

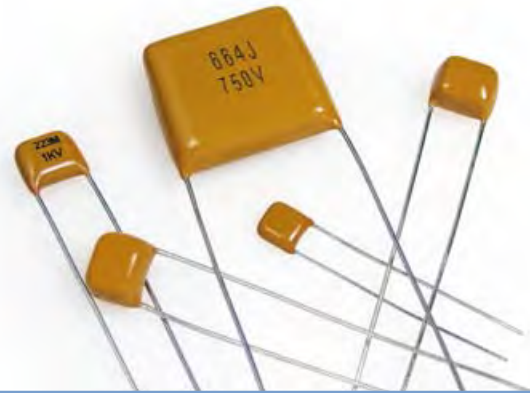
Commercial Radial Lead 50V to 5kV

RoHS compliant interconnects, small case size, Radial Leaded Capacitors available in COG, X7R and X8R dielectrics. The conformal coating and lead mounting style provide a rugged configuration for optimum performance. Units exhibit high capacitance efficiency per KV rating and find application in commercial/industrial use up to 5kV, such as power supplies and voltage multiplier circuits. They are offered in bulk pack or taped form, Ref EIA-RS468, making them suitable for automatic insertion.

For dielectric characteristics see pages 4 & 6.

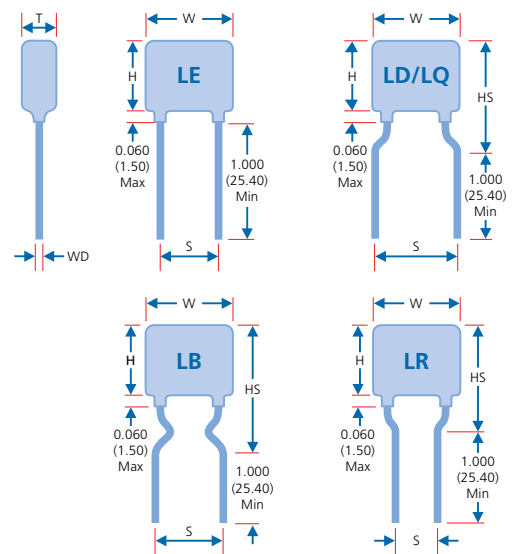
For capacitance tolerances available see page 26.

For ordering information see page 26.



Dimensions - inches/mm

Lead Style	LE	LD	LR	LD	LQ	LD	LE	LB
Size	0805	0805	1206	1206	1206	1210	1812	2225
Wmax inches: mm:	0.150 3.81	0.150 3.81	0.200 5.08	0.200 5.08	0.200 5.08	0.200 5.08	0.300 7.62	0.350 8.89
Hmax inches: mm:	0.150 3.81	0.150 3.81	0.150 3.81	0.150 3.81	0.150 3.81	0.200 5.08	0.250 6.35	0.350 8.89
Tmax inches: mm:	0.100 2.54	0.100 2.54	0.125 3.18	0.125 3.18	0.125 3.18	0.175 4.45	0.200 5.08	0.200 5.08
HSmax inches: mm:	0.200 5.08	0.250 6.35	0.250 6.35	0.250 6.35	0.250 6.35	0.300 7.62	0.350 8.89	0.500 12.70
S inches ±0.02: mm ±0.51:	0.100 2.54	0.200 5.08	0.100 2.54	0.200 5.08	0.250 6.35	0.200 5.08	0.200 5.08	0.200 5.08
WD inches ±0.02: mm ±0.51:	0.020 0.51	0.020 0.51	0.020 0.51	0.020 0.51	0.020 0.51	0.020 0.51	0.025 0.64	0.025 0.64

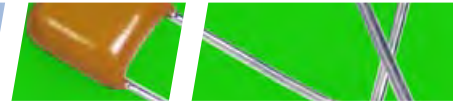


Capacitance and Voltage Selection

Size	0805			1206			1210			1812			2225		
Min cap.	100	121	121	100	121	221	100	121	331	101	151	221	101	471	102
	COG	X7R	X8R	COG	X7R	X8R	COG	X7R	X8R	COG	X7R	X8R	COG	X7R	X8R
50V	392	104	473	123	274	154	223	474	274	393	125	564	124	185	125
100V	392	683	333	103	184	104	183	334	184	273	824	394	823	155	105
250V	152	273	183	392	683	333	822	124	823	223	394	154	473	824	564
500V	821	123	562	182	223	153	472	563	393	123	154	563	273	334	154
1kV	471	272	•	102	682	•	222	153	•	822	473	•	153	104	•
2kV	•	•	•	391	102	•	821	222	•	272	682	•	392	153	•
3kV	•	•	•	•	•	•	•	•	•	122	272	•	182	562	•
4kV	•	•	•	•	•	•	•	•	•	821	122	•	102	152	•
5kV	•	•	•	•	•	•	•	•	•	•	•	•	561	102	•

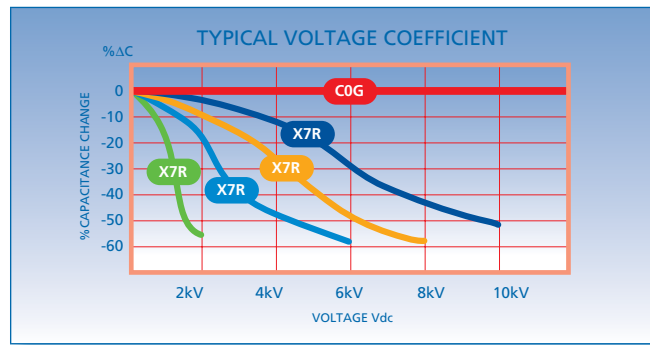
Note: Maximum capacitance values are shown above as 3 digit code: 2 significant figures followed by the no. of zeros e.g. 183 = 18,000pF. R denotes decimal e.g. 2R7 = 2.7pF.

Commercial Radial Lead 500V to 10kV



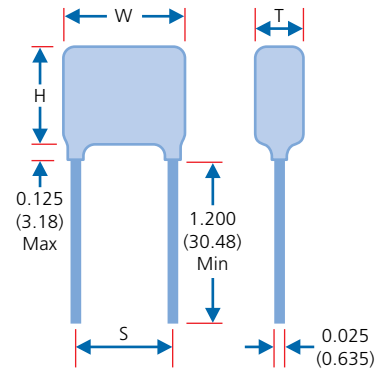
RoHS or Non RoHS Radial Ledged Capacitors available in COG and X7R dielectrics with high voltage ratings from 500V. The conformal coating and lead mounting style provide a rugged configuration for optimum performance. Units exhibit high capacitance efficiency per KV rating and find application in commercial/industrial use up to 10kV, such as power supplies and voltage multiplier circuits. They are also offered without the conformal coating for less harsh environmental applications.

- For dielectric characteristics see pages 4 & 6.
- For capacitance tolerances available see page 26.
- For ordering information see page 26.



Dimensions - inches/mm

Lead Style	LE with conformal coating - LO without							
	Size	1515	2520	3530	4540	5550	6560	7565
Wmax	inches: mm:	0.250 6.35	0.400 10.20	0.500 12.70	0.600 15.20	0.700 17.80	0.800 20.30	0.900 22.80
Hmax	inches: mm:	0.250 6.35	0.350 8.89	0.450 11.40	0.550 14.00	0.650 16.50	0.750 19.00	0.850 21.60
Tmax	inches: mm:	0.200 5.08	0.250 6.35	0.350 8.89	0.400 10.20	0.400 10.20	0.400 10.20	0.400 10.20
S	inches ±0.02: mm ±0.51:	0.170 4.32	0.280 7.10	0.380 9.65	0.480 12.20	0.580 14.70	0.680 17.30	0.780 19.80



Capacitance and Voltage Selection

Size	1515		2520		3530		4540		5550		6560		7565	
Min cap.	100	151	390	102	390	102	390	102	390	102	560	222	101	222
	COG	X7R	COG	X7R	COG	X7R	COG	X7R	COG	X7R	COG	X7R	COG	X7R
500V	822	154	393	684	683	105	124	185	184	225	274	335	334	475
600V	682	124	223	394	393	684	823	155	154	225	224	275	274	395
800V	682	823	183	274	333	394	683	824	124	155	184	225	224	275
1kV	562	563	123	184	273	334	563	684	104	105	154	155	184	225
2kV	272	822	562	273	153	683	333	184	473	274	683	394	104	474
3kV	122	332	272	123	103	273	223	683	333	124	473	184	563	224
4kV	681	122	152	472	562	153	123	333	183	473	273	823	393	104
5kV	•	•	102	272	332	103	822	183	123	333	183	473	223	563
6kV	•	•	•	•	182	562	392	123	562	223	103	333	123	393
7kV	•	•	•	•	122	472	272	822	472	153	682	223	822	273
8kV	•	•	•	•	102	332	222	682	332	123	562	153	682	223
9kV	•	•	•	•	•	272	182	472	272	103	392	123	472	183
10kV	•	•	•	•	•	182	152	392	222	682	332	103	392	123

Note: Maximum capacitance values are shown above as 3 digit code: 2 significant figures followed by the no. of zeros: e.g. 183 = 18,000pF.

Radial Ordering Information

How to Order - Radial Lead - Commercial & High Rel

0805	B	123	K	501	LE	H	A	R
SIZE See charts	DIELECTRIC N = COG B = X7R RN = COG RoHS 2013 ≤ 200V RB = X7R RoHS 2013 ≤ 200V S = X8R not RoHS compliant	CAPACITANCE Value in Picofarads. Two significant figures, followed by number of zeros: 123 = 12,000pF	TOLERANCE F = ±1%* G = ±2%* J = ± 5% K = ± 10% M = ± 20% *COG parts only	VOLTAGE-VDCW Two significant figures, followed by number of zeros: 501 = 500V	LEAD STYLES LE, LB, LD, LR, LQ* = Yellow conformal coated LO = without any coating * Product & Case size dependant	HIGH RELIABILITY Specify testing - see page 27	PACKING No suffix = Bulk A = Ammo pack 2K/pack T = Tape & Reel 4K/Reel	RoHS R = RoHS Compliant

How to Order - Radial Lead - High Temperature

2520	E	563	K	501	LG	H	W	R
SIZE See charts	DIELECTRIC D = 200°C COG E = 200°C Class II	CAPACITANCE Value in Picofarads. Two significant figures, followed by number of zeros: 563 = 56,000pF	TOLERANCE F = ±1%* G = ±2%* J = ± 5% K = ± 10% M = ± 20% *COG parts only	VOLTAGE-VDCW Two significant figures, followed by number of zeros: 501 = 500V	LEAD STYLES LC = Encapsulated LG = Black Epoxy Coated LO = without any coating	HIGH TEMP SCREENING Novacap High Temperature screening procedure	PACKING No suffix = Bulk W = Waffle pack	RoHS R = RoHS Compliant Only available on ≥250V

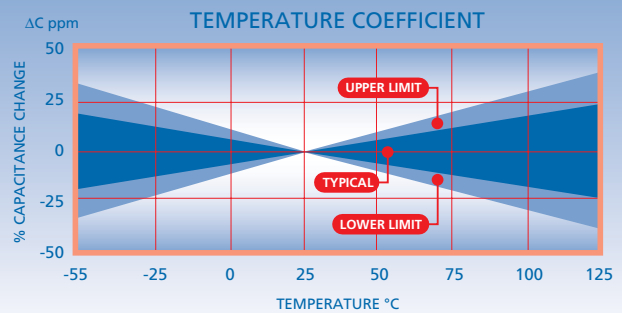




Dielectric Characteristics

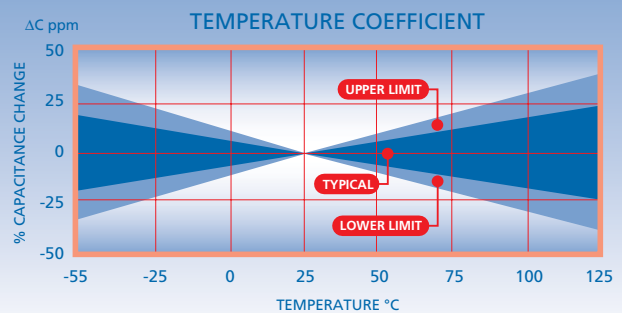
COG/NP0 (N) Ultra Stable and RoHS 2013 (RN) type

Operating temperature range:	-55°C to 125°C
Temperature coefficient:	0 ±30 ppm/°C
Dissipation factor:	0.1% max @ 25°C
Insulation resistance	@25°C: >100GΩ or >1000ΩF whichever is less @125°C: >10GΩ or >100ΩF whichever is less
Dielectric withstanding voltage	<200V: 250% 201-500V: 150% or 500V whichever is greater >500V: 120% or 750V whichever is greater
Ageing rate:	0% per decade
Test parameters:	1KHz, 1.0 ±0.2 VRMS, 25°C 1MHz for Capacitance ≤100pF



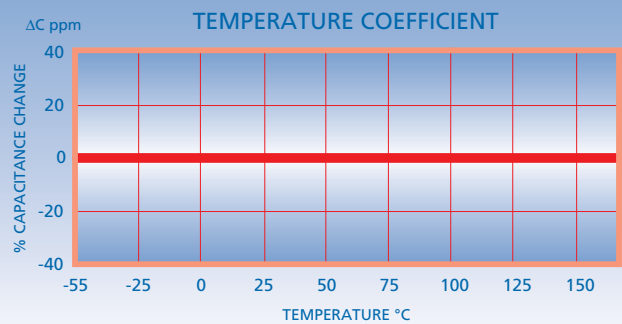
COG/NP0 (M) Ultra Stable Non Magnetic

Operating temperature range:	-55°C to 125°C
Temperature coefficient:	0 ±30 ppm/°C
Dissipation factor:	0.1% max @ 25°C
Insulation resistance	@25°C: >1000ΩF or >10000ΩF whichever is less @125°C: >100ΩF or >1000ΩF whichever is less
Dielectric withstanding voltage	<200V: 250% 201-500V: 150% or 500V whichever is greater >500V: 120% or 750V whichever is greater
Ageing rate:	0% per decade
Test parameters:	1KHz, 1.0 ±0.2 VRMS, 25°C 1MHz for Capacitance ≤100pF



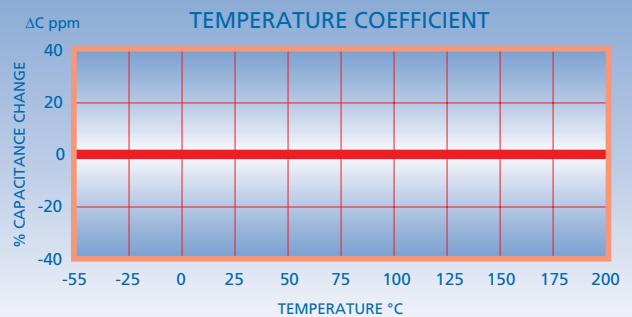
COG/NP0 (F) Ultra Stable High Temperature (up to 160°C)

Operating temperature range:	-55°C to 160°C
Temperature coefficient:	0 ±30 ppm/°C
Dissipation factor:	0.1% max @ 25°C
Insulation resistance	@25°C: >100GΩ or >1000ΩF whichever is less @160°C: >1GΩ or >10ΩF whichever is less
Dielectric withstanding voltage	<200V: 250% 201-500V: 150% or 500V whichever is greater >500V: 120% or 750V whichever is greater
Ageing rate:	0% per decade
Test parameters:	1KHz, 1.0 ±0.2 VRMS, 25°C 1MHz for Capacitance ≤100pF



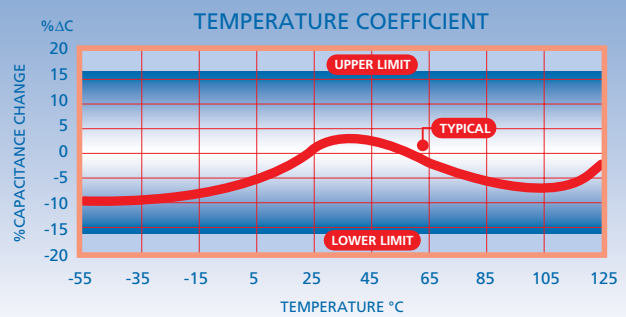
COG/NP0 (D) Ultra Stable High Temperature (up to 200°C)

Operating temperature range:	-55°C to 200°C
Temp. coefficient ≤200°C:	0 ±30 ppm/°C
Dissipation factor @ 25°C:	0.1% Max.
Insulation resistance	@25°C: >100GΩ or >1000ΩF whichever is less @200°C: >1GΩ or >10ΩF whichever is less
Dielectric withstanding voltage	<200V: 250% 201-500V: 150% or 500V whichever is greater >500V: 120% or 750V whichever is greater
Ageing rate:	0% per decade
Test parameters:	1KHz, 1.0 ±0.2 VRMS, 25°C 1MHz for capacitance ≤100pF



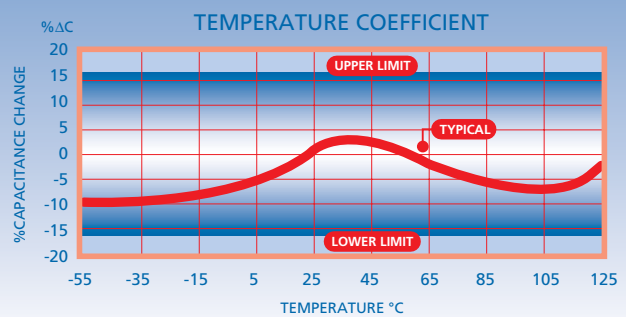
X7R (B) Stable and RoHS 2013 (RB) type

Operating temperature range:	-55°C to 125°C
Temperature coefficient :	±15% ΔC Max.
Dissipation factor	>25V rating: 2.5% max ≤25V rating: 3.5% max
Insulation resistance:	@25°C: >100GΩ or >1000ΩF whichever is less @125°C: >10GΩ or >100ΩF whichever is less
Dielectric withstanding voltage	≤200V: 250% 201-500V: 150% or 500V whichever is greater >500V: 120% or 750V whichever is greater
Ageing rate:	<2.0% per decade
Test parameters:	1KHz, 1.0 ±0.2 VRMS, 25°C



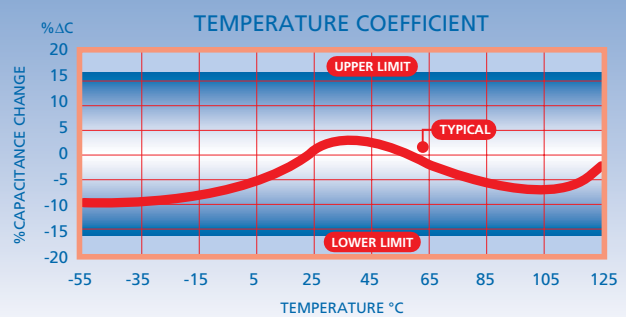
X7R (C) Stable Non Magnetic

Operating temperature range:	-55°C to 125°C
Temperature coefficient:	±15% ΔC Max.
Dissipation factor	>25V rating: 2.5% max ≤25V rating: 3.5% max
Insulation resistance:	@25°C: >100GΩ or >1000ΩF whichever is less @125°C: >10GΩ or >100ΩF whichever is less
Dielectric withstanding voltage	≤200V: 250% 201-500V: 150% or 500V whichever is greater >500V: 120% or 750V whichever is greater
Ageing rate:	<2.0% per decade
Test parameters:	1KHz, 1.0 ±0.2 VRMS, 25°C



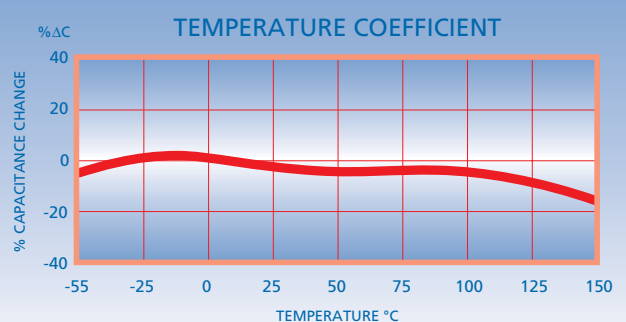
BX (X) Stable

Operating temperature range:	-55°C to 125°C
Temperature coefficient:	±15% ΔC Max.
Temp-voltage coefficient:	+15% -25% ΔC Max.
Dissipation factor	>25V rating: 2.5% max ≤25V rating: 3.5% max
Insulation resistance:	@25°C: >100GΩ or >1000ΩF whichever is less @125°C: >10GΩ or >100ΩF whichever is less
Dielectric withstanding voltage	≤200V: 250% 201-500V: 150% or 500V whichever is greater >500V: 120% or 750V whichever is greater
Ageing rate:	<2.0% per decade
Test parameters:	1KHz, 1.0 ±0.2 VRMS, 25°C



X8R (S) Stable

Operating temperature range:	-55°C to 150°C
Temp. coefficient ≤150°C:	±15% ΔC Max.
Dissipation factor	>25V rating: 2.5% max ≤25V rating: 3.5% max
Insulation resistance	@25°C: >100GΩ or >1000ΩF whichever is less @150°C: >10GΩ or >100ΩF whichever is less
Dielectric withstanding voltage	≤200V: 250% 201-500V: 150% or 500V whichever is greater >500V: 120% or 750V whichever is greater
Ageing rate:	<2.0% per decade
Test parameters:	1KHz, 1.0 ±0.2 VRMS, 25°C



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