

Type 935C, Polypropylene Capacitors for High Frequency Filtering

High Current Capacitors for Switching Power Supplies



Type 935 metallized polypropylene capacitors are designed for filtering applications in switching power supplies that operate in the 20-100 kHz range. Their low ESR, high current and high capacitance gives them an advantage over general purpose types. This series is UL recognized for construction only under UL File Number E128034(N).

Highlights

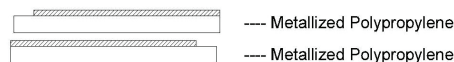
- Low ESR
- High current
- High capacitance
- Self healing
- UL recognized
- Available with lugs

Specifications

Capacitance Range	1.0 to 30.0 μ F
Capacitance Tolerance	± 10 % (K) Standard; ± 5 % (J) Optional
Rated Voltage	100 to 400 Vdc (70 to 250 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	200,000 M Ω x μ F
Test Voltage between Terminals @ 25 $^{\circ}$ C	200% rated DC voltage for 60 s
Test Voltage between Terminals & Case @ 25 $^{\circ}$ C	3 kVac @ 50/60 Hz for 60 s
Life Test	1,000 h @ 85 $^{\circ}$ C, 150% rated DC voltage
Life Expectancy	60,000 h @ rated Vdc, 70 $^{\circ}$ C 30,000 h @ rated Vac, 70 $^{\circ}$ C
RoHS Compliant	

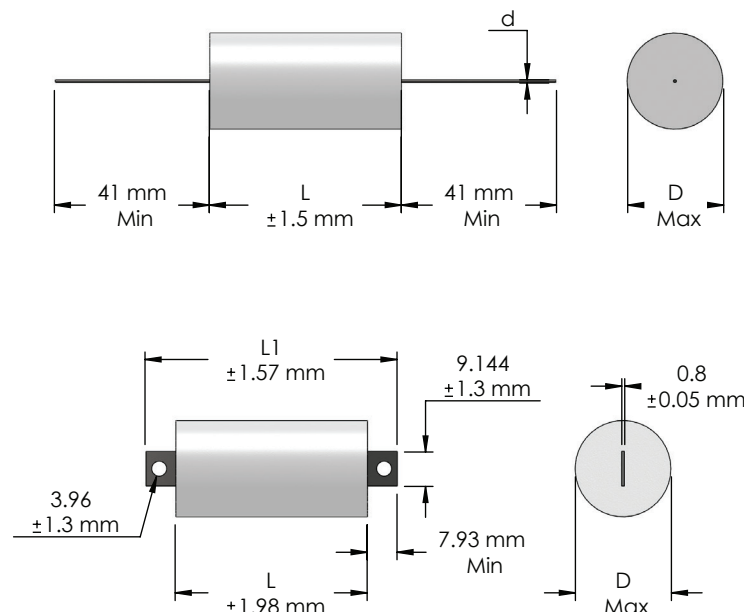
Dimensions

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

935	C	1	P	22	K	-F
Series	Termination Code	Voltage Code	Capacitance Decimal Point	Capacitance Significant Figures (μF)	Tolerance Code	RoHS Compliant Indicator
935	C = Tinned Copper Wire H = Copper Lugs	1 = 100 Vdc 2 = 250 Vdc 4 = 400 Vdc	W = No decimal point		K = ±10% J = ± 5%	

Ratings

Wire Leads

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

Cap. (μF)	Catalog Part Number	D mm	L mm	d mm	Max. ESR		Max. Ripple Current Amps RMS 20-100 kHz							
					20-100 kHz	dV/dt	Case Temperature							
					(mΩ)	(V/μs)	25 °C	35 °C	45 °C	55 °C	65 °C	75 °C	85 °C	
100 Vdc (70 Vac)														
1	935C1W1K-F	11.9 ± 1.6	19.0	0.8	15	25	9.2	8.5	7.8	7.0	6.0	4.9	4.5	
2	935C1W2K-F	13.6 ± 1.6	23.8	0.8	12	16	10.8	10.0	9.1	8.2	7.0	5.8	5.3	
3	935C1W3K-F	15.8 ± 2.4	23.8	1.0	11	16	12.1	11.2	10.3	9.2	8.0	6.5	5.9	
5	935C1W5K-F	16.3 ± 2.4	31.7	1.0	10	10	13.8	12.7	11.6	10.4	9.0	7.4	6.7	
10	935C1W10K-F	20.4 ± 2.4	38.1	1.0	9	8	15.0	15.0	14.2	12.7	11.0	9.0	8.2	
20	935C1W20K-F	22.2 ± 3.2	57.1	1.0	8	5	15.0	15.0	15.0	15.0	13.6	11.1	10.0	
30	935C1W30K-F	27.3 ± 3.2	57.1	1.0	6	5	15.0	15.0	15.0	15.0	15.0	12.4	11.4	
200 Vdc (140 Vac)														
1	935C2W1K-F	11.4 ± 1.6	31.7	0.8	20	15	7.3	7.3	7.3	7.3	7.2	5.9	5.4	
2	935C2W2K-F	15.4 ± 2.4	31.7	0.8	15	15	12.0	12.0	11.3	10.1	8.7	7.1	6.5	
3	935C2W3K-F	16.6 ± 2.4	38.1	1.0	13	12	15.0	13.8	12.6	11.3	9.8	8.0	7.3	
5	935C2W5K-F	19.5 ± 2.4	44.4	1.0	11	9	15.0	15.0	14.7	13.1	11.4	9.3	8.5	
10	935C2W10K-F	23.0 ± 3.2	57.1	1.0	9	7	15.0	15.0	15.0	15.0	13.8	11.3	10.3	
20	935C2W20K-F	33.4 ± 3.2	57.1	1.0	6	7	15.0	15.0	15.0	15.0	15.0	14.1	12.8	
400 Vdc (250 Vac)														
1	935C4W1K-F	15.7 ± 2.4	38.1	0.8	19	19	9.5	9.5	9.5	9.5	9.5	7.8	7.1	
2	935C4W2K-F	20.4 ± 2.4	44.4	1.0	15	16	15.0	15.0	15.0	13.4	11.6	9.5	8.7	
3	935C4W3K-F	24.4 ± 3.2	44.4	1.0	12	16	15.0	15.0	15.0	15.0	13.1	10.7	9.8	
5	935C4W5K-F	27.1 ± 3.2	57.1	1.0	10	11	15.0	15.0	15.0	15.0	15.0	12.5	11.4	
10	935C4W10K-F	39.2 ± 3.2	57.1	1.0	6	11	15.0	15.0	15.0	15.0	15.0	15.0	14.1	

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Lug Leads

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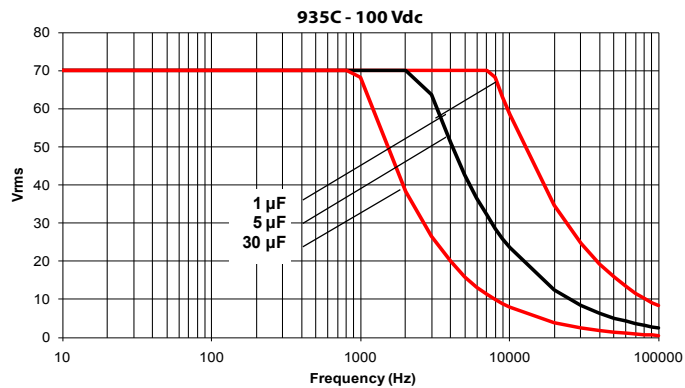
Cap. (μF)	Catalog Part Number	D mm	L mm	L1 mm	Max. ESR		Max. Ripple Current Amps RMS 20-100 kHz							
					20-100 kHz	dV/dt	Case Temperature							
					(mΩ)	(V/μs)	25 °C	35 °C	45 °C	55 °C	65 °C	75 °C	85 °C	
100 Vdc (70 Vac)														
1	935H1W1K-F	11.9 ± 1.6	19.0	41.6	15	25	10.3	9.5	8.7	7.8	6.7	5.5	5.0	
2	935H1W2K-F	13.6 ± 1.6	23.8	46.4	12	16	12.0	11.0	10.0	8.9	7.8	6.3	5.8	
3	935H1W3K-F	15.8 ± 2.4	23.8	46.4	11	16	13.3	12.3	11.2	10.0	8.7	7.1	6.5	
5	935H1W5K-F	16.3 ± 2.4	31.7	53.3	10	10	14.8	13.7	12.5	11.2	9.7	7.9	7.2	
10	935H1W10K-F	20.4 ± 2.4	38.1	57.2	9	8	17.8	16.5	15.0	13.5	11.7	9.5	8.7	
20	935H1W20K-F	22.2 ± 3.2	57.1	77.6	8	5	21.6	20.0	18.3	16.4	14.2	11.6	10.6	
30	935H1W30K-F	27.3 ± 3.2	57.1	77.6	6	5	24.3	22.5	20.5	18.4	15.9	13.0	11.9	
200 Vdc (140 Vac)														
1	935H2W1K-F	11.4 ± 1.6	31.7	53.3	20	15	7.3	7.3	7.3	7.3	7.3	6.4	5.8	
2	935H2W2K-F	15.4 ± 2.4	31.7	53.3	15	15	14.3	13.3	12.1	10.8	9.4	7.7	7.0	
3	935H2W3K-F	16.6 ± 2.4	38.1	57.2	13	12	15.9	14.7	13.5	12.0	10.4	8.5	7.8	
5	935H2W5K-F	19.5 ± 2.4	44.4	65.3	11	9	18.3	17.0	15.5	13.9	12.0	9.8	8.9	
10	935H2W10K-F	23.0 ± 3.2	57.1	77.6	9	7	22.4	20.7	18.9	16.9	14.6	12.0	10.9	
20	935H2W20K-F	33.4 ± 3.2	57.1	77.6	6	7	27.4	25.4	23.2	20.7	17.9	14.7	13.4	
400 Vdc (250 Vac)														
1	935H4W1K-F	15.7 ± 2.4	38.1	57.2	19	19	9.5	9.5	9.5	9.5	9.5	8.3	7.5	
2	935H4W2K-F	20.4 ± 2.4	44.4	65.3	15	16	15.0	15.0	15.0	14.2	12.3	10.0	9.1	
3	935H4W3K-F	24.4 ± 3.2	44.4	65.3	12	16	21.1	19.5	17.8	15.9	13.8	11.3	10.3	
5	935H4W5K-F	27.1 ± 3.2	57.1	77.6	10	11	24.4	22.6	20.6	18.5	16.0	13.1	11.9	
10	935H4W10K-F	39.2 ± 3.2	57.1	77.6	6	11	30.0	27.8	25.4	22.7	19.7	16.1	14.7	

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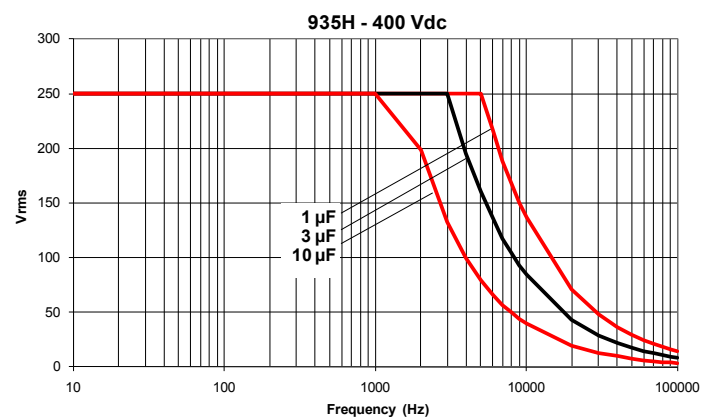
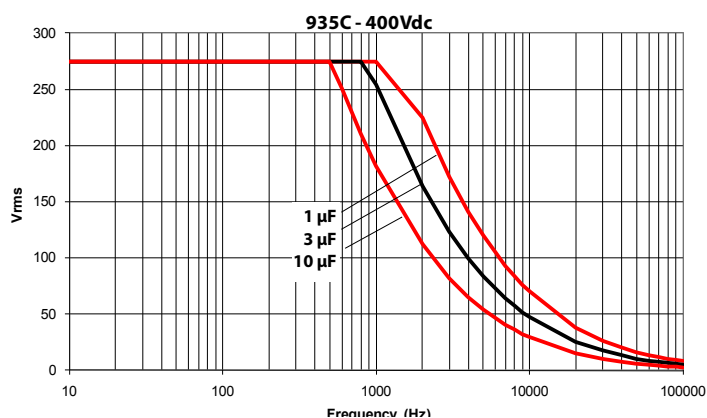
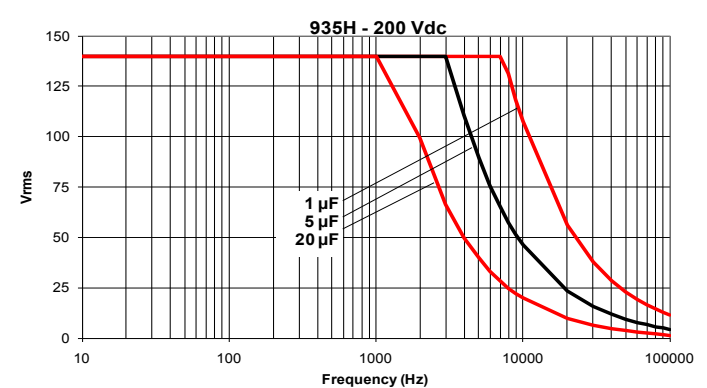
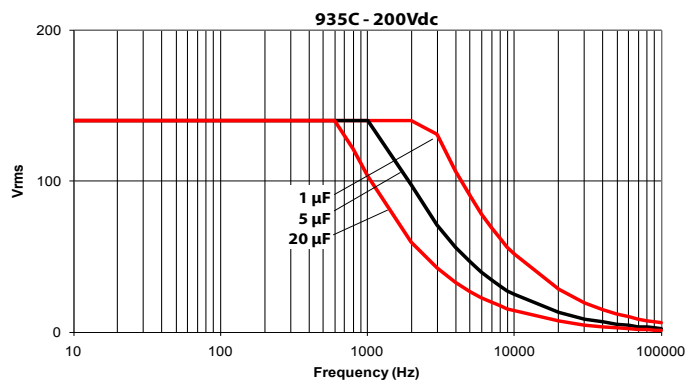
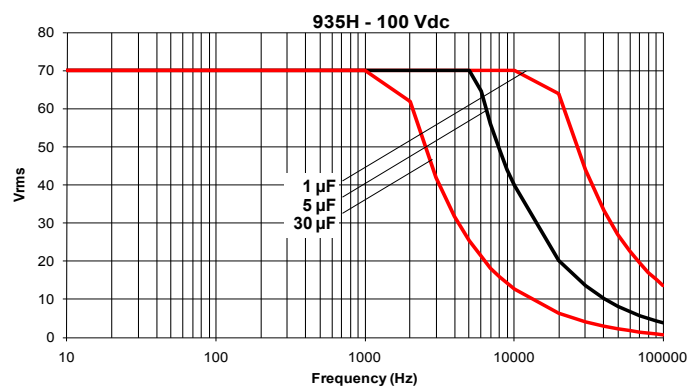
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RMS Voltage vs Frequency @ 25 °C

Wire Leads



Lug Leads



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