-HF

RoHS Device
Halogen Free



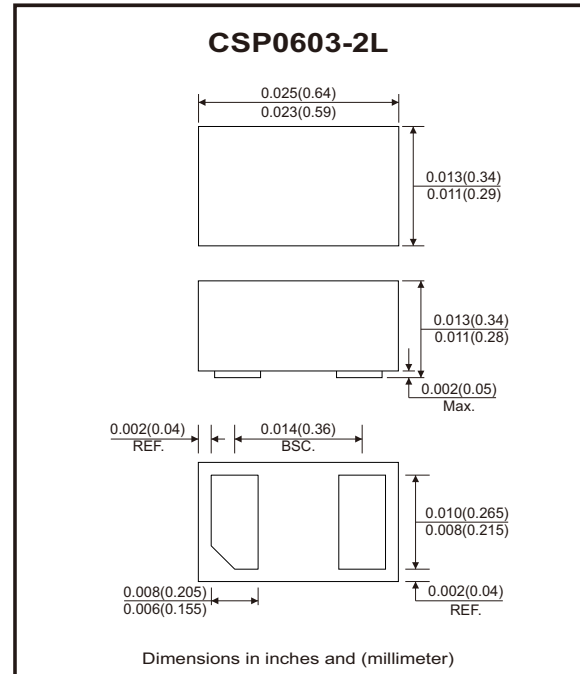
Features

- IEC 61000-4-2 (ESD) $\pm 30\text{kV}$ (air/contact).
- Protecting one Bi-directional lines.
- Low clamping voltage.
- Low leakage current.

Mechanical data

- Case: CSP0603-2L package, molded plastic.
- 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}	126	W
Peak pulse current	$T_P = 8/20\mu\text{s}$	I_{PP}	14	A
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD	± 30	kV
Lead temperature		T_L	260	$^\circ\text{C}$
Junction temperature		T_J	150	$^\circ\text{C}$
Storage temperature range		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
Reverse stand-off voltage		V_{RWM}			5	V
Breakdown voltage	$I_T = 1\text{mA}$	V_{BR}	6	7.8		V
Reverse leakage current	$V_{RWM} = 5\text{V}$	I_R			100	nA
Clamping voltage	$I_{PP} = 1\text{A}$, $T_P = 8/20\mu\text{s}$	V_C		2.5		V
	$I_{PP} = 14\text{A}$, $T_P = 8/20\mu\text{s}$	V_C		6.4	9	V
Dynamic resistance	$I_T = 10\text{A}$	R_{DYN}		0.25		Ω
Junction capacitance	$V_R = 0\text{V}$, $f = 1\text{MHz}$	C_J		0.28	0.35	pF

Typical Rating and Characteristic Curves (CPDWZ5V0SBPA-E5-HF)

Fig.1 - Reverse Breaking Voltage Curve

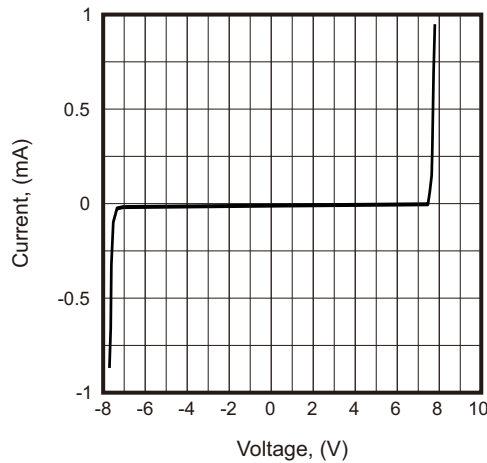


Fig.2 - Reverse Leakage Current Curve

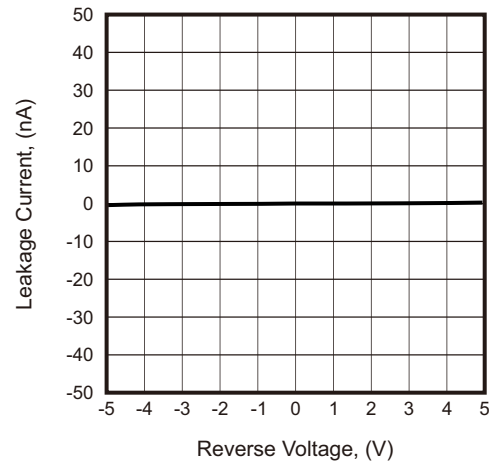


Fig.3 - Junction Capacitance Curve

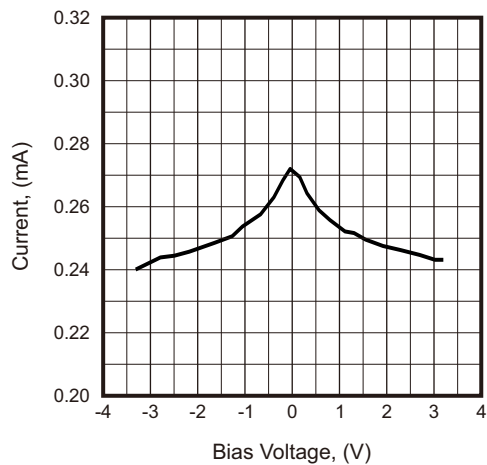


Fig.4 - I—V Curve

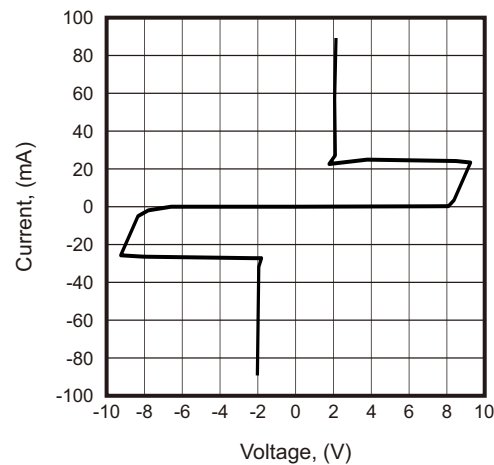


Fig.5 - TLP Curve

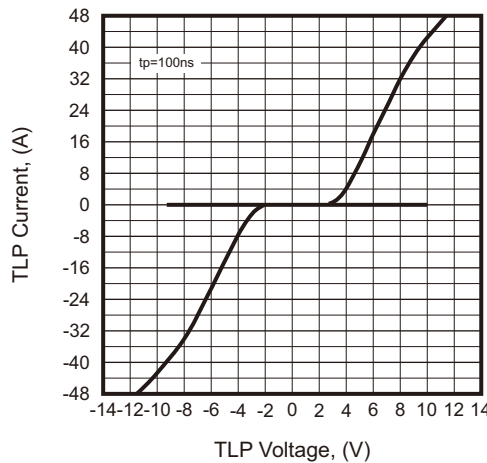
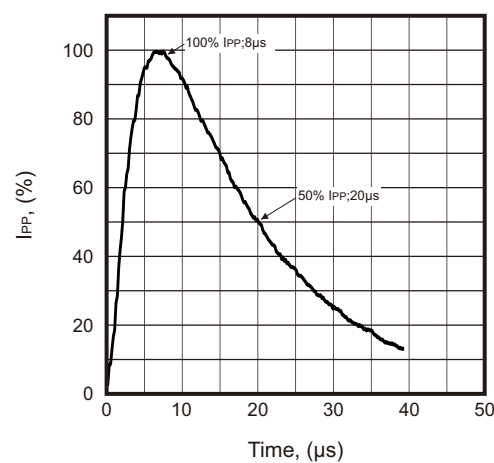
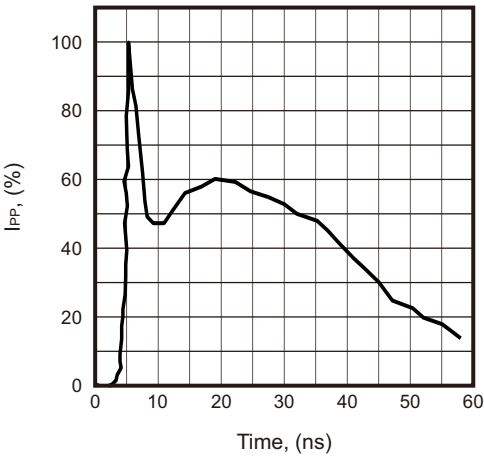


Fig.6 - 8/20μs Pulse Waveform IEC 61000-4-5

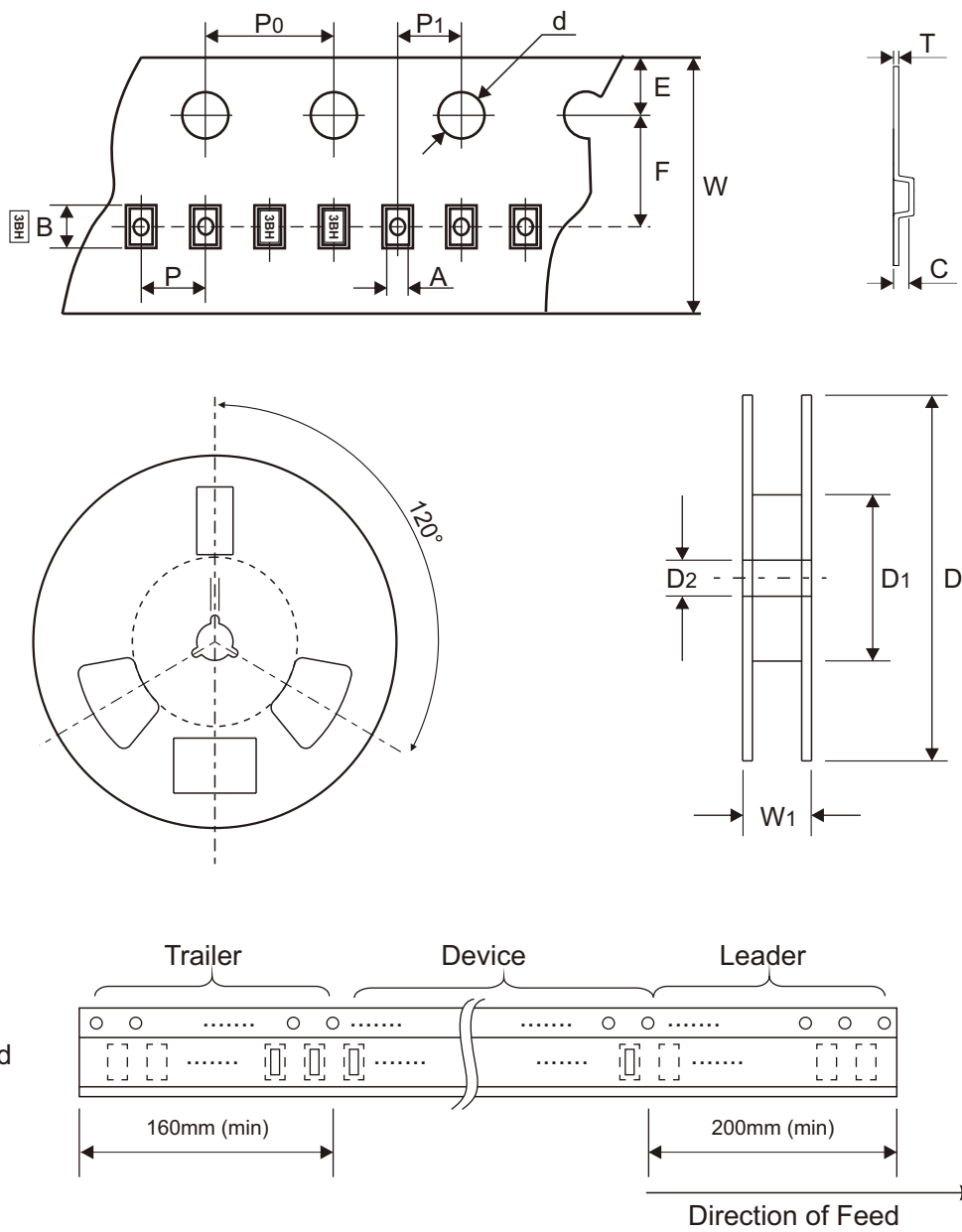


Typical Rating and Characteristic Curves (CPDWZ5V0SBPA-E5-HF)

Fig.7 - ESD Pulse Waveform IEC 61000-4-2



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	178.00 ± 1.00	54.40 ± 0.40	$13.00 + 0.50 - 0.20$
	(inch)	0.015 ± 0.001	0.028 ± 0.001	0.015 ± 0.001	0.061 ± 0.002	7.008 ± 0.039	2.142 ± 0.016	$0.512 + 0.020 - 0.008$

CSP0603-2L	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.04	2.00 ± 0.05	4.00 ± 0.10	2.00 ± 0.05	0.18 ± 0.03	8.00 ± 0.10	11.40 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.079 ± 0.002	0.157 ± 0.004	0.079 ± 0.002	0.007 ± 0.001	0.315 ± 0.004	0.449 ± 0.039

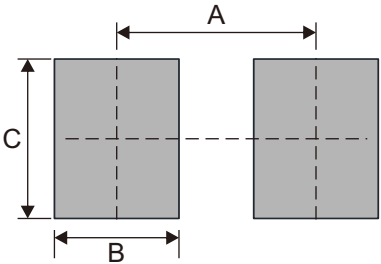
Marking Code

Part Number	Marking Code
CPDWZ5V0SBPA-E5-HF	3BH

3BH

Suggested P.C.B. PAD Layout

SIZE	CSP0603-2L	
	(mm)	(inch)
A	0.40	0.016
B	0.25	0.010
C	0.32	0.013



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
CSP0603-2L	10,000	7