

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 μF |
| 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 μF |
| 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 | |

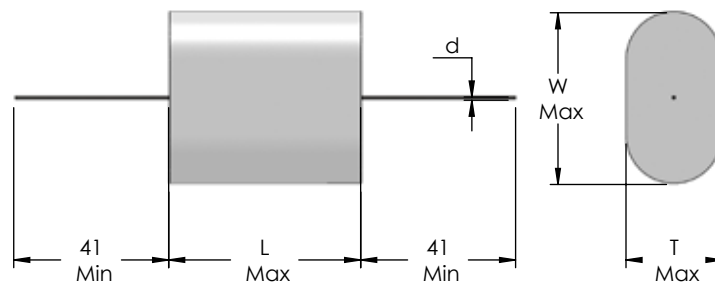
Dimensions

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 | Tolerance | RoHS Compliant Indicator |
| Series | Termination Code | Voltage Code | | Capacitance Decimal Point | Capacitance Significant Figures in μF | Tolerance Code |
| 943 | 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 | | J = $\pm 5\%$ H = $\pm 6\%$ K = $\pm 10\%$ 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 (m Ω) | 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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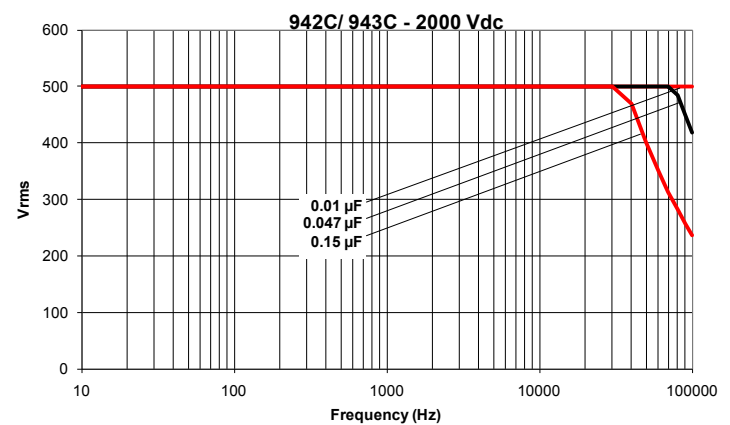
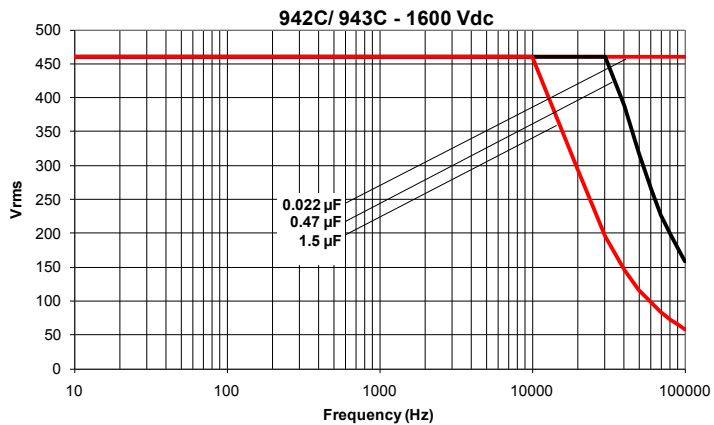
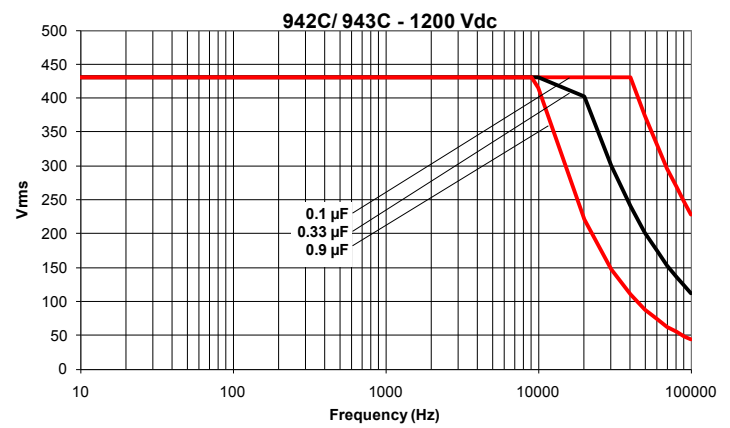
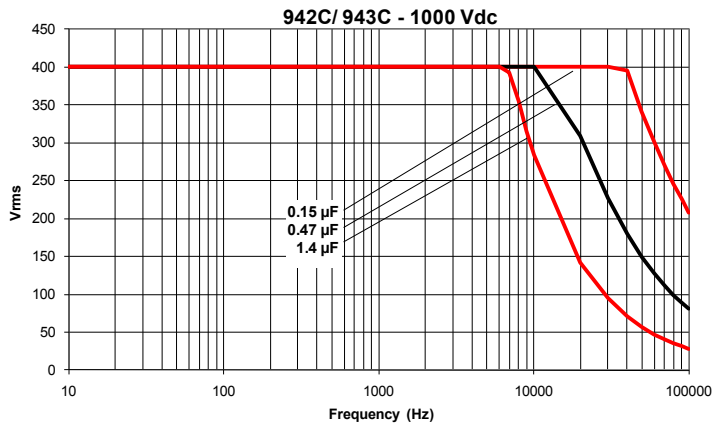
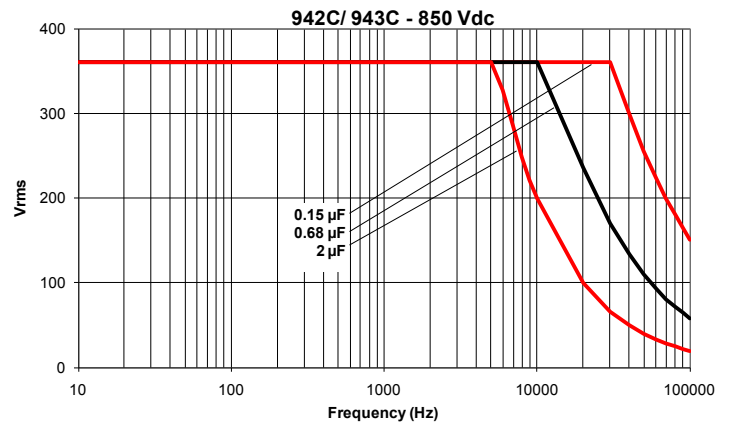
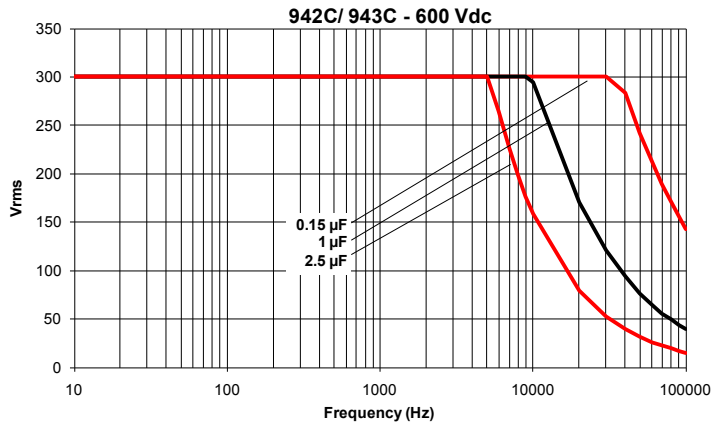
Very High dV/dt for Snubber Applications

| 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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Как с нами связаться

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