

Type 943C, Polypropylene Capacitors, for High Pulse, Snubber

Very High dV/dt for Snubber Applications

Type 943 oval, 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.



Highlights

- Very high dV/dt
- Very high pulse current
- Low inductance
- Self Healing

Specifications

Capacitance Range	0.01 to 2.5 μ F
Capacitance Tolerance	$\pm 10\%$ Standard Tolerance
Rated Voltage	600 to 2000 Vdc (300 to 500 Vac, 60 Hz)
Operating Temperature Range with Ripple	-55 °C to 105 °C* *Full rated voltage at 85 °C - derated linearly to 50% rated at 105 °C
Maximum rms Current	Check tables for values
Insulation Resistance	> 100,000 M Ω x μ F
Test Voltage between Terminals @ 25°C	150% rated DC voltage for 60 s
Test Voltage between Terminals & Case @ 25 °C	3 kVac @ 50/60 Hz for 60 s
Life Test	2,000 hours @ 85 °C, 125% rated DC voltage
Life Expectancy	60,000 h @ rated Vdc, 70 °C 30,000 h @ rated Vac, 70 °C
RoHS Compliant	

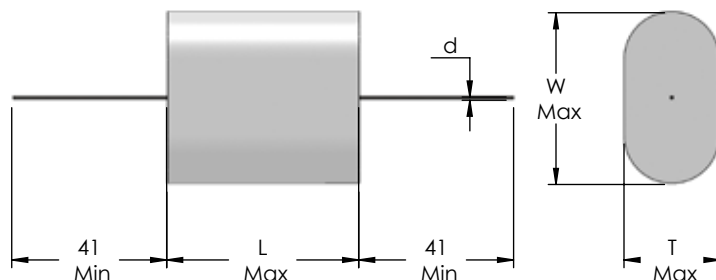
Dimensions

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

943	C	6	P	22	K	-F	
				Capacitance		RoHS	
Series	Termination Code	Voltage Code		Capacitance Decimal Point	Significant Figures in μF	Tolerance Code	Compliant Indicator
943	C = Tinned Copper Wire	6 = 600 Vdc	16 = 1600 Vdc	S = 0.0		J = $\pm 5\%$	
	F = Insulated Stranded Wire	8 = 850 Vdc	20 = 2000 Vdc	P = 0.		H = $\pm 6\%$	
		10 = 1000 Vdc	30 = 3000 Vdc	W = No decimal point		K = $\pm 10\%$	
	H = Tinned Lugs	12 = 1200 Vdc				M = $\pm 20\%$	

Ratings

NOTE: Other capacitance values, 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 (300 Vac)										
.15	943C6P15K-F	12.3	17.0	34.0	1.0	5	19	1427	214	8.9
.22	943C6P22K-F	14.3	19.0	34.0	1.0	7	20	1427	314	8.1
.33	943C6P33K-F	17.1	21.8	34.0	1.0	6	22	1427	471	9.6
.47	943C6P47K-F	19.9	24.6	34.0	1.0	5	23	1427	671	11.4
.68	943C6P68K-F	23.5	28.3	34.0	1.2	4	24	1427	970	14.1
1.00	943C6W1K-F	19.2	28.6	46.0	1.2	5	28	800	800	13.4
1.50	943C6W1P5K-F	23.5	32.9	46.0	1.2	4	30	800	1200	16.6
2.00	943C6W2K-F	24.0	33.5	54.0	1.2	3	33	628	1256	20.6
2.20	943C6W2P2K-F	25.2	34.6	54.0	1.2	3	34	628	1382	21.1
2.50	943C6W2P5K-F	27.0	36.5	54.0	1.2	3	35	628	1570	21.9
850 Vdc (360 Vac)										
.15	943C8P15K-F	13.9	18.6	34.0	1.0	5	20	1712	257	9.4
.22	943C8P22K-F	16.4	21.0	34.0	1.0	7	21	1712	377	8.7
.33	943C8P33K-F	19.5	24.2	34.0	1.0	6	23	1712	565	10.3
.47	943C8P47K-F	22.9	27.6	34.0	1.2	5	24	1712	805	12.4
.68	943C8P68K-F	27.1	31.8	34.0	1.2	4	26	1712	1164	15.3
1.00	943C8W1K-F	22.4	31.8	46.0	1.2	5	29	960	960	14.5
1.50	943C8W1P5K-F	24.3	33.7	54.0	1.2	4	34	754	1131	18.0
2.00	943C8W2K-F	24.7	34.2	64.0	1.2	3	38	574	1147	22.4
1000 Vdc (400 Vac)										
.10	943C10P1K-F	14.4	19.2	34.0	1.0	8	20	2283	228	7.6
.15	943C10P15K-F	17.2	21.9	34.0	1.0	7	22	2283	342	8.9
.22	943C10P22K-F	20.4	25.1	34.0	1.0	6	23	2283	502	10.6
.33	943C10P33K-F	16.6	26.0	46.0	1.0	5	27	1280	422	12.5
.47	943C10P47K-F	19.7	29.1	46.0	1.2	5	28	1280	601	13.6
.68	943C10P68K-F	23.7	33.1	46.0	1.2	5	30	1280	870	14.9
1.00	943C10W1K-F	25.4	34.9	54.0	1.2	5	34	1005	1005	16.5
1.40	943C10W1P4K-F	26.3	36.0	64.0	1.2	4	39	765	1071	20.1

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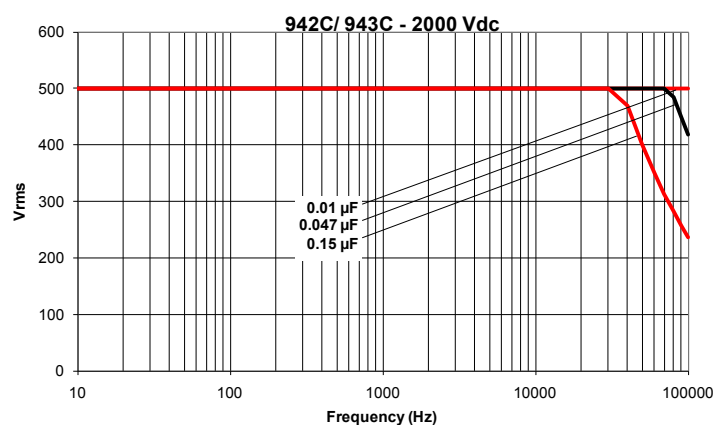
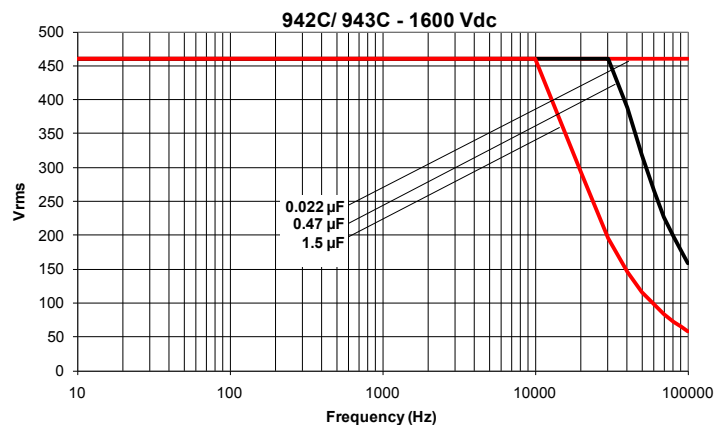
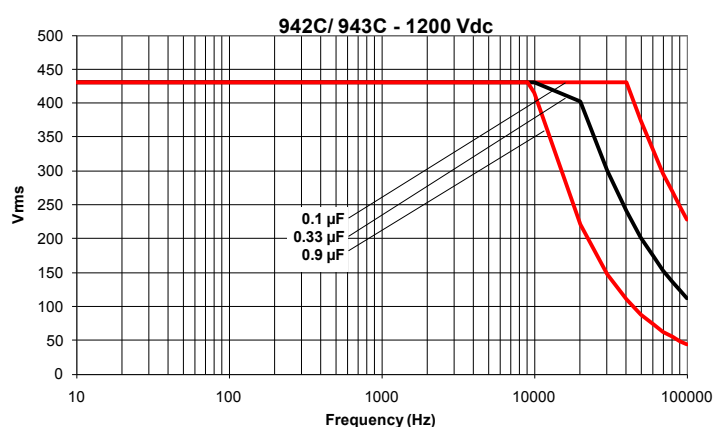
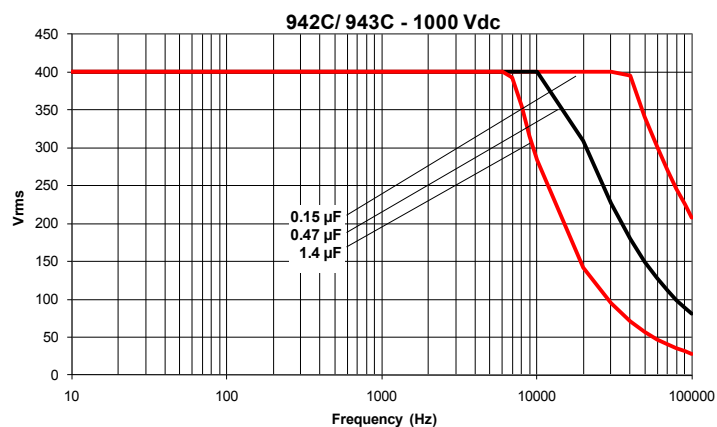
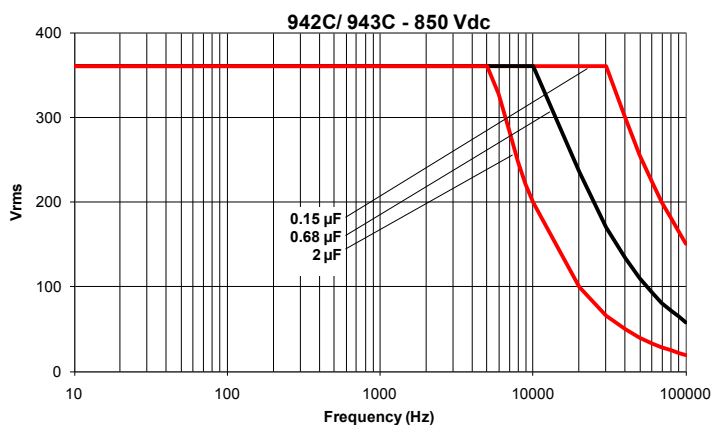
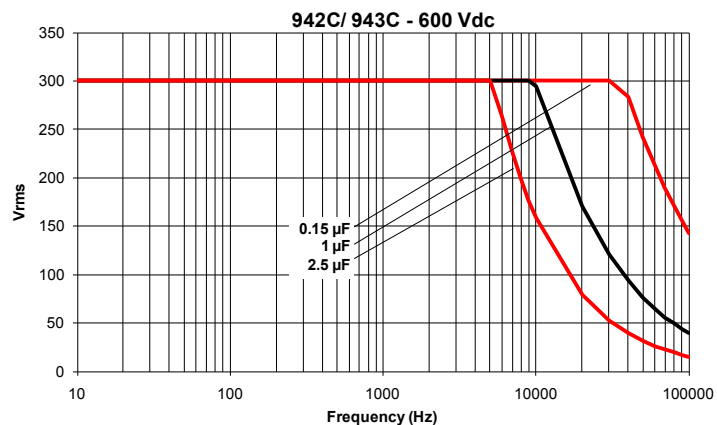
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Cap. (μ F)	Catalog Part Number	T mm	W mm	L mm	d mm	Typical ESR (m Ω)	Typical ESL (nH)	dV/dt (V/ μ s)	I peak (A)	I _{RMS} 70 °C 100 kHz (A)
1200 Vdc (430 Vac)										
.1	943C12P1K-F	17.1	21.8	34.0	1.0	5	22	2854	285	10.5
.15	943C12P15K-F	20.5	25.2	34.0	1.0	5	23	2854	428	11.6
.22	943C12P22K-F	24.4	29.1	34.0	1.2	6	25	2854	628	11.7
.33	943C12P33K-F	20.2	29.6	46.0	1.2	6	28	1600	528	12.5
.47	943C12P47K-F	24.0	33.4	46.0	1.2	5	30	1600	752	15.0
.68	943C12P68K-F	25.6	35.0	54.0	1.2	5	36	1256	854	16.5
.90	943C12P9K-F	25.7	35.1	64.0	1.2	5	39	956	860	17.7
1600 Vdc (460 Vac)										
.022	943C16S22K-F	10.6	15.3	34.0	1.0	27	19	3425	75	3.5
.033	943C16S33K-F	12.4	17.1	34.0	1.0	14	20	3425	113	5.3
.047	943C16S47K-F	14.3	19.0	34.0	1.0	8	20	3425	161	7.6
.068	943C16S68K-F	16.7	21.4	34.0	1.0	6	21	3425	233	9.5
.10	943C16P1K-F	19.8	24.5	34.0	1.0	4	23	3425	342	12.8
.15	943C16P15K-F	16.1	25.5	46.0	1.0	5	26	1919	288	12.3
.22	943C16P22K-F	19.4	28.8	46.0	1.0	5	28	1919	422	13.5
.33	943C16P33K-F	23.7	33.2	46.0	1.2	5	30	1919	633	14.9
.47	943C16P47K-F	25.1	34.5	54.0	1.2	5	34	1507	708	16.3
.56	943C16P56K-F	24.3	33.7	64.0	1.2	5	38	1147	642	17.2
.68	943C16P68K-F	26.6	36.0	64.0	1.2	5	40	1147	780	18.0
2000 Vdc (500 Vac)										
.010	943C20S1K-F	8.8	13.3	34.0	1.0	50	19	5137	51	2.6
.015	943C20S15K-F	10.5	14.9	34.0	1.0	40	19	5137	77	3.1
.022	943C20S22K-F	12.2	17.0	34.0	1.0	20	20	5137	113	4.8
.033	943C20S33K-F	14.5	19.6	34.0	1.0	12	22	5137	170	6.8
.047	943C20S47K-F	11.3	21.0	46.0	1.0	10	25	2879	135	8.0
.068	943C20S68K-F	13.5	23.0	46.0	1.0	6	26	2879	196	11.2
.10	943C20P1K-F	17.5	27.0	46.0	1.2	5	28	2879	288	14.9
.15	943C20P15K-F	21.0	30.4	46.0	1.2	5	30	2879	432	15.5

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RMS Voltage vs Frequency @ 25 °C



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