

The products listed in this catalog are only a few of the thousands of variations that TUSONIX produces. For custom component design, please contact the factory direct.

Catalog 4000R7  
Part 1  
Revised 4/10/07



## TUSONIX Capabilities

### Manufacturing

TUSONIX utilizes more than 120,000 square feet (11,150 square meters) of manufacturing space, dedicated to providing high quality EMI/RFI products.

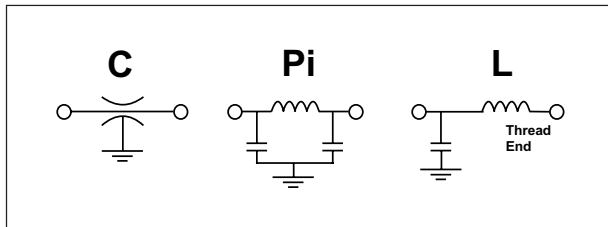
In addition to the standard catalog items, TUSONIX has numerous variations of these designs and can custom design a part to meet your particular specifications. TUSONIX maintains a staff of highly skilled Customer Engineers to assist our customers in the design of custom products.

### Meeting Customer Requirements

Headquartered in Tucson, Arizona, TUSONIX is devoted to bringing the company's broad product line to an ever expanding world market.

TUSONIX has more than five decades of efficient manufacturing expertise in its corporate heritage, and utilizes sophisticated equipment to provide customers with attractive pricing and full value for the products they purchase.

### Circuits Available in this Catalog



### TUSONIX Quality Objective

The timely delivery of quality products which exceed our customers' expectations through the use of effective teamwork and the process of continuous improvement.

### TUSONIX Quality

Quality is the key ingredient in all TUSONIX products with approval to MIL-PRF-15733, MIL-PRF-81 and MIL-C-11015. TUSONIX maintains a fully approved Quality Assurance laboratory and relies heavily on Statistical Process Control to monitor critical operations.

# TUSONIX

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## Providing Excellence in EMI/RFI Filtering Components...

**TUSONIX, Inc.** manufactures thousands of EMC Products featuring an extensive line of EMI/RFI Filters and Capacitors.

We combine Technology, Expertise, Versatility and Innovation to produce the industry's most complete line of ceramic EMI/RFI Filters.

TUSONIX draws upon its 50+ years of manufacturing expertise and an accumulated base of ceramic dielectric technology to provide an ever expanding line of EMI/RFI Filters and Capacitors.

Tusonix products not only set the industry standard but lead the way in the development of tomorrow's EMI Technology.



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### How to use this Catalog

This Catalog identifies standard parts produced by TUSONIX. Part numbers are listed in sections by mounting style (Solder Mount or Bushing Mount). Bushing parts are listed by circuit configuration and arranged in ascending order with respect to voltage rating at 125°C and then capacitance value.

#### FILTERS

Filters are assigned a four digit style number followed by a three digit variation number. (Example: 4100-003)

#### FEED-THRU CAPACITORS

Feed-thru capacitors are assigned a three or four digit style number followed by a three digit variation number, then the EIA Code for temperature characteristic, capacitance and tolerance. (Example: 2482-012-X5U0-272M)

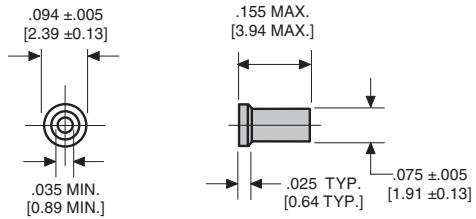
For additional EIA Codes and Tolerances, please see page 25.

For additional product lines manufactured by TUSONIX, please refer to the back cover of this Catalog.

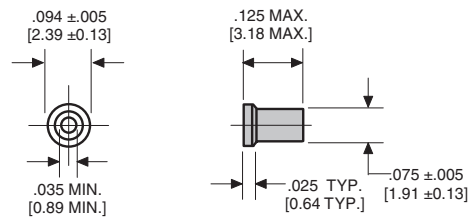
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## Solder Mount Feed-Thru Capacitors

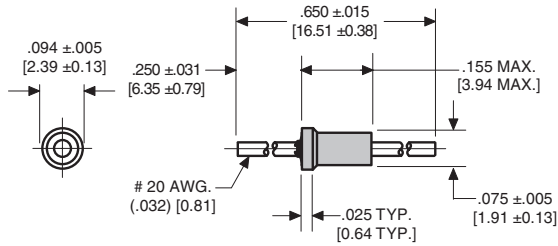


STYLE 1

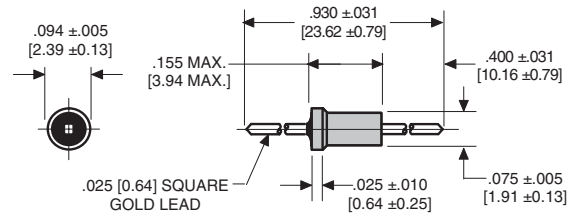


STYLE 2

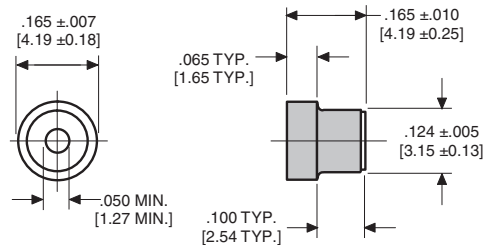
inches  
[mm]



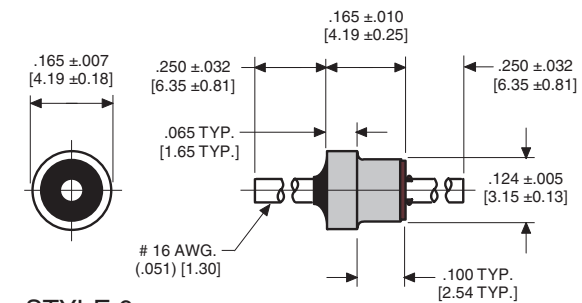
STYLE 3



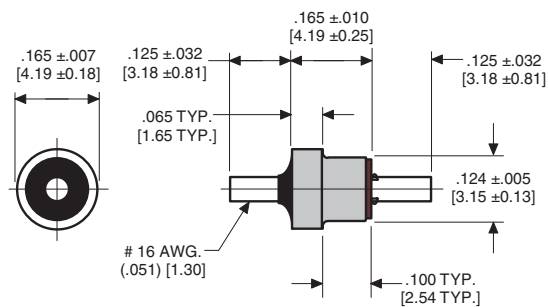
STYLE 4



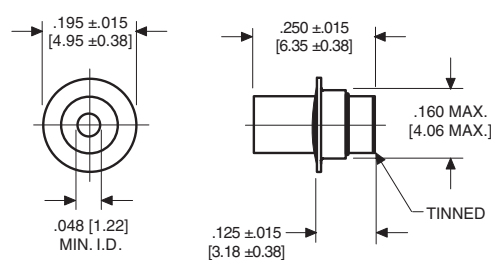
STYLE 5



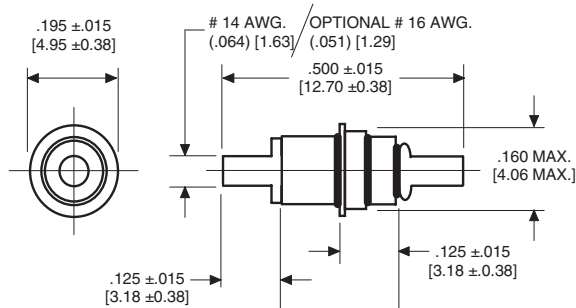
STYLE 6



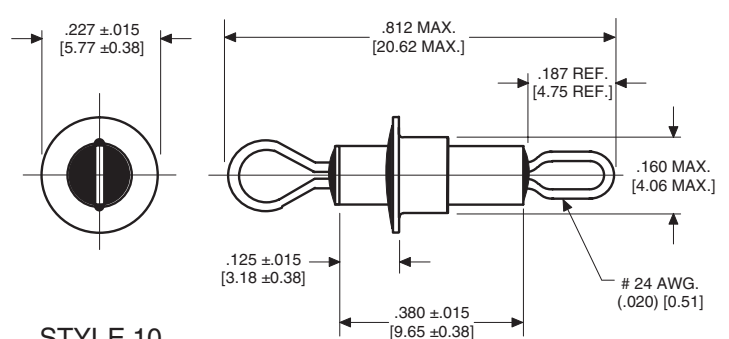
STYLE 7



STYLE 8

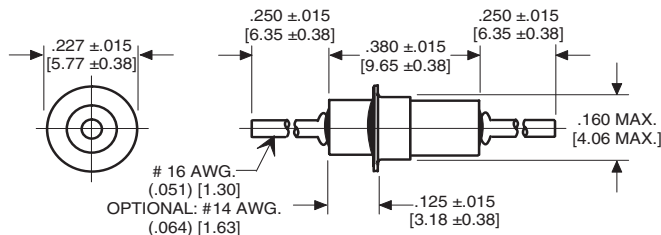


STYLE 9

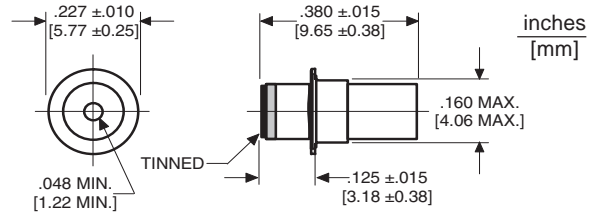


STYLE 10

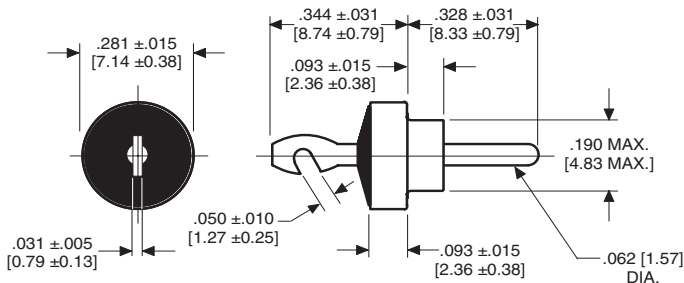
## Solder Mount Feed-Thru Capacitors



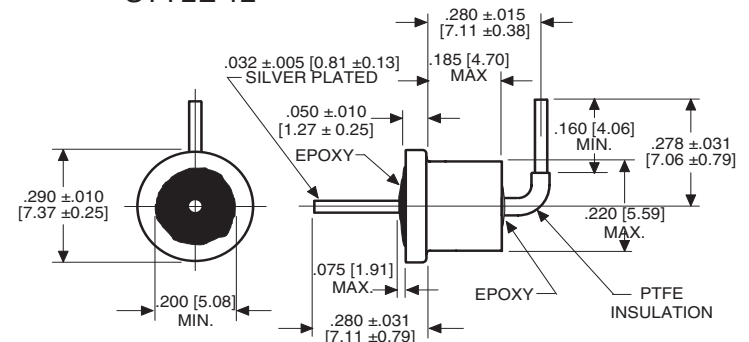
STYLE 11



STYLE 12

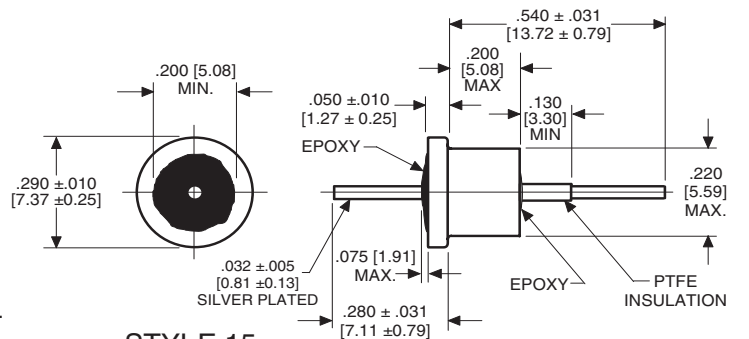


STYLE 13



STYLE 14

| Series Number | Temperature Range | WVDC  | MAX. CAP. Nominal (pF) |
|---------------|-------------------|-------|------------------------|
| 2404          | Z5, Y5, X5        | 500   | 7000                   |
|               | X7                | 250   | 7000                   |
| 2482          | Z5, Y5, X5        | 300   | 4000                   |
|               | X7                | 150   | 4000                   |
| 2450          | Z5, Y5, X5        | 500   | 1800                   |
|               | X7                | 250   | 1800                   |
| 2461          | Z5, Y5, X5        | 200   | 1000                   |
|               | X7                | 100   | 1000                   |
| 2463          | Z5, Y5, X5        | 200   | 2000                   |
|               | X7                | 100   | 2000                   |
| 2470          | Z5, Y5, X5        | 250AC | 2000                   |



STYLE 15

Drawings not to scale.

Please see temperature Characteristics and EIA Codes on page 25.

●UL Recognized to UL standard 1283; UL File No. E201344

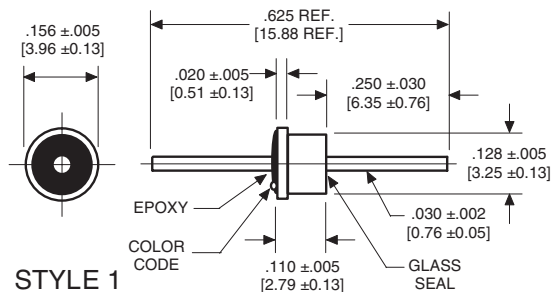
| TUSONIX Part Number    | Style | Notes | Circuit | Working Voltage (dc) |       | Capacitance (pF) | Capacitance Tolerance | Current (A) | Typical No-Load Insertion Loss (dB) at 25°C per MIL-Std-220 |       |        |      |       |
|------------------------|-------|-------|---------|----------------------|-------|------------------|-----------------------|-------------|---|-------|--------|------|-------|
|                        |       |       |         | 85°C                 | 125°C |                  |                       |             | 1MHz  | 10MHz | 100MHz | 1GHz | 10GHz |
| <b>C Configuration</b> |       |       |         |                      |       |                  |                       |             |   |       |        |      |       |
| 2463-001-X5S0-471M     | 2     | --    | C       | 200                  | --    | 470              | ±20%                  | --          | --  | 12    | 27     | 27   |       |
| 2463-002-X5S0-471M     | 3     | --    | C       | 200                  | --    | 470              | ±20%                  | 10          | --  | 12    | 27     | 27   |       |
| 2463-003-X5U0-471P     | 4     | --    | C       | 200                  | --    | 470              | +100-0%               | 10          | --  | 12    | 27     | 27   |       |
| 2461-000-X7V0-102P     | 5     | --    | C       | --                   | 100   | 1000             | +100-0%               | --          | --  | 3     | 20     | 35   | 40    |
| 2461-001-X7V0-102AA    | 6     | --    | C       | --                   | 100   | 1000             | GMV                   | 20          | --  | 3     | 20     | 35   | 40    |
| 2461-002-X7V0-102M     | 7     | --    | C       | --                   | 100   | 1000             | ±20%                  | 20          | --  | 3     | 20     | 35   | 40    |
| 2463-000-X7U0-152P     | 1     | --    | C       | --                   | 100   | 1500             | +100-0%               | --          | --  | 5     | 22     | 35   | 40    |
| 2463-002-X5U0-152P     | 3     | --    | C       | 200                  | --    | 1500             | +100-0%               | 10          | --  | 5     | 22     | 35   | 40    |
| 2463-003-X5U0-152P     | 4     | --    | C       | 200                  | --    | 1500             | +100-0%               | 10          | --  | 5     | 22     | 35   | 40    |
| 2482-001-X5U0-471M     | 9     | --    | C       | 300                  | --    | 470              | ±20%                  | 20          | --  | 12    | 27     | 27   |       |
| 2482-012-X5U0-102M     | 8     | --    | C       | 300                  | --    | 1000             | ±20%                  | --          | --  | 3     | 20     | 35   | 40    |
| 2482-001-X5U0-102M     | 9     | --    | C       | 300                  | --    | 1000             | ±20%                  | 20          | --  | 3     | 20     | 35   | 40    |
| 2450-001-X5R0-101K     | 13    | --    | C       | 500                  | --    | 100              | ±10%                  | 20          | --  | 3     | 20     | 28   |       |
| 2450-001-X5R0-471M     | 13    | --    | C       | 500                  | --    | 470              | ±20%                  | 20          | --  | 12    | 27     | 27   |       |
| 2404-000-X7R0-471M     | 11    | --    | C       | --                   | 250   | 470              | ±20%                  | 20          | --  | 12    | 27     | 27   |       |
| 2450-001-X5U0-102P     | 13    | --    | C       | 500                  | --    | 1000             | +100-0%               | 20          | --  | 3     | 20     | 35   | 40    |
| 2404-000-X5U0-102P     | 11    | --    | C       | 500                  | --    | 1000             | +100-0%               | 20          | --  | 3     | 20     | 35   | 40    |
| 2404-014-X5U0-102P     | 12    | --    | C       | 500                  | --    | 1000             | +100-0%               | --          | --  | 3     | 20     | 35   | 40    |
| 2404-014-X5W0-502M     | 12    | --    | C       | 500                  | --    | 5000             | ±20%                  | --          | --  | 15    | 30     | 45   | 50    |
| 2404-000-X5W0-502Z     | 11    | --    | C       | 500                  | --    | 5000             | +80-20%               | 20          | --  | 15    | 30     | 45   | 50    |
| 2404-007-X5W0-502Z     | 10    | --    | C       | 500                  | --    | 5000             | +80-20%               | 15          | --  | 15    | 30     | 45   | 50    |
| 2470-500●              | 14    | --    | C       | 250AC                | --    | 1000             | +100-0%               | 10          | --  | 3     | 20     | 35   | 40    |
| 2470-501●              | 15    | --    | C       | 250AC                | --    | 1000             | +100-0%               | 10          | --  | 3     | 20     | 35   | 40    |

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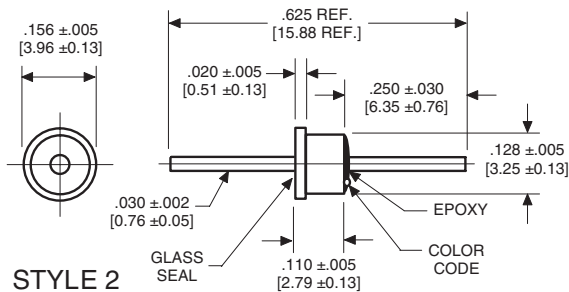


## Solder Mount C Filters

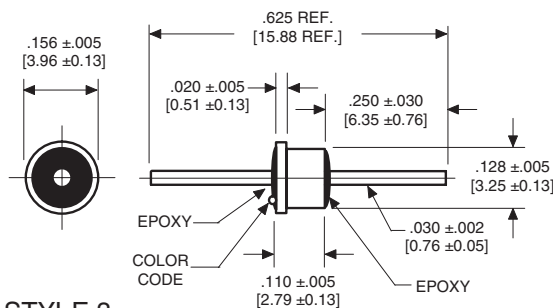
### 4300 Series Miniature EMI Filter MICROWAVE APPLICATIONS:



STYLE 1



STYLE 2



STYLE 3

- Oscillators
- Attenuators
- Low Noise Amplifiers
- Microwave Filters

inches  
[mm]

| TUSONIX Part Number                            | Style | Circuit | Working Voltage (dc) |       | Capacitance (pF) | Capacitance Tolerance | Current (A) | Minimum No-Load Insertion Loss (dB) at 25°C per MIL-Std-220 |       |        |      |       | Color Code |
|--|-------|---------|----------------------|-------|------------------|-----------------------|-------------|---|-------|--------|------|-------|------------|
|  |       |         | 85°C                 | 125°C |                  |                       |             | 1MHz  | 10MHz | 100MHz | 1GHz | 10GHz |            |
| Epoxy Sealed Top (flange)/ Glass Sealed Bottom |       |         |                      |       |                  |                       |             |   |       |        |      |       |            |
| 4300-005                                       | 1     | C       | 70                   | 50    | 10,000           | GMV                   | 5           | 4   | 21    | 35     | 50   | 60    | BLACK      |
| 4300-055                                       | 1     | C       | 70                   | 50    | 10,000           | $\pm 20\%$            | 5           | 4   | 21    | 35     | 50   | 60    | BLK-GOLD   |
| 4300-006                                       | 1     | C       | 70                   | 50    | 15,000           | GMV                   | 5           | 7   | 20    | 35     | 55   | 60    | ORANGE     |
| 4300-013                                       | 1     | C       | 70                   | 50    | 27,000           | GMV                   | 5           | 10  | 28    | 42     | 65   | 65    | RED-RED    |
| 4300-014                                       | 1     | C       | 50                   | 50    | 50,000           | GMV                   | 5           | 15  | 35    | 45     | 70   | --    | BLU-BLU    |
| 4300-003                                       | 1     | C       | 150                  | 100   | 2700             | GMV                   | 5           | --  | 10    | 25     | 40   | 50    | RED        |
| 4300-053                                       | 1     | C       | 150                  | 100   | 2700             | $\pm 20\%$            | 5           | --  | 10    | 25     | 40   | 50    | RED-GOLD   |
| 4300-004                                       | 1     | C       | 150                  | 100   | 5000             | GMV                   | 5           | --  | 15    | 30     | 45   | 55    | YELLOW     |
| 4300-054                                       | 1     | C       | 150                  | 100   | 5000             | $\pm 20\%$            | 5           | --  | 15    | 30     | 45   | 55    | YEL-GOLD   |
| 4300-680                                       | 1     | C       | 300                  | 200   | 5                | MAX                   | 5           | --  | --    | --     | --   | --    | BLK-BLK    |
| 4300-008                                       | 1     | C       | 300                  | 200   | 10               | GMV                   | 5           | --  | --    | --     | 5    | 20    | VIOLET     |
| 4300-009                                       | 1     | C       | 300                  | 200   | 25               | GMV                   | 5           | --  | --    | --     | 10   | 25    | BLUE       |
| 4300-000                                       | 1     | C       | 300                  | 200   | 100              | GMV                   | 5           | --  | --    | 3      | 20   | 28    | GREEN      |
| 4300-050                                       | 1     | C       | 300                  | 200   | 100              | $\pm 20\%$            | 5           | --  | --    | 3      | 20   | 28    | GRN-GOLD   |
| 4300-001                                       | 1     | C       | 300                  | 200   | 500              | GMV                   | 5           | --  | --    | 15     | 35   | 40    | BROWN      |
| 4300-051                                       | 1     | C       | 300                  | 200   | 500              | $\pm 20\%$            | 5           | --  | --    | 15     | 35   | 40    | BRWN-GOLD  |
| 4300-007                                       | 1     | C       | 300                  | 200   | 1000             | GMV                   | 5           | --  | 5     | 20     | 35   | 45    | GRAY       |
| 4300-002                                       | 1     | C       | 300                  | 200   | 1200             | GMV                   | 5           | --  | 5     | 20     | 35   | 45    | WHITE      |
| 4300-052                                       | 1     | C       | 300                  | 200   | 1200             | $\pm 20\%$            | 5           | --  | 5     | 20     | 35   | 45    | WHT-GOLD   |

Drawings not to scale.

## Solder Mount C Filters

### TUSONIX 4300 Series Miniature EMI Filters

These filters are ideal for applications where small size and high performance are critical. These C configured filters can be glass sealed on either one of the ends for optimal sealing between system compartments or components.

The gold plating on the leads offers excellent conductivity and connective ability using common gold bonding methods. The small package and large range of electrical characteristics of the 4300 Series make it an effective solution for a variety of microwave applications.



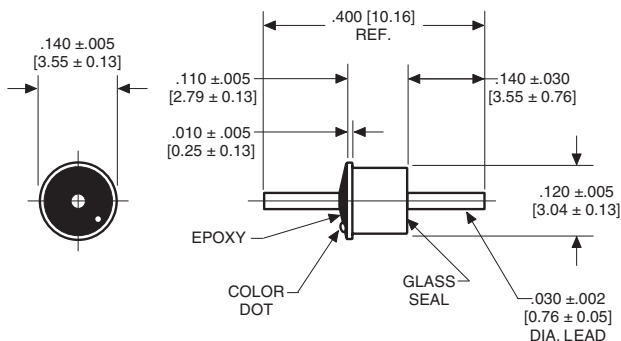
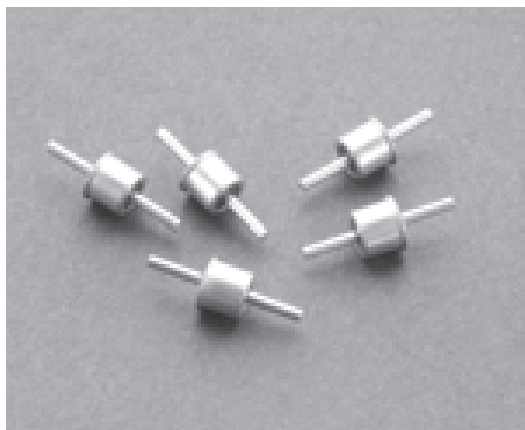
| TUSONIX Part Number                                   | Style | Circuit | Working Voltage (dc) |       | Capacitance (pF) | Capacitance Tolerance | Current (A) | Minimum No-Load Insertion Loss (dB) at 25°C per MIL-Std-220 |       |        |      |       | Color Code |
|---|-------|---------|----------------------|-------|------------------|-----------------------|-------------|---|-------|--------|------|-------|------------|
|   |       |         | 85°C                 | 125°C |                  |                       |             | 1MHz  | 10MHz | 100MHz | 1GHz | 10GHz |            |
| <b>Glass Sealed Top (flange)/ Epoxy Sealed Bottom</b> |       |         |                      |       |                  |                       |             |   |       |        |      |       |            |
| 4300-025  | 2     | C       | 70                   | 50    | 10,000           | GMV                   | 5           | 4   | 21    | 35     | 50   | 60    | BLACK      |
| 4300-065  | 2     | C       | 70                   | 50    | 10,000           | ±20%                  | 5           | 4   | 21    | 35     | 50   | 60    | BLK-GOLD   |
| 4300-026  | 2     | C       | 70                   | 50    | 15,000           | GMV                   | 5           | 7   | 20    | 35     | 55   | 60    | ORANGE     |
| 4300-031  | 2     | C       | 70                   | 50    | 27,000           | GMV                   | 5           | 10  | 28    | 42     | 65   | 65    | RED-RED    |
| 4300-034  | 2     | C       | 50                   | 50    | 50,000           | GMV                   | 5           | 15  | 35    | 45     | 70   | --    | BLU-BLU    |
| 4300-023  | 2     | C       | 150                  | 100   | 2700             | GMV                   | 5           | --  | 10    | 25     | 40   | 50    | RED        |
| 4300-063  | 2     | C       | 150                  | 100   | 2700             | ±20%                  | 5           | --  | 10    | 25     | 40   | 50    | RED-GOLD   |
| 4300-024  | 2     | C       | 150                  | 100   | 5000             | GMV                   | 5           | --  | 15    | 30     | 45   | 55    | YELLOW     |
| 4300-064  | 2     | C       | 150                  | 100   | 5000             | ±20%                  | 5           | --  | 15    | 30     | 45   | 55    | YEL-GOLD   |
| 4300-681  | 2     | C       | 300                  | 200   | 5                | MAX                   | 5           | --  | --    | --     | --   | --    | BLK-BLK    |
| 4300-028  | 2     | C       | 300                  | 200   | 10               | GMV                   | 5           | --  | --    | --     | 5    | 20    | VIOLET     |
| 4300-029  | 2     | C       | 300                  | 200   | 25               | GMV                   | 5           | --  | --    | --     | 10   | 25    | BLUE       |
| 4300-020  | 2     | C       | 300                  | 200   | 100              | GMV                   | 5           | --  | --    | 3      | 20   | 28    | GREEN      |
| 4300-060  | 2     | C       | 300                  | 200   | 100              | ±20%                  | 5           | --  | --    | 3      | 20   | 28    | GRN-GOLD   |
| 4300-021  | 2     | C       | 300                  | 200   | 500              | GMV                   | 5           | --  | --    | 15     | 35   | 40    | BROWN      |
| 4300-061  | 2     | C       | 300                  | 200   | 500              | ±20%                  | 5           | --  | --    | 15     | 35   | 40    | BRWN-GOLD  |
| 4300-027  | 2     | C       | 300                  | 200   | 1000             | GMV                   | 5           | --  | 5     | 20     | 35   | 45    | GRAY       |
| 4300-022  | 2     | C       | 300                  | 200   | 1200             | GMV                   | 5           | --  | 5     | 20     | 35   | 45    | WHITE      |
| 4300-062  | 2     | C       | 300                  | 200   | 1200             | ±20%                  | 5           | --  | 5     | 20     | 35   | 45    | WHT-GOLD   |
| <b>Epoxy Sealed Top (flange)/ Epoxy Sealed Bottom</b> |       |         |                      |       |                  |                       |             |   |       |        |      |       |            |
| 4302-005  | 3     | C       | 70                   | 50    | 10,000           | GMV                   | 10          | 4   | 21    | 35     | 50   | 60    | BLACK      |
| 4302-006  | 3     | C       | 70                   | 50    | 15,000           | GMV                   | 10          | 7   | 20    | 35     | 55   | 60    | ORANGE     |
| 4302-013  | 3     | C       | 70                   | 50    | 27,000           | GMV                   | 10          | 10  | 28    | 42     | 65   | 65    | RED-RED    |
| 4302-014  | 3     | C       | 50                   | 50    | 50,000           | GMV                   | 10          | 15  | 35    | 45     | 70   | --    | BLU-BLU    |
| 4302-003  | 3     | C       | 150                  | 100   | 2700             | GMV                   | 10          | --  | 10    | 25     | 40   | 50    | RED        |
| 4302-004  | 3     | C       | 150                  | 100   | 5000             | GMV                   | 10          | --  | 15    | 30     | 45   | 55    | YELLOW     |
| 4302-680  | 3     | C       | 300                  | 200   | 5                | MAX                   | 10          | --  | --    | --     | --   | --    | BLK-BLK    |
| 4302-008  | 3     | C       | 300                  | 200   | 10               | GMV                   | 10          | --  | --    | --     | 5    | 20    | VIOLET     |
| 4302-009  | 3     | C       | 300                  | 200   | 25               | GMV                   | 10          | --  | --    | --     | 10   | 25    | BLUE       |
| 4302-000  | 3     | C       | 300                  | 200   | 100              | GMV                   | 10          | --  | --    | 3      | 20   | 28    | GREEN      |
| 4302-001  | 3     | C       | 300                  | 200   | 500              | GMV                   | 10          | --  | --    | 15     | 35   | 40    | BROWN      |
| 4302-007  | 3     | C       | 300                  | 200   | 1000             | GMV                   | 10          | --  | 5     | 20     | 35   | 45    | GRAY       |
| 4302-002  | 3     | C       | 300                  | 200   | 1200             | GMV                   | 10          | --  | 5     | 20     | 35   | 45    | WHITE      |

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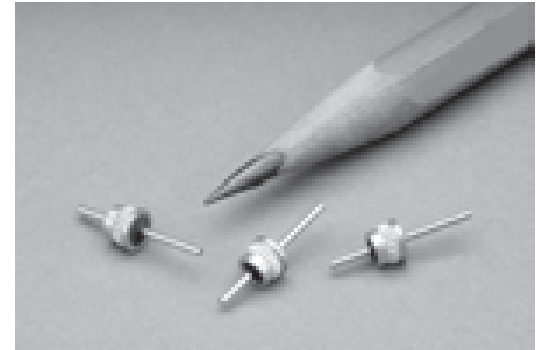
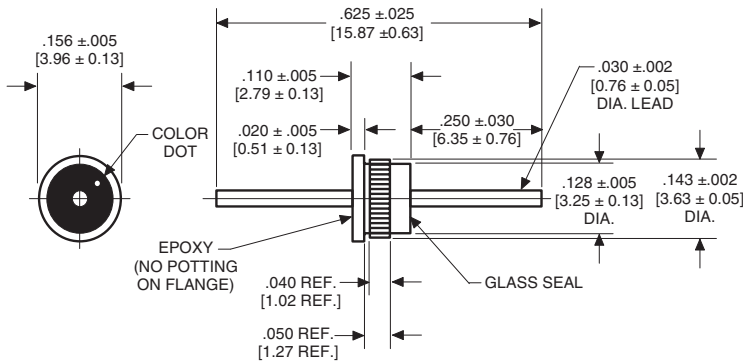


## Solder Mount C Filters

## 4305 Series - Extra Mini EMI Filters



| TUSONIX Part Number                            | Circuit | Working Voltage (dc) |       | Capacitance (pF) | Capacitance Tolerance | Current (A) | Minimum No-Load Insertion Loss (dB) at 25°C per MIL-Std-220 |       |        |      |       | Color Code  |
|--|---------|----------------------|-------|------------------|-----------------------|-------------|---|-------|--------|------|-------|-------------|
|  |         | 85°C                 | 125°C |                  |                       |             | 1MHz  | 10MHz | 100MHz | 1GHz | 10GHz |             |
| Epoxy Sealed Top (flange)/ Glass Sealed Bottom |         |                      |       |                  |                       |             |   |       |        |      |       |             |
| 4305-000                                       | C       | 300                  | 200   | 50               | +100-0%               | 5           | --  | --    | --     | 10   | 25    | BRWN-BROWN  |
| 4305-001                                       | C       | 300                  | 200   | 100              | +100-0%               | 5           | --  | --    | 3      | 20   | 28    | GREEN       |
| 4305-002                                       | C       | 300                  | 200   | 500              | +100-0%               | 5           | --  | --    | 15     | 35   | 40    | BROWN       |
| 4305-003                                       | C       | 150                  | 100   | 2700             | +100-0%               | 5           | --  | 10    | 25     | 40   | 50    | RED         |
| 4305-004                                       | C       | 150                  | 100   | 5000             | +100-0%               | 5           | --  | 15    | 30     | 45   | 55    | YELLOW      |
| 4305-005                                       | C       | 300                  | 200   | 10               | +100-0%               | 5           | --  | --    | --     | 5    | 20    | VIOLET      |
| 4305-006                                       | C       | 300                  | 200   | 25               | +100-0%               | 5           | --  | --    | --     | 10   | 25    | BLUE        |
| 4305-007                                       | C       | 300                  | 200   | 250              | +100-0%               | 5           | --  | --    | 5      | 22   | 30    | YEL-YELLOW  |
| 4305-008                                       | C       | 300                  | 200   | 1000             | +100-0%               | 5           | --  | 5     | 20     | 35   | 45    | GRAY        |
| 4305-009                                       | C       | 300                  | 200   | 1500             | +100-0%               | 5           | --  | 5     | 22     | 35   | 45    | GREEN-GREEN |
| 4305-010                                       | C       | 50                   | 50    | 10,000           | +100-0%               | 5           | 4   | 21    | 35     | 50   | 60    | BLACK       |
| 4305-011                                       | C       | 70                   | 50    | 27,000           | +100-0%               | 5           | 10  | 28    | 42     | 65   | 65    | RED-RED     |
| 4305-012                                       | C       | 300                  | 200   | 5                | +100-0%               | 5           | --  | --    | --     | --   | 5     | BLUE-BLUE   |
| 4305-680                                       | C       | 300                  | 200   | 5                | MAX                   | 5           | --  | --    | --     | --   | --    | BLACK-BLACK |



Tusonix Press-In Ceramic EMI filters suppress unwanted EMI and allow a fast, mechanical bonding that is free from soldering. And, by offering an excellent alternative to the traditional soldering installation, these finely designed, knurled filters significantly reduce assembly costs.

These EMI filters cover a variety of voltage, attenuation and capacitance ranges in a press-in mounting style.

Product installation recommendations (X-2656/9) are provided with parts to prevent damage to the component during installation.



### Installation tool

| Tool Part No. | Item No. | Filter Type |
|---------------|----------|-------------|
| 4300-314      | 1        | 4304        |

(Ordering Example for 4304 filter tool: 4300-314-1)

Installation Tool: Ordering Information to right.

| TUSONIX Part Number                                   | Circuit | Working Voltage (dc) |       | Capacitance (pF) | Capacitance Tolerance | Current (A) | Minimum No-Load Insertion Loss (dB) at 25°C per MIL-Std-220 |       |        |      |       | Color Code  |
|---|---------|----------------------|-------|------------------|-----------------------|-------------|---|-------|--------|------|-------|-------------|
|   |         | 85°C                 | 125°C |                  |                       |             | 1MHz  | 10MHz | 100MHz | 1GHz | 10GHz |             |
| <b>Epoxy Sealed Top (flange)/ Glass Sealed Bottom</b> |         |                      |       |                  |                       |             |   |       |        |      |       |             |
| 4304-000  | C       | 300                  | 200   | 10               | +100-0%               | 5           | --  | --    | --     | 5    | 20    | VIOLET      |
| 4304-001  | C       | 300                  | 200   | 25               | +100-0%               | 5           | --  | --    | --     | 10   | 25    | BLUE        |
| 4304-002  | C       | 300                  | 200   | 500              | +100-0%               | 5           | --  | --    | 15     | 35   | 40    | BROWN       |
| 4304-003  | C       | 300                  | 200   | 100              | +100-0%               | 5           | --  | --    | 3      | 20   | 28    | GREEN       |
| 4304-004  | C       | 300                  | 200   | 1000             | +100-0%               | 5           | --  | 5     | 20     | 35   | 45    | GRAY        |
| 4304-005  | C       | 300                  | 200   | 1200             | +100-0%               | 5           | --  | 5     | 20     | 35   | 45    | WHITE       |
| 4304-006  | C       | 150                  | 100   | 2700             | +100-0%               | 5           | --  | 10    | 25     | 40   | 50    | RED         |
| 4304-007  | C       | 150                  | 100   | 5000             | +100-0%               | 5           | --  | 15    | 30     | 45   | 55    | YELLOW      |
| 4304-008  | C       | 50                   | 50    | 10000            | +100-0%               | 5           | 4   | 21    | 35     | 50   | 60    | BLACK       |
| 4304-009  | C       | 70                   | 50    | 15000            | +100-0%               | 5           | 7   | 20    | 35     | 55   | 60    | ORANGE      |
| 4304-010  | C       | 70                   | 50    | 27000            | +100-0%               | 5           | 10  | 28    | 42     | 65   | 65    | RED-RED     |
| 4304-011  | C       | 50                   | 50    | 50000            | +100-0%               | 5           | 15  | 35    | 45     | 70   | --    | BLUE-BLUE   |
| 4304-681  | C       | 300                  | 200   | 5                | MAX                   | 5           | --  | --    | --     | --   | --    | BLACK-BLACK |



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## No Solder/Press-In EMI Filters

## 4306 Series - C Filters

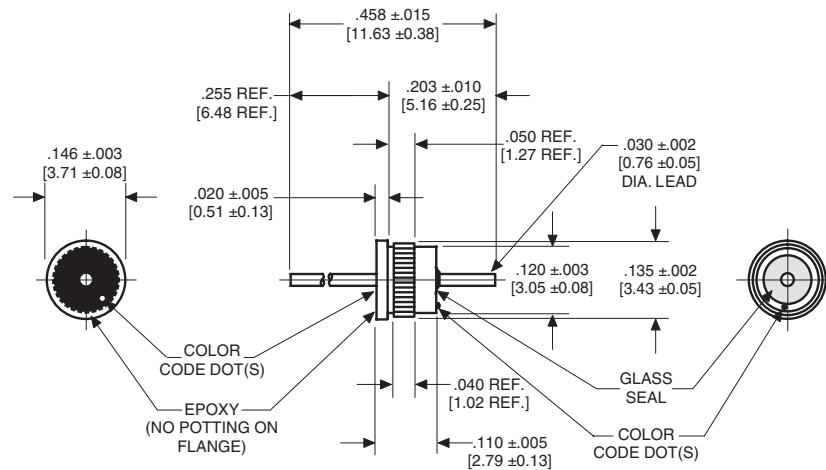


Installation tool

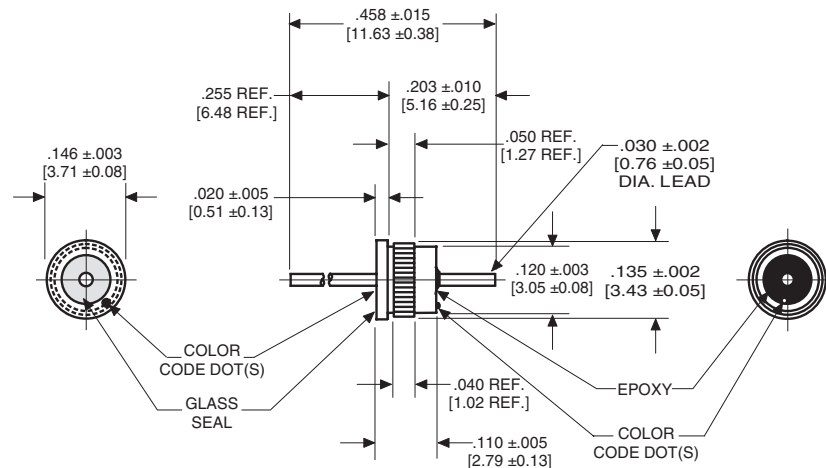
### Installation tool

| Tool Part No. | Item No. | Filter Type |
|---------------|----------|-------------|
| 4300-314      | 2        | 4306        |

(Ordering Example for 4306 filter tool: 4300-314-2)



Style 1



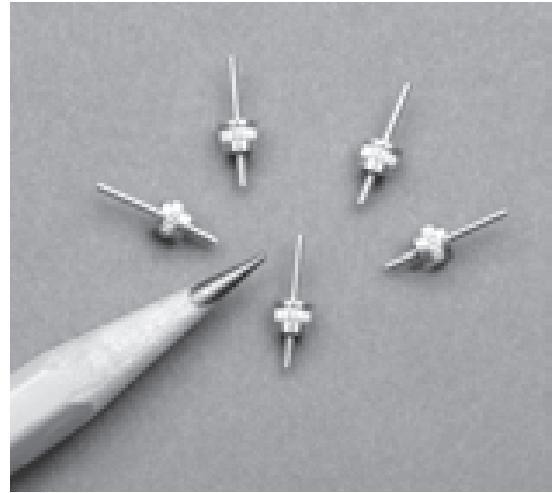
Style 2

## 4306 Series - C Filters

## No Solder/Press-In C Filters

TUSONIX's Press-In EMI filters are excellent for a variety of microwave and RF applications that include:

- attenuators
- oscillators
- synthesizers
- combiners

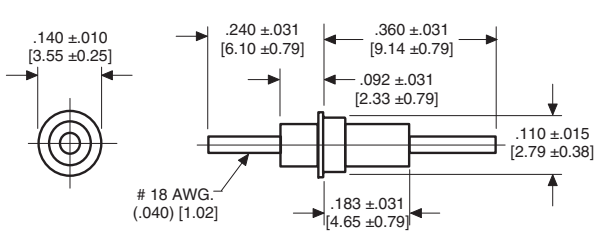


| TUSONIX Part Number                                   | Style | Circuit | Working Voltage (dc) |       | Capacitance (pF) | Capacitance Tolerance | Current (A) | Minimum No-Load Insertion Loss (dB) at 25°C per MIL-Std-220 |       |        |      |       | Color Code    |
|---|-------|---------|----------------------|-------|------------------|-----------------------|-------------|---|-------|--------|------|-------|---------------|
|   |       |         | 85°C                 | 125°C |                  |                       |             | 1MHz  | 10MHz | 100MHz | 1GHz | 10GHz |               |
| <b>Epoxy Sealed Top (flange)/ Glass Sealed Bottom</b> |       |         |                      |       |                  |                       |             |   |       |        |      |       |               |
| 4306-010  | 1     | C       | 50                   | 50    | 10000            | +100-0%               | 5           | 4   | 21    | 35     | 50   | 60    | BLACK         |
| 4306-011  | 1     | C       | 70                   | 50    | 27000            | +100-0%               | 5           | 10  | 28    | 42     | 65   | 65    | RED-RED       |
| 4306-030  | 1     | C       | 150                  | 100   | 2700             | +100-0%               | 5           | --  | 10    | 25     | 40   | 50    | RED           |
| 4306-004  | 1     | C       | 150                  | 100   | 5000             | +100-0%               | 5           | --  | 15    | 30     | 45   | 55    | YELLOW        |
| 4306-012  | 1     | C       | 300                  | 200   | 5                | +100-0%               | 5           | --  | --    | --     | --   | 5     | BLUE-BLUE     |
| 4306-680  | 1     | C       | 300                  | 200   | 5                | MAX                   | 5           | --  | --    | --     | --   | --    | BLACK-BLACK   |
| 4306-028  | 1     | C       | 300                  | 200   | 10               | +100-0%               | 5           | --  | --    | --     | 5    | 20    | VIOLET        |
| 4306-006  | 1     | C       | 300                  | 200   | 25               | +100-0%               | 5           | --  | --    | --     | 10   | 25    | BLUE          |
| 4306-005  | 1     | C       | 300                  | 200   | 50               | +100-0%               | 5           | --  | --    | --     | 10   | 25    | BROWN-BROWN   |
| 4306-029  | 1     | C       | 300                  | 200   | 100              | +100-0%               | 5           | --  | --    | 3      | 20   | 28    | GREEN         |
| 4306-007  | 1     | C       | 300                  | 200   | 250              | +100-0%               | 5           | --  | --    | 5      | 22   | 30    | YELLOW-YELLOW |
| 4306-003  | 1     | C       | 300                  | 200   | 500              | +100-0%               | 5           | --  | --    | 15     | 35   | 40    | BROWN         |
| 4306-008  | 1     | C       | 300                  | 200   | 1000             | +100-0%               | 5           | --  | 5     | 20     | 35   | 45    | GRAY          |
| 4306-009  | 1     | C       | 300                  | 200   | 1500             | +100-0%               | 5           | --  | 5     | 22     | 35   | 45    | GREEN-GREEN   |
| <b>Glass Sealed Top (flange)/ Epoxy Sealed Bottom</b> |       |         |                      |       |                  |                       |             |   |       |        |      |       |               |
| 4306-023  | 2     | C       | 50                   | 50    | 10000            | +100-0%               | 5           | 4   | 21    | 35     | 50   | 60    | BLACK         |
| 4306-024  | 2     | C       | 70                   | 50    | 27000            | +100-0%               | 5           | 10  | 28    | 42     | 65   | 65    | RED-RED       |
| 4306-015  | 2     | C       | 150                  | 100   | 2700             | +100-0%               | 5           | --  | 10    | 25     | 40   | 50    | RED           |
| 4306-017  | 2     | C       | 150                  | 100   | 5000             | +100-0%               | 5           | --  | 15    | 30     | 45   | 55    | YELLOW        |
| 4306-025  | 2     | C       | 300                  | 200   | 5                | +100-0%               | 5           | --  | --    | --     | --   | 5     | BLUE-BLUE     |
| 4306-681  | 2     | C       | 300                  | 200   | 5                | MAX                   | 5           | --  | --    | --     | --   | --    | BLACK-BLACK   |
| 4306-013  | 2     | C       | 300                  | 200   | 10               | +100-0%               | 5           | --  | --    | --     | 5    | 20    | VIOLET        |
| 4306-019  | 2     | C       | 300                  | 200   | 25               | +100-0%               | 5           | --  | --    | --     | 10   | 25    | BLUE          |
| 4306-018  | 2     | C       | 300                  | 200   | 50               | +100-0%               | 5           | --  | --    | --     | 10   | 25    | BROWN-BROWN   |
| 4306-014  | 2     | C       | 300                  | 200   | 100              | +100-0%               | 5           | --  | --    | 3      | 20   | 28    | GREEN         |
| 4306-020  | 2     | C       | 300                  | 200   | 250              | +100-0%               | 5           | --  | --    | 5      | 22   | 30    | YELLOW-YELLOW |
| 4306-016  | 2     | C       | 300                  | 200   | 500              | +100-0%               | 5           | --  | --    | 15     | 35   | 40    | BROWN         |
| 4306-021  | 2     | C       | 300                  | 200   | 1000             | +100-0%               | 5           | --  | 5     | 20     | 35   | 45    | GRAY          |
| 4306-022  | 2     | C       | 300                  | 200   | 1500             | +100-0%               | 5           | --  | 5     | 22     | 35   | 45    | GREEN-GREEN   |

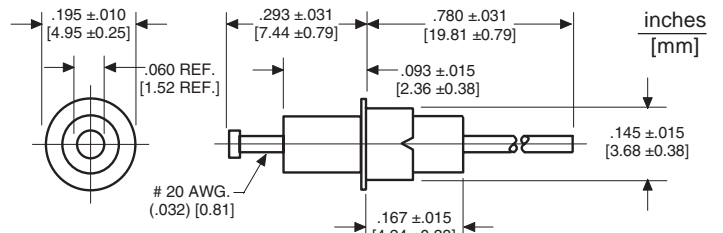
The products listed in this catalog are only a few of the thousands of variations that TUSONIX produces. For custom component design, please contact the factory direct.



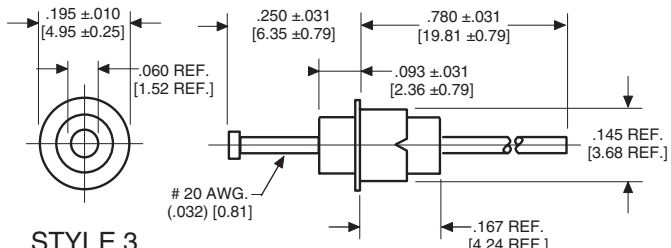
## Solder Mount Pi Filters



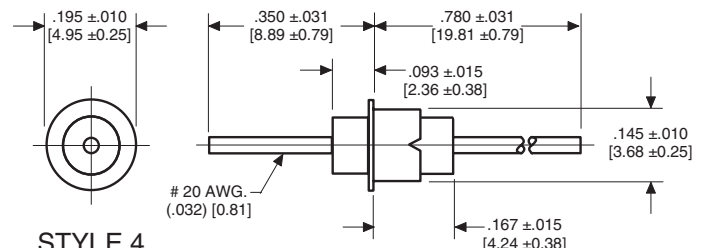
STYLE 1



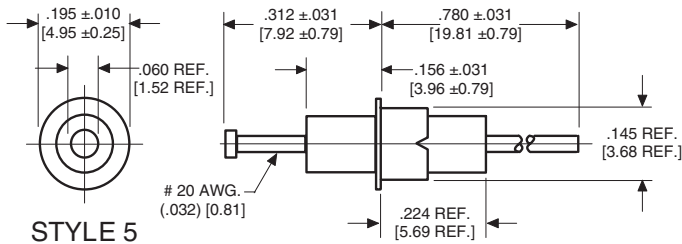
STYLE 2



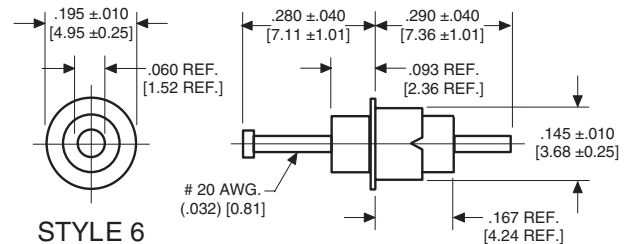
STYLE 3



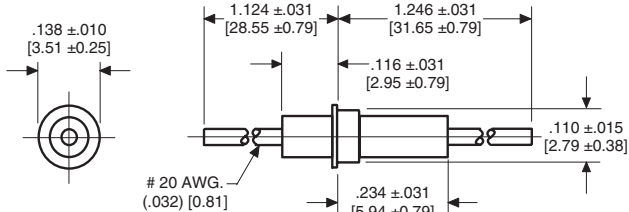
STYLE 4



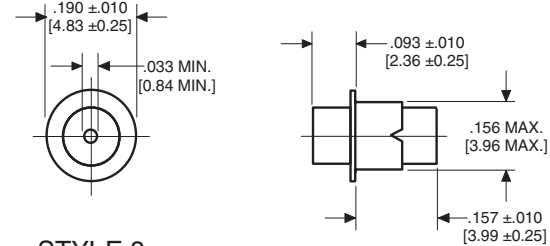
STYLE 5



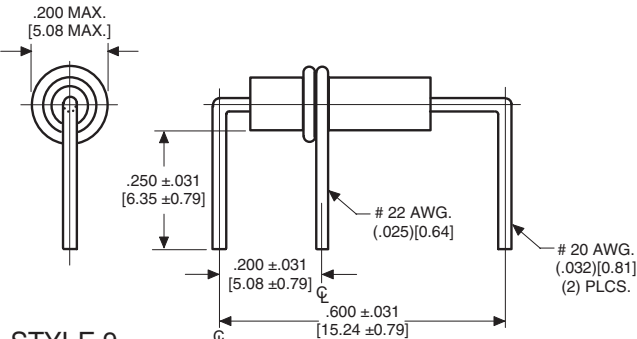
STYLE 6



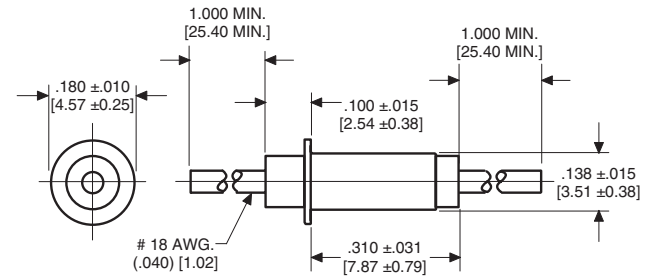
STYLE 7



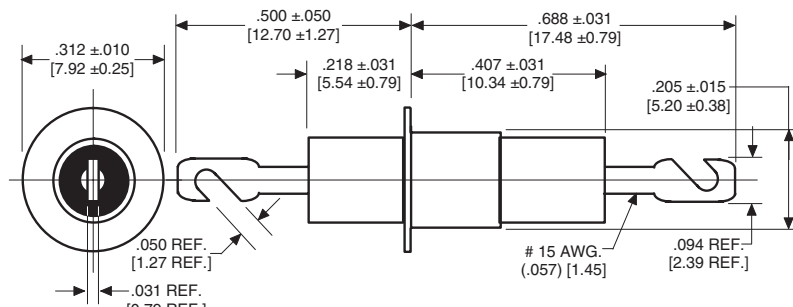
STYLE 8



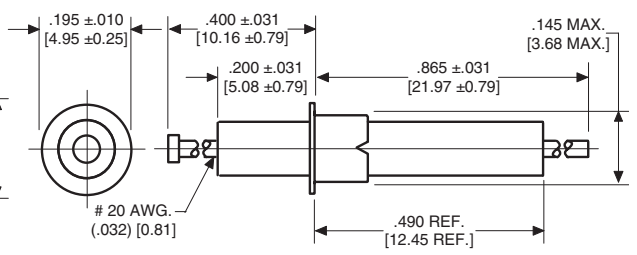
STYLE 9



STYLE 10



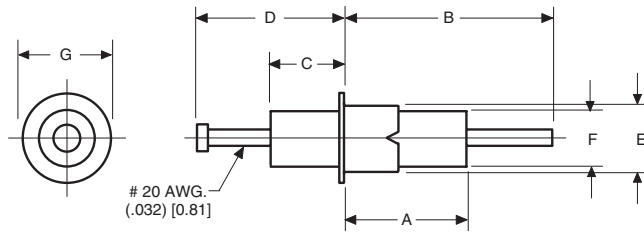
STYLE 11



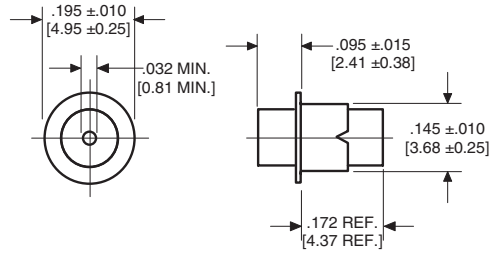
STYLE 12

Drawings not to scale.

## Solder Mount Pi Filters



STYLE 13 THROUGH 19



STYLE 20

inches  
[mm]

DIMENSIONS FOR STYLES 13 THROUGH 19

| Style Number | MIL-PRF-15733          | DIM. A                       | DIM. B                         | DIM. C                       | DIM. D                         | DIM. E                       | DIM. F                       | DIM. G                       |
|--------------|------------------------|------------------------------|--------------------------------|------------------------------|--------------------------------|------------------------------|------------------------------|------------------------------|
| 13           | /62-0003               | .272 ± .025<br>[6.91 ± 0.64] | .438 ± .062<br>[11.13 ± 1.57]  | .156 ± .015<br>[3.96 ± 0.38] | .312 ± .031<br>[7.92 ± 0.79]   | .145 ± .015<br>[3.68 ± 0.38] | ----                         | .190 ± .015<br>[4.83 ± 0.38] |
| 14           | /62-0004               | .151 ± .031<br>[3.84 ± 0.79] | .780 ± .031<br>[19.81 ± 0.79]  | .093 ± .031<br>[2.36 ± 0.79] | .273 ± .031<br>[6.93 ± 0.79]   | .145 ± .015<br>[3.68 ± 0.38] | ----                         | .196 ± .007<br>[4.98 ± 0.18] |
| 15           | /51-0002               | .226 ± .022<br>[5.74 ± 0.56] | .780 ± .031<br>[19.81 ± 0.79]  | .164 ± .022<br>[4.16 ± 0.56] | .312 ± .031<br>[7.92 ± 0.79]   | .145 ± .015<br>[3.68 ± 0.38] | ----                         | .203 ± .015<br>[5.16 ± 0.38] |
| 16           | /33-0001<br>/33-0002 ♦ | .170 ± .027<br>[4.32 ± 0.69] | .780 ± .031<br>[19.81 ± 0.79]  | .093 ± .015<br>[2.36 ± 0.38] | .288 ± .015<br>[7.32 ± 0.38]   | ----                         | .125 MAX<br>[3.18 MAX]       | .190 ± .015<br>[4.83 ± 0.38] |
| 17           | /62-0001               | .250 ± .031<br>[6.35 ± 0.79] | .406 ± .031<br>[10.31 ± 0.79]  | .156 ± .031<br>[3.96 ± 0.79] | .312 ± .031<br>[7.92 ± 0.79]   | .145 ± .015<br>[3.68 ± 0.38] | .125 ± .015<br>[3.18 ± 0.38] | .190 ± .015<br>[4.83 ± 0.38] |
| 18           | /62-0002 ♦             | .231 ± .046<br>[5.87 ± 1.17] | 1.231 ± .077<br>[31.27 ± 1.96] | .109 ± .031<br>[2.77 ± 0.79] | 1.109 ± .062<br>[28.17 ± 1.57] | .110 ± .015<br>[2.79 ± 0.38] | ----                         | .143 ± .010<br>[3.63 ± 0.25] |
| 19           | /51-0001               | .250 ± .031<br>[6.35 ± 0.79] | .406 ± .031<br>[10.31 ± 0.79]  | .156 ± .031<br>[3.96 ± 0.79] | .312 ± .031<br>[7.92 ± 0.79]   | .142 ± .007<br>[3.61 ± 0.18] | .122 ± .017<br>[3.10 ± 0.43] | .195 ± .010<br>[4.95 ± 0.25] |

Notes:



Straight Lead

| TUSONIX Part Number     | MIL-PRF-15733 Number | Style | Notes | Circuit | Working Voltage (dc) |                | Capacitance (pF) | Capacitance Tolerance | Current (A) | Minimum No-Load Insertion Loss (dB) at 25°C per MIL-Std-220 |       |        |      |       |
|-------------------------|----------------------|-------|-------|---------|----------------------|----------------|------------------|-----------------------|-------------|---|-------|--------|------|-------|
|                         |                      |       |       |         | 85°C                 | 125°C          |                  |                       |             | 1MHz  | 10MHz | 100MHz | 1GHz | 10GHz |
| <b>Pi Configuration</b> |                      |       |       |         |                      |                |                  |                       |             |   |       |        |      |       |
| 4100-003                | --                   | 1     | --    | Pi      | 125                  | 50             | 3000             | GMV                   | 15          | --  | 7     | 50     | 65   | 60    |
| 4101-505                | /62-0003             | 13    | --    | Pi      | --                   | 70             | 1500             | GMV                   | 10          | --  | --    | 50     | 65   | 65    |
| 4151-000                | --                   | 3     | --    | Pi      | 100                  | 70             | 12,000           | GMV                   | 10          | --  | 25    | 70     | 65   | 65    |
| 4151-500                | /62-0004             | 14    | --    | Pi      | --                   | 70             | 12,000           | GMV                   | 10          | --  | 22    | 70     | --   | 65    |
| 4151-001                | --                   | 5     | --    | Pi      | 100                  | 70             | 22,000           | GMV                   | 10          | --  | 35    | 70     | 70   | 70    |
| 4151-501                | /51-0002             | 15    | --    | Pi      | --                   | 70             | 22,000           | GMV                   | 10          | --  | 25    | 70     | 70   | 70    |
| 4151-003                | --                   | 12    | --    | Pi      | 100                  | 70             | 60,000           | GMV                   | 10          | --  | 60    | 75     | 75   | 75    |
| 4100-000                | --                   | 7     | --    | Pi      | 250                  | 125            | 1500             | GMV                   | 10          | --  | 6     | 45     | 60   | 60    |
| 4101-000                | --                   | 20    | --    | Pi      | 250                  | 125            | 1750             | GMV                   | 10          | --  | 5     | 35     | 50   | 50    |
| 4101-002                | --                   | 2     | --    | Pi      | 250                  | 125            | 1750             | GMV                   | 10          | --  | 5     | 50     | 60   | 60    |
| 4101-003                | --                   | 4     | --    | Pi      | 250                  | 125            | 1750             | GMV                   | 10          | --  | 5     | 50     | 60   | 60    |
| 4101-004                | --                   | 6     | --    | Pi      | 250                  | 125            | 1750             | GMV                   | 10          | --  | 5     | 50     | 60   | 60    |
| 4101-502                | /33-0001             | 16    | --    | Pi      | --                   | 125dc<br>90ac  | 1750             | GMV                   | 10          | --  | --    | 50     | 60   | 60    |
| 4101-503                | /33-0002             | 16    | ♦     | Pi      | --                   | 125dc<br>90ac  | 1750             | GMV                   | 10          | --  | --    | 50     | 60   | 60    |
| 4101-500                | /66-0001             | 8     | --    | Pi      | --                   | 125            | 1750             | GMV                   | 10          | --  | 5     | 35     | 50   | 50    |
| 4100-056                | --                   | 9     | --    | Pi      | 250ac                | 200dc          | 1000             | ±20%                  | 10          | --  | 3     | 20     | 55   | --    |
| 4100-002                | --                   | 1     | --    | Pi      | 350                  | 200            | 1500             | GMV                   | 15          | --  | 5     | 25     | 60   | 60    |
| 4101-001                | --                   | 17    | --    | Pi      | 350                  | 200            | 1500             | GMV                   | 10          | --  | 3     | 45     | 70   | 70    |
| 4101-501                | /62-0001             | 17    | --    | Pi      | --                   | 200dc<br>140ac | 1500             | GMV                   | 10          | --  | 3     | 45     | 70   | 70    |
| 4100-500                | /62-0002             | 18    | ♦     | Pi      | --                   | 200            | 1500             | GMV                   | 10          | --  | 5     | 45     | 70   | --    |
| 4100-057                | --                   | 9     | --    | Pi      | 250ac                | 200dc          | 1500             | GMV                   | 10          | --  | 5     | 45     | 70   | --    |
| 4102-000                | --                   | 10    | --    | Pi      | 350                  | 200            | 3000             | GMV                   | 10          | --  | 8     | 55     | 65   | 65    |
| 4100-053                | --                   | 9     | --    | Pi      | 250ac                | 200dc          | 5000             | GMV                   | 10          | --  | 18    | 60     | 70   | --    |
| 4101-504                | /51-0001             | 19    | --    | Pi      | 200dc<br>200ac       | --             | 5500             | GMV                   | 10          | --  | 15    | 55     | 70   | 70    |
| 4106-000                | --                   | 11    | --    | Pi      | 500dc<br>350ac       | 500            | 3000             | GMV                   | 25          | --  | --    | 50     | 50   | 50    |
| 4106-001                | --                   | 11    | --    | Pi      | 1000                 | 500            | 4500             | GMV                   | 25          | --  | 8     | 50     | 70   | 70    |

Drawings not to scale.

## 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

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