

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

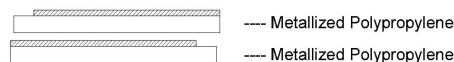
- Low ESR
- High current
- High capacitance
- Self healing
- UL recognized
- Available with lugs

Specifications

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

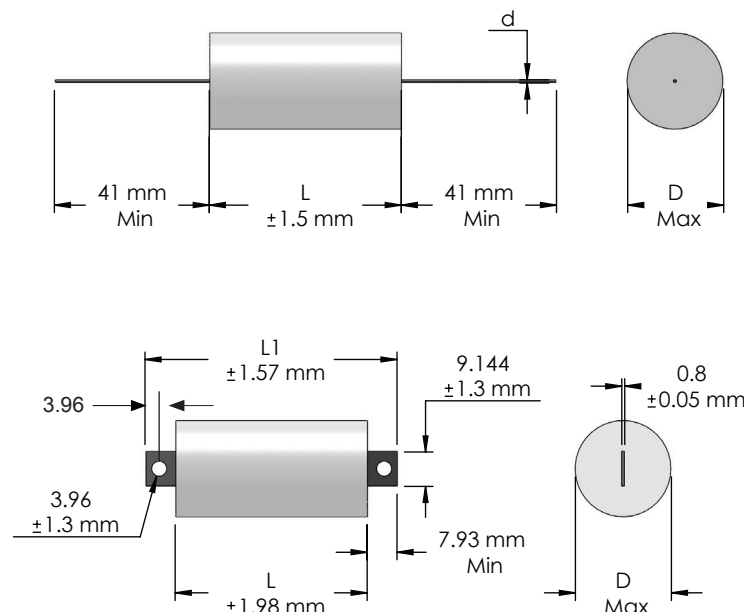
Dimensions

Construction Diagram



Construction Details

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



Type 935C, Metallized Polypropylene Capacitors for High Frequency Filtering

High Current Capacitors for Switching Power Supplies

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 = 200 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	

Type 935C, Metallized Polypropylene Capacitors for High Frequency Filtering

High Current Capacitors for Switching Power Supplies

Lug Leads

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

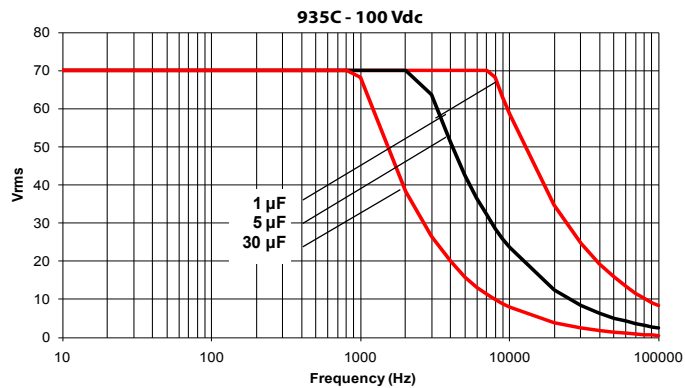
Cap. (μ F)	Catalog Part Number	D mm	L mm	L1 mm	Max. ESR		Max. Ripple Current Amps RMS 20-100 kHz							
					20-100 kHz	dV/dt	Case Temperature							
					(m Ω)	(V/ μ s)	25 °C	35 °C	45 °C	55 °C	65 °C	75 °C	85 °C	
100 Vdc (70 Vac)														
1	935H1W1K-F	11.9 $\pm$ 1.6	19.0	41.6	15	25	10.3	9.5	8.7	7.8	6.7	5.5	5.0	
2	935H1W2K-F	13.6 $\pm$ 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 $\pm$ 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 $\pm$ 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 $\pm$ 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 $\pm$ 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 $\pm$ 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 $\pm$ 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 $\pm$ 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 $\pm$ 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 $\pm$ 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 $\pm$ 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 $\pm$ 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 $\pm$ 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 $\pm$ 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 $\pm$ 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 $\pm$ 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 $\pm$ 3.2	57.1	77.6	6	11	30.0	27.8	25.4	22.7	19.7	16.1	14.7	

Type 935C, Metallized Polypropylene Capacitors for High Frequency Filtering

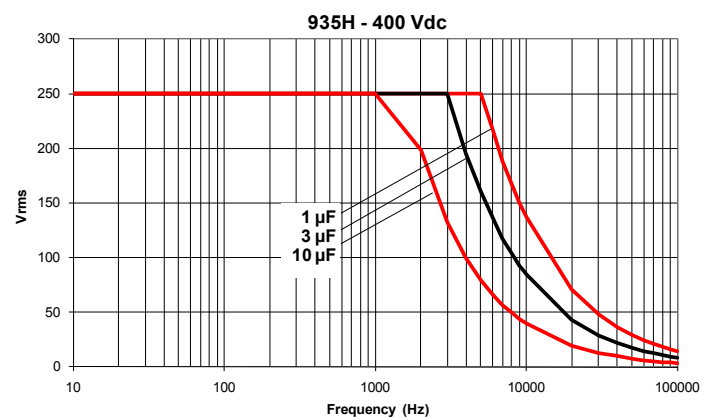
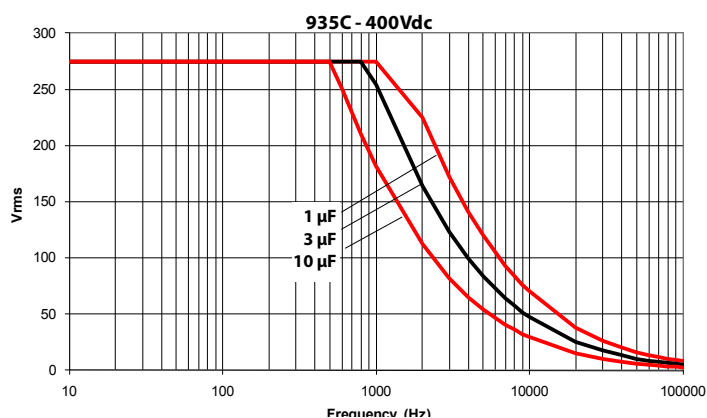
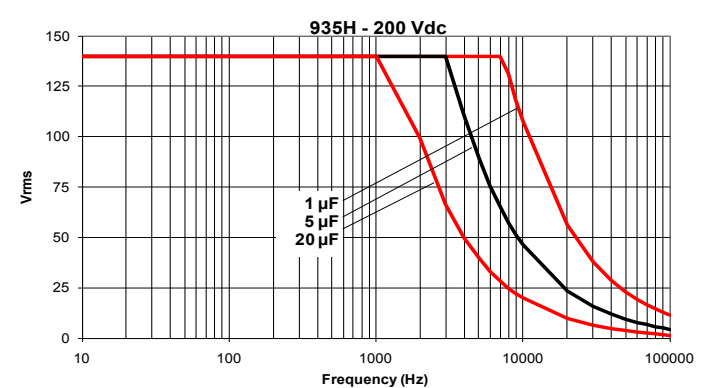
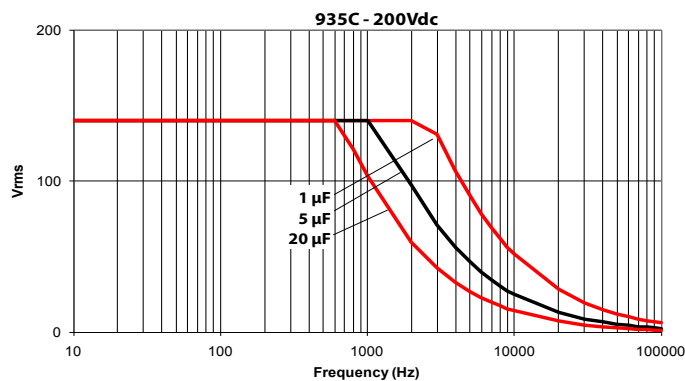
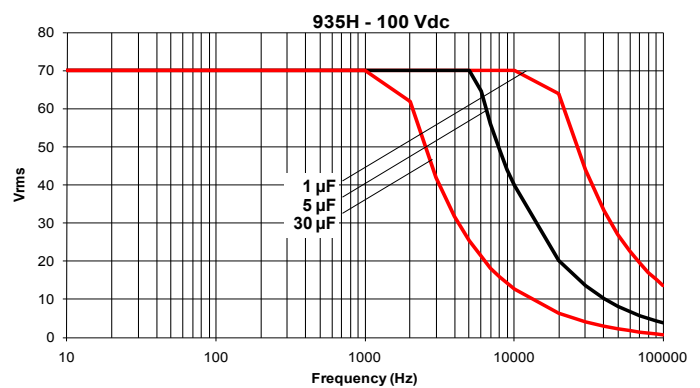
High Current Capacitors for Switching Power Supplies

RMS Voltage vs Frequency @ 25 °C

Wire Leads



Lug Leads



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.