

Type P10 to P40 Multilayer Ceramic Capacitors

Axial Leaded Capacitors



The Type P10 to P40 axial leaded, conformally coated, multilayer ceramic capacitors offer a wide range of temperature coefficients that are excellent for filtering, bypass and coupling applications

Highlights

- Conformally coated, axial leaded
- Available on tape and reel
- IECQ Approved to:
QC300601/US0001 - NPO
QC300701/US0003- X7R
QC300701/US0001-Z5U



Complies with the EU Directive 2002/95/EC requirement restricting the use of Lead (Pb), Mercury (Hg), Cadmium (Cd), Hexavalent chromium (Cr(VI)), PolyBrominated Biphenyls (PBB) and PolyBrominated Diphenyl Ethers (PBDE).

Specifications

Capacitance Range:	10 pF to 1.0 μ F
Voltage Range:	50, 100, 200 WVdc
Capacitance Tolerance:	See ratings tables
Temperature Coefficient:	COG (NPO), X7R, Z5U
Withstand Voltage:	250% of rated voltage is applied for 1 to 5 sec.
Available on Tape and Reel:	Add 'TR' to end of catalog part number

Ratings

COG (NPO) Temperature Coefficient 200 Vdc

Catalog		Size		Catalog		Size	
Cap	Part Number	D	L	Cap	Part Number	D	L
		(Inches)				(Inches)	
10 pF	P10G100*2-F	0.1	0.17	68 pF	P10G680*2-F	0.1	0.17
12 pF	P10G120*2-F	0.1	0.17	82 pF	P10G820*2-F	0.1	0.17
15 pF	P10G150*2-F	0.1	0.17	100 pF	P10G101*2-F	0.1	0.17
18 pF	P10G180*2-F	0.1	0.17	120 pF	P10G121*2-F	0.1	0.17
22 pF	P10G220*2-F	0.1	0.17	150 pF	P10G151*2-F	0.1	0.17
33 pF	P10G330*2-F	0.1	0.17	180 pF	P10G181*2-F	0.1	0.17
39 pF	P10G390*2-F	0.1	0.17	220 pF	P10G221*2-F	0.1	0.17
47 pF	P10G470*2-F	0.1	0.17	270 pF	P10G271*2-F	0.1	0.17
56 pF	P10G560*2-F	0.1	0.17				

*Insert proper letter symbol for tolerance.
J = $\pm 5\%$, K = $\pm 10\%$

COG (NPO) Temperature Coefficient 100 Vdc

Catalog		Size		Catalog		Size		Catalog		Size	
Cap	Part Number	D	L	Cap	Part Number	D	L	Cap	Part Number	D	L
		(Inches)				(Inches)				(Inches)	
10 pF	P10G100*1-F	0.1	0.17	120 pF	P10G121*1-F	0.1	0.17	1500 pF	P20G152*1-F	0.1	0.26
12 pF	P10G120*1-F	0.1	0.17	150 pF	P10G151*1-F	0.1	0.17	1800 pF	P20G182*1-F	0.1	0.26
15 pF	P10G150*1-F	0.1	0.17	180 pF	P10G181*1-F	0.1	0.17	2200 pF	P20G222*1-F	0.1	0.26
18 pF	P10G180*1-F	0.1	0.17	220 pF	P10G221*1-F	0.1	0.17	2700 pF	P30G272*1-F	0.15	0.29
22 pF	P10G220*1-F	0.1	0.17	270 pF	P10G271*1-F	0.1	0.17	3300 pF	P30G332*1-F	0.15	0.29
27 pF	P10G270*1-F	0.1	0.17	330 pF	P10G331*1-F	0.1	0.17	3900 pF	P30G392*1-F	0.15	0.29
33 pF	P10G330*1-F	0.1	0.17	390 pF	P10G391*1-F	0.1	0.17	4700 pF	P30G472*1-F	0.15	0.29
39 pF	P10G390*1-F	0.1	0.17	470 pF	P10G471*1-F	0.1	0.17	5600 pF	P30G562*1-F	0.15	0.29
47 pF	P10G470*1-F	0.1	0.17	560 pF	P10G561*1-F	0.1	0.17	6800 pF	P30G682*1-F	0.15	0.29
56 pF	P10G560*1-F	0.1	0.17	680 pF	P10G681*1-F	0.1	0.17	8200 pF	P30G822*1-F	0.15	0.29
68 pF	P10G680*1-F	0.1	0.17	820 pF	P10G821*1-F	0.1	0.17	.010 μ F	P40G103*1-F	0.15	0.40
82 pF	P10G820*1-F	0.1	0.17	1000 pF	P10G102*1-F	0.1	0.17	.012 μ F	P40G123*1-F	0.15	0.40
100 pF	P10G101*1-F	0.1	0.17	1200 pF	P20G122*1-F	0.1	0.26	.015 μ F	P40G153*1-F	0.15	0.40

Type P10 to P40 Multilayer Ceramic Capacitors

Ratings

RoHS Compliant

COG (NPO) Temperature Coefficient 50 Vdc

Catalog		Size	
Cap	Part Number	D	L
(Inches)			
560 pF	P10G561*5-F	0.10	0.17
680 pF	P10G681*5-F	0.10	0.17
820 pF	P10G821*5-F	0.10	0.17
1000 pF	P10G102*5-F	0.10	0.17
1200 pF	P12G122*5-F	0.12	0.17
1200 pF	P20G122*5-F	0.10	0.26
1500 pF	P12G152*5-F	0.12	0.17
1500 pF	P20G152*5-F	0.10	0.26

Catalog		Size	
Cap	Part Number	D	L
(Inches)			
1800 pF	P12G182*5-F	0.12	0.17
1800 pF	P20G182*5-F	0.10	0.26
2200 pF	P12G222*5-F	0.12	0.17
2200 pF	P20G222*5-F	0.10	0.26
2700 pF	P12G272*5-F	0.12	0.17
2700 pF	P30G272*5-F	0.15	0.29
3300 pF	P30G332*5-F	0.15	0.29
3900 pF	P30G392*5-F	0.15	0.29

Catalog		Size	
Cap	Part Number	D	L
(Inches)			
4700 pF	P30G472*5-F	0.15	0.29
5600 pF	P30G562*5-F	0.15	0.29
6800 pF	P30G682*5-F	0.15	0.29
8200 pF	P30G822*5-F	0.15	0.29
.010 uF	P40G103*5-F	0.15	0.40
.012 uF	P40G123*5-F	0.15	0.40
.015 uF	P40G153*5-F	0.15	0.40

*Insert proper letter symbol for tolerance.
J = $\pm 5\%$, K = $\pm 10\%$

Add 'TR' to end of part number for Tape & Reel
P10, P12, P20 - 5,000 per reel
P30, P40 - 2,500 per reel
Full reels only

X7R Temperature Coefficient 100 Vdc

Catalog		Size	
Cap	Part Number	D	L
(Inches)			
470 pF	P10R471*1-F	0.1	0.17
560 pF	P10R561*1-F	0.1	0.17
680 pF	P10R681*1-F	0.1	0.17
820 pF	P10R821*1-F	0.1	0.17
1000 pF	P10R102*1-F	0.1	0.17
1200 pF	P10R122*1-F	0.1	0.17
1500 pF	P10R152*1-F	0.1	0.17
1800 pF	P10R182*1-F	0.1	0.17
2200 pF	P10R222*1-F	0.1	0.17
2700 pF	P10R272*1-F	0.1	0.17
3300 pF	P10R332*1-F	0.1	0.17
3900 pF	P10R392*1-F	0.1	0.17

Catalog		Size	
Cap	Part Number	D	L
(Inches)			
4700 pF	P10R472*1-F	0.10	0.17
5600 pF	P10R562*1-F	0.10	0.17
6800 pF	P10R682*1-F	0.10	0.17
8200 pF	P10R822*1-F	0.10	0.17
.01 uF	P10R103*1-F	0.10	0.17
.012 uF	P10R123*1-F	0.10	0.17
.015 uF	P12R153*1-F	0.12	0.17
.015 uF	P20R153*1-F	0.10	0.26
.018 uF	P12R183*1-F	0.12	0.17
.018 uF	P20R183*1-F	0.10	0.26
.022 uF	P12R223*1-F	0.12	0.17
.022 uF	P20R223*1-F	0.10	0.26

Catalog		Size	
Cap	Part Number	D	L
(Inches)			
.027 uF	P12R273*1-F	0.12	0.17
.027 uF	P20R273*1-F	0.10	0.26
.033 uF	P20R333*1-F	0.10	0.26
.039 uF	P30R393*1-F	0.15	0.29
.047 uF	P30R473*1-F	0.15	0.29
.056 uF	P30R563*1-F	0.15	0.29
.068 uF	P30R683*1-F	0.15	0.29
.082 uF	P30R823*1-F	0.15	0.29
.10 uF	P30R104*1-F	0.15	0.29
.12 uF	P40R124*1-F	0.15	0.29
.15 uF	P40R154*1-F	0.15	0.40

*Insert proper letter symbol for tolerance.
K = $\pm 10\%$, M = $\pm 20\%$

Add 'TR' to end of part number for Tape & Reel
P10, P12, P20 - 5,000 per reel
P30, P40 - 2,500 per reel
Full reels only

X7R Temperature Coefficient 50 Vdc

Catalog		Size	
Cap	Part Number	D	L
(Inches)			
8200 pF	P10R822*5-F	0.1	0.17
.010 uF	P10R103*5-F	0.1	0.17
.012 uF	P10R123*5-F	0.1	0.17
.015 uF	P10R153*5-F	0.1	0.17
.018 uF	P10R183*5-F	0.1	0.17
.022 uF	P10R223*5-F	0.1	0.17
.027 uF	P10R273*5-F	0.1	0.17
.033 uF	P10R333*5-F	0.1	0.17
.039 uF	P10R393*5-F	0.1	0.17

50 Vdc

Cap	Catalog		Size	
	Part Number	D	L	
			(Inches)	
.047 uF	P10R473*5-F	0.10	0.17	
.056 uF	P12R563*5-F	0.12	0.17	
.056 uF	P20R563*5-F	0.10	0.26	
.068 uF	P12R683*5-F	0.12	0.17	
.068 uF	P20R683*5-F	0.10	0.26	
.082 uF	P12R823*5-F	0.12	0.17	
.082 uF	P20R823*5-F	0.10	0.26	
.10 uF	P12R104*5-F	0.12	0.17	
.10 uF	P20R104*5-F	0.10	0.26	

Full reels only

Cap	Catalog		Size	
	Part Number	D	L	
			(Inches)	
.12 uF	P30R124*5-F	0.15	0.29	
.15 uF	P30R154*5-F	0.15	0.29	
.18 uF	P30R184*5-F	0.15	0.29	
.22 uF	P30R224*5-F	0.15	0.29	
.27 uF	P30R274*5-F	0.15	0.29	
.33 uF	P40R334*5-F	0.15	0.40	
.39uF	P40R394*5-F	0.15	0.40	
.47uF	P40R474*5-F	0.15	0.40	

*Insert proper letter symbol for tolerance.
K = $\pm 10\%$, M = $\pm 20\%$

Type P10 to P40 Multilayer Ceramic Capacitors

Ratings

RoHS Compliant

Z5U Temperature Coefficient 100 Vdc

Catalog		Size	
Cap	Part Number	D	L
(Inches)			
.010 uF	P10U103*1-F	0.1	0.17
.012 uF	P10U123*1-F	0.1	0.17
.015 uF	P10U153*1-F	0.1	0.17
.018 uF	P10U183*1-F	0.1	0.17
.022 uF	P10U223*1-F	0.1	0.17
.027 uF	P20U273*1-F	0.1	0.26

Catalog		Size	
Cap	Part Number	D	L
(Inches)			
.033 uF	P20U333*1-F	0.10	0.26
.039 uF	P20U393*1-F	0.10	0.26
.047 uF	P20U473*1-F	0.10	0.26
.056 uF	P30U563*1-F	0.15	0.29
.068 uF	P30U683*1-F	0.15	0.29
.082 uF	P30U823*1-F	0.15	0.29

Catalog		Size	
Cap	Part Number	D	L
(Inches)			
.1 uF	P30U104*1-F	0.15	0.29
.12 uF	P30U124*1-F	0.15	0.29
.15 uF	P30U154*1-F	0.15	0.29
.18 uF	P40U184*1-F	0.15	0.4
.22 uF	P40U224*1-F	0.15	0.4

*Insert proper letter symbol for tolerance.
M = $\pm 20\%$, Z = +80 -20%, P = +100 -0%

Z5U Temperature Coefficient 50 Vdc

Catalog		Size	
Cap	Part Number	D	L
(Inches)			
.027 uF	P10U273*5-F	0.1	0.17
.033 uF	P10U333*5-F	0.1	0.17
.039 uF	P10U393*5-F	0.1	0.17
.047 uF	P10U473*5-F	0.1	0.17
.056 uF	P10U563*5-F	0.1	0.17
.068 uF	P10U683*5-F	0.1	0.17
.082 uF	P10U823*5-F	0.1	0.17
.10 uF	P10U104*5-F	0.1	0.17

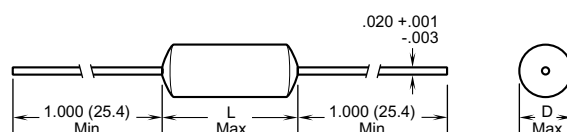
Catalog		Size	
Cap	Part Number	D	L
(Inches)			
.12 uF	P10U124*5-F	0.10	0.17
.12 uF	P20U124*5-F	0.10	0.26
.15 uF	P10U154*5-F	0.10	0.17
.18 uF	P10U184*5-F	0.10	0.17
.22 uF	P10U224*5-F	0.10	0.17
.27 uF	P12U274*5-F	0.12	0.17
.27 uF	P20U274*5-F	0.10	0.26
.33 uF	P12U334*5-F	0.12	0.17

Catalog		Size	
Cap	Part Number	D	L
(Inches)			
.33 uF	P20U334*5-F	0.10	0.26
.39 uF	P30U394*5-F	0.15	0.29
.47 uF	P30U474*5-F	0.15	0.29
.56 uF	P40U564*5-F	0.15	0.40
.68 uF	P40U684*5-F	0.15	0.40
.82 uF	P40U824*5-F	0.15	0.40
1.0 uF	P40U105*5-F	0.15	0.40

*Insert proper letter symbol for tolerance.
M = $\pm 20\%$, Z = +80 -20%, P = +100 -0%

Add 'TR' to end of part number for Tape & Reel
P10, P12, P20 - 5,000 per reel
P30, P40 - 2,500 per reel
Full reels only

Outline Drawing



Type P10 to P40 Multilayer Ceramic Capacitors

Notice and Disclaimer: All product drawings, descriptions, specifications, statements, information and data (collectively, the "Information") in this datasheet or other publication are subject to change. The customer is responsible for checking, confirming and verifying the extent to which the Information contained in this datasheet or other publication is applicable to an order at the time the order is placed. All Information given herein is believed to be accurate and reliable, but it is presented without any guarantee, warranty, representation or responsibility of any kind, expressed or implied. Statements of suitability for certain applications are based on the knowledge that the Cornell Dubilier company providing such statements ("Cornell Dubilier") has of operating conditions that such Cornell Dubilier company regards as typical for such applications, but are not intended to constitute any guarantee, warranty or representation regarding any such matter – and Cornell Dubilier specifically and expressly disclaims any guarantee, warranty or representation concerning the suitability for a specific customer application, use, storage, transportation, or operating environment. The Information is intended for use only by customers who have the requisite experience and capability to determine the correct products for their application. Any technical advice inferred from this Information or otherwise provided by Cornell Dubilier with reference to the use of any Cornell Dubilier products is given gratis (unless otherwise specified by Cornell Dubilier), and Cornell Dubilier assumes no obligation or liability for the advice given or results obtained. Although Cornell Dubilier strives to apply the most stringent quality and safety standards regarding the design and manufacturing of its products, in light of the current state of the art, isolated component failures may still occur. Accordingly, customer applications which require a high degree of reliability or safety should employ suitable designs or other safeguards (such as installation of protective circuitry or redundancies or other appropriate protective measures) in order to ensure that the failure of an electrical component does not result in a risk of personal injury or property damage. Although all product-related warnings, cautions and notes must be observed, the customer should not assume that all safety measures are indicated in such warnings, cautions and notes, or that other safety measures may not be required.