

CPDWZ2V5SBP-HF

RoHS Device

Halogen Free



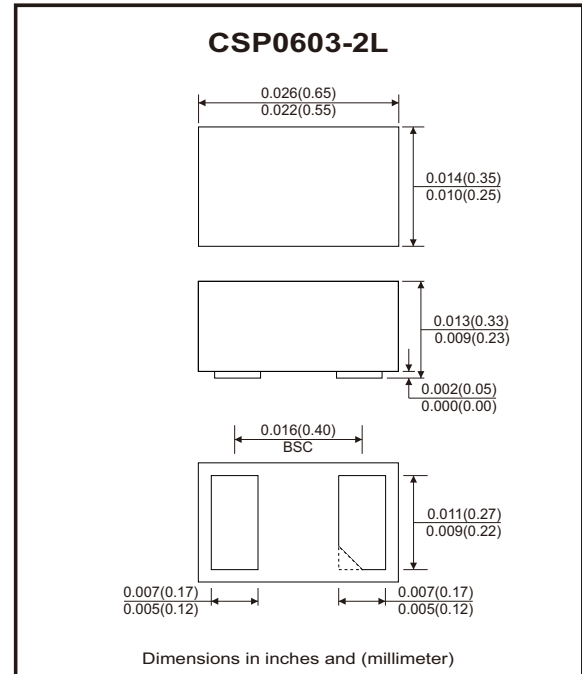
Features

- Bi-directional configurations.
- Low clamping voltage.
- Low leakage.
- Low capacitance.
- IEC 61000-4-2 (ESD) $\pm 20\text{kV}$ (air/contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 9A (8/20 μs)

Mechanical data

- Case: CSP0603-2L package, molded plastic.
- 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}	72	W
Peak pulse current	$T_P = 8/20\mu\text{s}$	I_{PP}	9	A
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD	± 20	kV
Lead soldering temperature (10 sec.)		T_L	260	$^\circ\text{C}$
Operating junction temperature range		T_J	-55 to +125	$^\circ\text{C}$
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
Working peak reverse voltage		V_{RWM}			2.5	V
Breakdown voltage	$I_T = 1\text{mA}$	V_{BR}	4			V
Reverse leakage current	$V_{RWM} = 2.5\text{V}$	I_R			10	nA
Clamping voltage	$I_{PP} = 1\text{A}$, $T_P = 8/20\mu\text{s}$	V_C		3.2		V
	$I_{PP} = 9\text{A}$, $T_P = 8/20\mu\text{s}$	V_C		5.5	8	V
Clamping voltage	$TLP = 8\text{A}$	V_C		4.5		V
	$TLP = 16\text{A}$	V_C		6.5		V
Dynamic resistance	$T_P = 100\text{ns}$	R_{DYN}		0.25		Ω
Junction capacitance	$V_R = 0\text{V}$, $f = 1\text{MHz}$	C_J		0.26		pF
	$V_R = 1\text{V}$, $f = 1\text{MHz}$	C_J		0.2	0.3	pF
	$V_R = 1\text{V}$, $f = 1\text{GHz}$	C_J		0.15		pF

Typical Rating and Characteristic Curves (CPDWZ2V5SBP-HF)

Fig.1 - Pulse Waveform

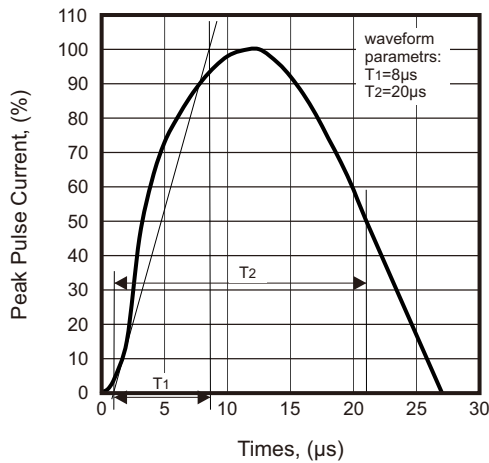


Fig.2 - Non-Repetitive Peak Pulse Power vs. Pulse Time

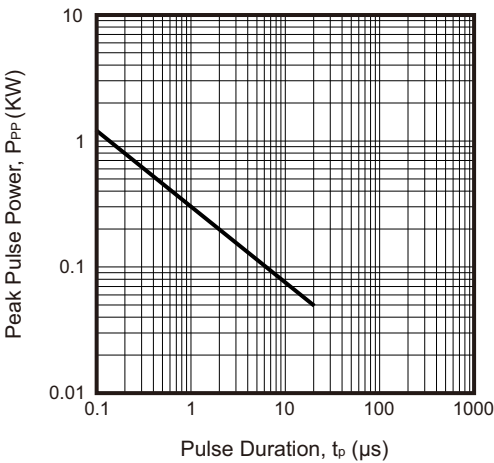


Fig.3 - Power Derating Curve

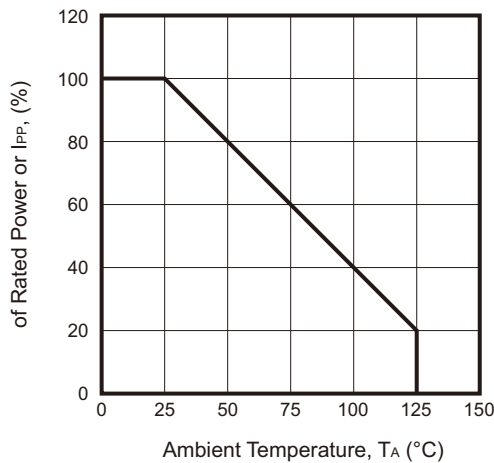


Fig.4 - Clamping Voltage vs. Peak Pulse Current

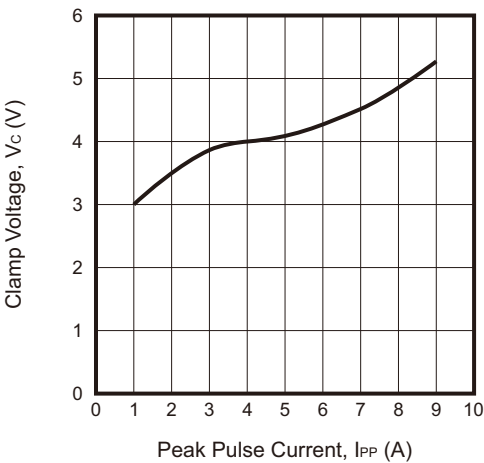
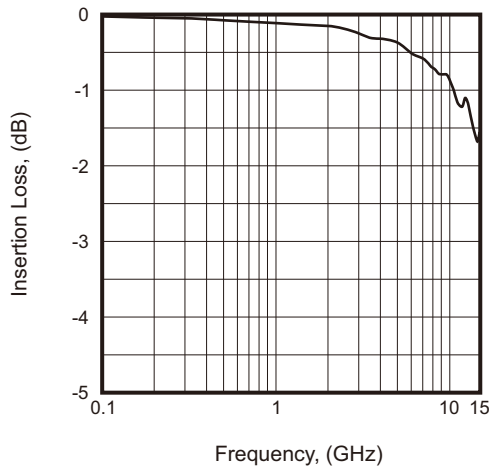
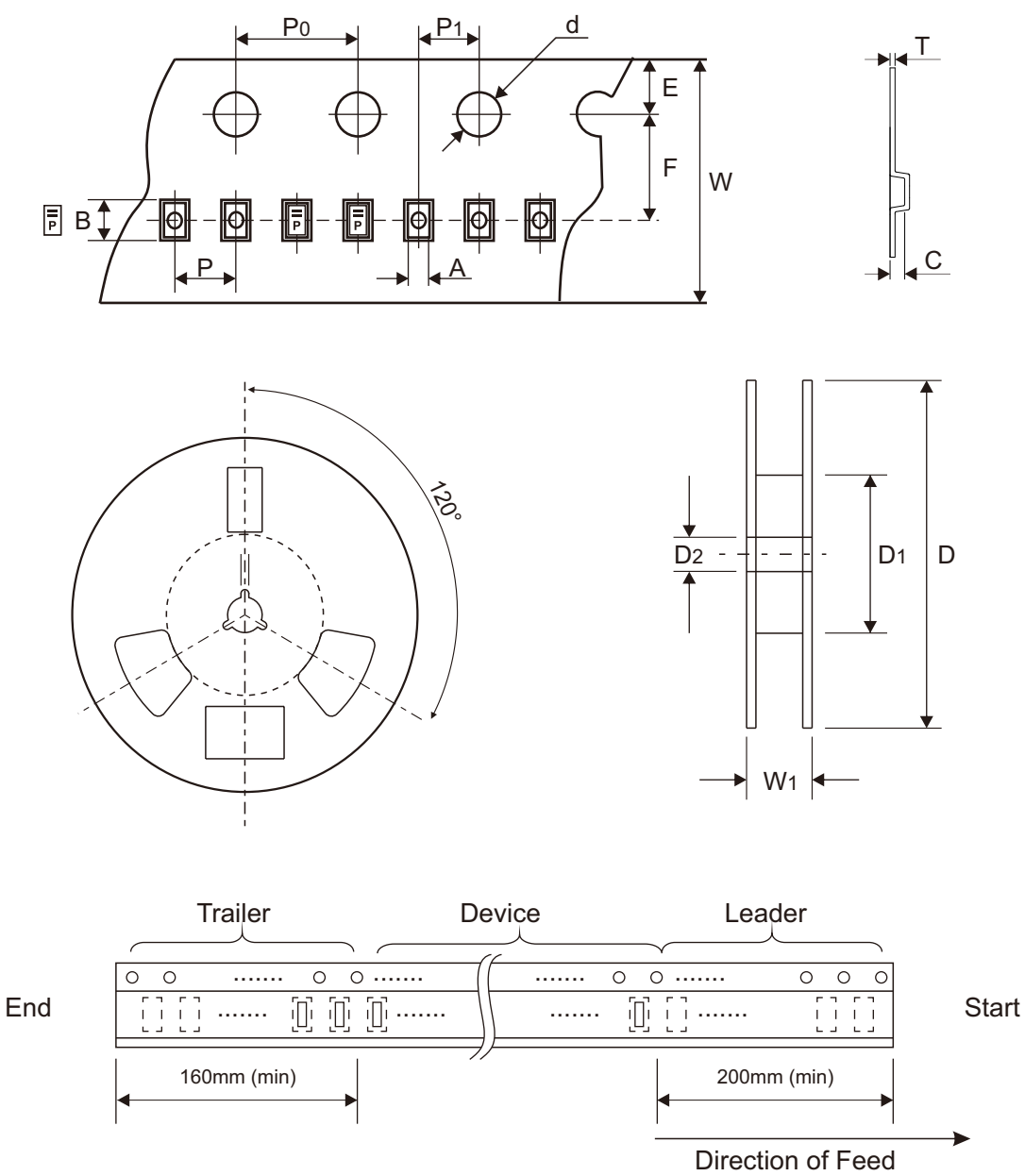


Fig.5 - Insertion loss S21



Reel Taping Specification



CSP0603-2L	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	0.34 ± 0.05	0.67 ± 0.05	0.40 ± 0.05	1.50 ± 0.10	178.00 ± 1.00	55.00 ± 1.00	13.00 ± 1.00
	(inch)	0.013 ± 0.002	0.026 ± 0.002	0.016 ± 0.002	0.059 ± 0.004	7.008 ± 0.039	2.165 ± 0.039	0.512 ± 0.039

CSP0603-2L	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	2.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.23 ± 0.02	8.00 ± 0.10	13.00 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.079 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.009 ± 0.001	0.315 ± 0.004	0.512 ± 0.039

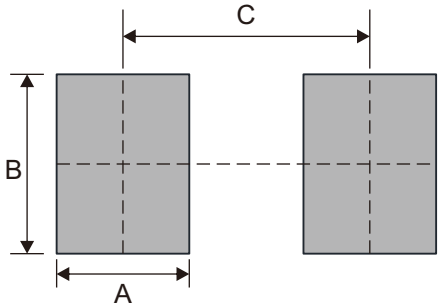
Marking Code

Part Number	Marking Code
CPDWZ2V5SBP-HF	P



Suggested P.C.B. PAD Layout

SIZE	CSP0603-2L	
	(mm)	(inch)
A	0.25	0.010
B	0.28	0.011
C	0.40	0.016



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
CSP0603-2L	9,000	7