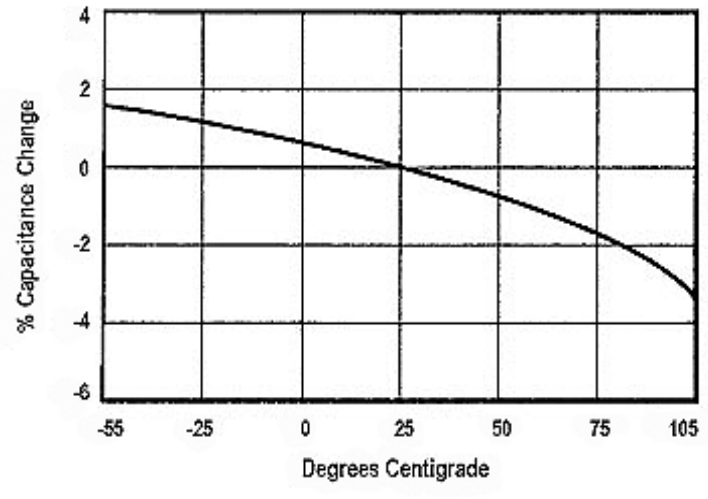
Electrical Characteristics

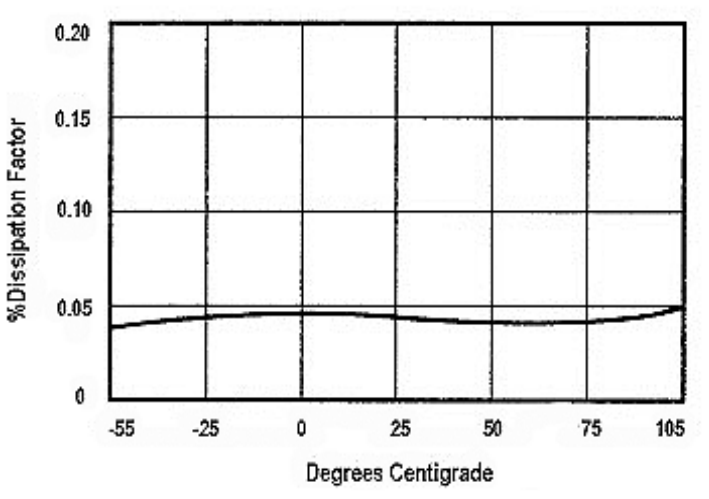
Operating Temperature	-55°C to +105°C * * Full rated voltage at 85°C-Derate linearly to 50% rated voltage at 105°C
Capacitance Tolerance	±10% standard tolerance
Dissipation Factor	<0.1% at 1 kHz, 25°C
Dielectric Withstand	1.6 x rated voltage for 60 seconds
Insulation Resistance	>100,000 megohms x µF 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, Ipk, Irms 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

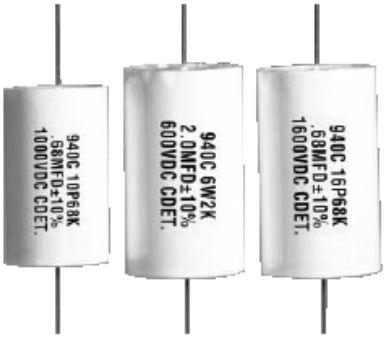
Typical Characteristics



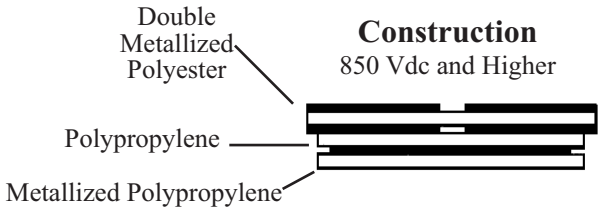


Type 940C High dV/dt, Round Polypropylene Film Capacitors

Double Metallized
Axial Leads

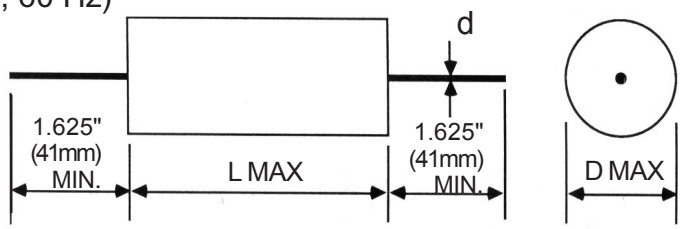


Type 940C round, axial film capacitors use polypropylene film and dual metallized electrodes for both self healing properties and high peak current carrying capability (dV/dt). This series features low ESR characteristics, excellent high frequency and high voltage capabilities.



Specifications

Voltage Range: 600 – 3000 Vdc (275 Vac to 750 Vac, 60 Hz)
Capacitance Range: 0.01 – 4.7 µF
Capacitance Tolerance: ±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: Refer to Application Guide for test conditions. Contact us for other capacitance values, sizes and performance specifications.

Ratings and Dimensions — Normally Stocked

Cap. (µF)	Catalog Part Number	D Inches	D (mm)	L Inches	L (mm)	d Inches	d (mm)	Typical ESR (mΩ)	Typical ESL (nH)	dV/dt (V/µs)	Ipk (A)	Irms 70 °C 100 KHz
600 Vdc (275 Vac)												
.10	940C6P1K	.354	(9.0)	1.339	(34.0)	.032	(.8)	28	19	196	20	2.5
.15	940C6P15K	.413	(10.5)	1.339	(34.0)	.040	(1.0)	13	20	196	29	4.0
.22	940C6P22K	.453	(11.5)	1.339	(34.0)	.040	(1.0)	12	20	196	43	4.4
.33	940C6P33K	.531	(13.5)	1.339	(34.0)	.040	(1.0)	9	21	196	65	5.6
.47	940C6P47K	.610	(15.5)	1.339	(34.0)	.040	(1.0)	7	22	196	92	6.9
.68	940C6P68K	.709	(18.0)	1.339	(34.0)	.040	(1.0)	6	23	196	134	8.1
1.00	940C6W1K	.827	(21.0)	1.339	(34.0)	.040	(1.0)	6	24	196	196	8.9
1.50	940C6W1P5K	.984	(25.0)	1.339	(34.0)	.047	(1.2)	5	26	196	295	10.9
2.00	940C6W2K	.925	(23.5)	1.811	(46.0)	.047	(1.2)	5	31	128	255	11.8
3.30	940C6W3P3K	1.063	(27.0)	2.126	(54.0)	.047	(1.2)	4	36	105	346	15.3
4.70	940C6W4P7K	1.240	(31.5)	2.126	(54.0)	.047	(1.2)	4	38	105	492	16.8
850 Vdc (450 Vac)												
.15	940C8P15K	.512	(13.0)	1.339	(34.0)	.040	(1.0)	8	21	713	107	5.8
.22	940C8P22K	.610	(15.5)	1.339	(34.0)	.040	(1.0)	8	22	713	157	6.4
.33	940C8P33K	.709	(18.0)	1.339	(34.0)	.040	(1.0)	7	23	713	235	7.5
.47	940C8P47K	.827	(21.0)	1.339	(34.0)	.040	(1.0)	5	24	713	335	9.8
.68	940C8P68K	.965	(24.5)	1.339	(34.0)	.047	(1.2)	4	26	713	485	12.0
1.00	940C8W1K	.886	(22.5)	1.811	(46.0)	.047	(1.2)	5	30	400	400	11.5
1.50	940C8W1P5K	1.063	(27.0)	1.811	(46.0)	.047	(1.2)	4	32	400	600	14.3
2.00	940C8W2K	1.201	(30.5)	1.811	(46.0)	.047	(1.2)	3	34	400	800	17.9
2.20	940C8W2P2K	1.260	(32.0)	1.811	(46.0)	.047	(1.2)	3	34	400	880	18.4
2.50	940C8W2P5K	1.339	(34.0)	1.811	(46.0)	.047	(1.2)	3	35	400	1000	19.1

Type 940C High dV/dt, Round Polypropylene Film Capacitors

Cap. (µF)	Catalog Part Number	D		L		d		Typical ESR (mΩ)	Typical ESL (nH)	dV/dt (V/µs)	Ipk (A)	Irms 70 ºC 100 KHz
		Inches	(mm)	Inches	(mm)	Inches	(mm)					
1000 Vdc (500 Vac)												
.150	940C10P15K	.591	(15.0)	1.339	(34.0)	.040	(1.0)	7	22	856	128	6.7
.220	940C10P22K	.689	(17.5)	1.339	(34.0)	.040	(1.0)	7	23	856	188	7.4
.330	940C10P33K	.807	(20.5)	1.339	(34.0)	.040	(1.0)	6	24	856	283	8.8
.470	940C10P47K	.945	(24.0)	1.339	(34.0)	.047	(1.2)	5	26	856	402	10.6
.680	940C10P68K	1.102	(28.0)	1.339	(34.0)	.047	(1.2)	5	27	856	582	11.7
1.000	940C10W1K	1.024	(26.0)	1.811	(46.0)	.047	(1.2)	5	32	480	480	12.5
1.500	940C10W1P5K	1.220	(31.0)	1.811	(46.0)	.047	(1.2)	4	34	480	720	15.6
2.000	940C10W2K	1.398	(35.5)	1.811	(46.0)	.047	(1.2)	3	36	480	960	19.6
1200 Vdc (500 Vac)												
.100	940C12P1K	.610	(15.5)	1.339	(34.0)	.040	(1.0)	9	22	1142	114	6.1
.150	940C12P15K	.728	(18.5)	1.339	(34.0)	.040	(1.0)	7	23	1142	171	7.6
.220	940C12P22K	.846	(21.5)	1.339	(34.0)	.040	(1.0)	7	24	1142	251	8.4
.330	940C12P33K	.787	(20.0)	1.811	(46.0)	.040	(1.0)	7	29	640	211	9.0
.470	940C12P47K	.906	(23.0)	1.811	(46.0)	.047	(1.2)	7	30	640	301	9.8
.680	940C12P68K	1.063	(27.0)	1.811	(46.0)	.047	(1.2)	6	32	640	435	11.7
1.000	940C12W1K	1.299	(33.0)	1.811	(46.0)	.047	(1.2)	5	35	640	640	14.5
1.500	940C12W1P5K	1.378	(35.0)	2.126	(54.0)	.047	(1.2)	4	39	502	754	17.9
1600 Vdc (630 Vac)												
.100	940C16P1K	.709	(18.0)	1.339	(34.0)	.040	(1.0)	7	23	1427	143	7.5
.150	940C16P15K	.846	(21.5)	1.339	(34.0)	.040	(1.0)	5	24	1427	214	9.9
.220	940C16P22K	1.004	(25.5)	1.339	(34.0)	.047	(1.2)	7	26	1427	314	9.3
.330	940C16P33K	.925	(23.5)	1.811	(46.0)	.047	(1.2)	7	31	800	264	10.0
.470	940C16P47K	1.083	(27.5)	1.811	(46.0)	.047	(1.2)	6	32	800	376	11.8
.680	940C16P68K	1.280	(32.5)	1.811	(46.0)	.047	(1.2)	6	35	800	544	13.1
1.000	940C16W1K	1.535	(39.0)	1.811	(46.0)	.047	(1.2)	5	37	800	800	16.2
1.500	940C16W1P5K	1.654	(42.0)	2.126	(54.0)	.047	(1.2)	4	42	628	942	20.1
2000 Vdc (630 Vac)												
.022	940C20S22K	.453	(11.5)	1.339	(34.0)	.040	(1.0)	35	6	1712	38	2.6
.033	940C20S33K	.531	(13.5)	1.339	(34.0)	.040	(1.0)	20	21	1712	57	3.8
.047	940C20S47K	.591	(15.0)	1.339	(34.0)	.040	(1.0)	12	22	1712	80	5.2
.068	940C20S68K	.689	(17.5)	1.339	(34.0)	.040	(1.0)	8	23	1712	116	6.9
.100	940C20P1K	.827	(21.0)	1.339	(34.0)	.040	(1.0)	7	24	1712	171	8.3
.150	940C20P15K	.768	(19.5)	1.811	(46.0)	.040	(1.0)	7	29	960	144	8.9
.220	940C20P22K	.866	(22.0)	1.811	(46.0)	.040	(1.0)	8	30	960	211	9.0
.330	940C20P33K	1.063	(27.0)	1.811	(46.0)	.047	(1.2)	8	32	960	317	10.1
.470	940C20P47K	1.260	(32.0)	1.811	(46.0)	.047	(1.2)	6	34	960	451	13.0
.560	940C20P56K	1.220	(31.0)	2.126	(54.0)	.047	(1.2)	7	37	754	422	12.6
.680	940C20P68K	1.339	(34.0)	2.126	(54.0)	.047	(1.2)	6	39	754	513	14.3
1.000	940C20W1K	1.614	(41.0)	2.126	(54.0)	.047	(1.2)	5	42	754	754	17.7
3000 Vdc (750 Vac)												
.010	940C30S1K	0.453	(11.5)	1.339	(34.0)	.040	(1.0)	60	20	2568	26	2.0
.015	940C30S15K	0.531	(13.5)	1.339	(34.0)	.040	(1.0)	40	21	2568	39	2.7
.022	940C30S22K	0.61	(15.5)	1.339	(34.0)	.040	(1.0)	25	22	2568	57	3.6
.033	940C30S33K	0.709	(18.0)	1.339	(34.0)	.040	(1.0)	14	23	2568	85	5.3
.047	940C30S47K	0.65	(16.5)	1.811	(46.0)	.040	(1.0)	14	28	1440	68	5.7
.068	940C30S68K	0.748	(19.0)	1.811	(46.0)	.040	(1.0)	12	29	1440	98	6.7
.100	940C30P1K	0.886	(22.5)	1.811	(46.0)	.047	(1.2)	10	30	1440	144	8.1
.150	940C30P15K	1.063	(27.0)	1.811	(46.0)	.047	(1.2)	8	32	1440	216	10.1

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