

Metalized Polyester Film Capacitors Wrap-and-Fill



FEATURES

- Economical
- Extensive standard ratings
- Rugged construction
- Small size

PERFORMANCE CHARACTERISTICS

Operating Temperature: - 55°C to + 85°C.

Capacitance Range: 0.0047μF to 10.0μF.

Capacitance Tolerance: ± 20%, ± 10%, ± 5%.

Voltage Rating: 50 WVDC to 600 WVDC.

Dissipation Factor: 1.0% maximum.

Voltage Test: 200% of rated voltage for 2 minutes.

Insulation Resistance:

At + 25°C: 25,000 Megohm - Microfarads or 50,000 Megohm minimum.

At + 85°C: 1000 Megohm - Microfarads or 2500 Megohm minimum.

Vibration Test (Condition B): No mechanical damage, short, open or intermittent circuits.

Life Validation Test: 125% of rated voltage for 250 hours @ + 85°C. No visible damage. No open or short circuits. Maximum CAP change = ± 10%. Minimum IR = 50% of initial limit. Maximum DF = 1.25%.

Humidity Test: 95% relative humidity at + 40°C for 250 hours. No visible damage. Maximum CAP change = ± 10%. Minimum IR = 20% of initial limit. Maximum DF = 2.0%.

PHYSICAL CHARACTERISTICS

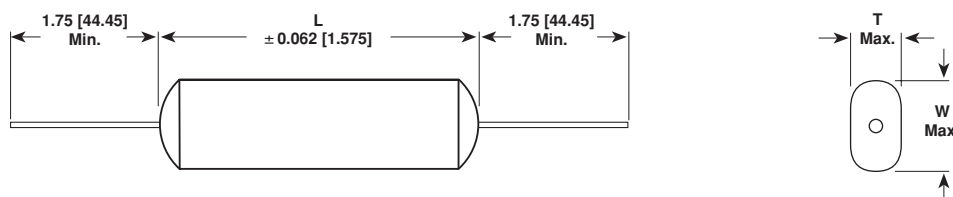
Lead Material: Leads are bare, solid tinned copper wire.

Lead Pull: 5 pounds (2.3 kilograms) for 1 minute. No physical damage.

Lead Bend: After three complete consecutive bends, no damage.

Marking: Sprague® trademark, type or part number, capacitance and voltage.

DIMENSIONS in inches [millimeters]



STANDARD RATINGS* in inches [millimeters]

CAPACITANCE (μF)	PART NUMBER*	CASE SIZE			LEAD AWG NO.
		T (Max.)	W (Max.)	L ± .062 [1.575]	
50 WVDC					
0.33	431P334X9050	0.210 [5.334]	0.317 [8.052]	0.625 [15.875]	22
0.39	431P394X9050	0.182 [4.623]	0.290 [7.366]	0.750 [19.050]	22
0.47	431P474X9050	0.191 [4.851]	0.323 [8.204]	0.750 [19.050]	22
0.56	431P564X9050	0.209 [5.309]	0.340 [8.636]	0.750 [19.050]	22
0.68	431P684X9050	0.231 [5.867]	0.363 [9.220]	0.750 [19.050]	22
0.82	431P824X9050	0.192 [4.877]	0.323 [8.204]	1.0 [25.400]	22
1.00	431P105X9050	0.212 [5.385]	0.344 [8.738]	1.0 [25.400]	22
1.50	431P155X9050	0.252 [6.401]	0.406 [10.312]	1.0 [25.400]	20

* Part Numbers listed are for a capacitance tolerance of ± 10%. To specify another capacitance tolerance, change X9 to X5 for ± 5% or X0 for ± 20%.



STANDARD RATINGS* in inches [millimeters]					
CAPACITANCE (μ F)	PART NUMBER*	CASE SIZE			LEAD AWG NO.
		T (Max.)	W (Max.)	L \pm .062 [1.575]	
50 WVDC					
2.00	431P205X9050**	0.274 [6.960]	0.480 [12.192]	1.0 [25.400]	20
2.50	431P255X9050	0.311 [7.899]	0.517 [13.132]	1.0 [25.400]	20
3.00	431P305X9050	0.283 [7.188]	0.488 [12.395]	1.250 [31.750]	20
4.00	431P405X9050	0.307 [7.798]	0.513 [13.030]	1.250 [31.750]	20
5.00	431P505X9050	0.349 [8.865]	0.554 [14.072]	1.500 [38.100]	20
6.00	431P605X9050	0.365 [9.271]	0.620 [15.748]	1.500 [38.100]	20
7.00	431P705X9050	0.400 [10.160]	0.654 [16.612]	1.500 [38.100]	20
10.00	431P106X9050**	0.492 [12.497]	0.747 [18.974]	1.500 [38.100]	20
12.00	431P126X9050	0.496 [12.598]	0.740 [18.796]	1.750 [44.450]	20
15.00	431P156X9050	0.507 [12.878]	0.860 [21.844]	1.750 [44.450]	20
100 WVDC					
0.18	431P184X9100	0.181 [4.597]	0.289 [7.341]	0.625 [15.875]	22
0.22	431P224X9100	0.200 [5.080]	0.307 [7.798]	0.625 [15.875]	22
0.27	431P274X9100	0.177 [4.496]	0.265 [6.731]	0.750 [19.050]	22
0.33	431P334X9100**	0.196 [4.978]	0.303 [7.696]	0.750 [19.050]	22
0.39	431P394X9100	0.203 [5.156]	0.335 [8.509]	0.750 [19.050]	22
0.47	431P474X9100	0.178 [4.521]	0.285 [7.239]	1.0 [25.400]	22
0.56	431P564X9100	0.185 [4.699]	0.317 [8.052]	1.0 [25.400]	22
0.68	431P684X9100	0.204 [5.182]	0.336 [8.534]	1.0 [25.400]	22
0.82	431P824X9100	0.188 [4.775]	0.319 [8.103]	1.250 [31.750]	22
1.00	431P105X9100**	0.208 [5.283]	0.339 [8.611]	1.250 [31.750]	22
1.50	431P155X9100	0.246 [6.248]	0.403 [10.236]	1.250 [31.750]	20
2.00	431P205X9100	0.288 [7.315]	0.444 [11.278]	1.250 [31.750]	20
2.50	431P255X9100	0.304 [7.722]	0.509 [12.929]	1.250 [31.750]	20
3.00	431P305X9100	0.337 [8.560]	0.542 [13.767]	1.250 [31.750]	20
4.00	431P405X9100	0.345 [8.763]	0.600 [15.240]	1.500 [38.100]	20
5.00	431P505X9100	0.393 [9.982]	0.648 [16.459]	1.500 [38.100]	20
6.00	431P605X9100	0.437 [11.100]	0.692 [17.577]	1.500 [38.100]	20
7.00	431P705X9100	0.479 [12.167]	0.733 [18.618]	1.500 [38.100]	20
10.00	431P106X9100	0.478 [12.141]	0.831 [21.107]	1.750 [44.450]	20
12.00	431P126X9100	0.483 [12.268]	0.738 [18.745]	2.250 [57.150]	20
15.00	431P156X9100	0.505 [12.827]	0.857 [21.768]	2.250 [57.150]	20
200 WVDC					
0.10	431P104X9200**	0.191 [4.851]	0.298 [7.569]	0.625 [15.875]	22
0.12	431P124X9200	0.199 [5.055]	0.331 [8.407]	0.625 [15.875]	22
0.15	431P154X9200	0.186 [4.724]	0.293 [7.442]	0.750 [19.050]	22
0.18	431P184X9200	0.194 [4.928]	0.326 [8.280]	0.750 [19.050]	22
0.22	431P224X9200**	0.215 [5.461]	0.347 [8.814]	0.750 [19.050]	22
0.27	431P274X9200	0.190 [4.826]	0.297 [7.544]	1.0 [25.400]	22
0.33	431P334X9200	0.200 [5.080]	0.332 [8.433]	1.0 [25.400]	22
0.39	431P394X9200	0.218 [5.537]	0.350 [8.890]	1.0 [25.400]	22
0.47	431P474X9200**	0.231 [5.867]	0.387 [9.830]	1.0 [25.400]	22
0.56	431P564X9200	0.254 [6.452]	0.410 [10.414]	1.0 [25.400]	20
0.68	431P684X9200**	0.282 [7.163]	0.438 [11.125]	1.0 [25.400]	20
0.82	431P824X9200	0.258 [6.553]	0.414 [10.516]	1.250 [31.750]	20
1.00	431P105X9200**	0.287 [7.290]	0.443 [11.252]	1.250 [31.750]	20
1.50	431P155X9200	0.336 [8.534]	0.541 [13.741]	1.250 [31.750]	20
2.00	431P205X9200**	0.341 [8.661]	0.547 [13.894]	1.500 [38.100]	20
2.50	431P255X9200	0.366 [9.296]	0.628 [15.951]	1.500 [38.100]	20
3.00	431P305X9200	0.407 [10.338]	0.662 [16.815]	1.500 [38.100]	20
4.00	431P405X9200**	0.427 [10.846]	0.682 [17.323]	1.750 [44.450]	20
5.00	431P505X9200	0.486 [12.344]	0.741 [18.821]	1.750 [44.450]	20
6.00	431P605X9200	0.496 [12.598]	0.848 [21.539]	1.750 [44.450]	20
7.00	431P705X9200	0.544 [13.818]	0.897 [22.784]	1.750 [44.450]	20
10.00	431P106X9200	0.558 [14.173]	0.910 [23.114]	2.250 [57.150]	20
12.00	431P126X9200	0.622 [15.799]	0.975 [24.765]	2.250 [57.150]	20

* Part Numbers listed are for a capacitance tolerance of \pm 10%. To specify another capacitance tolerance, change X9 to X5 for \pm 5% or X0 for \pm 20%.

** Inventoried.



STANDARD RATINGS in inches [millimeters]						
CAPACITANCE (μ F)	PART NUMBER*	CASE SIZE			LEAD AWG NO.	
		T (Max.)	W (Max.)	L \pm .062 [1.575]		
400 WVDC						
0.033	431P333X9400	0.173 [4.394]	0.280 [7.112]	0.625 [15.875]	22	
0.039	431P393X9400	0.188 [4.775]	0.295 [7.493]	0.625 [15.875]	22	
0.047	431P473X9400	0.206 [5.232]	0.313 [7.950]	0.625 [15.875]	22	
0.056	431P563X9400	0.180 [4.572]	0.287 [7.290]	0.750 [19.050]	22	
0.068	431P683X9400	0.198 [5.029]	0.305 [7.747]	0.750 [19.050]	22	
0.082	431P823X9400	0.207 [5.258]	0.339 [8.611]	0.750 [19.050]	22	
0.10	431P104X9400**	0.230 [5.842]	0.362 [9.195]	0.750 [19.050]	22	
0.12	431P124X9400	0.191 [4.851]	0.322 [8.179]	1.0 [25.400]	22	
0.15	431P154X9400	0.214 [5.436]	0.345 [8.763]	1.0 [25.400]	22	
0.18	431P184X9400	0.235 [5.969]	0.367 [9.322]	1.0 [25.400]	22	
0.22	431P224X9400	0.251 [6.375]	0.407 [10.338]	1.0 [25.400]	20	
0.27	431P274X9400	0.232 [5.893]	0.388 [9.855]	1.250 [31.750]	22	
0.33	431P334X9400	0.258 [6.553]	0.415 [10.541]	1.250 [31.750]	20	
0.39	431P394X9400	0.246 [6.248]	0.402 [10.211]	1.500 [38.100]	20	
0.47	431P474X9400	0.272 [6.909]	0.428 [10.871]	1.500 [38.100]	20	
0.56	431P564X9400	0.299 [7.595]	0.455 [11.557]	1.500 [38.100]	20	
0.68	431P684X9400	0.297 [7.544]	0.453 [11.506]	1.750 [44.450]	20	
0.82	431P824X9400	0.307 [7.798]	0.513 [13.030]	1.750 [44.450]	20	
1.00	431P105X9400	0.344 [8.738]	0.550 [13.970]	1.750 [44.450]	20	
1.50	431P155X9400	0.411 [10.439]	0.665 [16.891]	1.750 [44.450]	20	
2.00	431P205X9400	0.486 [12.344]	0.740 [18.796]	1.750 [44.450]	20	
2.50	431P255X9400	0.507 [12.878]	0.860 [21.844]	1.750 [44.450]	20	
3.00	431P305X9400	0.467 [11.862]	0.820 [20.828]	2.250 [57.150]	20	
4.00	431P405X9400	0.557 [14.148]	0.910 [23.114]	2.250 [57.150]	20	
600 WVDC						
0.010	431P103X9600	0.171 [4.343]	0.278 [7.061]	0.625 [15.875]	22	
0.012	431P123X9600	0.187 [4.750]	0.294 [7.468]	0.625 [15.875]	22	
0.015	431P153X9600	0.199 [5.055]	0.331 [8.407]	0.625 [15.875]	22	
0.018	431P183X9600	0.171 [4.343]	0.278 [7.061]	0.750 [19.050]	22	
0.022	431P223X9600	0.189 [4.801]	0.296 [7.518]	0.750 [19.050]	22	
0.027	431P273X9600	0.199 [5.055]	0.331 [8.407]	0.750 [19.050]	22	
0.033	431P333X9600	0.221 [5.613]	0.353 [8.966]	0.750 [19.050]	22	
0.039	431P393X9600	0.263 [6.680]	0.290 [7.366]	1.0 [25.400]	20	
0.047	431P473X9600	0.191 [4.851]	0.323 [8.204]	1.0 [25.400]	22	
0.056	431P563X9600	0.209 [5.309]	0.341 [8.661]	1.0 [25.400]	22	
0.068	431P683X9600	0.231 [5.867]	0.363 [9.220]	1.0 [25.400]	22	
0.082	431P823X9600	0.245 [6.223]	0.401 [10.185]	1.0 [25.400]	20	
0.10	431P104X9600**	0.272 [6.909]	0.429 [10.897]	1.0 [25.400]	20	
0.12	431P124X9600	0.244 [6.198]	0.400 [10.160]	1.250 [31.750]	20	
0.15	431P154X9600	0.275 [6.985]	0.432 [10.973]	1.250 [31.750]	20	
0.18	431P184X9600	0.262 [6.655]	0.418 [10.617]	1.500 [38.100]	20	
0.22	431P224X9600**	0.292 [7.417]	0.448 [11.379]	1.500 [38.100]	20	
0.27	431P274X9600	0.305 [7.747]	0.510 [12.954]	1.500 [38.100]	20	
0.33	431P334X9600	0.302 [7.671]	0.507 [12.878]	1.750 [44.450]	20	
0.39	431P394X9600	0.332 [8.433]	0.537 [13.640]	1.750 [44.450]	20	
0.47	431P474X9600**	0.348 [8.839]	0.603 [15.316]	1.750 [44.450]	20	
0.56	431P564X9600	0.386 [9.804]	0.640 [16.256]	1.750 [44.450]	20	
0.68	431P684X9600	0.432 [10.973]	0.687 [17.450]	1.750 [44.450]	20	
0.82	431P824X9600	0.434 [11.024]	0.689 [17.501]	2.0 [50.080]	20	
1.00	431P105X9600	0.488 [12.395]	0.742 [18.847]	2.0 [50.080]	20	

* Part Numbers listed are for a capacitance tolerance of \pm 10%. To specify another capacitance tolerance, change X9 to X5 for \pm 5% or X0 for \pm 20%.

** Inventoried.

ORDERING INFORMATION			
431P TYPE	124 CAPACITANCE	X9 CAPACITANCE TOLERANCE	050 DC VOLTAGE RATING
	This is expressed in picofarads. The first two digits are the significant figures. The third is the number of zeros to follow. Values must conform to the decade rating for the tolerance specified.	X0 = \pm 20% X9 = \pm 10% X5 = \pm 5%	This is expressed in volts.



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