



# M15 to M50 Series Multilayer Ceramic Capacitors

## COG (NPO) Temperature Coefficient 100 VDC

Capacity	Size (Inches)				Catalog Number	Capacity	Size (Inches)				Catalog Number	Capacity	Size (Inches)				Catalog Number
	L	H	T	S			L	H	T	S			L	H	T	S	
120 pF	.150	.210	.100	.100	M15G121*1	1500 pF	.200	.260	.125	.100	M20G152*1	6800 pF	.300	.360	.150	.200	M30G682*1
150 pF	.150	.210	.100	.100	M15G151*1	1500 pF	.200	.260	.125	.200	M22G152*1	8200 pF	.300	.360	.150	.200	M30G822*1
180 pF	.150	.210	.100	.100	M15G181*1	1800 pF	.200	.260	.125	.100	M20G182*1	.01 uF	.300	.360	.150	.200	M30G103*1
220 pF	.150	.210	.100	.100	M15G221*1	1800 pF	.200	.260	.125	.200	M22G182*1	.012 uF	.300	.360	.150	.200	M30G123*1
270 pF	.150	.210	.100	.100	M15G271*1	2200 pF	.200	.260	.125	.100	M20G222*1	.015 uF	.300	.360	.150	.200	M30G153*1
330 pF	.150	.210	.100	.100	M15G331*1	2200 pF	.200	.260	.125	.200	M22G222*1	.018 uF	.300	.360	.150	.200	M30G183*1
390 pF	.150	.210	.100	.100	M15G391*1	2700 pF	.200	.260	.125	.100	M20G272*1	.022 uF	.300	.360	.150	.200	M30G223*1
470 pF	.150	.210	.100	.100	M15G471*1	2700 pF	.200	.260	.125	.200	M22G272*1	.027 uF	.300	.360	.150	.200	M30G273*1
560 pF	.150	.210	.100	.100	M15G561*1	3300 pF	.200	.260	.125	.100	M20G332*1	.027 uF	.400	.460	.150	.200	M40G273*1
680 pF	.150	.210	.100	.100	M15G681*1	3300 pF	.200	.260	.125	.200	M22G332*1	.033 uF	.400	.460	.150	.200	M40G333*1
680 pF	.200	.260	.125	.100	M20G681*1	3300 pF	.300	.360	.150	.200	M30G332*1	.039 uF	.400	.460	.150	.200	M40G393*1
680 pF	.200	.260	.125	.200	M22G681*1	3900 pF	.200	.260	.125	.100	M20G392*1	.039 uF	.500	.560	.200	.400	M50G393*1
820 pF	.150	.210	.100	.100	M15G821*1	3900 pF	.200	.260	.125	.200	M22G392*1	.047 uF	.400	.460	.150	.200	M40G473*1
820 pF	.200	.260	.125	.100	M20G821*1	3900 pF	.300	.360	.150	.200	M30G392*1	.047 uF	.500	.560	.200	.400	M50G473*1
820 pF	.200	.260	.125	.200	M22G821*1	4700 pF	.200	.260	.125	.100	M20G472*1	.056 uF	.400	.460	.150	.200	M40G563*1
1000 pF	.150	.210	.100	.100	M15G102*1	4700 pF	.200	.260	.125	.200	M22G472*1	.056 uF	.500	.560	.200	.400	M50G563*1
1000 pF	.200	.260	.125	.100	M20G102*1	4700 pF	.300	.360	.150	.200	M30G472*1	.068 uF	.400	.460	.150	.200	M40G683*1
1000 pF	.200	.260	.125	.200	M22G102*1	5600 pF	.200	.260	.125	.100	M20G562*1	.068 uF	.500	.560	.200	.400	M50G683*1
1200 pF	.200	.260	.125	.100	M20G122*1	5600 pF	.200	.260	.125	.200	M22G562*1	.082 uF	.500	.560	.200	.400	M50G823*1
1200 pF	.200	.260	.125	.200	M22G122*1	5600 pF	.300	.360	.150	.200	M30G562*1	.1 uF	.500	.560	.200	.400	M50G104*1
												.12 uF	.500	.560	.200	.400	M50G124*1

\* Insert proper letter symbol for tolerance:  
 F =  $\pm 1\%$ , G =  $\pm 2\%$ , J =  $\pm 5\%$ , K =  $\pm 10\%$

## X7R Temperature Coefficient 200 VDC

Capacity	Size (Inches)				Catalog Number	Capacity	Size (Inches)				Catalog Number	Capacity	Size (Inches)				Catalog Number
	L	H	T	S			L	H	T	S			L	H	T	S	
100 pF	.150	.210	.100	.100	M15R101*2	2200 pF	.150	.210	.100	.100	M15R222*2	.018 uF	.200	.260	.125	.100	M20R183*2
120 pF	.150	.210	.100	.100	M15R121*2	2200 pF	.200	.260	.125	.100	M20R222*2	.018 uF	.200	.260	.125	.200	M22R183*2
150 pF	.150	.210	.100	.100	M15R151*2	2200 pF	.200	.260	.125	.200	M22R222*2	.018 uF	.300	.360	.150	.200	M30R183*2
180 pF	.150	.210	.100	.100	M15R181*2	2700 pF	.200	.260	.125	.100	M20R272*2	.022 uF	.200	.260	.125	.100	M20R223*2
220 pF	.150	.210	.100	.100	M15R221*2	2700 pF	.200	.260	.125	.200	M22R272*2	.022 uF	.200	.260	.125	.200	M22R223*2
270 pF	.150	.210	.100	.100	M15R271*2	3300 pF	.200	.260	.125	.100	M20R332*2	.022 uF	.300	.360	.150	.200	M30R223*2
330 pF	.150	.210	.100	.100	M15R331*2	3300 pF	.200	.260	.125	.200	M22R332*2	.027 uF	.300	.360	.150	.200	M30R273*2
390 pF	.150	.210	.100	.100	M15R391*2	3900 pF	.200	.260	.125	.100	M20R392*2	.033 uF	.300	.360	.150	.200	M30R333*2
470 pF	.150	.210	.100	.100	M15R471*2	3900 pF	.200	.260	.125	.200	M22R392*2	.039 uF	.300	.360	.150	.200	M30R393*2
560 pF	.150	.210	.100	.100	M15R561*2	4700 pF	.200	.260	.125	.100	M20R472*2	.047 uF	.300	.360	.150	.200	M30R473*2
680 pF	.150	.210	.100	.100	M15R681*2	4700 pF	.200	.260	.125	.200	M22R472*2	.056 uF	.300	.360	.150	.200	M30R563*2
820 pF	.150	.210	.100	.100	M15R821*2	5600 pF	.200	.260	.125	.100	M20R562*2	.068 uF	.300	.360	.150	.200	M30R683*2
1000 pF	.150	.210	.100	.100	M15R102*2	5600 pF	.200	.260	.125	.200	M22R562*2	.082 uF	.300	.360	.150	.200	M30R823*2
1000 pF	.200	.260	.125	.100	M20R102*2	6800 pF	.200	.260	.125	.100	M20R682*2	.082 uF	.400	.460	.150	.200	M40R823*2
1000 pF	.200	.260	.125	.200	M22R102*2	6800 pF	.200	.260	.125	.200	M22R682*2	.1 uF	.300	.360	.150	.200	M30R104*2
1200 pF	.150	.210	.100	.100	M15R122*2	8200 pF	.200	.260	.125	.100	M20R822*2	.1 uF	.400	.460	.150	.200	M40R104*2
1200 pF	.200	.260	.125	.100	M20R122*2	8200 pF	.200	.260	.125	.200	M22R822*2	.12 uF	.400	.460	.150	.200	M40R124*2
1200 pF	.200	.260	.125	.200	M22R122*2	.01 uF	.200	.260	.125	.100	M20R103*2	.15 uF	.400	.460	.150	.200	M40R154*2
1500 pF	.150	.210	.100	.100	M15R152*2	.01 uF	.200	.260	.125	.200	M22R103*2	.18 uF	.400	.460	.150	.200	M40R184*2
1500 pF	.200	.260	.125	.100	M20R152*2	.012 uF	.200	.260	.125	.100	M20R123*2	.22 uF	.400	.460	.150	.200	M40R224*2
1500 pF	.200	.260	.125	.200	M22R152*2	.012 uF	.200	.260	.125	.200	M22R123*2	.22 uF	.500	.560	.200	.400	M50R224*2
1800 pF	.150	.210	.100	.100	M15R182*2	.015 uF	.200	.260	.125	.100	M20R153*2	.27 uF	.400	.460	.150	.200	M40R274*2
1800 pF	.200	.260	.125	.100	M20R182*2	.015 uF	.200	.260	.125	.200	M22R153*2	.27 uF	.500	.560	.200	.400	M50R274*2
1800 pF	.200	.260	.125	.200	M22R182*2	.015 uF	.300	.360	.150	.200	M30R153*2	.33 uF	.500	.560	.200	.400	M50R334*2
												.39 uF	.500	.560	.200	.400	M50R394*2
												.47 uF	.500	.560	.200	.400	M50R474*2

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

Add 'TR' to end of part number for Tape & Reel  
 M15, M20, M22 - 2,500 per reel  
 M30 - 1,500 per reel  
 M40 - 1,000 per reel  
 M50 - N/A  
 (Available in full reels only)

# M15 to M50 Series Multilayer Ceramic Capacitors



## X7R Temperature Coefficient 100 VDC

Capacity	Size (Inches)				Catalog Number	Capacity	Size (Inches)				Catalog Number	Capacity	Size (Inches)				Catalog Number
	L	H	T	S			L	H	T	S			L	H	T	S	
820 pF	.150	.210	.100	.100	M15R821*1	.012 uF	.200	.260	.125	.100	M20R123*1	.1 uF	.200	.260	.125	.100	M20R104*1
1000 pF	.150	.210	.100	.100	M15R102*1	.012 uF	.200	.260	.125	.200	M22R123*1	.1 uF	.200	.260	.125	.200	M22R104*1
1200 pF	.150	.210	.100	.100	M15R122*1	.015 uF	.200	.260	.125	.100	M20R153*1	.1 uF	.300	.360	.150	.200	M30R104*1
1500 pF	.150	.210	.100	.100	M15R152*1	.015 uF	.200	.260	.125	.200	M22R153*1	.12 uF	.300	.360	.150	.200	M30R124*1
1800 pF	.150	.210	.100	.100	M15R182*1	.018 uF	.200	.260	.125	.100	M20R183*1	.15 uF	.300	.360	.150	.200	M30R154*1
2200 pF	.150	.210	.100	.100	M15R222*1	.018 uF	.200	.260	.125	.200	M22R183*1	.18 uF	.300	.360	.150	.200	M30R184*1
2700 pF	.150	.210	.100	.100	M15R272*1	.022 uF	.200	.260	.125	.100	M20R223*1	.22 uF	.300	.360	.150	.200	M30R224*1
3300 pF	.150	.210	.100	.100	M15R332*1	.022 uF	.200	.260	.125	.200	M22R223*1	.27 uF	.300	.360	.150	.200	M30R274*1
3900 pF	.150	.210	.100	.100	M15R392*1	.027 uF	.200	.260	.125	.100	M20R273*1	.33 uF	.300	.360	.150	.200	M30R334*1
4700 pF	.150	.210	.100	.100	M15R472*1	.027 uF	.200	.260	.125	.200	M22R273*1	.33 uF	.400	.460	.150	.200	M40R334*1
4700 pF	.200	.260	.125	.100	M20R472*1	.033 uF	.200	.260	.125	.100	M20R333*1	.39 uF	.300	.360	.150	.200	M30R394*1
4700 pF	.200	.260	.125	.200	M22R472*1	.033 uF	.200	.260	.125	.200	M22R333*1	.39 uF	.400	.460	.150	.200	M40R394*1
5600 pF	.150	.210	.100	.100	M15R562*1	.039 uF	.200	.260	.125	.100	M20R393*1	.47 uF	.300	.360	.150	.200	M30R474*1
5600 pF	.200	.260	.125	.100	M20R562*1	.039 uF	.200	.260	.125	.200	M22R393*1	.47 uF	.400	.460	.150	.200	M40R474*1
5600 pF	.200	.260	.125	.200	M22R562*1	.047 uF	.200	.260	.125	.100	M20R473*1	.56 uF	.400	.460	.150	.200	M40R564*1
6800 pF	.150	.210	.100	.100	M15R682*1	.047 uF	.200	.260	.125	.200	M22R473*1	.68 uF	.400	.460	.150	.200	M40R684*1
6800 pF	.200	.260	.125	.100	M20R682*1	.056 uF	.200	.260	.125	.100	M20R563*1	.68 uF	.500	.560	.200	.400	M50R684*1
6800 pF	.200	.260	.125	.200	M22R682*1	.056 uF	.200	.260	.125	.200	M22R563*1	.82 uF	.400	.460	.150	.200	M40R824*1
8200 pF	.150	.210	.100	.100	M15R822*1	.068 uF	.200	.260	.125	.100	M20R683*1	.82 uF	.500	.560	.200	.400	M50R824*1
8200 pF	.200	.260	.125	.100	M20R822*1	.068 uF	.200	.260	.125	.200	M22R683*1	1.0 uF	.400	.460	.150	.200	M40R105*1
8200 pF	.200	.260	.125	.200	M22R822*1	.068 uF	.300	.360	.150	.200	M30R683*1	1.0 uF	.500	.560	.200	.400	M50R105*1
.01 uF	.150	.210	.100	.100	M15R103*1	.082 uF	.200	.260	.125	.100	M20R823*1	1.2 uF	.500	.560	.200	.400	M50R125*1
.01 uF	.200	.260	.125	.100	M20R103*1	.082 uF	.200	.260	.125	.200	M22R823*1						
.01 uF	.200	.260	.125	.200	M22R103*1	.082 uF	.300	.360	.150	.200	M30R823*1						

\* Insert proper letter symbol for tolerance:  
K = ±10%, M = ±20%

## X7R Temperature Coefficient 50 VDC

Capacity	Size (Inches)				Catalog Number	Capacity	Size (Inches)				Catalog Number	Capacity	Size (Inches)				Catalog Number
	L	H	T	S			L	H	T	S			L	H	T	S	
3300 pF	.150	.210	.100	.100	M15R332*5	.033 uF	.150	.210	.100	.100	M15R333*5	.22 uF	.200	.260	.125	.100	M20R224*5
3900 pF	.150	.210	.100	.100	M15R392*5	.033 uF	.200	.260	.125	.100	M20R333*5	.22 uF	.200	.260	.125	.200	M22R224*5
4700 pF	.150	.210	.100	.100	M15R472*5	.033 uF	.200	.260	.125	.200	M22R333*5	.22 uF	.300	.360	.150	.200	M30R224*5
5600 pF	.150	.210	.100	.100	M15R562*5	.039 uF	.200	.260	.125	.100	M20R393*5	.27 uF	.200	.260	.125	.100	M20R274*5
6800 pF	.150	.210	.100	.100	M15R682*5	.039 uF	.200	.260	.125	.200	M22R393*5	.27 uF	.200	.260	.125	.200	M22R274*5
8200 pF	.150	.210	.100	.100	M15R822*5	.047 uF	.200	.260	.125	.100	M20R473*5	.27 uF	.300	.360	.150	.200	M30R274*5
.01 uF	.150	.210	.100	.100	M15R103*5	.047 uF	.200	.260	.125	.200	M22R473*5	.33 uF	.300	.360	.150	.200	M30R334*5
.012 uF	.150	.210	.100	.100	M15R123*5	.056 uF	.200	.260	.125	.100	M20R563*5	.39 uF	.300	.360	.150	.200	M30R394*5
.012 uF	.200	.260	.125	.100	M20R123*5	.056 uF	.200	.260	.125	.200	M22R563*5	.47 uF	.300	.360	.150	.200	M30R474*5
.012 uF	.200	.260	.125	.200	M22R123*5	.068 uF	.200	.260	.125	.100	M20R683*5	.56 uF	.300	.360	.150	.200	M30R564*5
.015 uF	.150	.210	.100	.100	M15R153*5	.068 uF	.200	.260	.125	.200	M22R683*5	.68 uF	.300	.360	.150	.200	M30R684*5
.015 uF	.200	.260	.125	.100	M20R153*5	.082 uF	.200	.260	.125	.100	M20R823*5	.82 uF	.300	.360	.150	.200	M30R824*5
.015 uF	.200	.260	.125	.200	M22R153*5	.082 uF	.200	.260	.125	.200	M22R823*5	1.0 uF	.300	.360	.150	.200	M30R105*5
.018 uF	.150	.210	.100	.100	M15R183*5	.1 uF	.200	.260	.125	.100	M20R104*5	1.0 uF	.400	.460	.150	.200	M40R105*5
.018 uF	.200	.260	.125	.100	M20R183*5	.1 uF	.200	.260	.125	.200	M22R104*5	1.2 uF	.400	.460	.150	.200	M40R125*5
.018 uF	.200	.260	.125	.200	M22R183*5	.12 uF	.200	.260	.125	.100	M20R124*5	1.5 uF	.400	.460	.150	.200	M40R155*5
.022 uF	.150	.210	.100	.100	M15R223*5	.12 uF	.200	.260	.125	.200	M22R124*5	1.8 uF	.400	.460	.150	.200	M40R185*5
.022 uF	.200	.260	.125	.100	M20R223*5	.15 uF	.200	.260	.125	.100	M20R154*5	2.2 uF	.400	.460	.150	.200	M40R225*5
.022 uF	.200	.260	.125	.200	M22R223*5	.15 uF	.200	.260	.125	.200	M22R154*5	2.2 uF	.500	.560	.200	.400	M50R225*5
.027 uF	.150	.210	.100	.100	M15R273*5	.15 uF	.300	.360	.150	.200	M30R154*5	2.7 uF	.500	.560	.200	.400	M50R275*5
.027 uF	.200	.260	.125	.100	M20R273*5	.18 uF	.200	.260	.125	.100	M20R184*5	3.3 uF	.500	.560	.200	.400	M50R335*5
.027 uF	.200	.260	.125	.200	M22R273*5	.18 uF	.200	.260	.125	.200	M22R184*5	3.9 uF	.500	.560	.200	.400	M50R395*5

\* Insert proper letter symbol for tolerance:  
K = ±10%, M = ±20%

Add 'TR' to end of part number for Tape & Reel  
M15, M20, M22 - 2,500 per reel  
M30 - 1,500 per reel  
M40 - 1,000 per reel  
M50 - N/A  
(Available in full reels only)

Multilayer Ceramic Capacitors

