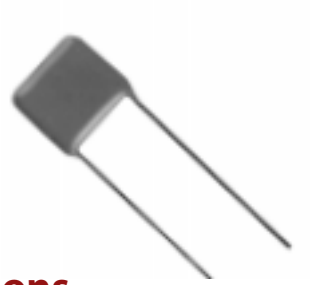
Type M15 to M50 Multilayer Ceramic Capacitors

COG (NPO). X7R & Z5U Capacitors



Type M15 to M50 conformally coated radial leaded capacitors cover a wide range of temperature coefficients for a wide variety of applications.

Highlights

- Conformally coated, radial leaded
- Coating meets UL94V-0
- IECQ approved to:
  QC300601/US0002 - NPO
  QC300701/US0002 - X7R
  QC300701/US0004 - Z5U

Specifications

Capacitance Range	1 pF to 6.8 µF
Capacitance Tolerance	See ratings tables
Rated Voltage	50, 100, 200 Vdc
Temperature Coefficient	COG (NPO), X7R & Z5U
Available in Tape and Ammo Pack Configuration	Add 'TA' to end of catalog part number
RoHS Compliant	

Ratings

COG (NPO) Temperature Coefficient
200 Vdc

Catalog Part Number	Cap	Sizes (Inches) L	H	T	S	Catalog Part Number	Cap	Sizes (Inches) L	H	T	S	Catalog Part Number	Cap	Sizes (Inches) L	H	T	S
M15G109D2-F	1.0 pF	.150	.210	.130	.100	M15G120*2-F	12 pF	.150	.210	.130	.100	M15G101*2-F	100 pF	.150	.210	.130	.100
M20G109D2-F	1.0 pF	.200	.260	.150	.100	M20G120*2-F	12 pF	.200	.260	.150	.100	M20G101*2-F	100 pF	.200	.260	.150	.100
M22G109D2-F	1.0 pF	.200	.260	.150	.200	M22G120*2-F	12 pF	.200	.260	.150	.200	M22G101*2-F	100 pF	.200	.260	.150	.200
M15G159D2-F	1.5 pF	.150	.210	.130	.100	M15G150*2-F	15 pF	.150	.210	.130	.100	M15G121*2-F	120 pF	.150	.210	.130	.100
M20G159D2-F	1.5 pF	.200	.260	.150	.100	M20G150*2-F	15 pF	.200	.260	.150	.100	M20G121*2-F	120 pF	.200	.260	.150	.100
M22G159D2-F	1.5 pF	.200	.260	.150	.200	M22G150*2-F	15 pF	.200	.260	.150	.200	M22G121*2-F	120 pF	.200	.260	.150	.200
M15G229D2-F	2.2 pF	.150	.210	.130	.100	M15G180*2-F	18 pF	.150	.210	.130	.100	M15G151*2-F	150 pF	.150	.210	.130	.100
M20G229D2-F	2.2 pF	.200	.260	.150	.100	M20G180*2-F	18 pF	.200	.260	.150	.100	M20G151*2-F	150 pF	.200	.260	.150	.100
M22G229D2-F	2.2 pF	.200	.260	.150	.200	M22G180*2-F	18 pF	.200	.260	.150	.200	M22G151*2-F	150 pF	.200	.260	.150	.200
M15G279D2-F	2.7 pF	.150	.210	.130	.100	M15G220*2-F	22 pF	.150	.210	.130	.100	M15G181*2-F	180 pF	.150	.210	.130	.100
M20G279D2-F	2.7 pF	.200	.260	.150	.100	M20G220*2-F	22 pF	.200	.260	.150	.100	M20G181*2-F	180 pF	.200	.260	.150	.100
M22G279D2-F	2.7 pF	.200	.260	.150	.200	M22G220*2-F	22 pF	.200	.260	.150	.200	M22G181*2-F	180 pF	.200	.260	.150	.200
M15G339D2-F	3.3 pF	.150	.210	.130	.100	M15G270*2-F	27 pF	.150	.210	.130	.100	M15G221*2-F	220 pF	.150	.210	.130	.100
M20G339D2-F	3.3 pF	.200	.260	.150	.100	M20G270*2-F	27 pF	.200	.260	.150	.100	M20G221*2-F	220 pF	.200	.260	.150	.100
M22G339D2-F	3.3 pF	.200	.260	.150	.200	M22G270*2-F	27 pF	.200	.260	.150	.200	M22G221*2-F	220 pF	.200	.260	.150	.200
M15G399D2-F	3.9 pF	.150	.210	.130	.100	M15G330*2-F	33 pF	.150	.210	.130	.100	M15G271*2-F	270 pF	.150	.210	.130	.100
M20G399D2-F	3.9 pF	.200	.260	.150	.100	M20G330*2-F	33 pF	.200	.260	.150	.100	M20G271*2-F	270 pF	.200	.260	.150	.100
M22G399D2-F	3.9 pF	.200	.260	.150	.200	M22G330*2-F	33 pF	.200	.260	.150	.200	M22G271*2-F	270 pF	.200	.260	.150	.200
M15G479D2-F	4.7 pF	.150	.210	.130	.100	M15G390*2-F	39 pF	.150	.210	.130	.100	M15G331*2-F	330 pF	.150	.210	.130	.100
M20G479D2-F	4.7 pF	.200	.260	.150	.100	M20G390*2-F	39 pF	.200	.260	.150	.100	M20G331*2-F	330 pF	.200	.260	.150	.100
M22G479D2-F	4.7 pF	.200	.260	.150	.200	M22G390*2-F	39 pF	.200	.260	.150	.200	M22G331*2-F	330 pF	.200	.260	.150	.200
M15G569D2-F	5.6 pF	.150	.210	.130	.100	M15G470*2-F	47 pF	.150	.210	.130	.100	M15G391*2-F	390 pF	.150	.210	.130	.100
M20G569D2-F	5.6 pF	.200	.260	.150	.100	M20G470*2-F	47 pF	.200	.260	.150	.100	M20G391*2-F	390 pF	.200	.260	.150	.100
M22G569D2-F	5.6 pF	.200	.260	.150	.200	M22G470*2-F	47 pF	.200	.260	.150	.200	M22G391*2-F	390 pF	.200	.260	.150	.200
M15G689D2-F	6.8 pF	.150	.210	.130	.100	M15G560*2-F	56 pF	.150	.210	.130	.100	M15G471*2-F	470 pF	.150	.210	.130	.100
M20G689D2-F	6.8 pF	.200	.260	.150	.100	M20G560*2-F	56 pF	.200	.260	.150	.100	M20G471*2-F	470 pF	.200	.260	.150	.100
M22G689D2-F	6.8 pF	.200	.260	.150	.200	M22G560*2-F	56 pF	.200	.260	.150	.200	M22G471*2-F	470 pF	.200	.260	.150	.200
M15G829D2-F	8.2 pF	.150	.210	.130	.100	M15G680*2-F	68 pF	.150	.210	.130	.100	M20G561*2-F	560 pF	.200	.260	.150	.100
M20G829D2-F	8.2 pF	.200	.260	.150	.100	M20G680*2-F	68 pF	.200	.260	.150	.100	M22G561*2-F	560 pF	.200	.260	.150	.200
M22G829D2-F	8.2 pF	.200	.260	.150	.200	M22G680*2-F	68 pF	.200	.260	.150	.200	M20G681*2-F	680 pF	.200	.260	.150	.100
M15G100*2-F	10 pF	.150	.210	.130	.100	M15G820*2-F	82 pF	.150	.210	.130	.100	M22G681*2-F	680 pF	.200	.260	.150	.200
M20G100*2-F	10 pF	.200	.260	.150	.100	M20G820*2-F	82 pF	.200	.260	.150	.100	M20G821*2-F	820 pF	.200	.260	.150	.100
M22G100*2-F	10 pF	.200	.260	.150	.200	M22G820*2-F	82 pF	.200	.260	.150	.200	M22G821*2-F	820 pF	.200	.260	.150	.200

*Insert proper letter symbol for tolerance

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

*Insert proper letter symbol for tolerence
1 pF to 8.2 pF available in D = ±.5 pF only
10 pF to 22 pF: J = ±5%; K = ±10%
27 pF to 47 pF: G = ±2%; J = ±5%; K = ±10%
56 pF & Up: F = ±1%; G = ±2%; J = ±5%; K = ±10%

Type M15 to M50 Multilayer Ceramic Capacitors

Ratings

RoHS Compliant

COG (NPO) Temperature Coefficient

200 Vdc

Catalog Part Number	Cap	Sizes (Inches) L	H	T	S
M20G102*2-F	1000 pF	.200	.260	.150	.100
M22G102*2-F	1000 pF	.200	.260	.150	.200
M20G122*2-F	1200 pF	.200	.260	.150	.100
M22G122*2-F	1200 pF	.200	.260	.150	.200
M20G152*2-F	1500 pF	.200	.260	.150	.100
M22G152*2-F	1500 pF	.200	.260	.150	.200
M20G182*2-F	1800 pF	.200	.260	.150	.100
M22G182*2-F	1800 pF	.200	.260	.150	.200
M20G222*2-F	2200 pF	.200	.260	.150	.100
M22G222*2-F	2200 pF	.200	.260	.150	.200
M20G272*2-F	2700 pF	.200	.260	.150	.100
M22G272*2-F	2700 pF	.200	.260	.150	.200
M30G272*2-F	2700 pF	.300	.360	.200	.200
M20G332*2-F	3300 pF	.200	.260	.150	.100
M22G332*2-F	3300 pF	.200	.260	.150	.200
M30G332*2-F	3300 pF	.300	.360	.200	.200
M30G392*2-F	3900 pF	.300	.360	.200	.200
M30G472*2-F	4700 pF	.300	.360	.200	.200
M30G562*2-F	5600 pF	.300	.360	.200	.200
M30G682*2-F	6800 pF	.300	.360	.200	.200
M30G822*2-F	8200 pF	.300	.360	.200	.200
M30G103*2-F	.010 uF	.300	.360	.200	.200
M30G123*2-F	.012 uF	.300	.360	.200	.200
M40G123*2-F	.012 uF	.400	.460	.200	.200
M30G153*2-F	.015 uF	.300	.360	.200	.200
M40G153*2-F	.015 uF	.400	.460	.200	.200
M30G183*2-F	.018 uF	.300	.360	.200	.200
M40G183*2-F	.018 uF	.400	.460	.200	.200
M40G223*2-F	.022 uF	.400	.460	.200	.200
M40G273*2-F	.027 uF	.400	.460	.200	.200
M40G333*2-F	.033 uF	.400	.460	.200	.200
M40G393*2-F	.039 uF	.400	.460	.200	.200
M50G393*2-F	.039 uF	.500	.560	.250	.400
M40G473*2-F	.047 uF	.400	.460	.200	.200
M50G473*2-F	.047 uF	.500	.560	.250	.400
M50G563*2-F	.056 uF	.500	.560	.250	.400
M50G683*2-F	.068 uF	.500	.560	.250	.400

*Insert proper letter symbol for tolerance

K = 10%; M = ±20%

100 Vdc

Catalog Part Number	Cap	Sizes (Inches) L	H	T	S
M15G121*1-F	120 pF	.150	.210	.130	.100
M15G151*1-F	150 pF	.150	.210	.130	.100
M15G181*1-F	180 pF	.150	.210	.130	.100
M15G221*1-F	220 pF	.150	.210	.130	.100
M15G271*1-F	270 pF	.150	.210	.130	.100
M15G331*1-F	330 pF	.150	.210	.130	.100
M15G391*1-F	390 pF	.150	.210	.130	.100
M15G471*1-F	470 pF	.150	.210	.130	.100
M15G561*1-F	560 pF	.150	.210	.130	.100
M15G681*1-F	680 pF	.150	.210	.130	.100
M20G681*1-F	680 pF	.200	.260	.150	.100
M22G681*1-F	680 pF	.200	.260	.150	.200
M15G821*1-F	820 pF	.150	.210	.130	.100
M20G821*1-F	820 pF	.200	.260	.150	.100
M22G821*1-F	820 pF	.200	.260	.150	.200
M15G102*1-F	1000 pF	.150	.210	.130	.100
M20G102*1-F	1000 pF	.200	.260	.150	.100
M22G102*1-F	1000 pF	.200	.260	.150	.200
M20G122*1-F	1200 pF	.200	.260	.150	.100
M22G122*1-F	1200 pF	.200	.260	.150	.200
M20G152*1-F	1500 pF	.200	.260	.150	.100
M22G152*1-F	1500 pF	.200	.260	.150	.200
M20G182*1-F	1800 pF	.200	.260	.150	.100
M22G182*1-F	1800 pF	.200	.260	.150	.200
M20G222*1-F	2200 pF	.200	.260	.150	.100
M22G222*1-F	2200 pF	.200	.260	.150	.200
M20G272*1-F	2700 pF	.200	.260	.150	.100
M22G272*1-F	2700 pF	.200	.260	.150	.200
M20G332*1-F	3300 pF	.200	.260	.150	.100
M22G332*1-F	3300 pF	.200	.260	.150	.200
M30G332*1-F	3300 pF	.300	.360	.200	.200
M20G392*1-F	3900 pF	.200	.260	.150	.100
M22G392*1-F	3900 pF	.200	.260	.150	.200
M30G392*1-F	3900 pF	.300	.360	.200	.200
M20G472*1-F	4700 pF	.200	.260	.150	.100
M22G472*1-F	4700 pF	.200	.260	.150	.200
M30G472*1-F	4700 pF	.300	.360	.200	.200
M20G562*1-F	5600 pF	.200	.260	.150	.100
M22G562*1-F	5600 pF	.200	.260	.150	.200
M30G562*1-F	5600 pF	.300	.360	.200	.200
M30G682*1-F	6800 pF	.300	.360	.200	.200
M30G822*1-F	8200 pF	.300	.360	.200	.200
M30G103*1-F	.01 uF	.300	.360	.200	.200
M30G123*1-F	.012 uF	.300	.360	.200	.200
M30G153*1-F	.015 uF	.300	.360	.200	.200
M30G183*1-F	.018 uF	.300	.360	.200	.200
M30G223*1-F	.022 uF	.300	.360	.200	.200
M30G273*1-F	.027 uF	.300	.360	.200	.200
M40G273*1-F	.027 uF	.400	.460	.200	.200
M40G333*1-F	.033 uF	.400	.460	.200	.200
M40G393*1-F	.039 uF	.400	.460	.200	.200
M50G393*1-F	.039 uF	.500	.560	.250	.400
M40G473*1-F	.047 uF	.400	.460	.200	.200
M50G473*1-F	.047 uF	.500	.560	.250	.400
M40G563*1-F	.056 uF	.400	.460	.200	.200
M50G563*1-F	.056 uF	.500	.560	.250	.400
M40G683*1-F	.068 uF	.400	.460	.200	.200
M50G683*1-F	.068 uF	.500	.560	.250	.400
M50G823*1-F	.082 uF	.500	.560	.250	.400
M50G104*1-F	.1 uF	.500	.560	.250	.400
M50G124*1-F	.12 uF	.500	.560	.250	.400

*Insert proper letter symbol for tolerance

K = 10%; M = ±20%

X7R Temperature Coefficient

200 Vdc

Catalog Part Number	Cap	Sizes (Inches) L	H	T	S
M15R101*2-F	100 pF	.150	.210	.130	.100
M15R121*2-F	120 pF	.150	.210	.130	.100
M15R151*2-F	150 pF	.150	.210	.130	.100
M15R181*2-F	180 pF	.150	.210	.130	.100
M15R221*2-F	220 pF	.150	.210	.130	.100
M15R271*2-F	270 pF	.150	.210	.130	.100
M15R331*2-F	330 pF	.150	.210	.130	.100
M15R391*2-F	390 pF	.150	.210	.130	.100
M15R471*2-F	470 pF	.150	.210	.130	.100
M15R561*2-F	560 pF	.150	.210	.130	.100
M15R681*2-F	680 pF	.150	.210	.130	.100
M15R821*2-F	820 pF	.150	.210	.130	.100
M15R102*2-F	1000 pF	.150	.210	.130	.100
M20R102*2-F	1000 pF	.200	.260	.150	.100
M22R102*2-F	1000 pF	.200	.260	.150	.200
M15R122*2-F	1200 pF	.150	.210	.130	.100
M20R122*2-F	1200 pF	.200	.260	.150	.100
M22R122*2-F	1200 pF	.200	.260	.150	.200
M15R152*2-F	1500 pF	.150	.210	.130	.100
M20R152*2-F	1500 pF	.200	.260	.150	.100
M22R152*2-F	1500 pF	.200	.260	.150	.200
M15R182*2-F	1800 pF	.150	.210	.130	.100
M20R182*2-F	1800 pF	.200	.260	.150	.100
M22R182*2-F	1800 pF	.200	.260	.150	.200
M15R222*2-F	2200 pF	.150	.210	.130	.100
M20R222*2-F	2200 pF	.200	.260	.150	.100
M22R222*2-F	2200 pF	.200	.260	.150	.200

Add 'TR' to end of part number for Tape & Reel

M15, M20, M22 - 2,500 per reel

M30 - 1,500 per reel Full reels only on all

M40 - 1,000 per reel; sizes.

M50 - N/A

*Insert proper letter symbol for tolerance

K = 10%; M = ±20%

Ratings

RoHS Compliant

X7R Temperature Coefficient
200 Vdc

Catalog Part Number	Cap	Sizes (Inches) L	H	T	S
M20R272*2-F	2700 pF	.200	.260	.150	.100
M22R272*2-F	2700 pF	.200	.260	.150	.200
M20R332*2-F	3300 pF	.200	.260	.150	.100
M22R332*2-F	3300 pF	.200	.260	.150	.200
M20R392*2-F	3900 pF	.200	.260	.150	.100
M22R392*2-F	3900 pF	.200	.260	.150	.200
M20R472*2-F	4700 pF	.200	.260	.150	.100
M22R472*2-F	4700 pF	.200	.260	.150	.200
M20R562*2-F	5600 pF	.200	.260	.150	.100
M22R562*2-F	5600 pF	.200	.260	.150	.200
M20R682*2-F	6800 pF	.200	.260	.150	.100
M22R682*2-F	6800 pF	.200	.260	.150	.200
M20R822*2-F	8200 pF	.200	.260	.150	.100
M22R822*2-F	8200 pF	.200	.260	.150	.200
M20R103*2-F	.010 uF	.200	.260	.150	.100
M22R103*2-F	.010 uF	.200	.260	.150	.200
M20R123*2-F	.012 uF	.200	.260	.150	.100
M22R123*2-F	.012 uF	.200	.260	.150	.200
M20R153*2-F	.015 uF	.200	.260	.150	.100
M22R153*2-F	.015 uF	.200	.260	.150	.200
M30R153*2-F	.015 uF	.300	.360	.200	.200
M20R183*2-F	.018 uF	.200	.260	.150	.100
M22R183*2-F	.018 uF	.200	.260	.150	.200
M30R183*2-F	.018 uF	.300	.360	.200	.200
M20R223*2-F	.022 uF	.200	.260	.150	.100
M22R223*2-F	.022 uF	.200	.260	.150	.200
M30R223*2-F	.022 uF	.300	.360	.200	.200
M30R273*2-F	.027 uF	.300	.360	.200	.200
M30R333*2-F	.033 uF	.300	.360	.200	.200
M30R393*2-F	.039 uF	.300	.360	.200	.200
M30R473*2-F	.047 uF	.300	.360	.200	.200
M30R563*2-F	.056 uF	.300	.360	.200	.200
M30R683*2-F	.068 uF	.300	.360	.200	.200
M30R823*2-F	.082 uF	.300	.360	.200	.200
M40R823*2-F	.082 uF	.400	.460	.200	.200
M30R104*2-F	.10 uF	.300	.360	.200	.200
M40R104*2-F	.10 uF	.400	.460	.200	.200
M40R124*2-F	.12 uF	.400	.460	.200	.200
M40R154*2-F	.15 uF	.400	.460	.200	.200
M40R184*2-F	.18 uF	.400	.460	.200	.200
M40R224*2-F	.22 uF	.400	.460	.200	.200
M50R224*2-F	.22 uF	.500	.560	.250	.400
M40R274*2-F	.27 uF	.400	.460	.200	.200
M50R274*2-F	.27 uF	.500	.560	.250	.400
M50R334*2-F	.33 uF	.500	.560	.250	.400
M50R394*2-F	.39 uF	.500	.560	.250	.400
M50R474*2-F	.47 uF	.500	.560	.250	.400

*Insert proper letter symbol for tolerance
K = 10%; M = ±20%

100 Vdc X7R

Catalog Part Number	Cap	Sizes (Inches) L	H	T	S
M15R821*1-F	820 pF	.150	.210	.130	.100
M15R102*1-F	1000 pF	.150	.210	.130	.100
M15R122*1-F	1200 pF	.150	.210	.130	.100
M15R152*1-F	1500 pF	.150	.210	.130	.100
M15R182*1-F	1800 pF	.150	.210	.130	.100
M15R222*1-F	2200 pF	.150	.210	.130	.100
M15R272*1-F	2700 pF	.150	.210	.130	.100
M15R332*1-F	3300 pF	.150	.210	.130	.100
M15R392*1-F	3900 pF	.150	.210	.130	.100
M15R472*1-F	4700 pF	.150	.210	.130	.100
M20R472*1-F	4700 pF	.200	.260	.150	.100
M22R472*1-F	4700 pF	.200	.260	.150	.200
M15R562*1-F	5600 pF	.150	.210	.130	.100
M20R562*1-F	5600 pF	.200	.260	.150	.100
M22R562*1-F	5600 pF	.200	.260	.150	.200
M15R682*1-F	6800 pF	.150	.210	.130	.100
M20R682*1-F	6800 pF	.200	.260	.150	.100
M22R682*1-F	6800 pF	.200	.260	.150	.200
M15R822*1-F	8200 pF	.150	.210	.130	.100
M20R822*1-F	8200 pF	.200	.260	.150	.100
M22R822*1-F	8200 pF	.200	.260	.150	.200
M15R103*1-F	.010 uF	.150	.210	.130	.100
M20R103*1-F	.010 uF	.200	.260	.150	.100
M22R103*1-F	.010 uF	.200	.260	.150	.200
M20R123*1-F	.012 uF	.200	.260	.150	.100
M22R123*1-F	.012 uF	.200	.260	.150	.200
M20R153*1-F	.015 uF	.200	.260	.150	.100
M22R153*1-F	.015 uF	.200	.260	.150	.200
M20R183*1-F	.018 uF	.200	.260	.150	.100
M22R183*1-F	.018 uF	.200	.260	.150	.200
M20R223*1-F	.022 uF	.200	.260	.150	.100
M22R223*1-F	.022 uF	.200	.260	.150	.200
M20R273*1-F	.027 uF	.200	.260	.150	.100
M22R273*1-F	.027 uF	.200	.260	.150	.200
M20R333*1-F	.033 uF	.200	.260	.150	.100
M22R333*1-F	.033 uF	.200	.260	.150	.200
M20R393*1-F	.039 uF	.200	.260	.150	.100
M22R393*1-F	.039 uF	.200	.260	.150	.200
M20R473*1-F	.047 uF	.200	.260	.150	.100
M22R473*1-F	.047 uF	.200	.260	.150	.200
M20R563*1-F	.056 uF	.200	.260	.150	.100
M22R563*1-F	.056 uF	.200	.260	.150	.200
M20R683*1-F	.068 uF	.200	.260	.150	.100
M22R683*1-F	.068 uF	.200	.260	.150	.200
M30R683*1-F	.068 uF	.300	.360	.200	.200
M20R823*1-F	.082 uF	.200	.260	.150	.100
M22R823*1-F	.082 uF	.200	.260	.150	.200
M30R823*1-F	.082 uF	.300	.360	.200	.200
M20R104*1-F	.10 uF	.200	.260	.150	.100
M22R104*1-F	.10 uF	.200	.260	.150	.200
M30R104*1-F	.10 uF	.300	.360	.200	.200
M30R124*1-F	.12 uF	.300	.360	.200	.200
M30R154*1-F	.15 uF	.300	.360	.200	.200
M30R184*1-F	.18 uF	.300	.360	.200	.200
M30R224*1-F	.22 uF	.300	.360	.200	.200
M30R274*1-F	.27 uF	.300	.360	.200	.200
M30R334*1-F	.33 uF	.300	.360	.200	.200
M40R334*1-F	.33 uF	.400	.460	.200	.200
M30R394*1-F	.39 uF	.300	.360	.200	.200
M40R394*1-F	.39 uF	.400	.460	.200	.200
M30R474*1-F	.47 uF	.300	.360	.200	.200
M40R474*1-F	.47 uF	.400	.460	.200	.200
M40R564*1-F	.56 uF	.400	.460	.200	.200
M40R684*1-F	.68 uF	.400	.460	.200	.200
M50R684*1-F	.68 uF	.500	.560	.250	.400
M40R824*1-F	.82 uF	.400	.460	.200	.200
M50R824*1-F	.82 uF	.500	.560	.250	.400
M40R105*1-F	1.0 uF	.400	.460	.200	.200
M50R105*1-F	1.0 uF	.500	.560	.250	.400
M50R125*1-F	1.2 uF	.500	.560	.250	.400

*Insert proper letter symbol for tolerance
K = 10%; M = ±20%

50 Vdc X7R

Catalog Part Number	Cap	Sizes (Inches) L	H	T	S
M15R332*5-F	3300 pF	.150	.210	.130	.100
M15R392*5-F	3900 pF	.150	.210	.130	.100
M15R472*5-F	4700 pF	.150	.210	.130	.100
M15R562*5-F	5600 pF	.150	.210	.130	.100
M15R682*5-F	6800 pF	.150	.210	.130	.100
M15R822*5-F	8200 pF	.150	.210	.130	.100
M15R103*5-F	.010 uF	.150	.210	.130	.100
M15R123*5-F	.012 uF	.150	.210	.130	.100
M20R123*5-F	.012 uF	.200	.260	.150	.100
M22R123*5-F	.012 uF	.200	.260	.150	.200
M15R153*5-F	.015 uF	.150	.210	.130	.100
M20R153*5-F	.015 uF	.200	.260	.150	.100

Add 'TR' to end of part number for Tape & Reel
M15, M20, M22 - 2,500 per reel
M30 - 1,500 per reel Full reels only on all sizes
M40 - 1,000 per reel
M50 - N/A

*Insert proper letter symbol for tolerance
K = 10%; M = ±20%

Type M15 to M50 Multilayer Ceramic Capacitors

Ratings

RoHS Compliant

X7R Temperature Coefficient
50 Vdc X7R

Catalog Part Number	Cap	Sizes (Inches) L	H	T	S
M22R153*5-F	.015 uF	.200	.260	.150	.200
M15R183*5-F	.018 uF	.150	.210	.130	.100
M20R183*5-F	.018 uF	.200	.260	.150	.100
M22R183*5-F	.018 uF	.200	.260	.150	.200
M15R223*5-F	.022 uF	.150	.210	.130	.100
M20R223*5-F	.022 uF	.200	.260	.150	.100
M22R223*5-F	.022 uF	.200	.260	.150	.200
M15R273*5-F	.027 uF	.150	.210	.130	.100
M20R273*5-F	.027 uF	.200	.260	.150	.100
M22R273*5-F	.027 uF	.200	.260	.150	.200
M15R333*5-F	.033 uF	.150	.210	.130	.100
M20R333*5-F	.033 uF	.200	.260	.150	.100
M22R333*5-F	.033 uF	.200	.260	.150	.200
M20R393*5-F	.039 uF	.200	.260	.150	.100
M22R393*5-F	.039 uF	.200	.260	.150	.200
M20R473*5-F	.047 uF	.200	.260	.150	.100
M22R473*5-F	.047 uF	.200	.260	.150	.200
M20R563*5-F	.056 uF	.200	.260	.150	.100
M22R563*5-F	.056 uF	.200	.260	.150	.200
M20R683*5-F	.068 uF	.200	.260	.150	.100
M22R683*5-F	.068 uF	.200	.260	.150	.200
M20R823*5-F	.082 uF	.200	.260	.150	.100
M22R823*5-F	.082 uF	.200	.260	.150	.200
M20R104*5-F	.10 uF	.200	.260	.150	.100
M22R104*5-F	.10 uF	.200	.260	.150	.200
M20R124*5-F	.12 uF	.200	.260	.150	.100
M22R124*5-F	.12 uF	.200	.260	.150	.200
M20R154*5-F	.15 uF	.200	.260	.150	.100
M22R154*5-F	.15 uF	.200	.260	.150	.200
M30R154*5-F	.15 uF	.300	.360	.200	.200
M20R184*5-F	.18 uF	.200	.260	.150	.100
M22R184*5-F	.18 uF	.200	.260	.150	.200
M30R184*5-F	.18 uF	.300	.360	.200	.200
M20R224*5-F	.22 uF	.200	.260	.150	.100
M22R224*5-F	.22 uF	.200	.260	.150	.200
M30R224*5-F	.22 uF	.300	.360	.200	.200
M20R274*5-F	.27 uF	.200	.260	.150	.100
M22R274*5-F	.27 uF	.200	.260	.150	.200
M30R274*5-F	.27 uF	.300	.360	.200	.200
M30R334*5-F	.33 uF	.300	.360	.200	.200
M30R394*5-F	.39 uF	.300	.360	.200	.200
M30R474*5-F	.47 uF	.300	.360	.200	.200
M30R564*5-F	.56 uF	.300	.360	.200	.200
M30R684*5-F	.68 uF	.300	.360	.200	.200
M30R824*5-F	.82 uF	.300	.360	.200	.200
M30R105*5-F	1.0 uF	.300	.360	.200	.200
M40R105*5-F	1.0 uF	.400	.460	.200	.200
M40R125*5-F	1.2 uF	.400	.460	.200	.200
M40R155*5-F	1.5 uF	.400	.460	.200	.200
M40R185*5-F	1.8 uF	.400	.460	.200	.200
M40R225*5-F	2.2 uF	.400	.460	.200	.200
M50R225*5-F	2.2 uF	.500	.560	.250	.400
M50R275*5-F	2.7 uF	.500	.560	.250	.400
M50R335*5-F	3.3 uF	.500	.560	.250	.400
M50R395*5-F	3.9 uF	.500	.560	.250	.400

*Insert proper letter symbol for tolerance

K = 10%; M = ±20%

Z5U Temperature Coefficient
100 Vdc

Catalog Part Number	Cap	Sizes (Inches) L	H	T	S
M15U102*1-F	1000 pF	.150	.210	.130	.100
M15U122*1-F	1200 pF	.150	.210	.130	.100
M15U152*1-F	1500 pF	.150	.210	.130	.100
M15U182*1-F	1800 pF	.150	.210	.130	.100
M15U222*1-F	2200 pF	.150	.210	.130	.100
M15U272*1-F	2700 pF	.150	.210	.130	.100
M15U332*1-F	3300 pF	.150	.210	.130	.100
M15U392*1-F	3900 pF	.150	.210	.130	.100
M15U472*1-F	4700 pF	.150	.210	.130	.100
M15U562*1-F	5600 pF	.150	.210	.130	.100
M15U682*1-F	6800 uF	.150	.210	.130	.100
M15U822*1-F	8200 pF	.150	.210	.130	.100
M15U103*1-F	.010 Uf	.150	.210	.130	.100
M20U103*1-F	.010 uF	.200	.260	.150	.100
M22U103*1-F	.010 uF	.200	.260	.150	.200
M15U123*1-F	.012 uF	.150	.210	.130	.100
M20U123*1-F	.012 uF	.200	.260	.150	.100
M22U123*1-F	.012 uF	.200	.260	.150	.200
M15U153*1-F	.015 uF	.150	.210	.130	.100
M20U153*1-F	.015 uF	.200	.260	.150	.100
M22U153*1-F	.015 uF	.200	.260	.150	.200
M15U183*1-F	.018 uF	.150	.210	.130	.100
M20U183*1-F	.018 uF	.200	.260	.150	.100
M22U183*1-F	.018 uF	.200	.260	.150	.200
M20U223*1-F	.022 uF	.200	.260	.150	.100
M22U223*1-F	.022 uF	.200	.260	.150	.200
M20U273*1-F	.027 uF	.200	.260	.150	.100
M22U273*1-F	.027 uF	.200	.260	.150	.200
M20U333*1-F	.033 uF	.200	.260	.150	.100
M22U333*1-F	.033 uF	.200	.260	.150	.200
M20U393*1-F	.039 uF	.200	.260	.150	.100
M22U393*1-F	.039 uF	.200	.260	.150	.200
M20U473*1-F	.047 uF	.200	.260	.150	.100
M22U473*1-F	.047 uF	.200	.260	.150	.200
M20U563*1-F	.056 uF	.200	.260	.150	.100
M22U563*1-F	.056 uF	.200	.260	.150	.200
M20U683*1-F	.068 uF	.200	.260	.150	.100
M22U683*1-F	.068 uF	.200	.260	.150	.200
M20U823*1-F	.082 uF	.200	.260	.150	.100
M22U823*1-F	.082 uF	.200	.260	.150	.200
M20U104*1-F	.10 uF	.200	.260	.150	.100
M22U104*1-F	.10 uF	.200	.260	.150	.200
M30U104*1-F	.10 uF	.300	.360	.200	.200
M20U124*1-F	.12 uF	.200	.260	.150	.100
M22U124*1-F	.12 uF	.200	.260	.150	.200
M30U124*1-F	.12 uF	.300	.360	.200	.200
M20U154*1-F	.15 uF	.200	.260	.150	.100
M22U154*1-F	.15 uF	.200	.260	.150	.200
M30U154*1-F	.15 uF	.300	.360	.200	.200
M30U184*1-F	.18 uF	.300	.360	.200	.200
M30U224*1-F	.22 uF	.300	.360	.200	.200
M30U274*1-F	.27 uF	.300	.360	.200	.200
M30U334*1-F	.33 uF	.300	.360	.200	.200
M40U334*1-F	.33 uF	.400	.460	.200	.200
M30U394*1-F	.39 uF	.300	.360	.200	.200
M40U394*1-F	.39 uF	.400	.460	.200	.200
M30U474*1-F	.47 uF	.300	.360	.200	.200
M40U474*1-F	.47 uF	.400	.460	.200	.200
M40U564*1-F	.56 uF	.400	.460	.200	.200
M40U684*1-F	.68 uF	.400	.460	.200	.200
M40U824*1-F	.82 uF	.400	.460	.200	.200
M40U105*1-F	1.0 uF	.400	.460	.200	.200
M50U105*1-F	1.0 uF	.500	.560	.250	.400
M40U125*1-F	1.2 uF	.400	.460	.200	.200
M50U125*1-F	1.2 uF	.500	.560	.250	.400
M40U155*1-F	1.5 uF	.400	.460	.200	.200
M50U155*1-F	1.5 uF	.500	.560	.250	.400
M50U185*1-F	1.8 uF	.500	.560	.250	.400
M50U225*1-F	2.2 uF	.500	.560	.250	.400

*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 Full reels only on all
M40 - 1,000 per reel; sizes.
M50 - N/A

Ratings

RoHS Compliant

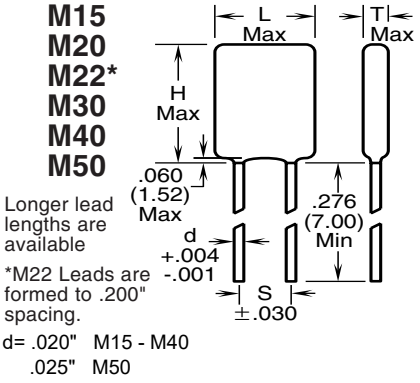
Z5U Temperature Coefficient
50 Vdc

Catalog Part Number	Cap	Sizes (Inches) L	H	T	S
M15U472*5-F	4700 pF	.150	.210	.130	.100
M15U562*5-F	5600 pF	.150	.210	.130	.100
M15U682*5-F	6800 pF	.150	.210	.130	.100
M15U822*5-F	8200 pF	.150	.210	.130	.100
M15U103*5-F	.010 uF	.150	.210	.130	.100
M15U123*5-F	.012 uF	.150	.210	.130	.100
M15U153*5-F	.015 uF	.150	.210	.130	.100
M15U183*5-F	.018 uF	.150	.210	.130	.100
M15U223*5-F	.022 uF	.150	.210	.130	.100
M15U273*5-F	.027 uF	.150	.210	.130	.100
M20U273*5-F	.027 uF	.200	.260	.150	.100
M22U273*5-F	.027 uF	.200	.260	.150	.200
M15U333*5-F	.033 uF	.150	.210	.130	.100
M20U333*5-F	.033 uF	.200	.260	.150	.100
M22U333*5-F	.033 uF	.200	.260	.150	.200
M15U393*5-F	.039 uF	.150	.210	.130	.100
M20U393*5-F	.039 uF	.200	.260	.150	.100
M22U393*5-F	.039 uF	.200	.260	.150	.200
M15U473*5-F	.047 uF	.150	.210	.130	.100
M20U473*5-F	.047 uF	.200	.260	.150	.100
M22U473*5-F	.047 uF	.200	.260	.150	.200
M15U563*5-F	.056 uF	.150	.210	.130	.100
M20U563*5-F	.056 uF	.200	.260	.150	.100
M22U563*5-F	.056 uF	.200	.260	.150	.200
M15U683*5-F	.068 uF	.150	.210	.130	.100
M20U683*5-F	.068 uF	.200	.260	.150	.100
M22U683*5-F	.068 uF	.200	.260	.150	.200
M20U823*5-F	.082 uF	.200	.260	.150	.100
M22U823*5-F	.082 uF	.200	.260	.150	.200
M15U104*5-F	.10 uF	.150	.210	.130	.100
M20U104*5-F	.10 uF	.200	.260	.150	.100
M22U104*5-F	.10 uF	.200	.260	.150	.200
M20U124*5-F	.12 uF	.200	.260	.150	.100
M22U124*5-F	.12 uF	.200	.260	.150	.200
M20U154*5-F	.15 uF	.200	.260	.150	.100
M22U154*5-F	.15 uF	.200	.260	.150	.200
M20U184*5-F	.18 uF	.200	.260	.150	.100
M22U184*5-F	.18 uF	.200	.260	.150	.200
M20U224*5-F	.22 uF	.200	.260	.150	.100
M22U224*5-F	.22 uF	.200	.260	.150	.200
M20U274*5-F	.27 uF	.200	.260	.150	.100
M22U274*5-F	.27 uF	.200	.260	.150	.200
M30U274*5-F	.27 uF	.300	.360	.200	.200
M20U334*5-F	.33 uF	.200	.260	.150	.100
M22U334*5-F	.33 uF	.200	.260	.150	.200
M30U334*5-F	.33 uF	.300	.360	.200	.200
M20U394*5-F	.39 uF	.200	.260	.150	.100
M22U394*5-F	.39 uF	.200	.260	.150	.200
M30U394*5-F	.39 uF	.300	.360	.200	.200
M20U474*5-F	.47 uF	.200	.260	.150	.100
M22U474*5-F	.47 uF	.200	.260	.150	.200
M30U474*5-F	.47 uF	.300	.360	.200	.200
M20U564*5-F	.56 uF	.200	.260	.150	.100
M22U564*5-F	.56 uF	.200	.260	.150	.200
M30U564*5-F	.56 uF	.300	.360	.200	.200
M30U684*5-F	.68 uF	.300	.360	.200	.200
M30U824*5-F	.82 uF	.300	.360	.200	.200
M30U105*5-F	1.0 uF	.300	.360	.200	.200
M30U125*5-F	1.2 uF	.300	.360	.200	.200
M40U125*5-F	1.2 uF	.400	.460	.200	.200
M30U155*5-F	1.5 uF	.300	.360	.200	.200
M40U155*5-F	1.5 uF	.400	.460	.200	.200
M30U185*5-F	1.8 uF	.300	.360	.200	.200
M40U185*5-F	1.8 uF	.400	.460	.200	.200
M40U225*5-F	2.2 uF	.400	.460	.200	.200
M40U275*5-F	2.7 uF	.400	.460	.200	.200
M40U335*5-F	3.3 uF	.400	.460	.200	.200
M40U395*5-F	3.9 uF	.400	.460	.200	.200
M50U395*5-F	3.9 uF	.500	.560	.250	.400
M40U475*5-F	4.7 uF	.400	.460	.200	.200
M50U475*5-F	4.7 uF	.500	.560	.250	.400
M50U565*5-F	5.6 uF	.500	.560	.250	.400
M50U685*5-F	6.8 uF	.500	.560	.250	.400

Add 'TR' to end of part number for Tape & Reel
M15, M20, M22 - 2,500 per reel
M30 - 1,500 per reel Full reels only on all
M40 - 1,000 per reel; sizes.
M50 - N/A

*Insert proper letter symbol for tolerance
K = 10%; M = ±20%

Outline Drawing



M30 Z5U 100 V 104 - 334 leads are formed to .200”
M30 X7R 50 V 154-105 leads are formed to .200”

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