Type 935, 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

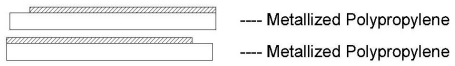
- Low ESR
- High current
- High capacitance
- Self healing
- UL recognized
- Available with lugs

Specifications

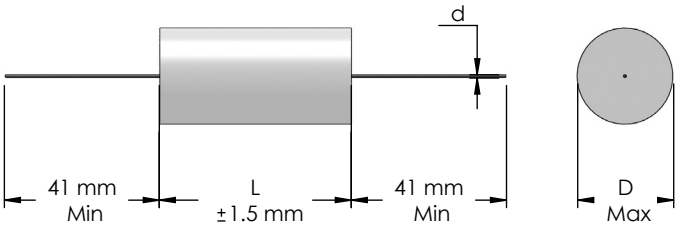
Capacitance Range	1.0 to 30.0 µF
Capacitance Tolerance	±10 % (K) Standard; ±5% (J) Optional
Rated Voltage	100 to 400 Vdc (70 to 250 Vac, 60 Hz)
Operating Temperature Range	–55 ºC to 105 ºC* *Full rated voltage at 85 ºC - derated linearly to 50% rated at 105 ºC
Maximum rms Current	Check tables for values
Insulation Resistance	200,000 MΩ x µF
Test Voltage between Terminals @ 25 ºC	200% rated DC voltage for 60 s
Test Voltage between Terminals & Case @ 25 ºC	3 kVac @ 50/60 Hz for 60 s
Life Test	1,000 h @ 85 ºC, 150% rated DC voltage
Life Expectancy	60,000 h @ rated Vdc, 70 ºC 30,000 h @ rated Vac, 70 ºC
Regulatory Information	

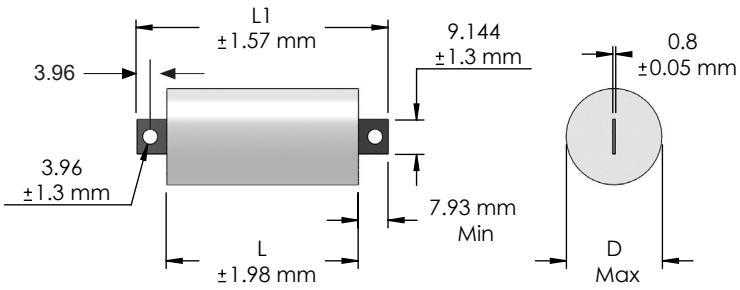
Dimensions

Construction Diagram



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





Type 935, Metallized Polypropylene Capacitors for High Frequency Filtering

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Part Numbering System

935	C	6		P	22	K	–F
Series	Termination Code	Voltage Code		Capacitance Decimal Point	Capacitance Significant figures in µF	Tolerance Code	RoHS Compliant Indicator
935	C =Tinned Copper Wire	6 = 600 Vdc	16 = 1600 Vdc	S = 0.0		K = ±10%	
	F = Insulated Stranded	8 = 800 Vdc	20 = 2000 Vdc	P = 0.		J = ±5%	
	Wire	10 = 1000 Vdc	30 = 3000 Vdc	W = No decimal			
	H = Tinned Lugs	12 = 1200 Vdc		point			

Ratings

Wire Leads

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

Cap.	Catalog	D	L	d	Max. ESR	dV/dt	Max. Ripple Current Amps RMS 20-100 kHz Case Temperature						
(µF)	Part Number	mm	mm	mm	20-100 kHz (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

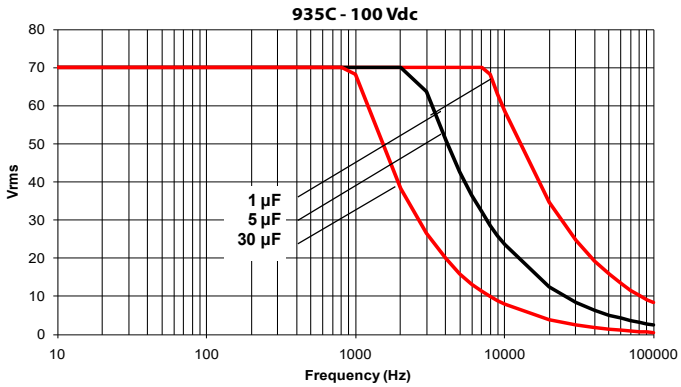
Lug Leads

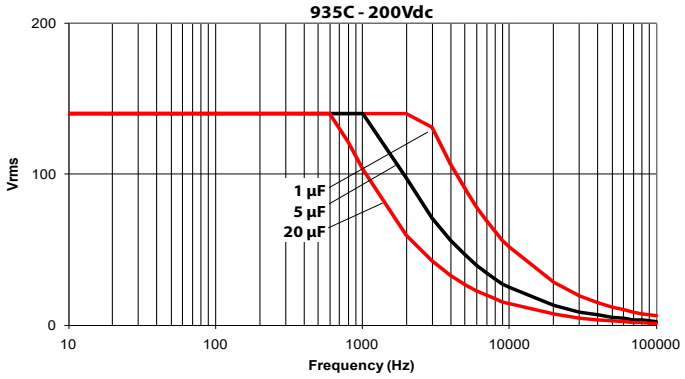
NOTE: Other ratings, sizes and performance specifications are available. Contact us.

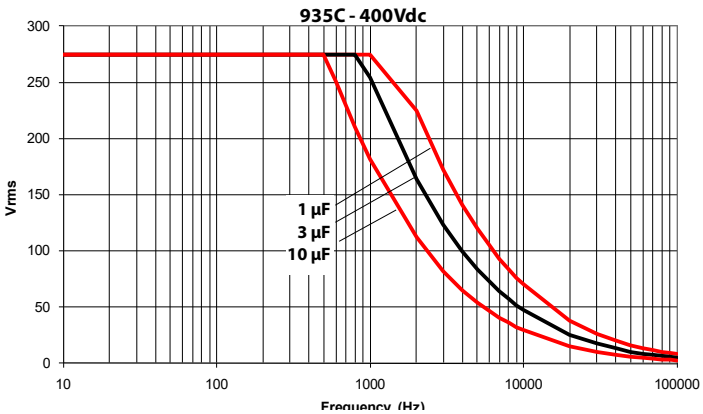
Cap. (µF)	Catalog Part Number	D mm	L mm	L1 mm	Max. ESR 20-100 kHz (mΩ)	dV/dt (V/µs)	Max. Ripple Current Amps RMS 20-100 kHz Case Temperature 25 °C	35 °C	45 °C	55 °C	65 °C	75 °C	85 °C
100 Vdc (70 Vac)													
1	935H1W1K-F	11.9 ± 1.6	19.0	41.6	15	25	10.3	9.5	8.7	7.8	6.7	5.5	5.0
2	935H1W2K-F	13.6 ± 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

RMS Voltage vs Frequency @ 25 °C

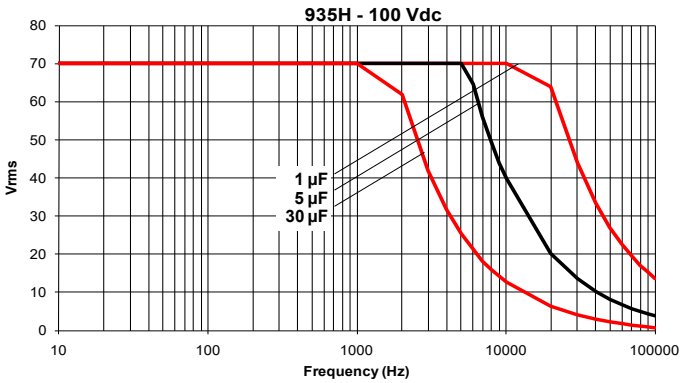
Wire Leads

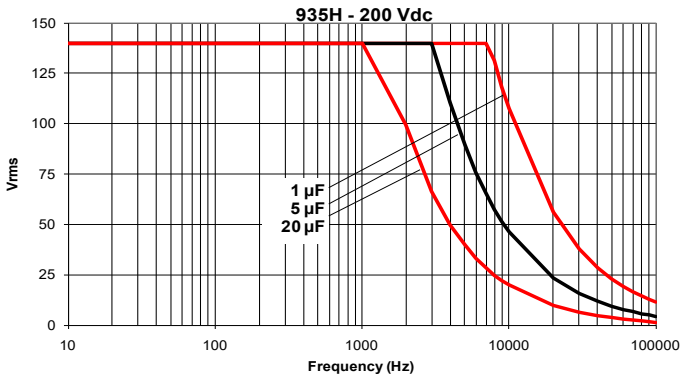


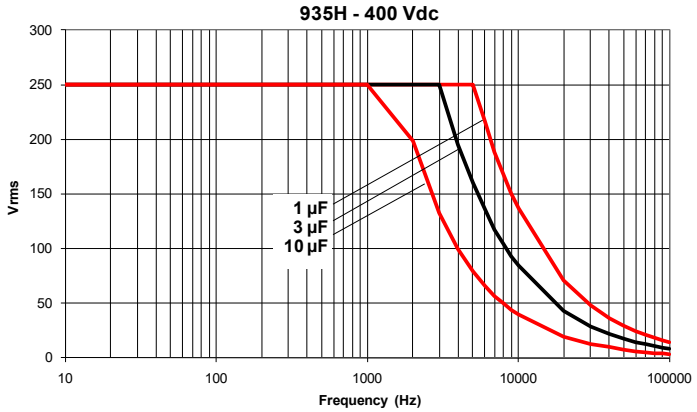




Lug Leads







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