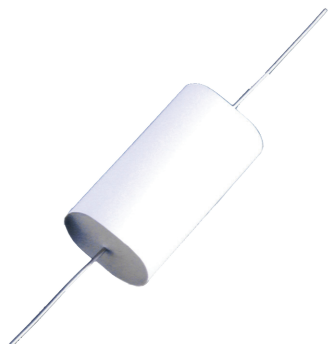


# Type 941, Polypropylene Capacitors, for Pulse, Snubber

## High dV/dt for Snubber Applications



Type 941 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

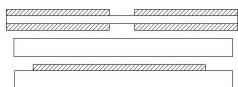
- High dV/dt
- High ripple current
- Low inductance
- Self healing

### Specifications

|                                                         |                                                                                                                                     |
|---------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Capacitance Range                                       | 0.01 to 4.7 $\mu$ F                                                                                                                 |
| Capacitance Tolerance                                   | $\pm 10$ % (K) Standard; $\pm 5$ % (J) Optional                                                                                     |
| Rated Voltage                                           | 600 to 3000 Vdc (275 to 500 Vac, 60 Hz)                                                                                             |
| Operating Temperature Range                             | -55 $^{\circ}$ C to 105 $^{\circ}$ C*<br>*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<br>30,000 h @ rated Vac, 70 $^{\circ}$ C                                                      |
| RoHS Compliant                                          |                                                                                                                                     |

### Dimensions

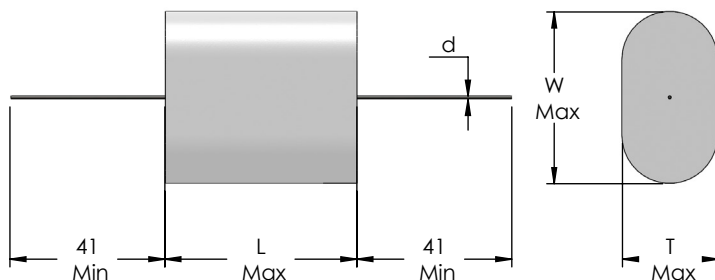
#### Construction Diagram



- Double Metallized Polyester
- Polypropylene
- Metallized Polypropylene

#### Construction Details

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



# Type 941, Polypropylene Capacitors, for Pulse, Snubber

## High dV/dt for Snubber Applications

### Part Numbering System

| 941    | C                                                                        | 6                                                            | P                                               | 22                                        | K                   | -F                       |
|--------|--------------------------------------------------------------------------|--------------------------------------------------------------|-------------------------------------------------|-------------------------------------------|---------------------|--------------------------|
| Series | Termination Code                                                         | Voltage Code                                                 | Capacitance Decimal Point                       | Capacitance Significant Figures (μF)      | Tolerance Code      | RoHS Compliant Indicator |
| 941    | C = Tinned Copper Wire<br>F = Insulated Stranded Wire<br>H = Tinned Lugs | 6 = 600 Vdc<br>8 = 850 Vdc<br>10 = 1000 Vdc<br>12 = 1200 Vdc | 16 = 1600 Vdc<br>20 = 2000 Vdc<br>30 = 3000 Vdc | S = 0.0<br>P = 0.<br>W = No decimal point | K = ±10%<br>J = ±5% |                          |

### Ratings

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

| Cap.<br>(μF)              | Catalog<br>Part Number | T<br>mm | W<br>mm | L<br>mm | d<br>mm | Typical<br>ESR<br>(mΩ) | Typical<br>ESL<br>(nH) | dV/dt<br>(V/μs) | I peak<br>(A) | I <sub>RMS</sub><br>70 °C<br>100 kHz<br>(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 941, Polypropylene Capacitors, for Pulse, Snubber

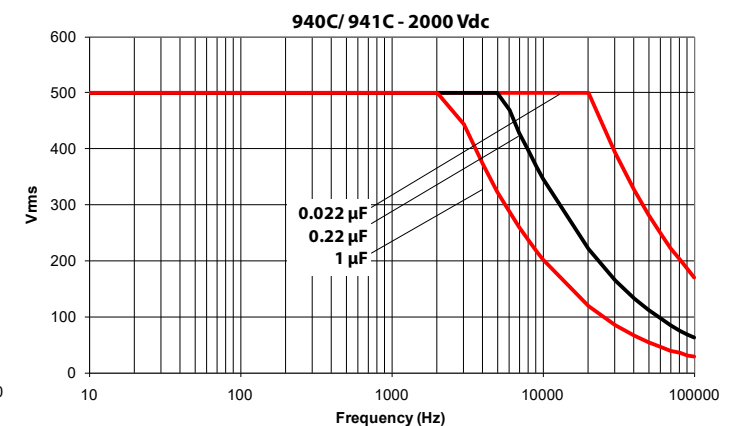
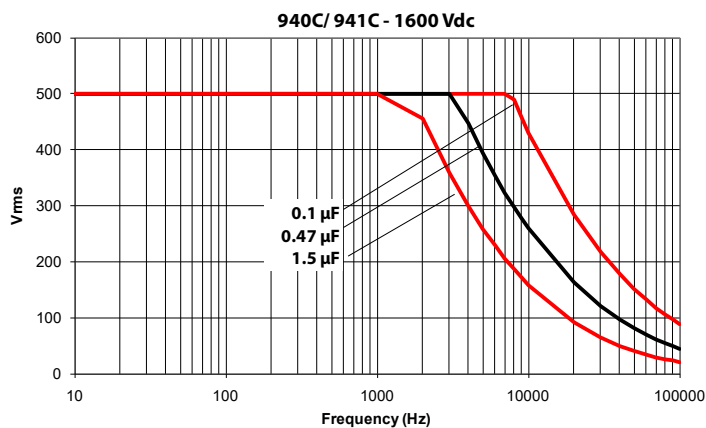
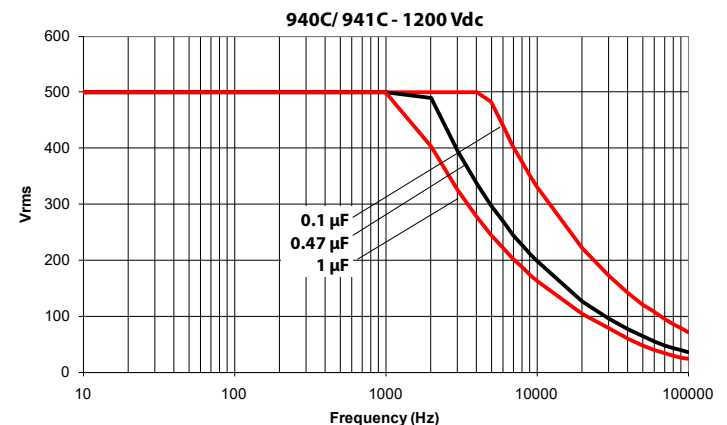
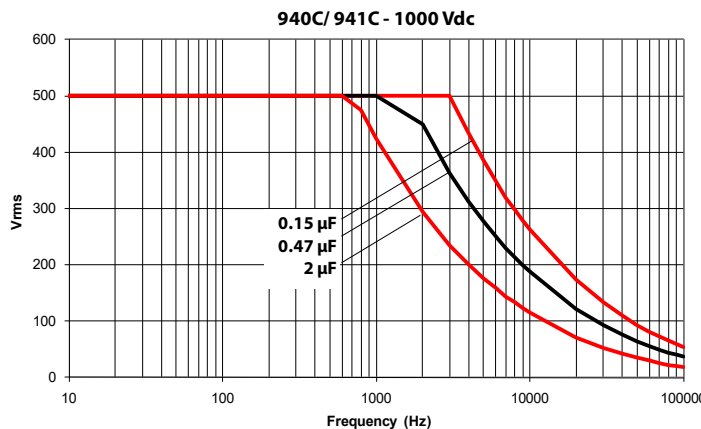
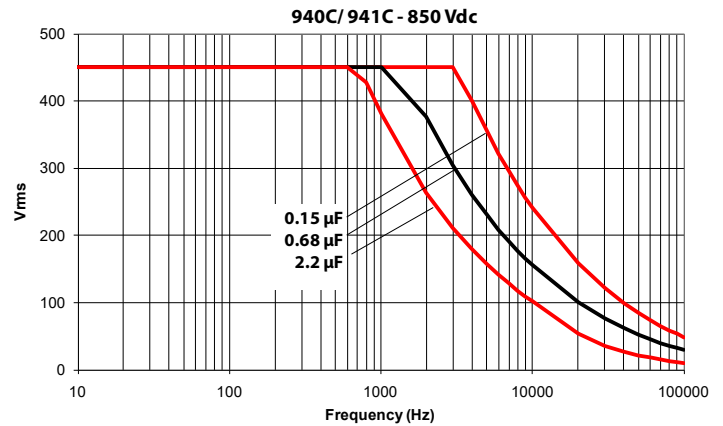
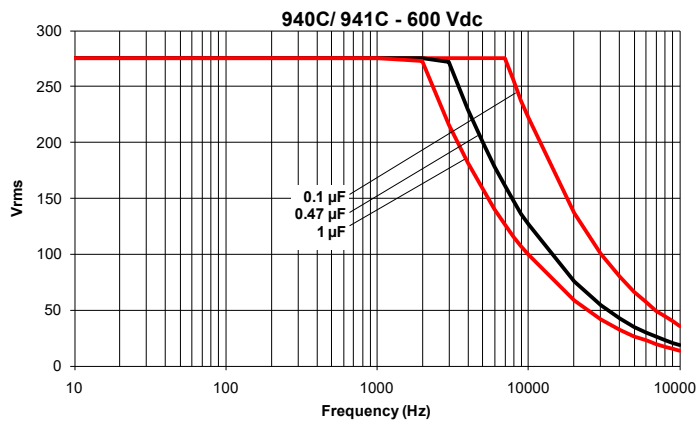
## High dV/dt for Snubber Applications

| Cap.<br>( $\mu$ F)        | Catalog<br>Part Number | T<br>mm | W<br>mm | L<br>mm | d<br>mm | Typical<br>ESR<br>(m $\Omega$ ) | Typical<br>ESL<br>(nH) | dV/dt<br>(V/ $\mu$ s) | I peak<br>(A) | I <sub>RMS</sub><br>70 °C<br>100 kHz<br>(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 941, Polypropylene Capacitors, for Pulse, Snubber

## High dV/dt for Snubber Applications

### RMS Voltage vs Frequency @ 25 °C



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[941C12W1P5K-F](#) [941C12P47K-F](#) [941C16P47K-F](#) [941C12P33K-F](#) [941C6P22K-F](#) [941C6P47K-F](#) [941C12W1K-F](#)  
[941C16W1P5K-F](#) [941C10P47K-F](#) [941C20P68K-F](#) [941C20W1K-F](#) [941C6P68K-F](#) [941C6W1P5K-F](#) [941C6W3P3K-F](#)  
[941C8W2P5K-F](#)