CPDWZ1V5SBP-HF

RoHS Device
Halogen Free

Features

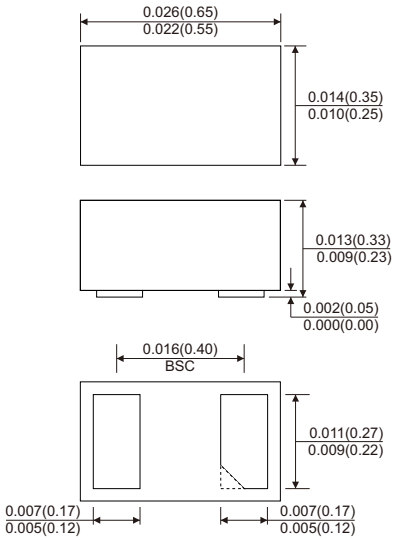
- Bi-directional configurations.
- Low clamping voltage.
- Low leakage.
- Low capacitance.
- IEC 61000-4-2 (ESD) ±20kV (air/contact)
  IEC 61000-4-4 (EFT) 40A (5/50ns)
  IEC 61000-4-5 (Lightning) 9A (8/20μs)

Mechanical data

- Case: CSP0603-2L package, molded plastic.
- Mounting position: Any.

Circuit Diagram

CSP0603-2L



Dimensions in inches and (millimeter)

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

Parameter	Conditions	Symbol	Value	Unit
Peak pulse power	T_P = 8/20μs	P_{PP}	72	W
Peak pulse current	T_P = 8/20μs	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	°C
Operating junction temperature range		T_J	-55 to +125	°C
Storage temperature range		T_{STG}	-55 to +150	°C

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Working peak reverse voltage		V_{RWM}			1.5	V
Breakdown voltage	I_T = 1mA	V_{BR}	4			V
Reverse leakage current	V_{RWM} = 1.5V	I_R			10	nA
Clamping voltage	I_{PP} = 1A, T_P = 8/20μs	V_C		3.2		V
	I_{PP} = 9A, T_P = 8/20μs	V_C		5.5	8	V
Clamping voltage	TLP = 8A	V_C		4.5		V
	TLP = 16A	V_C		6.5		V
Dynamic resistance	T_P = 100ns	R_{DYN}		0.25		Ω
Junction capacitance	V_R = 0V, f = 1MHz	C_J		0.26		pF
	V_R = 1V, f = 1MHz	C_J		0.2	0.3	pF
	V_R = 1V, f = 1GHz	C_J		0.15		pF

Typical Rating and Characteristic Curves (CPDWZ1V5SBP-HF)

Fig.1 - Pulse Waveform

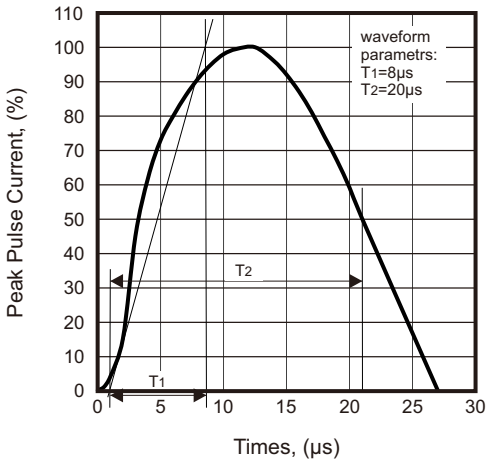


Fig.2 - Non-Repetitive Peak Pulse Power vs. Pulse Time

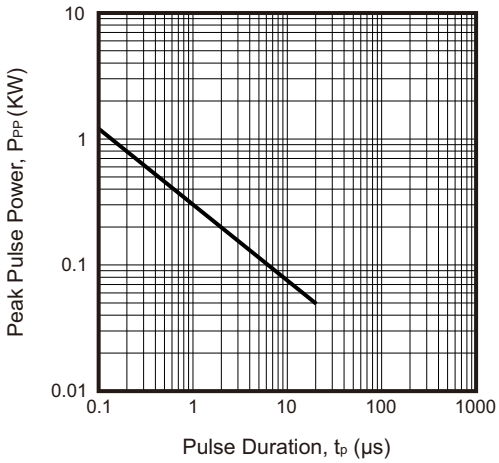


Fig.3 - Power Derating Curve

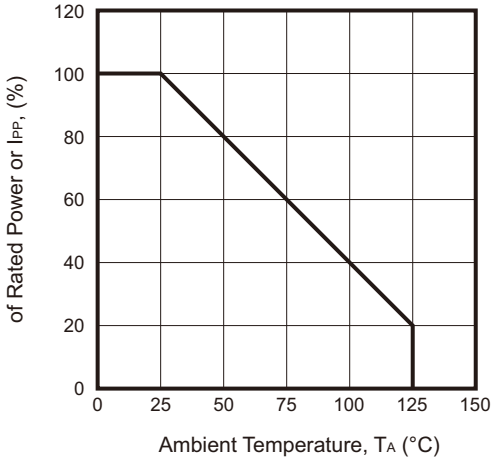


Fig.4 - Clamping Voltage vs. Peak Pulse Current

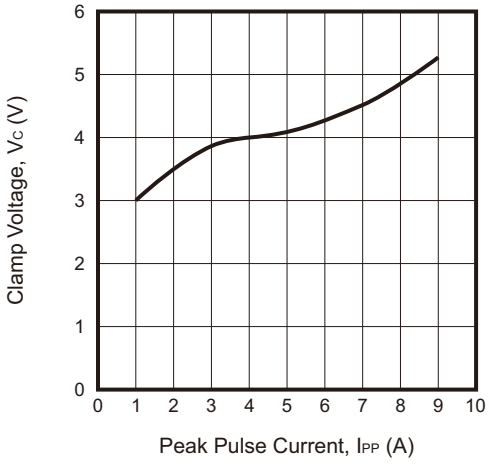
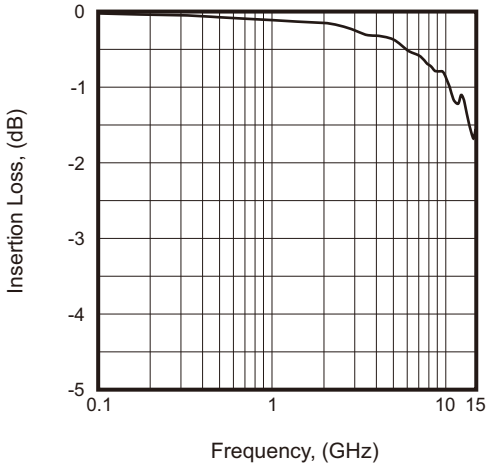
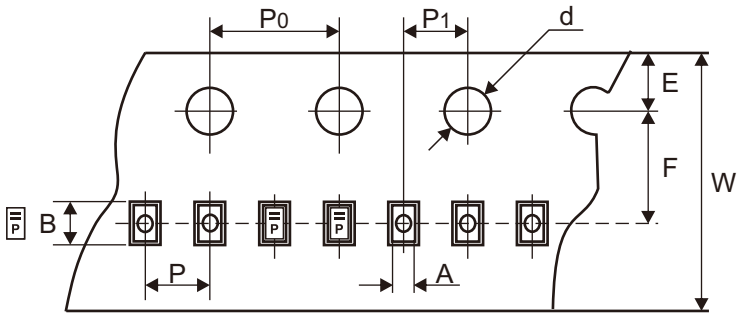
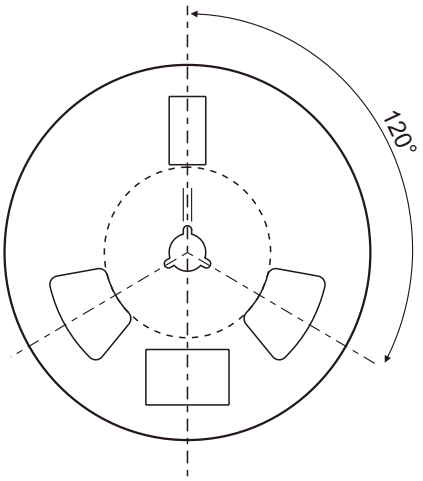


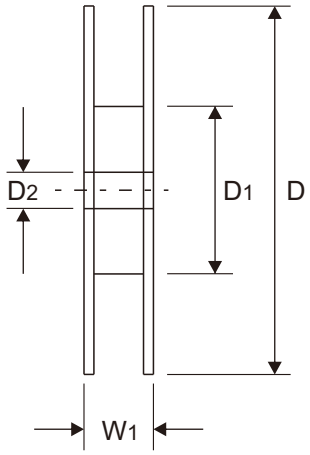
Fig.5 - Insertion loss S21

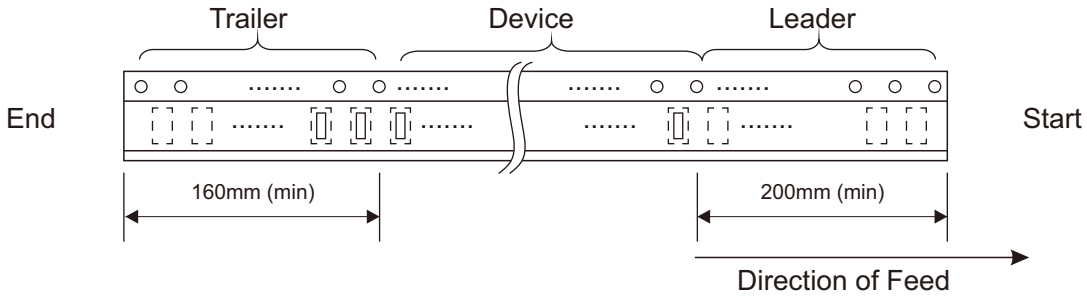


Reel Taping Specification









	SYMBOL	A	B	C	d	D	D1	D2
CSP0603 -2L	(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

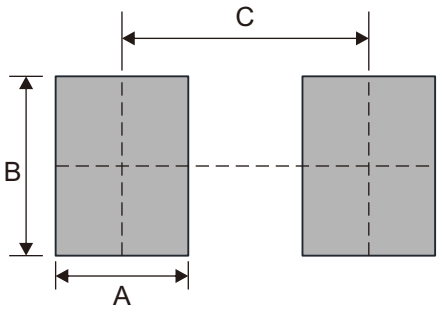
	SYMBOL	E	F	P	P0	P1	T	W	W1
CSP0603 -2L	(mm)	1.75 ± 0.10	3.50 ± 0.05	2.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.23 ± 0.02	8.00 ± 0.10	13.00 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.079 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.009 ± 0.001	0.315 ± 0.004	0.512 ± 0.039

Marking Code

Part Number	Marking Code
CPDWZ1V5SBP-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