

Type 940C through 943C Power Film Capacitors

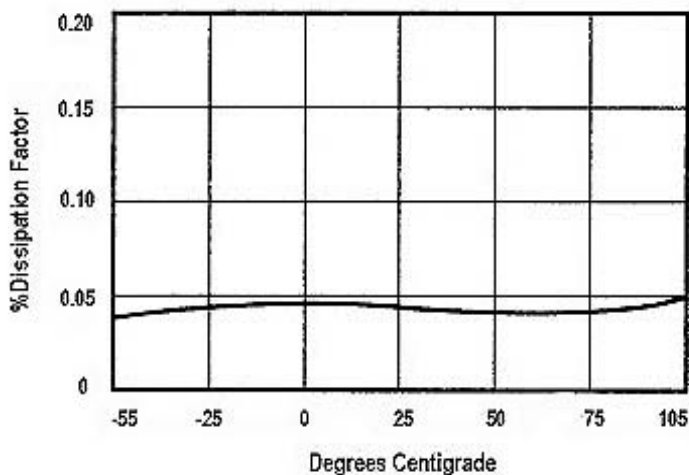
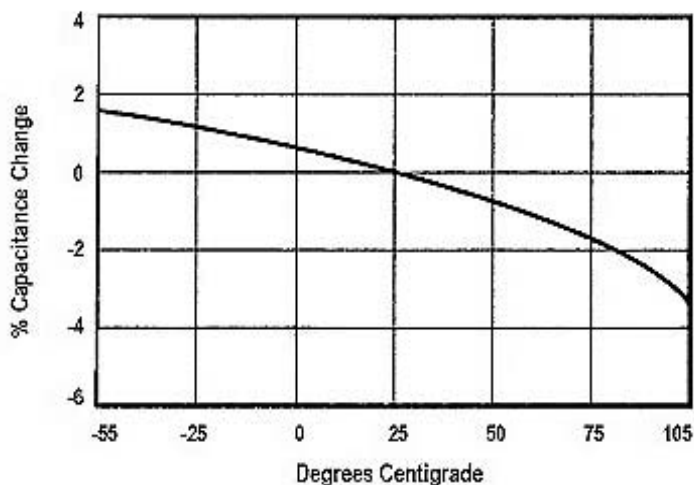
Electrical Characteristics

Operating Temperature	-55°C to +105°C * * Full rated voltage at 85°C-Derate linearly to 50% rated voltage at 105°C
Capacitance Tolerance	±10% standard tolerance
Dissipation Factor	<0.1% at 1 kHz, 25°C
Dielectric Withstand	1.6 x rated voltage for 60 seconds
Insulation Resistance	>100,000 megohms x μ F at 100 Vdc measured after 2 minutes
Equivalent Series Resistance (ESR)	See data tables for values
Equivalent Series Inductance (ESL)	See data tables for values
dV/dt	See data tables for values
Rated Current, I _{pk} , I _{rms} Maximum allowable current in Amperes at 70°C	See data tables for values
Capacitance Temperature Coefficient	-200 ppm/°C ±100 ppm
Service Life	30,000 hours @ rated Vac, 70°C 60,000 hours @ rated Vdc, 70°C

ACCELERATED TESTS

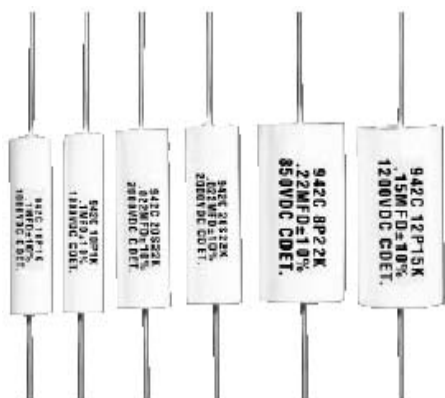
Accelerated Life	1.25 x rated DC voltage at 85°C for 2,000 Hours
Performance	<3% capacitance change ESR <125% of initial reading IR >50% of initial limit
Accelerated Pulse Testing Performance	per IEC-384 <3% in capacitance change <.003 increase in df from initial value

Typical Characteristics

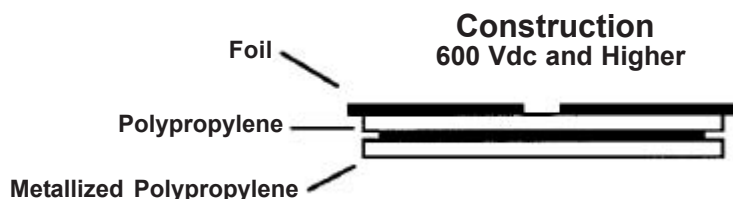


Type 942C Very High dV/dt, Round Polypropylene Film Capacitors

Round, Foil/Metallized Hybrid, Axial Leads



Type 942C round, axial film capacitors utilize a hybrid section design of polypropylene film, metal foils and metallized polypropylene dielectric to achieve both high peak current as well as superior rms current ratings. This series is ideal for high pulse operation and high peak current circuits.



Specifications

Voltage Range: 600-2000 Vdc (300 Vac to 500 Vac, 60 Hz)

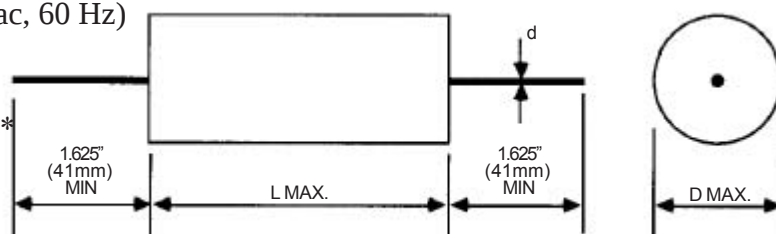
Capacitance Range: 0.01-2.5 μF

Capacitance Tolerance: $\pm 10\%$

Operating Temperature Range: -55°C to 105°C *

*Full-rated voltage at 85°C —Derate linearly to 50%-rated voltage at 105°C

NOTE: Other capacitance values, sizes and performance specifications are available. Contact us.



Ratings and Dimensions

Normally Stocked

Cap. (μF)	Catalog Part Number	D Inches (mm)	L Inches (mm)	d Inches (mm)	Typical ESR milliohms	Typical ESL nH	dV/dt V/ μs	I peak A	I rms 70 $^{\circ}\text{C}$ 100 KHz
600 Vdc (300 Vac)									
0.15	942C6P15K	0.551 (14.0)	1.339 (34.0)	0.040 (1.0)	5	21	1427	214	7.7
0.22	942C6P22K	0.630 (16.0)	1.339 (34.0)	0.040 (1.0)	7	22	1427	314	7.0
0.33	942C6P33K	0.748 (19.0)	1.339 (34.0)	0.040 (1.0)	6	23	1427	471	8.4
0.47	942C6P47K	0.866 (22.0)	1.339 (34.0)	0.040 (1.0)	5	24	1427	671	10.1
0.68	942C6P68K	1.010 (25.6)	1.339 (34.0)	0.047 (1.2)	4	26	1427	970	12.4
1.00	942C6W1K	0.925 (23.5)	1.811 (46.0)	0.047 (1.2)	5	30	800	800	11.8
1.50	942C6W1P5K	1.122 (28.5)	1.811 (46.0)	0.047 (1.2)	4	32	800	1200	14.8
2.00	942C6W2K	1.122 (28.5)	2.126 (54.0)	0.047 (1.2)	3	36	628	1256	18.2
2.20	942C6W2P2K	1.181 (30.0)	2.126 (54.0)	0.047 (1.2)	3	36	628	1382	18.8
2.50	942C6W2P5K	1.260 (32.0)	2.126 (54.0)	0.047 (1.2)	3	37	628	1570	19.5
850 Vdc (360 Vac)									
0.15	942C8P15K	0.610 (15.5)	1.339 (34.0)	0.040 (1.0)	5	22	1712	257	8.1
0.22	942C8P22K	0.709 (18.0)	1.339 (34.0)	0.040 (1.0)	7	23	1712	377	7.5
0.33	942C8P33K	0.846 (21.5)	1.339 (34.0)	0.040 (1.0)	6	24	1712	565	2.1
0.47	942C8P47K	0.984 (25.0)	1.339 (34.0)	0.047 (1.2)	5	26	1712	805	10.9
0.68	942C8P68K	1.161 (29.5)	1.339 (34.0)	0.047 (1.2)	4	27	1712	1164	13.6
1.00	942C8W1K	1.102 (28.0)	1.811 (46.0)	0.047 (1.2)	5	32	960	960	13.1
1.50	942C8W1P5K	1.142 (29.0)	2.126 (54.0)	0.047 (1.2)	4	36	754	1131	15.9
2.00	942C8W2K	1.161 (29.5)	2.520 (64.0)	0.047 (1.2)	3	41	574	1148	19.9

Type 942C Very High dV/dt, Round Polypropylene Film Capacitors

Cap. (μ F)	Catalog Part Number	D		L		d		Typical ESR	Typical ESL	dV/dt	I peak	I rms
		Inches	(mm)	Inches	(mm)	Inches	(mm)	milliohms	nH	V/ μ s	A	70 °C 100 KHz
1000 Vdc (400 Vac)												
0.100	942C10P1K	0.630	(16.0)	1.339	(34.0)	0.040	(1.0)	8	22	2283	228	6.6
0.150	942C10P15K	0.748	(19.0)	1.339	(34.0)	0.040	(1.0)	7	23	2283	342	7.8
0.220	942C10P22K	0.887	(22.5)	1.339	(34.0)	0.040	(1.0)	6	24	2283	502	9.3
0.330	942C10P33K	0.827	(21.0)	1.811	(46.0)	0.040	(1.0)	5	29	1280	422	11.0
0.470	942C10P47K	0.945	(24.0)	1.811	(46.0)	0.047	(1.2)	5	30	1280	601	11.9
0.680	942C10P68K	1.122	(28.5)	1.811	(46.0)	0.047	(1.2)	5	32	1280	870	13.3
1.000	942C10W1K	1.181	(30.0)	2.126	(54.0)	0.047	(1.2)	5	37	1005	1005	14.6
1.400	942C10W1P4K	1.240	(31.5)	2.520	(64.0)	0.047	(1.2)	4	41	765	1071	17.9
1200 Vdc (430 Vac)												
0.100	942C12P1K	0.748	(19.0)	1.339	(34.0)	0.040	(1.0)	5	23	2854	285	9.2
0.150	942C12P15K	0.887	(22.5)	1.339	(34.0)	0.040	(1.0)	5	24	2854	428	10.2
0.220	942C12P22K	1.043	(26.5)	1.339	(34.0)	0.047	(1.2)	6	26	2854	628	10.3
0.330	942C12P33K	0.965	(24.5)	1.811	(46.0)	0.047	(1.2)	6	31	1600	528	11.0
0.470	942C12P47K	1.142	(29.0)	1.811	(46.0)	0.047	(1.2)	5	32	1600	752	13.4
0.680	942C12P68K	1.201	(30.5)	2.126	(54.0)	0.047	(1.2)	5	37	1256	854	14.7
0.900	942C12P9K	1.220	(31.0)	2.520	(64.0)	0.047	(1.2)	5	41	957	861	15.9
1600 Vdc (460 Vac)												
0.022	942C16S22K	0.472	(12.0)	1.339	(34.0)	0.040	(1.0)	27	20	3425	75	3.0
0.033	942C16S33K	0.571	(14.5)	1.339	(34.0)	0.040	(1.0)	14	21	3425	113	4.7
0.047	942C16S47K	0.650	(16.5)	1.339	(34.0)	0.040	(1.0)	8	22	3425	161	6.7
0.068	942C16S68K	0.748	(19.0)	1.339	(34.0)	0.040	(1.0)	6	23	3425	233	8.4
0.100	942C16P1K	0.887	(22.5)	1.339	(34.0)	0.040	(1.0)	4	24	3425	342	11.4
0.150	942C16P15K	0.807	(20.5)	1.811	(46.0)	0.040	(1.0)	5	29	1919	288	10.9
0.220	942C16P22K	0.925	(23.5)	1.811	(46.0)	0.040	(1.0)	5	68	1919	422	11.8
0.330	942C16P33K	1.122	(28.5)	1.811	(46.0)	0.047	(1.2)	5	32	1919	633	13.3
0.470	942C16P47K	1.181	(30.0)	2.126	(54.0)	0.047	(1.2)	5	36	1507	708	14.6
0.560	942C16P56K	1.122	(28.5)	2.520	(64.0)	0.047	(1.2)	5	40	1148	643	15.1
0.680	942C16P68K	1.240	(31.5)	2.520	(64.0)	0.047	(1.2)	5	42	1148	781	16.0
2000 Vdc (500 Vac)												
0.010	942C20S1K	0.472	(12.0)	1.339	(34.0)	0.040	(1.0)	50	20	5137	51	2.2
0.015	942C20S15K	0.571	(14.5)	1.339	(34.0)	0.040	(1.0)	40	21	5137	77	2.8
0.022	942C20S22K	0.650	(16.5)	1.339	(34.0)	0.040	(1.0)	20	22	5137	113	4.2
0.033	942C20S33K	0.768	(19.5)	1.339	(34.0)	0.040	(1.0)	12	23	5137	170	6.0
0.047	942C20S47K	0.709	(18.0)	1.811	(46.0)	0.040	(1.0)	10	28	2879	135	7.1
0.068	942C20S68K	0.807	(20.5)	1.811	(46.0)	0.040	(1.0)	6	29	2879	196	9.9
0.100	942C20P1K	0.965	(24.5)	1.811	(46.0)	0.047	(1.2)	5	30	2879	288	12.1
0.150	942C20P15K	1.161	(29.5)	1.811	(46.0)	0.047	(1.2)	5	32	2879	432	13.5