



COMMERCIAL HIGH VOLTAGE CAPACITORS

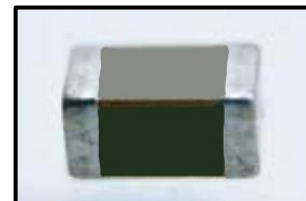


≠ Features

- Excellent volumetric efficiency and stability of capacitance with temperature
- High voltage capacitors
- Special internal electrode design for high voltage rating
- Surface mount suitable for wave and reflow soldering
- High Reliability
- RoHS Compliant

≠ Applications

- LAN/WLAN interface
- Back-lighting inverter, DC-DC converters
- Ballast, Modems and Power Supplies



≠ Part Numbering

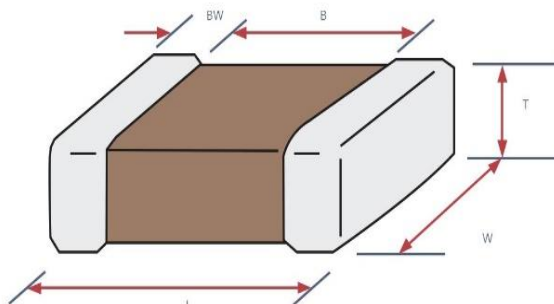
PPI-CHV	0603	N	250	240	J	C	T
PPI Series	Case Size	Termination Code <i>See Table</i>	Rated Voltage <i>See Table</i>	Capacitor Code 101 = 100pF 100 = 10pF 1R0 = 1.0pF	Capacitance Tolerance: <i>See Table</i>	Dielectric <i>See Table</i>	Packaging T = Tape & Reel



≠ Dimensions (mm)

Dimensions (mm)					
Size	L	W	T	B (min)	BW (min)
0603	1.60 ± 0.10	0.80 ± 0.10	*	0.40	0.15

* See Capacitance Range charts on following pages



Please note that the contents of this document are subject to change at any time at PPI's sole discretion. The most up-to-date version of this document is available at www.passiveplus.com

**≡ Terminations**

Code	Description
F	Silver Palladium
N	Nickel Barrier
A	High Leach Resistant Silver Palladium

≡ Rated Voltages

Code	Voltage
250	250V
500	500V
1K0	1KV

≡ Capacitance Codes

Cap Code	Value	Cap Code	Value	Cap Code	Value
1R0	1.0pF	101	100pF	103	10nF
100	10pF	102	1.0nF		

≡ Capacitance Tolerances

Code	B	C	F	G	J	K	M
Tol.	±0.1pF	±0.25pF	±1%	±2%	±5%	±10%	±20%

≡ Dielectric Codes

Code	C	X
	COG	X7R

≡ Performance

Dielectric Classification	C = COG / NP0 (Ultra Stable)	X = X7R (Stable)
Operating Temperature	-55°C to 125°C	-55°C to 125°C
Rated Voltage	250V – 1000V	250V – 1000V
Temperature Coefficient	≤±30ppmi/°C, -55°C ~+125°C (EIA Class I)	≤±15ppmi/°C, -55°C ~+125°C (EIA Class II)
Dissipation Factor	NP0: Q>1000	X7R: D.F. ≤2.5%
Insulation Resistance	10GΩ or 500/CΩ whichever is smaller	
Aging	NP0: 0%	X7R: Typically, 1.0% per decade of time
Dielectric Strength	100 ≤ V < 500V, 200% Rated Voltage 500 ≤ V < 1000V, 150% Rated Voltage 1000 ≤ V, 120% Rated Voltage	



CHV Series

PPI-CHV0603**⚡ PPI-CHV SERIES: 0603**

Dielectric		COG	X7R		
T (max)		0.95	0.95	0.95	0.95
Rated Voltage		250	250	500	1000
Cap Value (pF)	Code				
1.0pF	1R0				
1.3pF	1R3				
1.5pF	1R5				
1.8pF	1R8				
2.0pF	2R0				
2.2pF	2R2				
2.4pF	2R4				
2.5pF	2R5				
2.7pF	2R7				
2.0pF	3R0				
3.3pF	3R3				
3.6pF	3R6				
3.9pF	3R9				
4.0pF	4R0				
4.7pF	4R7				
5.0pF	5R0				
5.1pF	5R1				
5.6pF	5R6				
6.0pF	6R0				
6.8pF	6R8				
7.0pF	7R0				
7.5pF	7R5				
8.0pF	8R0				
8.2pF	8R2				
9.0pF	9R0				
9.1pF	9R1				
10	100				
12	120				
13	130				
15	150				
16	160				
18	180				
20	200				
22	220				
24	240				
27	270				
30	300				
33	330				
36	360				
39	390				
43	430				
47	470				
51	510				
56	560				
62	620				
68	680				
75	750				
82	820				
91	910				



CHV Series

PPI-CHV0603

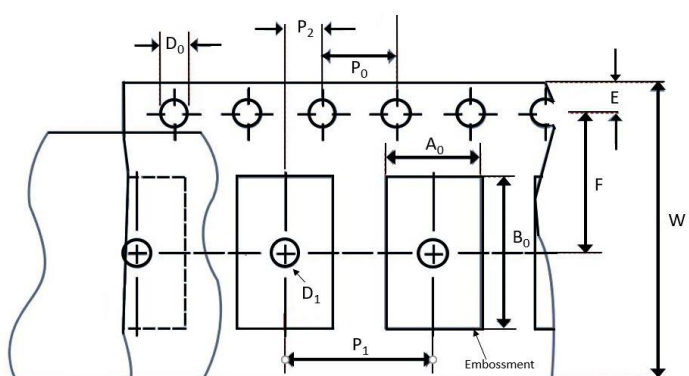
⚡ PPI-CHV SERIES: 0603

Dielectric		COG	X7R		
T (max)		0.95	0.95	0.95	0.95
Rated Voltage		250	250	500	1000
Cap Value (pF)	Code				
100	101				
120	121				
130	131				
150	151				
160	161				
180	181				
200	201				
220	221				
240	241				
270	271				
300	301				
330	331				
360	361				
390	391				
430	431				
470	471				
510	511				
560	561				
621	621				
680	681				
750	751				
820	821				
910	911				
1.0nF	102				
1.2	122				
1.3	132				
1.5	152				
1.6	162				
1.8	182				
2.0	202				
2.2	222				
2.7	272				
3.3	332				
3.9	392				
4.7	472				
5.6	562				
6.8	682				
8.2	822				
10	103				
12	123				
15	153				
18	183				
22	223				
27	273				
33	333				
39	393				
47	473				
56	563				
68	683				

Packaging: Cardboard Carrier Tape

Size	Qty per 7" Reel
0603	4K

Tape & Reel Specifications



Unit: mm

Size	W	P ₀	P ₁	P ₂	D ₀	D ₁	E	F
0603	8.00 ± 0.30	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	1.55 ± 0.10	1.00 ± 0.10	1.75 ± 0.10	3.50 ± 0.05

A₀ B₀

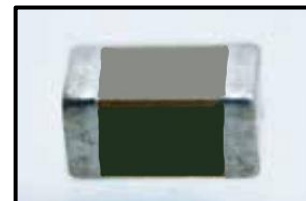
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- The component cannot rotate more than 20° within the determined cavity.

≠ Features

- Excellent volumetric efficiency and stability of capacitance with temperature
- High voltage capacitors
- Special internal electrode design for high voltage rating
- Surface mount suitable for wave and reflow soldering
- High Reliability
- RoHS Compliant

≠ Applications

- LAN/WLAN interface
- Back-lighting inverter, DC-DC converters
- Ballast, Modems and Power Supplies



≠ Part Numbering

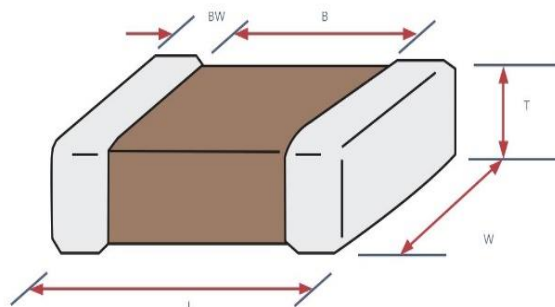
PPI-CHV	0805	N	1K0	101	J	C	T
PPI Series	Case Size	Termination Code <i>See Table</i>	Rated Voltage <i>See Table</i>	Capacitor Code 101 = 100pF 100 = 10pF 1R0 = 1.0pF	Capacitance Tolerance: <i>See Table</i>	Dielectric <i>See Table</i>	Packaging T = Tape & Reel



≠ Dimensions (mm)

Dimensions (mm)					
Size	L	W	T	B (min)	BW (min)
0805	2.00 ± 0.20	1.25 ± 0.20	*	0.70	0.20

* See Capacitance Range charts on following pages



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Terminations

Code	Description
F	Silver Palladium
N	Nickel Barrier
A	High Leach Resistant Silver Palladium

Rated Voltages

Code	Voltage
250	250V
500	500V
1K0	1KV

Capacitance Codes

Cap Code	Value	Cap Code	Value	Cap Code	Value
1R0	1.0pF	101	100pF	103	10nF
100	10pF	102	1.0nF	104	100nF

Capacitance Tolerances

Code	B	C	F	G	J	K	M
Tol.	±0.1pF	±0.25pF	±1%	±2%	±5%	±10%	±20%

Dielectric Codes

Code	C	X
	COG	X7R

Performance

Dielectric Classification	C = COG / NP0 (Ultra Stable)	X = X7R (Stable)
Operating Temperature	-55°C to 125°C	-55°C to 125°C
Rated Voltage	250V – 500V	250V – 1000V
Temperature Coefficient	≤±30ppmi/°C, -55°C ~+125°C (EIA Class I)	≤±15ppmi/°C, -55°C ~+125°C (EIA Class II)
Dissipation Factor	NP0: Q>1000	X7R: D.F. ≤2.5%
Insulation Resistance	10GΩ or 500/CΩ whichever is smaller	
Aging	NP0: 0%	X7R: Typically, 1.0% per decade of time
Dielectric Strength	100 ≤ V < 500V, 200% Rated Voltage 500 ≤ V < 1000V, 150% Rated Voltage 1000 ≤ V, 120% Rated Voltage	



CHV Series

PPI-CHV0805**⚡ PPI-CHV SERIES: 0805**

Dielectric		COG		X7R		
T (max)		1.45	1.1	1.1	1.1	1.1
Rated Voltage		250	500	250	500	1000
Cap Value (pF)	Code					
1.0pF	1R0					
1.3pF	1R3					
1.5pF	1R5					
1.8pF	1R8					
2.0pF	2R0					
2.2pF	2R2					
2.4pF	2R4					
2.5pF	2R5					
2.7pF	2R7					
2.0pF	3R0					
3.3pF	3R3					
3.6pF	3R6					
3.9pF	3R9					
4.0pF	4R0					
4.7pF	4R7					
5.0pF	5R0					
5.1pF	5R1					
5.6pF	5R6					
6.0pF	6R0					
6.8pF	6R8					
7.0pF	7R0					
7.5pF	7R5					
8.0pF	8R0					
8.2pF	8R2					
9.0pF	9R0					
9.1pF	9R1					
10	100					
12	120					
13	130					
15	150					
16	160					
18	180					
20	200					
22	220					
24	240					
27	270					
30	300					
33	330					
36	360					
39	390					
43	430					
47	470					
51	510					
56	560					
62	620					
68	680					
75	750					
82	820					
91	910					



CHV Series

PPI-CHV0805

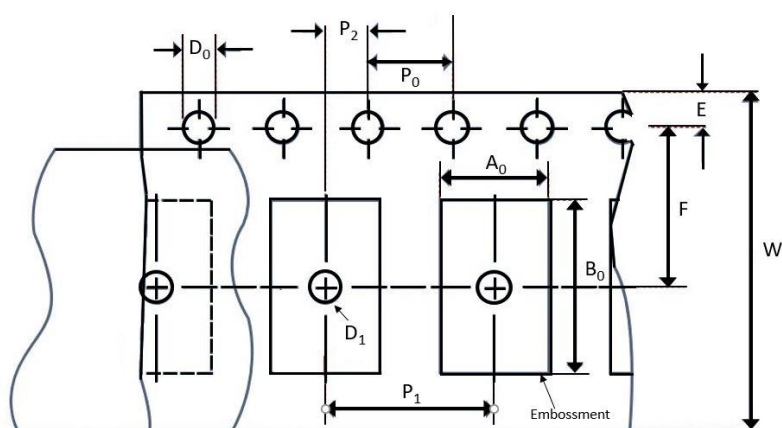
⚡ PPI-CHV SERIES: 0805

Dielectric		COG		X7R		
T (max)		1.45	1.1	1.1	1.1	1.1
Rated Voltage		250	500	250	500	1000
Cap Value (pF)	Code					
100	101					
120	121					
130	131					
150	151					
160	161					
180	181					
200	201					
220	221					
240	241					
270	271					
300	301					
330	331					
360	361					
390	391					
430	431					
470	471					
510	511					
560	561					
621	621					
680	681					
750	751					
820	821					
910	911					
1.0nF	102					
1.2	122					
1.3	132					
1.5	152					
1.6	162					
1.8	182					
2.0	202					
2.2	222					
2.7	272					
3.3	332					
3.9	392					
4.7	472					
5.6	562					
6.8	682					
8.2	822					
10	103					
12	123					
15	153					
18	183					
22	223					
27	273					
33	333					
39	393					
47	473					
56	563					
68	683					

⚡ Packaging: Cardboard Carrier Tape

Size	Qty per 7" Reel
0805	4K

⚡ Tape & Reel Specifications



Unit: mm

Size	W	P ₀	P ₁	P ₂	D ₀	D ₁	E	F
0805	8.00 ± 0.30	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	1.55 ± 0.10	*	1.75 ± 0.10	3.50 ± 0.05

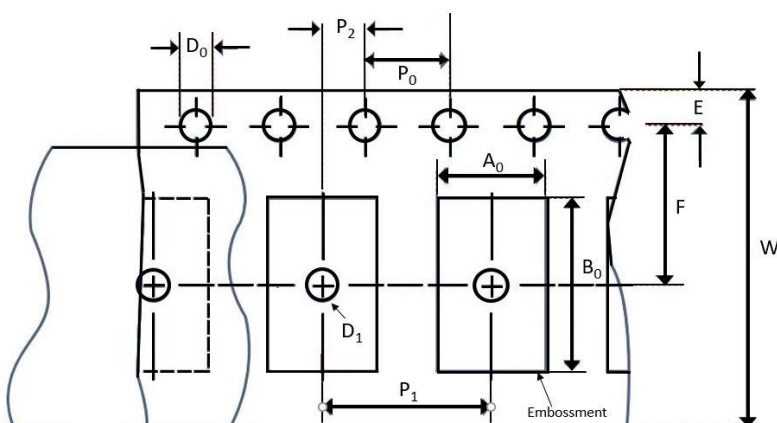
A₀ B₀

- Determined by component size to minimize rotation.
- The component cannot rotate more than 20° within the determined cavity.

Packaging: Embossed Plastic Carrier Tape

Size	Qty per 7" Reel	Qty 10/13" Reel
0805	2K, 3K	10K

Tape & Reel Specifications



Unit: mm

Size	W	P ₀	P ₁	P ₂	D ₀	D ₁	E	F
0805	8.00 ± 0.20	4.00 ± 0.10	2.00 ± 0.05	2.00 ± 0.05	1.50 ± 0.10	1.00 ± 0.10	1.75 ± 0.10	3.50 ± 0.05

A₀ B₀

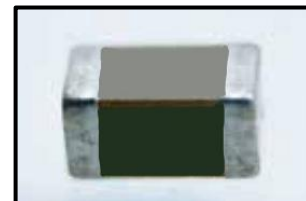
- Determined by component size to minimize rotation.
- The component cannot rotate more than 20° within the determined cavity.

≠ Features

- Excellent volumetric efficiency and stability of capacitance with temperature
- High voltage capacitors
- Special internal electrode design for high voltage rating
- Surface mount suitable for wave and reflow soldering
- High Reliability
- RoHS Compliant

≠ Applications

- LAN/WLAN interface
- Back-lighting inverter, DC-DC converters
- Ballast, Modems and Power Supplies



≠ Part Numbering

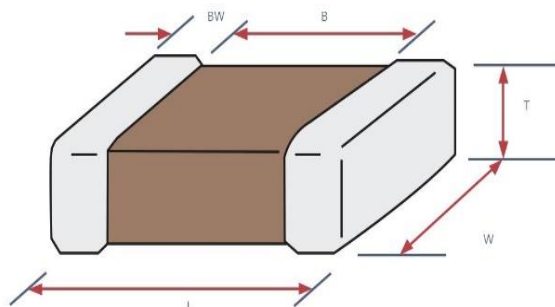
PPI-CHV	1206	N	1K0	101	J	C	T
PPI Series	Case Size	Termination Code <i>See Table</i>	Rated Voltage <i>See Table</i>	Capacitor Code 101 = 100pF 100 = 10pF 1R0 = 1.0pF	Capacitance Tolerance: <i>See Table</i>	Dielectric <i>See Table</i>	Packaging T = Tape & Reel



≠ Dimensions (mm)

Dimensions (mm)					
Size	L	W	T	B (min)	BW (min)
1206	3.20 ± 0.30	1.60 ± 0.20	*	1.50	0.30

* See Capacitance Range charts on following pages



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≠ Terminations

Code	Description
F	Silver Palladium
N	Nickel Barrier
A	High Leach Resistant Silver Palladium

≠ Rated Voltages

Code	Voltage	Code	Voltage
250	250V	1K5	1.5KV
500	500V	2K0	2KV
630	630V	2K5	2.5KV
1K0	1KV	3K0	3KV

≠ Capacitance Codes

Cap Code	Value	Cap Code	Value	Cap Code	Value
0R5	0.5pF	100	10pF	104	0.1uF
5R0	5.0pF	103	0.01uF	105	1.0uF

≠ Capacitance Tolerances

Code	B	C	F	G	J	K	M
Tol.	±0.1pF	±0.25pF	±1%	±2%	±5%	±10%	±20%

≠ Dielectric Codes

Code	C	X
	COG	X7R

≠ Performance

Dielectric Classification	C = COG / NP0 (Ultra Stable)	X = X7R (Stable)
Operating Temperature	-55°C to 125°C	-55°C to 125°C
Rated Voltage	250V – 3000V	250V – 3000V
Temperature Coefficient	≤±30ppmi/°C, -55°C ~+125°C (EIA Class I)	≤±15ppmi/°C, -55°C ~+125°C (EIA Class II)
Dissipation Factor	NP0: Q>1000	X7R: D.F. ≤2.5%
Insulation Resistance	10GΩ or 500/CΩ whichever is smaller	
Aging	NP0: 0%	X7R: Typically, 1.0% per decade of time
Dielectric Strength	100 ≤ V < 500V, 200% Rated Voltage 500 ≤ V < 1000V, 150% Rated Voltage 1000 ≤ V, 120% Rated Voltage	



CHV Series

PPI-CHV1206**⚡ PPI-CHV SERIES: 1206**

Dielectric		COG						X7R							
T (max)		1.8						1.8							
Rated Voltage		250	500	630	1000	2000	3000	250	500	630	1000	1500	2000	2500	3000
Cap Value	Code														
1.0pF	1R0														
2.0pF	2R0														
3.3pF	3R3														
3.9pF	3R9														
5.0pF	5R0														
8.2	8R2														
10	100														
12	120														
15	150														
18	180														
22	220														
27	270														
33	330														
39	390														
47	470														
56	560														
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120	121														
150	151														
180	181														
220	221														
270	271														
330	331														
390	391														
470	471														
560	561														
680	681														
820	821														
1.0nF	102														
1.2	122														
1.5	152														
1.8	182														
2.2	222														
2.7	272														
3.3	332														
3.9	392														
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6.8	682														
8.2	822														



CHV Series

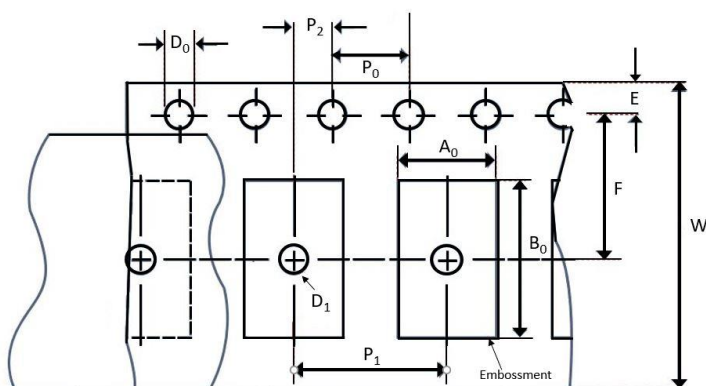
PPI-CHV1206**⚡ PPI-CHV SERIES: 1206**

Dielectric		COG						X7R							
T (max)		1.8						1.8							
Rated Voltage		250	500	630	1000	2000	3000	250	500	630	1000	1500	2000	2500	3000
Cap Value	Code														
10nF	103														
12	123														
15	153														
18	183														
22	223														
27	273														
33	333														
39	393														
47	473														
56	563														
68	683														
82	823														
100	104														
124	124														
154	154														
184	184														
224	224														
274	274														

Packaging: Cardboard Carrier Tape

Size	Qty per 7" Reel
1206	4K

Tape & Reel Specifications



Unit: mm

Size	W	P ₀	P ₁	P ₂	D ₀	D ₁	E	F
1206	8.00 ± 0.30	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	1.55 ± 0.10	*	1.75 ± 0.10	3.50 ± 0.05

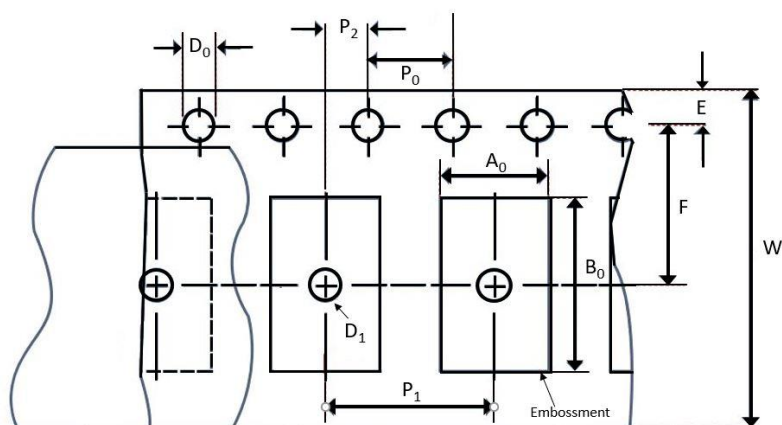
A₀ B₀

- Determined by component size to minimize rotation.
- The component cannot rotate more than 20° within the determined cavity.

Packaging: Embossed Plastic Carrier Tape

Size	Qty per 7" Reel	Qty 10/13" Reel
1206	2K, 3K	10K

Tape & Reel Specifications



Unit: mm

Size	W	P ₀	P ₁	P ₂	D ₀	D ₁	E	F
1206	8.00 ± 0.30	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	1.50 ± 0.10	1.00 ± 0.10	1.75 ± 0.10	3.50 ± 0.05

A₀ B₀

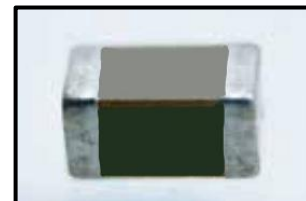
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- High voltage capacitors
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≠ Part Numbering

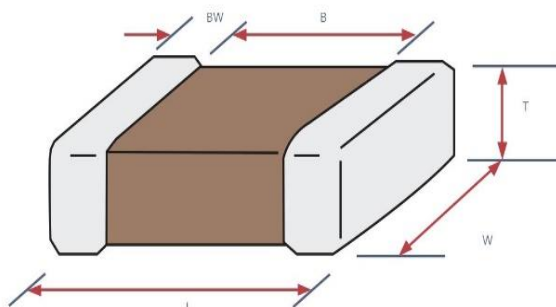
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PPI Series	Case Size	Termination Code <i>See Table</i>	Rated Voltage <i>See Table</i>	Capacitor Code 101 = 100pF 100 = 10pF 1R0 = 1.0pF	Capacitance Tolerance: <i>See Table</i>	Dielectric <i>See Table</i>	Packaging T = Tape & Reel



≠ Dimensions (mm)

Dimensions (mm)					
Size	L	W	T	B (min)	BW (min)
1210	3.20 ± 0.30	2.50 ± 0.20	*	1.60	0.30

* See Capacitance Range charts on following pages



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≠ Terminations

Code	Description
F	Silver Palladium
N	Nickel Barrier
A	High Leach Resistant Silver Palladium

≠ Rated Voltages

Code	Voltage	Code	Voltage
250	250V	1K0	1KV
500	500V	1K5	1.5KV
630	630V	2K0	2KV

≠ Capacitance Codes

Cap Code	Value	Cap Code	Value	Cap Code	Value	Cap Code	Value
5R0	5.0pF	101	100pF	103	10nF	105	1.0uF
100	10pF	102	1.0nF	104	100nF		

≠ Capacitance Tolerances

Code	B	C	F	G	J	K	M
Tol.	±0.1pF	±0.25pF	±1%	±2%	±5%	±10%	±20%

≠ Dielectric Codes

Code	C	X
	COG	X7R

≠ Performance

Dielectric Classification	C = COG / NP0 (Ultra Stable)	X = X7R (Stable)
Operating Temperature	-55°C to 125°C	-55°C to 125°C
Rated Voltage	250V – 1500V	250V – 2000V
Temperature Coefficient	≤±30ppmi/°C, -55°C ~+125°C (EIA Class I)	≤±15ppmi/°C, -55°C ~+125°C (EIA Class II)
Dissipation Factor	NP0: Q>1000	X7R: D.F. ≤2.5%
Insulation Resistance	10GΩ or 500/CΩ whichever is smaller	
Aging	NP0: 0%	X7R: Typically, 1.0% per decade of time
Dielectric Strength	100 ≤ V < 500V, 200% Rated Voltage 500 ≤ V < 1000V, 150% Rated Voltage 1000 ≤ V, 120% Rated Voltage	



CHV Series

PPI-CHV1210**⚡ PPI-CHV SERIES: 1210**

Dielectric		COG					X7R				
T (max)		2.2					2.6	2.2	2.6	2.6	2.6
Rated Voltage		250	500	630	1000	1500	250	500	1000	1500	2000
Cap Value	Code										
2.0pF	2R0										
3.3pF	3R3										
3.9pF	3R9										
5.0pF	5R0										
8.2	8R2										
10	100										
12	120										
15	150										
18	180										
22	220										
27	270										
33	330										
39	390										
47	470										
56	560										
68	680										
82	820										
100	101										
120	121										
150	151										
180	181										
220	221										
270	271										
330	331										
390	391										
470	471										
560	561										
680	681										
820	821										
1.0nF	102										
1.2	122										
1.5	152										



CHV Series

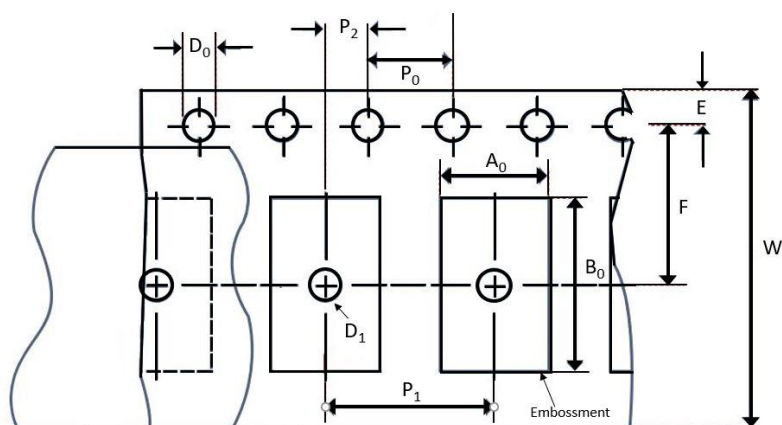
PPI-CHV1210**⚡ PPI-CHV SERIES: 1210**

Dielectric		COG					X7R				
T (max)		2.2					2.6	2.2	2.6	2.6	2.6
Rated Voltage		250	500	630	1000	1500	250	500	1000	1500	2000
Cap Value	Code										
1.8	182										
2.2	222										
2.7	272										
3.3	332										
3.9	392										
4.7	472										
5.6	562										
6.8	682										
8.2	822										
10nF	103										
12	123										
15	153										
18	183										
22	223										
27	273										
33	333										
39	393										
47	473										
56	563										
68	683										
82	823										
100	104										
124	124										
154	154										
184	184										
224	224										
274	274										
334	334										
394	394										
564	564										
684	684										
824	824										
1.0uF	105										
2.2	225										

Packaging: Embossed Plastic Carrier Tape

Size	Qty per 7" Reel	Qty 10/13" Reel
1210	1K, 2K, 3K	4K

Tape & Reel Specifications



Unit: mm

Size	W	P ₀	P ₁	P ₂	D ₀	D ₁	E	F
1210	8.00 ± 0.30	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	1.50 ± 0.10	1.00 ± 0.10	1.75 ± 0.10	3.50 ± 0.05

A₀ B₀

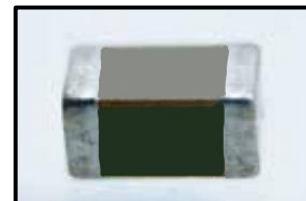
- Determined by component size to minimize rotation.
- The component cannot rotate more than 20° within the determined cavity.

≠ Features

- Excellent volumetric efficiency and stability of capacitance with temperature
- High voltage capacitors
- Special internal electrode design for high voltage rating
- Surface mount suitable for wave and reflow soldering
- High Reliability
- RoHS Compliant

≠ Applications

- LAN/WLAN interface
- Back-lighting inverter, DC-DC converters
- Ballast, Modems and Power Supplies



≠ Part Numbering

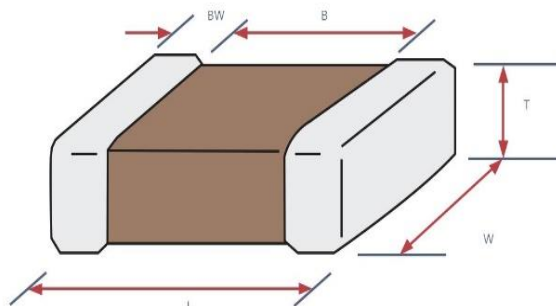
PPI-CHV	1808	N	2K0	101	J	C	T
PPI Series	Case Size	Termination Code <i>See Table</i>	Rated Voltage <i>See Table</i>	Capacitor Code 101 = 100pF 100 = 10pF 1R0 = 1.0pF	Capacitance Tolerance: <i>See Table</i>	Dielectric <i>See Table</i>	Packaging T = Tape & Reel



≠ Dimensions (mm)

Dimensions (mm)					
Size	L	W	T	B (min)	BW (min)
1808	4.60 ± 0.30	2.00 ± 0.20	*	2.50	0.30

* See Capacitance Range charts on following pages



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≠ Terminations

Code	Description
F	Silver Palladium
N	Nickel Barrier
A	High Leach Resistant Silver Palladium

≠ Rated Voltages

Code	Voltage	Code	Voltage
250	250V	2K0	2KV
500	500V	3K0	3KV
630	630V	4K0	4KV
1K0	1KV	5K0	5KV

≠ Capacitance Codes

Cap Code	Value	Cap Code	Value	Cap Code	Value
5R0	5.0pF	101	100pF	103	10nF
100	10pF	102	1.0nF	104	100nF

≠ Capacitance Tolerances

Code	B	C	F	G	J	K	M
Tol.	±0.1pF	±0.25pF	±1%	±2%	±5%	±10%	±20%

≠ Dielectric Codes

Code	C	X
	COG	X7R

≠ Performance

Dielectric Classification	C = COG / NP0 (Ultra Stable)	X = X7R (Stable)
Operating Temperature	-55°C to 125°C	-55°C to 125°C
Rated Voltage	250V – 5000V	250V – 4000V
Temperature Coefficient	≤±30ppmi/°C, -55°C ~+125°C (EIA Class I)	≤±15ppmi/°C, -55°C ~+125°C (EIA Class II)
Dissipation Factor	NP0: Q>1000	X7R: D.F. ≤2.5%
Insulation Resistance	10GΩ or 500/CΩ whichever is smaller	
Aging	NP0: 0%	X7R: Typically, 1.0% per decade of time
Dielectric Strength	100 ≤ V < 500V, 200% Rated Voltage 500 ≤ V < 1000V, 150% Rated Voltage 1000 ≤ V, 120% Rated Voltage	



CHV Series

PPI-CHV1808**⚡ PPI-CHV SERIES: 1808**

Dielectric		COG								X7R					
T (max)		1.8			2.2					2.2					
Rated Voltage		250	500	630	1000	2000	3000	4000	5000	250	500	1000	2000	3000	4000
Cap Value	Code														
2.0pF	2R0														
3.3pF	3R3														
3.9pF	3R9														
5.0pF	5R0														
8.2	8R2														
10	100														
12	120														
15	150														
18	180														
22	220														
27	270														
33	330														
39	390														
47	470														
56	560														
68	680														
82	820														
100	101														
120	121														
150	151														
180	181														
220	221														
270	271														
330	331														
390	391														
470	471														
560	561														
680	681														
820	821														



CHV Series

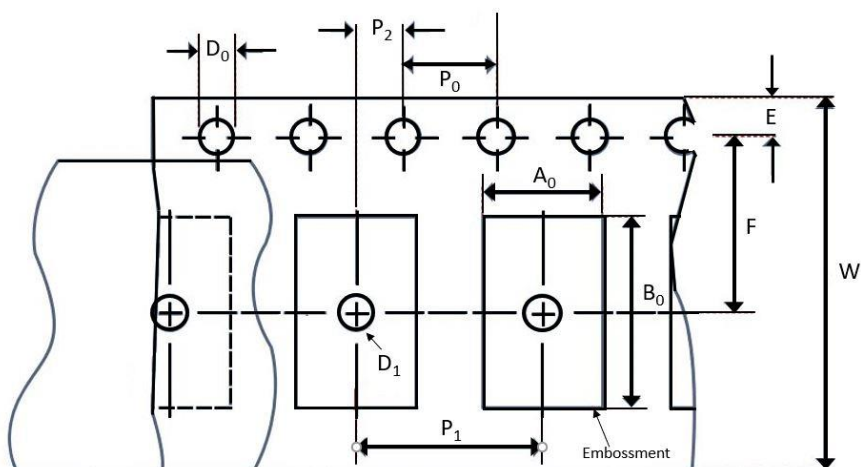
PPI-CHV1808**⚡ PPI-CHV SERIES: 1808**

Dielectric		COG								X7R					
T (max)		1.8			2.2					2.2					
Rated Voltage		250	500	630	1000	2000	3000	4000	5000	250	500	1000	2000	3000	4000
Cap Value	Code														
1.0nF	102														
1.2	122														
1.5	152														
1.8	182														
2.2	222														
2.7	272														
3.3	332														
3.9	392														
4.7	472														
5.6	562														
6.8	682														
8.2	822														
10	103														
12	123														
15	153														
18	183														
22	223														
27	273														
33	333														
39	393														
47	473														
56	563														
68	683														
82	823														
100	104														

Packaging: Embossed Plastic Carrier Tape

Size	Qty per 7" Reel	Qty 10/13" Reel
1808	1K, 2K, 3K	4K

Tape & Reel Specifications



Unit: mm

Size	W	P ₀	P ₁	P ₂	D ₀	D ₁	E	F
1808	12.00 ± 0.30	4.00 ± 0.10	8.00 ± 0.10	2.00 ± 0.05	1.50 ± 0.10	1.00 ± 0.10	1.75 ± 0.10	5.50 ± 0.05

A₀ B₀

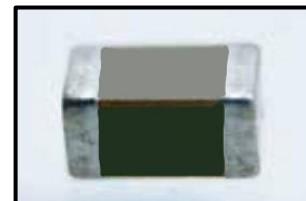
- Determined by component size to minimize rotation.
- The component cannot rotate more than 20° within the determined cavity.

≠ Features

- Excellent volumetric efficiency and stability of capacitance with temperature
- High voltage capacitors
- Special internal electrode design for high voltage rating
- Surface mount suitable for wave and reflow soldering
- High Reliability
- RoHS Compliant

≠ Applications

- LAN/WLAN interface
- Back-lighting inverter, DC-DC converters
- Ballast, Modems and Power Supplies



≠ Part Numbering

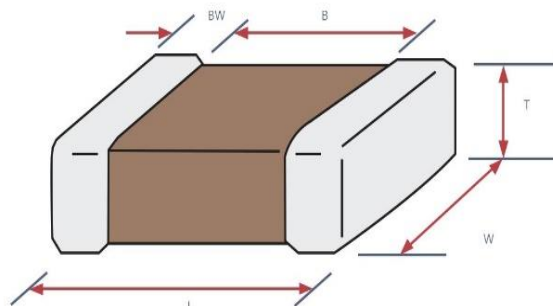
PPI-CHV	1812	N	2K0	101	J	C	T
PPI Series	Case Size	Termination Code <i>See Table</i>	Rated Voltage <i>See Table</i>	Capacitor Code 101 = 100pF 100 = 10pF 1R0 = 1.0pF	Capacitance Tolerance: <i>See Table</i>	Dielectric <i>See Table</i>	Packaging T = Tape & Reel



≠ Dimensions (mm)

Dimensions (mm)					
Size	L	W	T	B (min)	BW (min)
1812	4.60 ± 0.30	3.20 ± 0.20	*	2.50	0.30

* See Capacitance Range charts on following pages



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≠ Terminations

Code	Description
F	Silver Palladium
N	Nickel Barrier
A	High Leach Resistant Silver Palladium

≠ Rated Voltages

Code	Voltage	Code	Voltage	Code	Voltage
250	250V	1K0	1KV	4K0	4KV
500	500V	2K0	2KV	5K0	5KV
630	630V	3K0	3KV	6K0	6KV

≠ Capacitance Codes

Cap Code	Value	Cap Code	Value	Cap Code	Value	Cap Code	Value
5R0	5.0pF	101	100pF	103	10nF	105	1.0uF
100	10pF	102	1.0nF	104	100nF		

≠ Capacitance Tolerances

Code	B	C	F	G	J	K	M
Tol.	±0.1pF	±0.25pF	±1%	±2%	±5%	±10%	±20%

≠ Dielectric Codes

Code	C	X
	COG	X7R

≠ Performance

Dielectric Classification	C = COG / NP0 (Ultra Stable)	X = X7R (Stable)
Operating Temperature	-55°C to 125°C	-55°C to 125°C
Rated Voltage	250V – 6000V	250V – 6000V
Temperature Coefficient	≤±30ppmi/°C, -55°C ~+125°C (EIA Class I)	≤±15ppmi/°C, -55°C ~+125°C (EIA Class II)
Dissipation Factor	NP0: Q>1000	X7R: D.F. ≤2.5%
Insulation Resistance	10GΩ or 500/CΩ whichever is smaller	
Aging	NP0: 0%	X7R: Typically, 1.0% per decade of time
Dielectric Strength	100 ≤ V < 500V, 200% Rated Voltage 500 ≤ V < 1000V, 150% Rated Voltage 1000 ≤ V, 120% Rated Voltage	



CHV Series

PPI-CHV1812**⚡ PPI-CHV SERIES: 1812**

Dielectric		COG								X7R								
T (max)		1.8	1.8	2.6	2.2	2.6	2.6	2.6	2.6	2.7	2.6	3.0	3.0	1.8	2.2	2.7	2.7	2.7
Rated Voltage		250	500	630	1000	2000	3000	4000	5000	6000	250	500	1000	2000	3000	4000	5000	6000
Cap Value	Code																	
2.0pF	2R0																	
3.3pF	3R3																	
3.9pF	3R9																	
5.0pF	5R0																	
8.2	8R2																	
10	100																	
12	120																	
15	150																	
18	180																	
22	220																	
27	270																	
33	330																	
39	390																	
47	470																	
56	560																	
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270	271																	
330	331																	
390	391																	
470	471																	
560	561																	
680	681																	
820	821																	
1.0nF	102																	
1.2	122																	
1.5	152																	
1.8	182																	
2.2	222																	
2.7	272																	
3.3	332																	
3.9	392																	
4.7	472																	
5.6	562																	
6.8	682																	
8.2	822																	



CHV Series

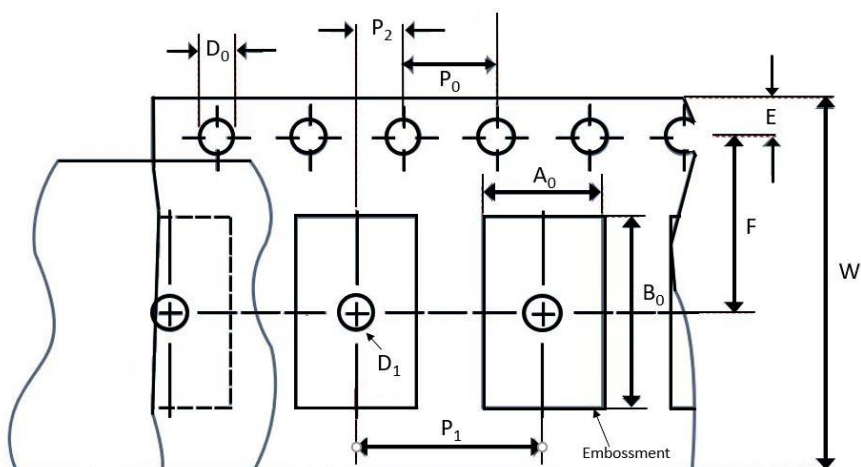
PPI-CHV1812**⚡ PPI-CHV SERIES: 1812**

Dielectric		COG								X7R								
T (max)		1.8	1.8	1.8	2.6	2.2	2.6	2.6	2.6	2.7	2.6	3.0	3.0	1.8	2.2	2.7	2.7	2.7
Rated Voltage		250	500	630	1000	2000	3000	4000	5000	6000	250	500	1000	2000	3000	4000	5000	6000
Cap Value	Code																	
10	103																	
12	123																	
15	153																	
18	183																	
22	223																	
27	273																	
33	333																	
39	393																	
47	473																	
56	563																	
68	683																	
82	823																	
100	104																	
124	124																	
154	154																	
184	184																	
224	224																	
274	274																	
334	334																	
394	394																	
474	474																	
564	564																	
684	684																	
824	824																	
1.0uF	105																	
2.2	225																	

Packaging: Embossed Plastic Carrier Tape

Size	Qty per 7" Reel	Qty 10/13" Reel
1812	500, 1000	2K

Tape & Reel Specifications



Unit: mm

Size	W	P ₀	P ₁	P ₂	D ₀	D ₁	E	F
1812	12.00 ± 0.30	4.00 ± 0.10	8.00 ± 0.10	2.00 ± 0.05	1.50 ± 0.10	1.00 ± 0.10	1.75 ± 0.10	5.50 ± 0.05

 $A_0 B_0$

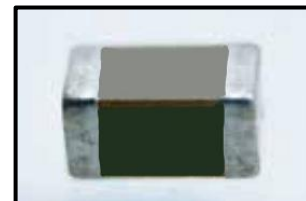
- Determined by component size to minimize rotation.
- The component cannot rotate more than 20° within the determined cavity.

≠ Features

- Excellent volumetric efficiency and stability of capacitance with temperature
- High voltage capacitors
- Special internal electrode design for high voltage rating
- Surface mount suitable for wave and reflow soldering
- High Reliability
- RoHS Compliant

≠ Applications

- LAN/WLAN interface
- Back-lighting inverter, DC-DC converters
- Ballast, Modems and Power Supplies



≠ Part Numbering

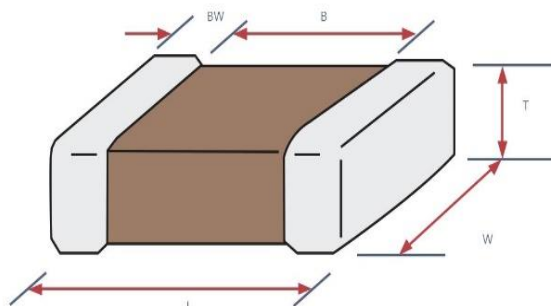
PPI-CHV	1825	N	2K0	330	J	C	T
PPI Series	Case Size	Termination Code <i>See Table</i>	Rated Voltage <i>See Table</i>	Capacitor Code 101 = 100pF 100 = 10pF 1R0 = 1.0pF	Capacitance Tolerance: <i>See Table</i>	Dielectric <i>See Table</i>	Packaging T = Tape & Reel



≠ Dimensions (mm)

Dimensions (mm)					
Size	L	W	T	B (min)	BW (min)
1825	4.60 ± 0.30	6.25 ± 0.40	*	2.50	0.30

* See Capacitance Range charts on following pages



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≠ Terminations

Code	Description
F	Silver Palladium
N	Nickel Barrier
A	High Leach Resistant Silver Palladium

≠ Rated Voltages

Code	Voltage	Code	Voltage	Code	Voltage
250	250V	1K5	1.5KV	3K0	3KV
500	500V	2K0	2KV	4K0	4KV
630	630V	2K5	2.5KV	5K0	5KV
1K0	1KV				

≠ Capacitance Codes

Cap Code	Value	Cap Code	Value	Cap Code	Value
330	33pF	102	1.0nF	104	0.1uF
101	100pF	103	10nF	105	1.0uF

≠ Capacitance Tolerances

Code	B	C	F	G	J	K	M
Tol.	±0.1pF	±0.25pF	±1%	±2%	±5%	±10%	±20%

≠ Dielectric Codes

Code	C	X
	COG	X7R

≠ Performance

Dielectric Classification	C = COG / NP0 (Ultra Stable)	X = X7R (Stable)
Operating Temperature	-55°C to 125°C	-55°C to 125°C
Rated Voltage	250V – 3000V	250V – 5000V
Temperature Coefficient	≤±30ppmi/°C, -55°C ~+125°C (EIA Class I)	≤±15ppmi/°C, -55°C ~+125°C (EIA Class II)
Dissipation Factor	NP0: Q>1000	X7R: D.F. ≤2.5%
Insulation Resistance	10GΩ or 500/CΩ whichever is smaller	
Aging	NP0: 0%	X7R: Typically, 1.0% per decade of time
Dielectric Strength	100 ≤ V < 500V, 200% Rated Voltage 500 ≤ V < 1000V, 150% Rated Voltage 1000 ≤ V, 120% Rated Voltage	



CHV Series

PPI-CHV1825**⚡ PPI-CHV SERIES: 1825**

Dielectric		COG								X7R						
T (max)		1.8	2.6	2.6	2.6	2.6	2.6	2.6	2.6	3.0	1.8	2.2	2.2	2.6	2.6	2.7
Rated Voltage		250	500	630	1000	1500	2000	2500	3000	250	500	1000	2000	3000	4000	5000
Cap Value	Code															
2.0pF	2R0															
3.3pF	3R3															
3.9pF	3R9															
5.0pF	5R0															
8.2	8R2															
10	100															
12	120															
15	150															
18	180															
22	220															
27	270															
33	330															
39	390															
47	470															
56	560															
68	680															
82	820															
100	101															
120	121															
150	151															
180	181															
220	221															
270	271															
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390	391															
470	471															
560	561															
680	681															
820	821															



CHV Series

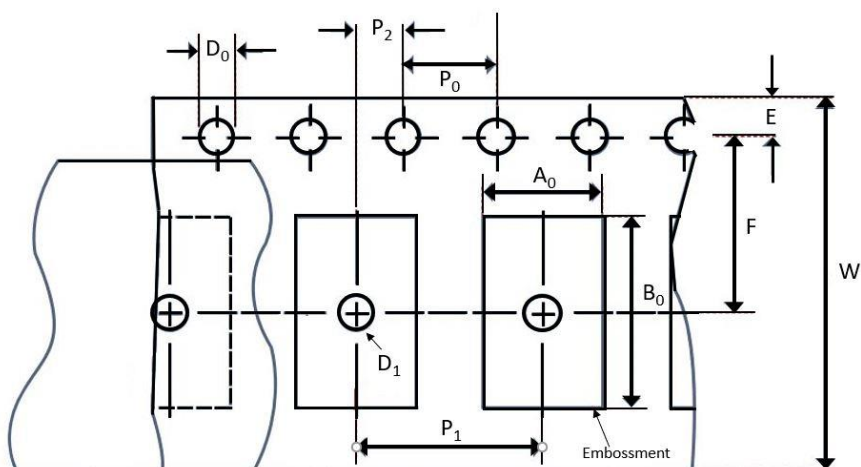
PPI-CHV1825**⚡ PPI-CHV SERIES: 1825**

Dielectric		COG								X7R						
T (max)		1.8	2.6	2.6	2.6	2.6	2.6	2.6	2.6	3.0	1.8	2.2	2.2	2.6	2.6	2.7
Rated Voltage		250	500	630	1000	1500	2000	2500	3000	250	500	1000	2000	3000	4000	5000
Cap Value	Code															
1.0nF	102															
1.2	122															
1.5	152															
1.8	182															
2.2	222															
2.7	272															
3.3	332															
3.9	392															
4.7	472															
5.6	562															
6.8	682															
8.2	822															
10	103															
12	123															
15	153															
18	183															
22	223															
27	273															
33	333															
39	393															
47	473															
56	563															
68	683															
82	823															
100	104															
124	124															
154	154															
184	184															
224	224															
274	274															
334	334															
394	394															
474	474															
564	564															
684	684															
824	824															
1.0uF	105															
2.2	225															

Packaging: Embossed Plastic Carrier Tape

Size	Qty per 7" Reel	Qty 10/13" Reel
1825	500, 1000	2K

Tape & Reel Specifications



Unit: mm

Size	W	P ₀	P ₁	P ₂	D ₀	D ₁	E	F
1825	12.00 ± 0.30	4.00 ± 0.10	8.00 ± 0.10	2.00 ± 0.05	1.50 ± 0.10	1.00 ± 0.10	1.75 ± 0.10	5.50 ± 0.05

A₀ B₀

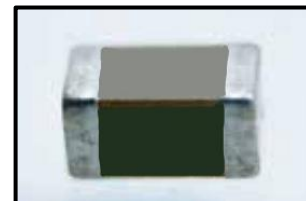
- Determined by component size to minimize rotation.
- The component cannot rotate more than 20° within the determined cavity.

≠ Features

- Excellent volumetric efficiency and stability of capacitance with temperature
- High voltage capacitors
- Special internal electrode design for high voltage rating
- Surface mount suitable for wave and reflow soldering
- High Reliability
- RoHS Compliant

≠ Applications

- LAN/WLAN interface
- Back-lighting inverter, DC-DC converters
- Ballast, Modems and Power Supplies



≠ Part Numbering

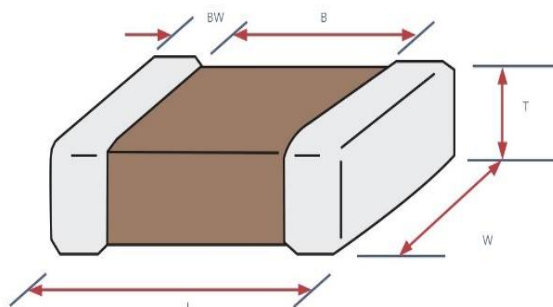
PPI-CHV	2220	N	2K0	330	J	C	T
PPI Series	Case Size	Termination Code <i>See Table</i>	Rated Voltage <i>See Table</i>	Capacitor Code 101 = 100pF 100 = 10pF 1R0 = 1.0pF	Capacitance Tolerance: <i>See Table</i>	Dielectric <i>See Table</i>	Packaging T = Tape & Reel



≠ Dimensions (mm)

Dimensions (mm)					
Size	L	W	T	B (min)	BW (min)
2220	5.70 ± 0.40	5.00 ± 0.40	*	3.50	0.30

* See Capacitance Range charts on following pages



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≠ Terminations

Code	Description
F	Silver Palladium
N	Nickel Barrier
A	High Leach Resistant Silver Palladium

≠ Rated Voltages

Code	Voltage	Code	Voltage	Code	Voltage
250	250V	1K0	1KV	4K0	4KV
500	500V	2K0	2KV	5K0	5KV
630	630V	3K0	3KV	6K0	6KV

≠ Capacitance Codes

Cap Code	Value	Cap Code	Value	Cap Code	Value
330	33pF	102	1.0nF	104	0.1uF
101	100pF	103	10nF	105	1.0uF

≠ Capacitance Tolerances

Code	B	C	F	G	J	K	M
Tol.	±0.1pF	±0.25pF	±1%	±2%	±5%	±10%	±20%

≠ Dielectric Codes

Code	C	X
	COG	X7R

≠ Performance

Dielectric Classification	C = COG / NP0 (Ultra Stable)	X = X7R (Stable)
Operating Temperature	-55°C to 125°C	-55°C to 125°C
Rated Voltage	250V – 6000V	250V – 6000V
Temperature Coefficient	≤±30ppmi/°C, -55°C ~+125°C (EIA Class I)	≤±15ppmi/°C, -55°C ~+125°C (EIA Class II)
Dissipation Factor	NP0: Q>1000	X7R: D.F. ≤2.5%
Insulation Resistance	10GΩ or 500/CΩ whichever is smaller	
Aging	NP0: 0%	X7R: Typically, 1.0% per decade of time
Dielectric Strength	100 ≤ V < 500V, 200% Rated Voltage 500 ≤ V < 1000V, 150% Rated Voltage 1000 ≤ V, 120% Rated Voltage	



CHV Series

PPI-CHV2220**⚡ PPI-CHV SERIES: 2220**

Dielectric		COG									X7R							
T (max)		1.8	1.8	1.8	1.8	1.8	2.2	2.2	1.8	2.5	3.0	2.2	2.2	2.6	1.8	1.8	2.2	2.7
Rated Voltage		250	500	630	1000	2000	3000	4000	5000	6000	250	500	1000	2000	3000	4000	5000	6000
Cap Value	Code																	
2.0pF	2R0																	
3.3pF	3R3																	
3.9pF	3R9																	
5.0pF	5R0																	
8.2	8R2																	
10	100																	
12	120																	
15	150																	
18	180																	
22	220																	
27	270																	
33	330																	
39	390																	
47	470																	
56	560																	
68	680																	
82	820																	
100	101																	
120	121																	
150	151																	
180	181																	
220	221																	
270	271																	
330	331																	
390	391																	
470	471																	
560	561																	
300	601																	
680	681																	
820	821																	
1.0nF	102																	
1.2	122																	
1.5	152																	
1.8	182																	



CHV Series

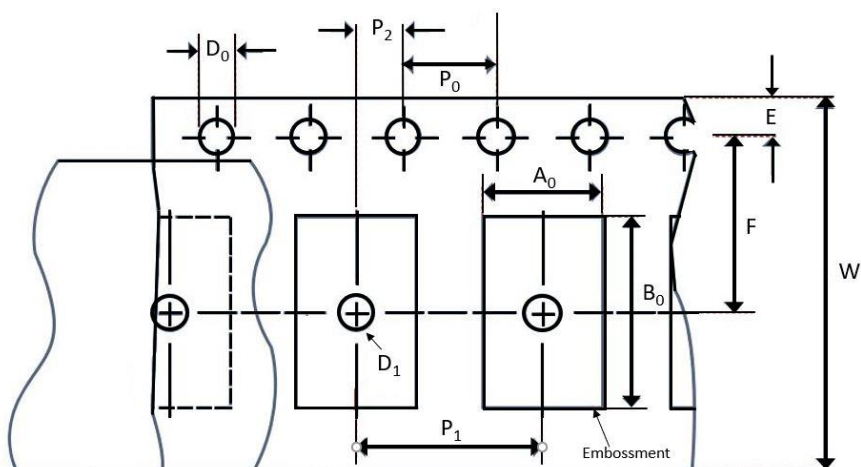
PPI-CHV2220**⚡ PPI-CHV SERIES: 2220**

Dielectric		COG									X7R							
T (max)		1.8	1.8	1.8	1.8	1.8	2.2	2.2	1.8	2.5	3.0	2.2	2.2	2.6	1.8	1.8	2.2	2.7
Rated Voltage		250	500	630	1000	2000	3000	4000	5000	6000	250	500	1000	2000	3000	4000	5000	6000
Cap Value	Code																	
2.2	222																	
2.7	272																	
3.3	332																	
3.9	392																	
4.7	472																	
5.6	562																	
6.8	682																	
8.2	822																	
10	103																	
12	123																	
15	153																	
18	183																	
22	223																	
27	273																	
33	333																	
39	393																	
47	473																	
56	563																	
68	683																	
82	823																	
100	104																	
120	124																	
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220	224																	
270	274																	
330	334																	
390	394																	
470	474																	
560	564																	
680	684																	
820	824																	
1.0uF	105																	
2.2	225																	
3.3	335																	
4.7	475																	
6.8	685																	
8.2	825																	
10	106																	

Packaging: Embossed Plastic Carrier Tape

Size	Qty per 7" Reel	Qty 10/13" Reel
2220	500, 1000	1.5K

Tape & Reel Specifications



Unit: mm

Size	W	P ₀	P ₁	P ₂	D ₀	D ₁	E	F
2220	12.00 ± 0.30	4.00 ± 0.10	8.00 ± 0.10	2.00 ± 0.05	1.50 ± 0.10	1.00 ± 0.10	1.75 ± 0.10	5.50 ± 0.05

 $A_0 B_0$

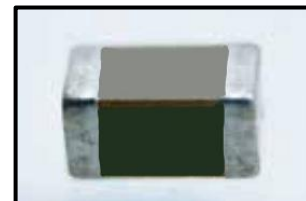
- Determined by component size to minimize rotation.
- The component cannot rotate more than 20° within the determined cavity.

≠ Features

- Excellent volumetric efficiency and stability of capacitance with temperature
- High voltage capacitors
- Special internal electrode design for high voltage rating
- Surface mount suitable for wave and reflow soldering
- High Reliability
- RoHS Compliant

≠ Applications

- LAN/WLAN interface
- Back-lighting inverter, DC-DC converters
- Ballast, Modems and Power Supplies



≠ Part Numbering

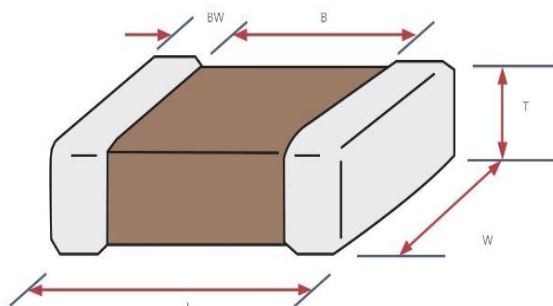
PPI-CHV	2225	N	2K0	101	G	X	T
PPI Series	Case Size	Termination Code <i>See Table</i>	Rated Voltage <i>See Table</i>	Capacitor Code 101 = 100pF 100 = 10pF 1R0 = 1.0pF	Capacitance Tolerance: <i>See Table</i>	Dielectric <i>See Table</i>	Packaging T = Tape & Reel



≠ Dimensions (mm)

Dimensions (mm)					
Size	L	W	T	B (min)	BW (min)
2225	5.70 ± 0.40	6.35 ± 0.40	*	3.50	0.30

* See Capacitance Range charts on following pages



Please note that the contents of this document are subject to change at any time at PPI's sole discretion. The most up-to-date version of this document is available at www.passiveplus.com

**≠ Terminations**

Code	Description
F	Silver Palladium
N	Nickel Barrier
A	High Leach Resistant Silver Palladium

≠ Rated Voltages

Code	Voltage	Code	Voltage	Code	Voltage
250	250V	1K0	1KV	4K0	4KV
500	500V	2K0	2KV	5K0	5KV
630	630V	3K0	3KV		

≠ Capacitance Codes

Cap Code	Value	Cap Code	Value	Cap Code	Value
330	33pF	102	1.0nF	104	0.1uF
101	100pF	103	10nF	105	1.0uF

≠ Capacitance Tolerances

Code	B	C	F	G	J	K	M
Tol.	±0.1pF	±0.25pF	±1%	±2%	±5%	±10%	±20%

≠ Dielectric Codes

Code	C	X
	COG	X7R

≠ Performance

Dielectric Classification	C = COG / NP0 (Ultra Stable)	X = X7R (Stable)
Operating Temperature	-55°C to 125°C	-55°C to 125°C
Rated Voltage	250V – 5000V	250V – 5000V
Temperature Coefficient	≤±30ppmi/°C, -55°C ~+125°C (EIA Class I)	≤±15ppmi/°C, -55°C ~+125°C (EIA Class II)
Dissipation Factor	NP0: Q>1000	X7R: D.F. ≤2.5%
Insulation Resistance	10GΩ or 500/CΩ whichever is smaller	
Aging	NP0: 0%	X7R: Typically, 1.0% per decade of time
Dielectric Strength	100 ≤ V < 500V, 200% Rated Voltage 500 ≤ V < 1000V, 150% Rated Voltage 1000 ≤ V, 120% Rated Voltage	



CHV Series

PPI-CHV2225

⚡ PPI-CHV SERIES: 2225

Dielectric		COG								X7R						
T (max)		3.0								3.0	2.2	2.2	2.6	1.8	2.2	2.7
Rated Voltage		250	500	630	1000	2000	3000	4000	5000	250	500	1000	2000	3000	4000	5000
Cap Value	Code															
2.0pF	2R0															
3.3pF	3R3															
3.9pF	3R9															
5.0pF	5R0															
8.2	8R2															
10	100															
12	120															
15	150															
18	180															
22	220															
27	270															
33	330															
39	390															
47	470															
56	560															
68	680															
82	820															
100	101															
120	121															
150	151															
180	181															
220	221															
270	271															
330	331															
390	391															
470	471															
560	561															
300	601															
680	681															
820	821															
1000	102															
1200	122															
1500	152															
1800	182															
2200	222															
2700	272															
3300	332															
3900	392															
4700	472															
5600	562															
6800	682															
8200	822															



CHV Series

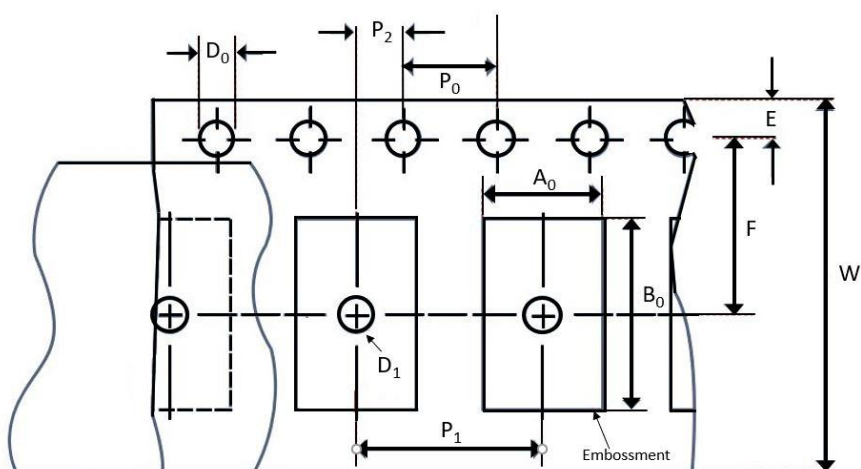
PPI-CHV2225**⚡ PPI-CHV SERIES: 2225**

Dielectric		COG								X7R						
T (max)		3.0								3.0	2.2	2.2	2.6	1.8	2.2	2.7
Rated Voltage										250	500	1000	2000	3000	4000	5000
Cap Value	Code	250	500	630	1000	2000	3000	4000	5000	250	500	1000	2000	3000	4000	5000
10nF	103															
12	123															
15	153															
18	183															
22	223															
27	273															
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6.8	685															
8.2	825															
100	106															

Packaging: Embossed Plastic Carrier Tape

Size	Qty per 7" Reel	Qty 10/13" Reel
2225	500, 750	1K

Tape & Reel Specifications



Unit: mm

Size	W	P ₀	P ₁	P ₂	D ₀	D ₁	E	F
2225	12.00 ± 0.30	4.00 ± 0.10	8.00 ± 0.10	2.00 ± 0.05	1.50 ± 0.10	1.00 ± 0.10	1.75 ± 0.10	5.50 ± 0.05

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- Determined by component size to minimize rotation.
- The component cannot rotate more than 20° within the determined cavity.

