

Type 941C, Polypropylene Capacitors, for Pulse, Snubber

High dV/dt for Snubber Applications



Type 941C flat, oval film capacitors are constructed with 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.

Highlights

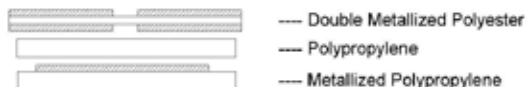
- High dV/dt
- High ripple current
- Low inductance
- Self healing

Specifications

Capacitance Range	0.01 to 4.7 μ F
Capacitance Tolerance	$\pm 10\%$ Standard Tolerance
Rated Voltage	600 to 3000 Vdc (275 to 500 Vac, 60 Hz)
Operating Temperature Range with Ripple	-55 $^{\circ}$ C to 105 $^{\circ}$ C* *Full rated voltage at 85 $^{\circ}$ C - derated linearly to 50% rated at 105 $^{\circ}$ C
Maximum rms Current	Check tables for values
Insulation Resistance	> 100,000 M Ω x μ F
Test Voltage between Terminals @ 25 $^{\circ}$ C	160% rated DC voltage for 60 s
Test Voltage between Terminals & Case @ 25 $^{\circ}$ C	3 kVac @ 50/60 Hz for 60 s
Life Test	2,000 h @ 85 $^{\circ}$ C, 125% rated DC voltage
Life Expectancy	60,000 h @ rated Vdc, 70 $^{\circ}$ C 30,000 h @ rated Vac, 70 $^{\circ}$ C
RoHS Compliant	

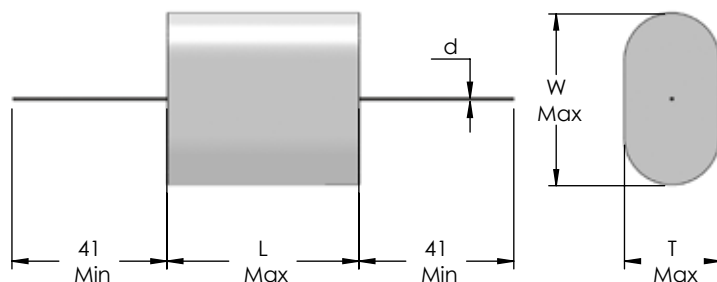
Dimensions

Construction Diagram



Construction Details

Case Material	UL510 Polyester Tape Wrap
Resin Material	UL94V-0 Epoxy Fill
Terminal Material	Tin Plated Copper



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Part Numbering System

941	C	6	P	22	K	-F
Series	Termination Code	Voltage Code	Capacitance Decimal Point	Capacitance Significant Figures (μF)	Tolerance Code	RoHS Compliant Indicator
941	C = Tinned Copper Wire F = Insulated Stranded Wire H = Tinned Lugs	6 = 600 Vdc 8 = 850 Vdc 10 = 1000 Vdc 12 = 1200 Vdc	16 = 1600 Vdc 20 = 2000 Vdc 30 = 3000 Vdc	S = 0.0 P = 0. W = No decimal point	K = ±10%	

Ratings

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

Cap. (μF)	Catalog Part Number	T mm	W mm	L mm	d mm	Typical ESR (mΩ)	Typical ESL (nH)	dV/dt (V/μs)	I peak (A)	I _{RMS} 70 °C 100 kHz (A)
600 Vdc (275 Vac)										
.10	941C6P1K-F	5.7	11.9	34.0	0.8	28	17	196	20	2.8
.15	941C6P15K-F	6.8	13.0	34.0	0.8	13	18	196	29	4.4
.22	941C6P22K-F	8.1	14.3	34.0	0.8	12	19	196	43	4.9
.33	941C6P33K-F	9.8	16.1	34.0	0.8	9	19	196	65	6.1
.47	941C6P47K-F	11.7	18.0	34.0	0.8	7	20	196	92	7.6
.68	941C6P68K-F	14.2	20.4	34.0	1.0	6	21	196	134	8.9
1.0	941C6W1K-F	17.3	23.5	34.0	1.0	6	23	196	196	9.9
1.5	941C6W1P5K-F	21.3	27.5	34.0	1.2	5	24	196	295	12.1
2.0	941C6W2K-F	18.2	27.6	46.0	1.2	5	28	128	255	13.1
3.3	941C6W3P3K-F	22.5	31.8	54.0	1.2	4	34	105	346	17.3
4.7	941C6W4P7K-F	28.6	33.3	54.0	1.2	4	36	105	492	18.7
850 Vdc (450 Vac)										
.15	941C8P15K-F	9.6	15.9	34.0	0.8	8	19	713	107	6.4
.22	941C8P22K-F	11.6	17.9	34.0	0.8	8	20	713	157	7.0
.33	941C8P33K-F	14.3	20.6	34.0	1.0	7	21	713	235	8.3
.47	941C8P47K-F	17.1	23.4	34.0	1.0	5	22	713	335	10.8
.68	941C8P68K-F	20.7	27.0	34.0	1.2	4	24	713	485	13.3
1.0	941C8W1K-F	17.2	26.7	46.0	1.2	5	28	400	400	12.7
1.5	941C8W1P5K-F	21.5	30.9	46.0	1.2	4	30	400	600	15.8
2.0	941C8W2K-F	25.1	34.6	46.0	1.2	3	31	400	800	19.8
2.2	941C8W2P2K-F	26.5	35.9	46.0	1.2	3	32	400	880	20.4
2.5	941C8W2P5K-F	28.4	37.8	46.0	1.2	3	33	400	1000	21.2
1000 Vdc (500 Vac)										
.15	941C10P15K-F	11.2	17.5	34.0	0.8	7	20	856	128	7.4
.22	941C10P22K-F	13.6	19.9	34.0	1.0	7	21	856	188	8.1
.33	941C10P33K-F	16.7	23.0	34.0	1.0	6	22	856	283	9.7
.47	941C10P47K-F	20.1	26.3	34.0	1.2	5	24	856	402	11.7
.68	941C10P68K-F	24.2	30.5	34.0	1.2	5	26	856	582	13.0
1.0	941C10W1K-F	20.4	29.8	46.0	1.2	5	24	480	480	13.8
1.5	941C10W1P5K-F	25.4	34.8	46.0	1.2	4	31	480	720	17.3
2.0	941C10W2K-F	29.7	39.1	46.0	1.2	3	33	480	960	21.7

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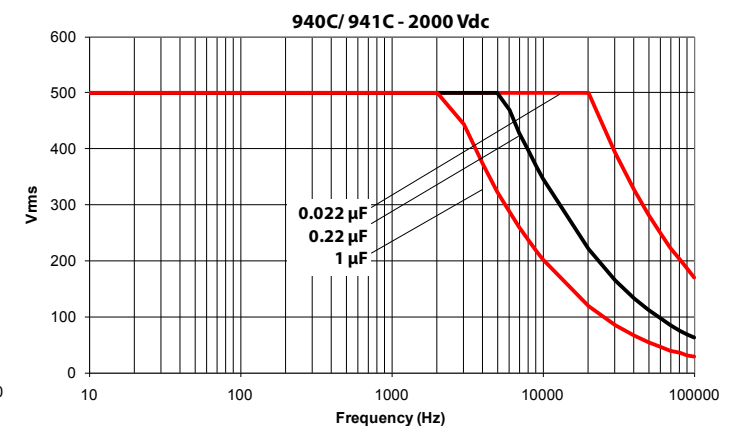
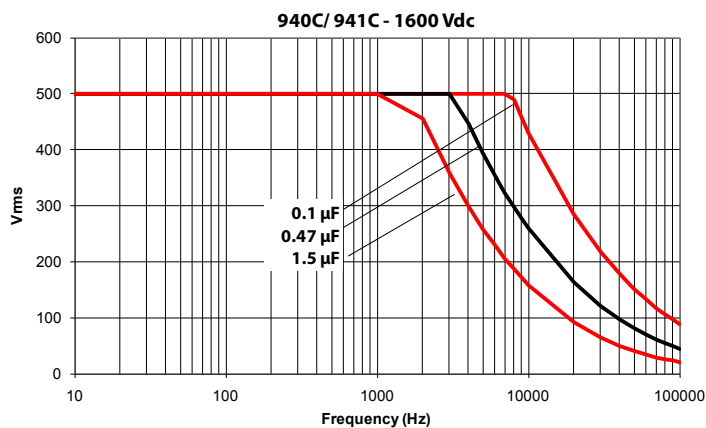
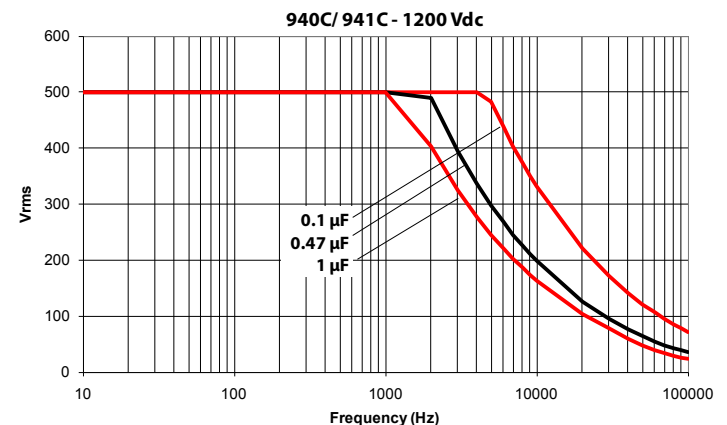
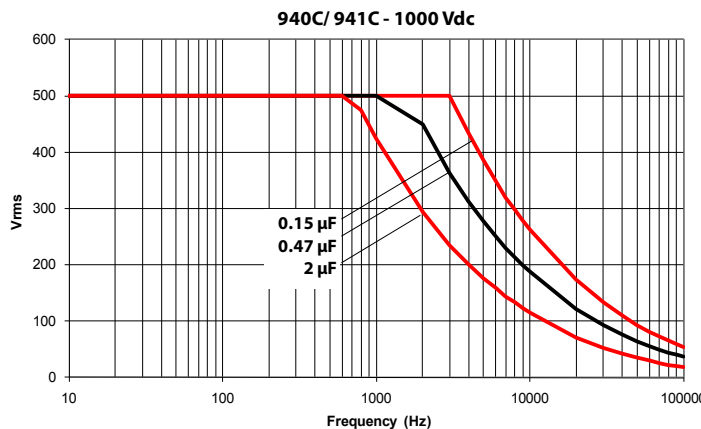
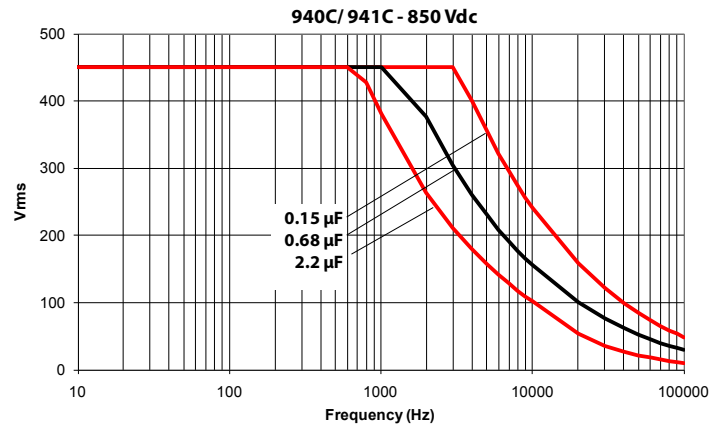
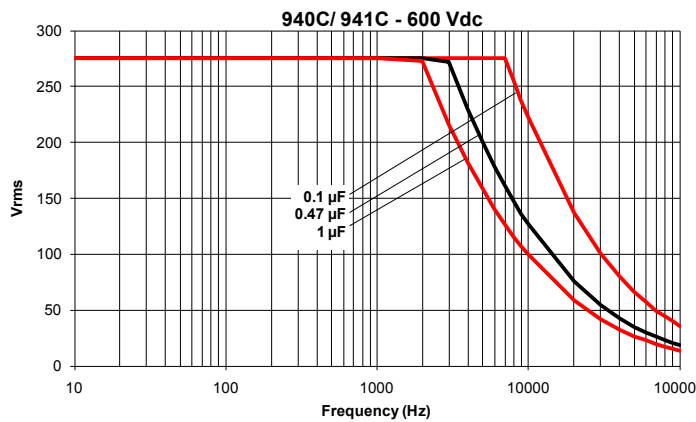
High dV/dt for Snubber Applications

Cap. (μ F)	Catalog Part Number	T mm	W mm	L mm	d mm	Typical ESR (m Ω)	Typical ESL (nH)	dV/dt (V/ μ s)	I peak (A)	I _{RMS} 70 °C 100 kHz (A)
1200 Vdc (500 Vac)										
.10	941C12P1K-F	11.7	18.0	34.0	0.8	9	20	1142	114	6.7
.15	941C12P15K-F	14.4	20.7	34.0	1.0	7	21	1142	171	8.3
.22	941C12P22K-F	17.5	23.8	34.0	1.0	7	23	1142	251	9.2
.33	941C12P33K-F	14.6	24.0	46.0	1.0	7	21	640	211	10.0
.47	941C12P47K-F	17.7	27.1	46.0	1.2	7	28	640	301	10.9
.68	941C12P68K-F	21.7	31.1	46.0	1.2	6	30	640	435	13.0
1.0	941C12W1K-F	26.7	36.1	46.0	1.2	5	32	640	640	15.9
1.5	941C12W1P5K-F	27.6	40.2	54.0	1.2	4	36	502	754	19.7
1600 Vdc (500 Vac)										
.10	941C16P1K-F	14.3	20.6	34.0	1.0	7	21	1427	143	8.3
.15	941C16P15K-F	17.7	23.9	34.0	1.0	5	23	1427	214	11.0
.22	941C16P22K-F	21.5	27.8	34.0	1.2	7	24	1427	314	10.3
.33	941C16P33K-F	18.2	27.6	46.0	1.2	7	23	800	264	11.0
.47	941C16P47K-F	22.0	31.4	46.0	1.2	6	30	800	376	13.1
.68	941C16P68K-F	26.9	36.3	46.0	1.2	6	32	800	544	14.5
1.0	941C16W1K-F	33.1	42.5	46.0	1.2	5	35	800	800	17.9
1.5	941C16W1P5K-F	34.5	47.0	54.0	1.2	4	39	628	942	22.2
2000 Vdc (500 Vac)										
.022	941C20S22K-F	7.9	14.2	34.0	0.8	35	18	1712	38	2.8
.033	941C20S33K-F	9.7	16.0	34.0	0.8	20	19	1712	57	4.1
.047	941C20S47K-F	11.6	17.8	34.0	0.8	12	20	1712	80	5.7
.068	941C20S68K-F	14.0	20.2	34.0	1.0	8	21	1712	116	7.7
.10	941C20P1K-F	17.0	23.3	34.0	1.0	7	22	1712	171	9.1
.15	941C20P15K-F	14.1	23.6	46.0	1.0	7	21	960	144	9.8
.22	941C20P22K-F	17.4	26.8	46.0	1.0	8	28	960	211	10.1
.33	941C20P33K-F	21.7	31.2	46.0	1.2	8	30	960	317	11.3
.47	941C20P47K-F	26.3	35.8	46.0	1.2	6	32	960	451	14.4
.56	941C20P56K-F	23.9	36.5	54.0	1.2	7	31	754	422	13.9
.68	941C20P68K-F	26.7	39.2	54.0	1.2	6	35	754	513	15.8
1.0	941C20W1K-F	33.1	45.6	54.0	1.2	5	38	754	754	19.4
3000 Vdc (500 Vac)										
.010	941C30S1K-F	7.8	14.1	34.0	0.8	60	18	2568	26	2.2
.015	941C30S15K-F	9.5	15.8	34.0	0.8	40	19	2568	39	2.9
.022	941C30S22K-F	11.5	17.8	34.0	0.8	25	20	2568	57	4.0
.033	941C30S33K-F	14.2	20.4	34.0	1.0	14	21	2568	85	5.8
.047	941C30S47K-F	11.3	20.7	46.0	1.0	14	20	1440	68	6.3
.068	941C30S68K-F	13.8	23.3	46.0	1.0	12	26	1440	98	7.4
.10	941C30P1K-F	17.1	26.5	46.0	1.2	10	28	1440	144	9.0
.15	941C30P15K-F	21.3	30.7	46.0	1.2	8	30	1440	216	11.2

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RMS Voltage vs Frequency @ 25 °C



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