

# Type 942C, Polypropylene Capacitors, for High Pulse, Snubber

## Very High dV/dt for Snubber Applications



Type 942 round, 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 $\mu$ F                                                                         |
| 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*<br>*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 $\Omega$ x $\mu$ F                                                              |
| 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 h @ 85 °C, 125% rated DC voltage                                                      |
| Life Expectancy                               | 60,000 h @ rated Vdc, 70 °C<br>30,000 h @ rated Vac, 70 °C                                  |
| RoHS Compliant                                |                                                                                             |

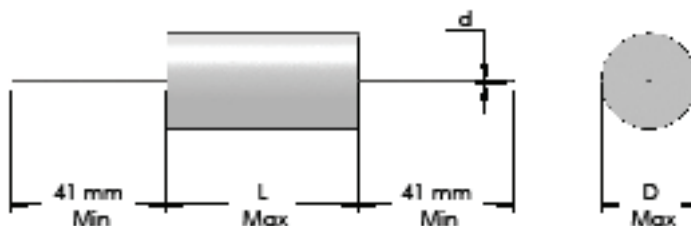
### Dimensions

#### Construction Diagram



#### Construction Details

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



# Type 942C, Polypropylene Capacitors, for High Pulse, Snubber

## Very High dV/dt for Snubber Applications

### Part Numbering System

|               |                             |                     |               |                                                          |                       |                                 |
|---------------|-----------------------------|---------------------|---------------|----------------------------------------------------------|-----------------------|---------------------------------|
| <b>942</b>    | <b>C</b>                    | <b>6</b>            | <b>P</b>      | <b>22</b>                                                | <b>K</b>              | <b>-F</b>                       |
|               |                             |                     |               |                                                          |                       |                                 |
| <b>Series</b> | <b>Termination Code</b>     | <b>Voltage Code</b> |               | <b>Capacitance Significant Figures <math>\mu</math>F</b> | <b>Tolerance Code</b> | <b>RoHS Compliant Indicator</b> |
| 942           | C = Tinned Copper Wire      | 6 = 600 Vdc         | 12 = 1200 Vdc | S = 0.0                                                  | K = $\pm 10\%$        |                                 |
|               | F = Insulated Stranded Wire | 8 = 850 Vdc         | 16 = 1600 Vdc | P = 0.                                                   |                       |                                 |
|               |                             | 10 = 1000 Vdc       | 20 = 2000 Vdc | W = No decimal point                                     |                       |                                 |
|               | H = Copper Lugs             |                     |               |                                                          |                       |                                 |

### Ratings

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

| Cap. ( $\mu$ F)           | Catalog Part Number | D mm | L mm | d mm | Typical ESR (m $\Omega$ ) | Typical ESL (nH) | dV/dt (V/ $\mu$ s) | I <sub>PEAK</sub> (A) | I <sub>RMS</sub> 70 °C 100 kHz (A) |
|---------------------------|---------------------|------|------|------|---------------------------|------------------|--------------------|-----------------------|------------------------------------|
| <b>600 Vdc (300 Vac)</b>  |                     |      |      |      |                           |                  |                    |                       |                                    |
| .15                       | 942C6P15K-F         | 14.0 | 34.0 | 1.0  | 5                         | 21               | 1427               | 214                   | 7.7                                |
| .22                       | 942C6P22K-F         | 16.0 | 34.0 | 1.0  | 7                         | 22               | 1427               | 314                   | 7.0                                |
| .33                       | 942C6P33K-F         | 19.0 | 34.0 | 1.0  | 6                         | 23               | 1427               | 471                   | 8.4                                |
| .47                       | 942C6P47K-F         | 22.0 | 34.0 | 1.0  | 5                         | 24               | 1427               | 671                   | 10.1                               |
| .68                       | 942C6P68K-F         | 25.6 | 34.0 | 1.2  | 4                         | 26               | 1427               | 970                   | 12.4                               |
| 1.00                      | 942C6W1K-F          | 23.5 | 46.0 | 1.2  | 5                         | 30               | 800                | 800                   | 11.8                               |
| 1.50                      | 942C6W1P5K-F        | 28.5 | 46.0 | 1.2  | 4                         | 32               | 800                | 1200                  | 14.8                               |
| 2.00                      | 942C6W2K-F          | 28.5 | 54.0 | 1.2  | 3                         | 36               | 628                | 1256                  | 18.2                               |
| 2.20                      | 942C6W2P2K-F        | 30.0 | 54.0 | 1.2  | 3                         | 36               | 628                | 1382                  | 18.8                               |
| 2.50                      | 942C6W2P5K-F        | 32.0 | 54.0 | 1.2  | 3                         | 37               | 628                | 1570                  | 19.5                               |
| <b>850 Vdc (360 Vac)</b>  |                     |      |      |      |                           |                  |                    |                       |                                    |
| .15                       | 942C8P15K-F         | 15.5 | 34.0 | 1.0  | 5                         | 22               | 1712               | 257                   | 8.1                                |
| .22                       | 942C8P22K-F         | 18.0 | 34.0 | 1.0  | 7                         | 23               | 1712               | 377                   | 7.5                                |
| .33                       | 942C8P33K-F         | 21.5 | 34.0 | 1.0  | 6                         | 24               | 1712               | 565                   | 7.7                                |
| .47                       | 942C8P47K-F         | 25.0 | 34.0 | 1.2  | 5                         | 26               | 1712               | 805                   | 10.9                               |
| .68                       | 942C8P68K-F         | 29.5 | 34.0 | 1.2  | 4                         | 27               | 1712               | 1164                  | 13.6                               |
| 1.00                      | 942C8W1K-F          | 28.0 | 46.0 | 1.2  | 5                         | 32               | 960                | 960                   | 13.1                               |
| 1.50                      | 942C8W1P5K-F        | 29.0 | 54.0 | 1.2  | 4                         | 36               | 754                | 1131                  | 15.9                               |
| 2.00                      | 942C8W2K-F          | 29.5 | 64.0 | 1.2  | 3                         | 41               | 574                | 1148                  | 19.9                               |
| <b>1000 Vdc (400 Vac)</b> |                     |      |      |      |                           |                  |                    |                       |                                    |
| .10                       | 942C10P1K-F         | 16.0 | 34.0 | 1.0  | 8                         | 22               | 2283               | 228                   | 6.6                                |
| .15                       | 942C10P15K-F        | 19.0 | 34.0 | 1.0  | 7                         | 23               | 2283               | 342                   | 7.8                                |
| .22                       | 942C10P22K-F        | 22.5 | 34.0 | 1.0  | 6                         | 24               | 2283               | 502                   | 9.3                                |
| .33                       | 942C10P33K-F        | 21.0 | 46.0 | 1.0  | 5                         | 29               | 1280               | 422                   | 11.0                               |
| .47                       | 942C10P47K-F        | 24.0 | 46.0 | 1.2  | 5                         | 30               | 1280               | 601                   | 11.9                               |
| .68                       | 942C10P68K-F        | 28.5 | 46.0 | 1.2  | 5                         | 32               | 1280               | 870                   | 13.3                               |
| 1.00                      | 942C10W1K-F         | 30.0 | 54.0 | 1.2  | 5                         | 37               | 1005               | 1005                  | 14.6                               |
| 1.40                      | 942C10W1P4K-F       | 31.5 | 64.0 | 1.2  | 4                         | 41               | 765                | 1071                  | 17.9                               |

# Type 942C, Polypropylene Capacitors, for High Pulse, Snubber

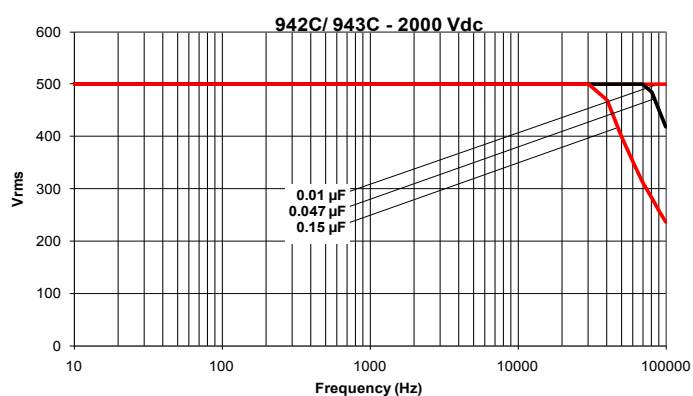
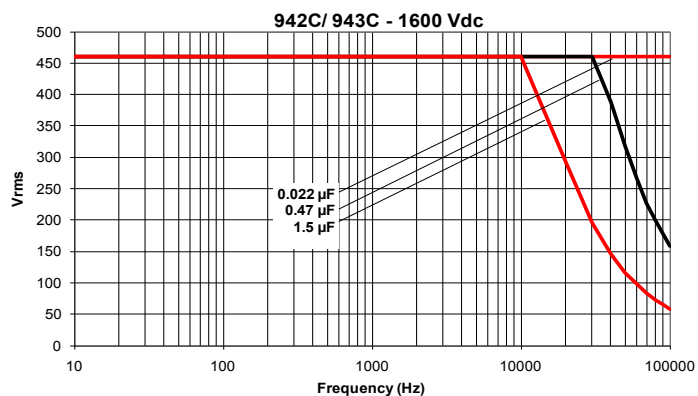
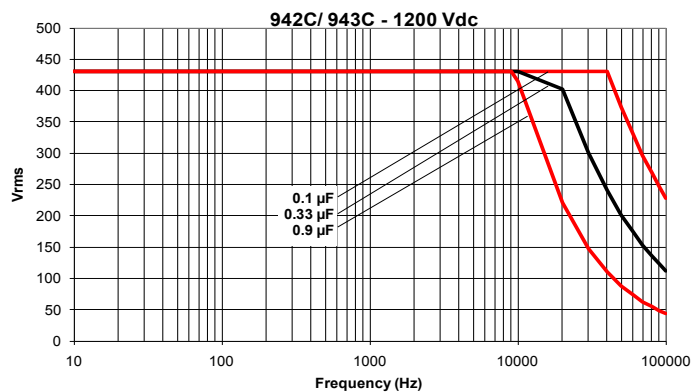
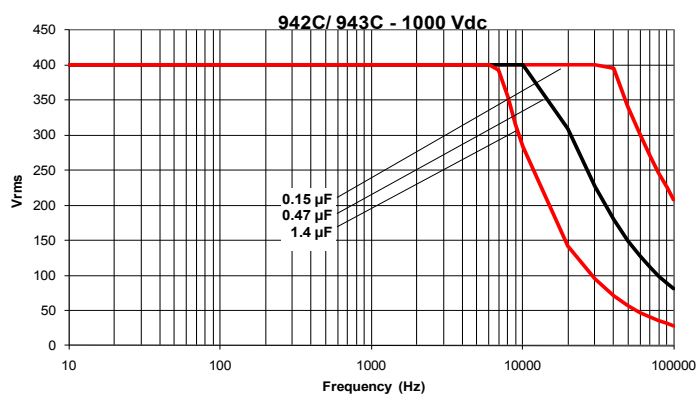
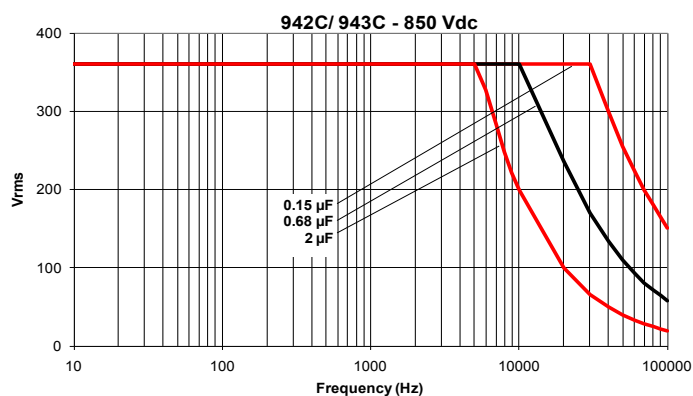
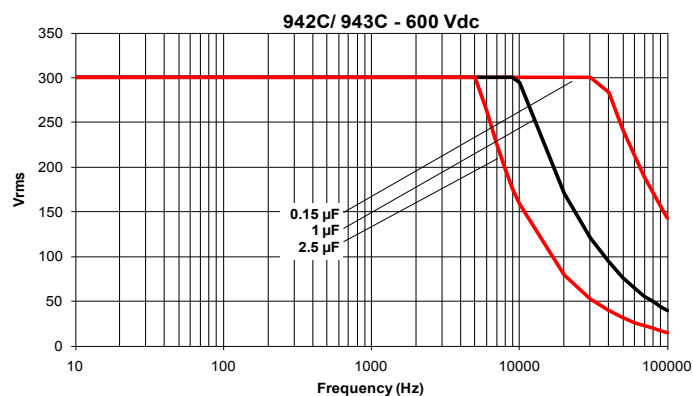
## Very High dV/dt for Snubber Applications

| Cap.<br>( $\mu$ F)        | Catalog<br>Part Number | D<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 <sub>PEAK</sub><br>(A) | I <sub>RMS</sub><br>70 °C<br>100 kHz<br>(A) |
|---------------------------|------------------------|---------|---------|---------|---------------------------------|------------------------|-----------------------|--------------------------|---------------------------------------------|
| <b>1200 Vdc (430 Vac)</b> |                        |         |         |         |                                 |                        |                       |                          |                                             |
| .10                       | 942C12P1K-F            | 19.0    | 34.0    | 1.0     | 5                               | 23                     | 2854                  | 285                      | 9.2                                         |
| .15                       | 942C12P15K-F           | 22.5    | 34.0    | 1.0     | 5                               | 24                     | 2854                  | 428                      | 10.2                                        |
| .22                       | 942C12P22K-F           | 26.5    | 34.0    | 1.2     | 6                               | 26                     | 2854                  | 628                      | 10.3                                        |
| .33                       | 942C12P33K-F           | 24.5    | 46.0    | 1.2     | 6                               | 31                     | 1600                  | 528                      | 11.0                                        |
| .47                       | 942C12P47K-F           | 29.0    | 46.0    | 1.2     | 5                               | 32                     | 1600                  | 752                      | 13.4                                        |
| .68                       | 942C12P68K-F           | 30.5    | 54.0    | 1.2     | 5                               | 37                     | 1256                  | 854                      | 14.7                                        |
| .90                       | 942C12P9K-F            | 31.0    | 64.0    | 1.2     | 5                               | 41                     | 957                   | 861                      | 15.9                                        |
| <b>1600 Vdc (460 Vac)</b> |                        |         |         |         |                                 |                        |                       |                          |                                             |
| .022                      | 942C16S22K-F           | 12.0    | 34.0    | 1.0     | 27                              | 20                     | 3425                  | 75                       | 3.0                                         |
| .033                      | 942C16S33K-F           | 14.5    | 34.0    | 1.0     | 14                              | 21                     | 3425                  | 113                      | 4.7                                         |
| .047                      | 942C16S47K-F           | 16.5    | 34.0    | 1.0     | 8                               | 22                     | 3425                  | 161                      | 6.7                                         |
| .068                      | 942C16S68K-F           | 19.0    | 34.0    | 1.0     | 6                               | 23                     | 3425                  | 233                      | 8.4                                         |
| .10                       | 942C16P1K-F            | 22.5    | 34.0    | 1.0     | 4                               | 24                     | 3425                  | 342                      | 11.4                                        |
| .15                       | 942C16P15K-F           | 20.5    | 46.0    | 1.0     | 5                               | 29                     | 1919                  | 288                      | 10.9                                        |
| .22                       | 942C16P22K-F           | 23.5    | 46.0    | 1.0     | 5                               | 68                     | 1919                  | 422                      | 11.8                                        |
| .33                       | 942C16P33K-F           | 28.5    | 46.0    | 1.2     | 5                               | 32                     | 1919                  | 633                      | 13.3                                        |
| .47                       | 942C16P47K-F           | 30.0    | 54.0    | 1.2     | 5                               | 36                     | 1507                  | 708                      | 14.6                                        |
| .56                       | 942C16P56K-F           | 28.5    | 64.0    | 1.2     | 5                               | 40                     | 1148                  | 643                      | 15.1                                        |
| .68                       | 942C16P68K-F           | 31.5    | 64.0    | 1.2     | 5                               | 42                     | 1148                  | 781                      | 16.0                                        |
| <b>2000 Vdc (500 Vac)</b> |                        |         |         |         |                                 |                        |                       |                          |                                             |
| .01                       | 942C20S1K-F            | 12.0    | 34.0    | 1.0     | 50                              | 20                     | 5137                  | 51                       | 2.2                                         |
| .015                      | 942C20S15K-F           | 14.5    | 34.0    | 1.0     | 40                              | 21                     | 5137                  | 77                       | 2.8                                         |
| .022                      | 942C20S22K-F           | 16.5    | 34.0    | 1.0     | 20                              | 22                     | 5137                  | 113                      | 4.2                                         |
| .033                      | 942C20S33K-F           | 19.5    | 34.0    | 1.0     | 12                              | 23                     | 5137                  | 170                      | 6.0                                         |
| .047                      | 942C20S47K-F           | 18.0    | 46.0    | 1.0     | 10                              | 28                     | 2879                  | 135                      | 7.1                                         |
| .068                      | 942C20S68K-F           | 20.5    | 46.0    | 1.0     | 6                               | 29                     | 2879                  | 196                      | 9.9                                         |
| .10                       | 942C20P1K-F            | 24.5    | 46.0    | 1.2     | 5                               | 30                     | 2879                  | 288                      | 12.1                                        |
| .15                       | 942C20P15K-F           | 29.5    | 46.0    | 1.2     | 5                               | 32                     | 2879                  | 432                      | 13.5                                        |

# Type 942C, Polypropylene Capacitors, for High Pulse, Snubber

## Very High dV/dt for Snubber Applications

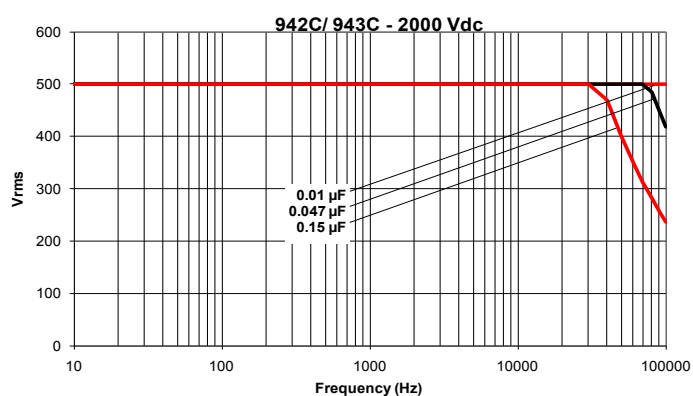
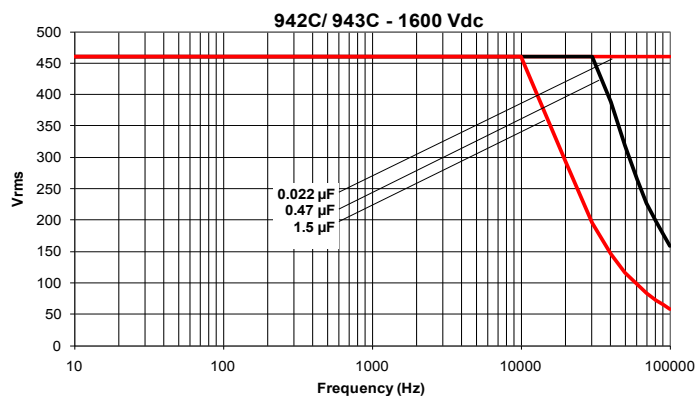
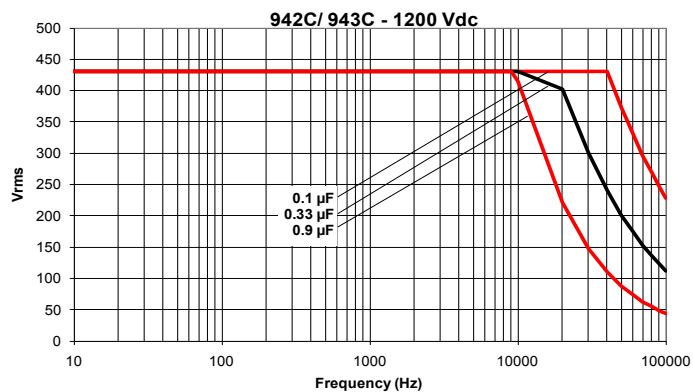
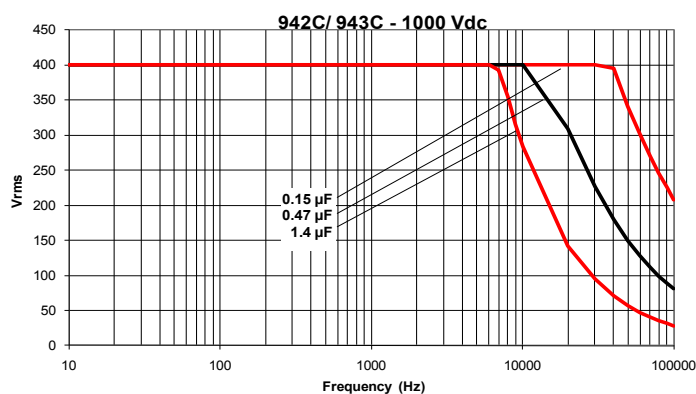
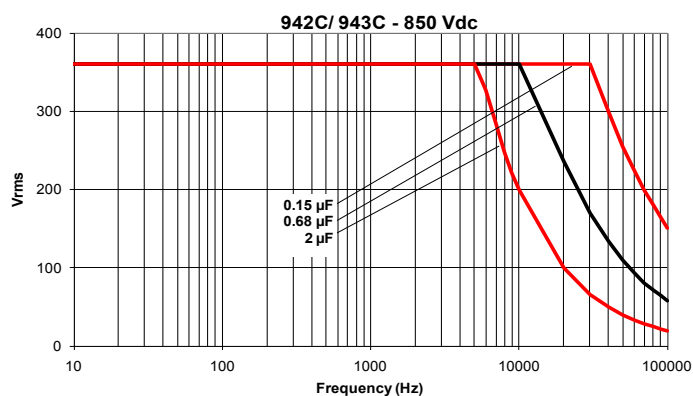
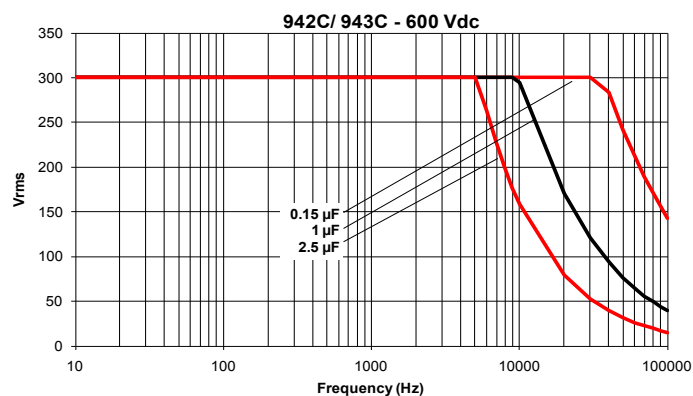
### RMS Voltage vs Frequency @ 25 °C



# Type 942C, Polypropylene Capacitors, for High Pulse, Snubber

## Very High dV/dt for Snubber Applications

### RMS Voltage vs Frequency @ 25 °C



## Данный компонент на территории Российской Федерации

**Вы можете приобрести в компании MosChip.**

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

moschip.ru\_6

moschip.ru\_9