

# 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 $\mu$ 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 $\Omega$ x $\mu$ 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	

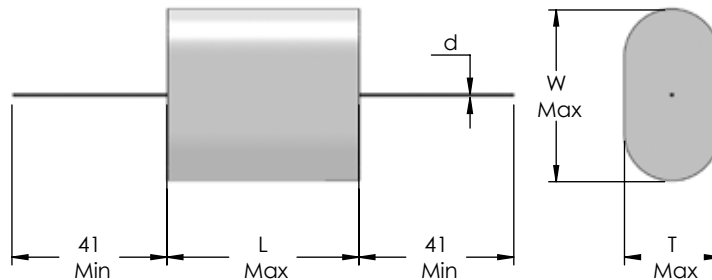
### Dimensions

#### Construction Diagram



#### Construction Details

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



# Type 941C, Polypropylene Capacitors, for Pulse, Snubber

## High dV/dt for Snubber Applications

### Part Numbering System

941   Series	C   Termination Code	6   Voltage Code	P   Capacitance Decimal Point	22   Capacitance Significant Figures (µF)	K   Tolerance Code	-F   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 <sub>RMS</sub> 70 °C 100 kHz (A)
<b>600 Vdc (275 Vac)</b>										
.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
<b>850 Vdc (450 Vac)</b>										
.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
<b>1000 Vdc (500 Vac)</b>										
.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

# Type 941C, Polypropylene Capacitors, for Pulse, Snubber

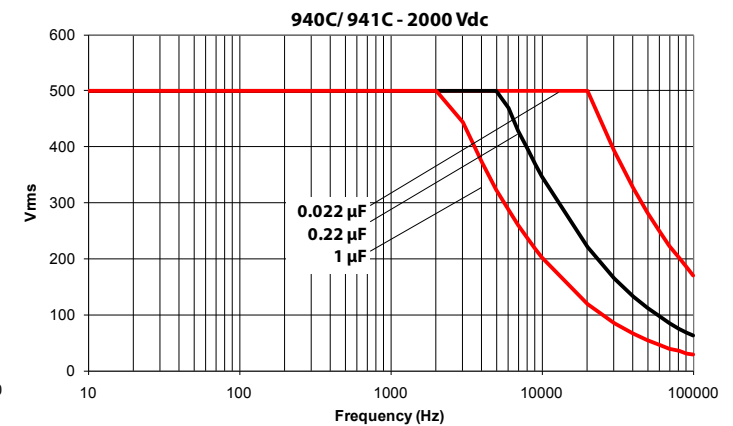
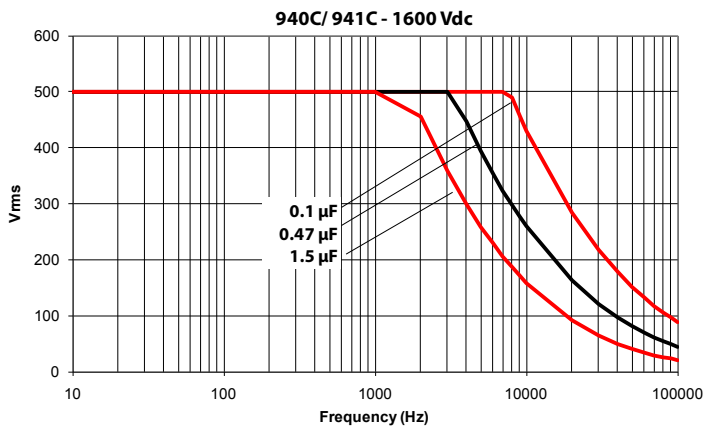
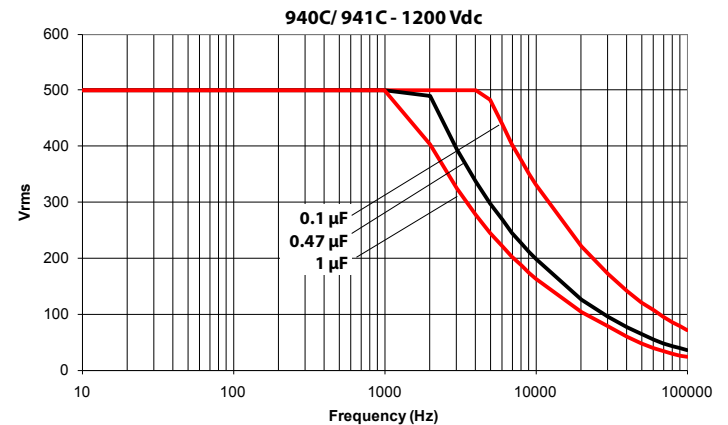
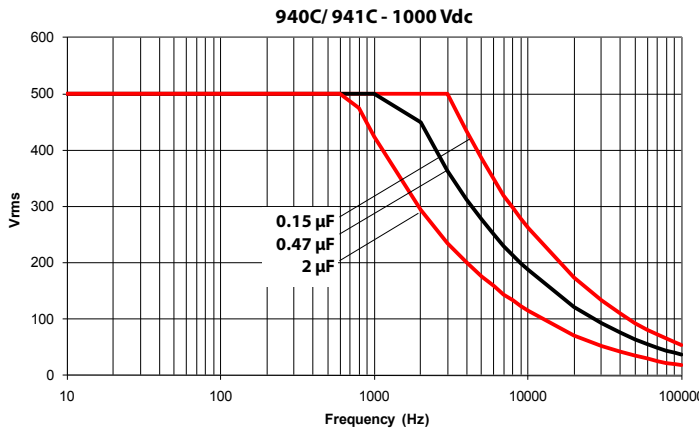
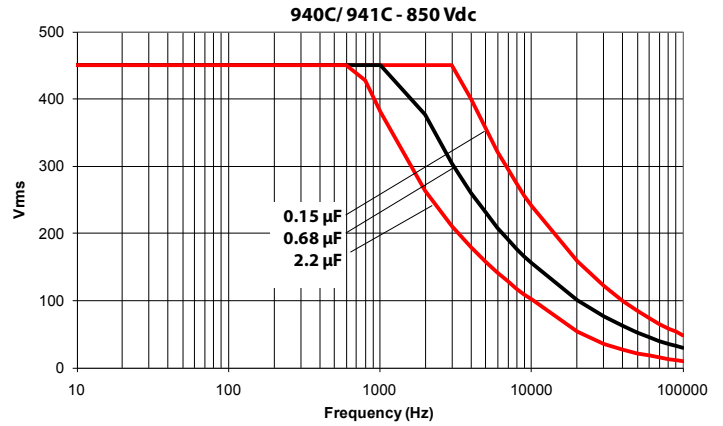
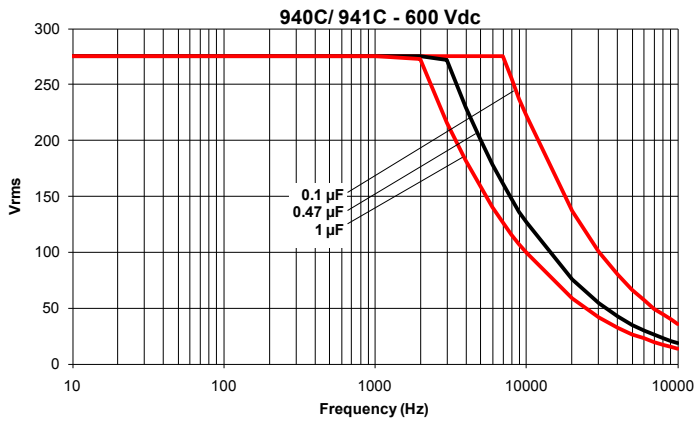
## High dV/dt for Snubber Applications

Cap. ( $\mu$ F)	Catalog Part Number	T mm	W mm	L mm	d mm	Typical ESR (m $\Omega$ )	Typical ESL (nH)	dV/dt (V/ $\mu$ s)	I peak (A)	I <sub>RMS</sub> 70 °C 100 kHz (A)
<b>1200 Vdc (500 Vac)</b>										
.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
<b>1600 Vdc (500 Vac)</b>										
.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
<b>2000 Vdc (500 Vac)</b>										
.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
<b>3000 Vdc (500 Vac)</b>										
.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

# Type 941C, Polypropylene Capacitors, for Pulse, Snubber

## High dV/dt for Snubber Applications

### RMS Voltage vs Frequency @ 25 °C



**Notice and Disclaimer:** All product drawings, descriptions, specifications, statements, information and data (collectively, the "Information") in this datasheet or other publication are subject to change. The customer is responsible for checking, confirming and verifying the extent to which the Information contained in this datasheet or other publication is applicable to an order at the time the order is placed. All Information given herein is believed to be accurate and reliable, but it is presented without any guarantee, warranty, representation or responsibility of any kind, expressed or implied. Statements of suitability for certain applications are based on the knowledge that the Cornell Dubilier company providing such statements ("Cornell Dubilier") has of operating conditions that such Cornell Dubilier company regards as typical for such applications, but are not intended to constitute any guarantee, warranty or representation regarding any such matter – and Cornell Dubilier specifically and expressly disclaims any guarantee, warranty or representation concerning the suitability for a specific customer application, use, storage, transportation, or operating environment. The Information is intended for use only by customers who have the requisite experience and capability to determine the correct products for their application. Any technical advice inferred from this Information or otherwise provided by Cornell Dubilier with reference to the use of any Cornell Dubilier products is given gratis (unless otherwise specified by Cornell Dubilier), and Cornell Dubilier assumes no obligation or liability for the advice given or results obtained. Although Cornell Dubilier strives to apply the most stringent quality and safety standards regarding the design and manufacturing of its products, in light of the current state of the art, isolated component failures may still occur. Accordingly, customer applications which require a high degree of reliability or safety should employ suitable designs or other safeguards (such as installation of protective circuitry or redundancies or other appropriate protective measures) in order to ensure that the failure of an electrical component does not result in a risk of personal injury or property damage. Although all product-related warnings, cautions and notes must be observed, the customer should not assume that all safety measures are indicated in such warnings, cautions and notes, or that other safety measures may not be required.