

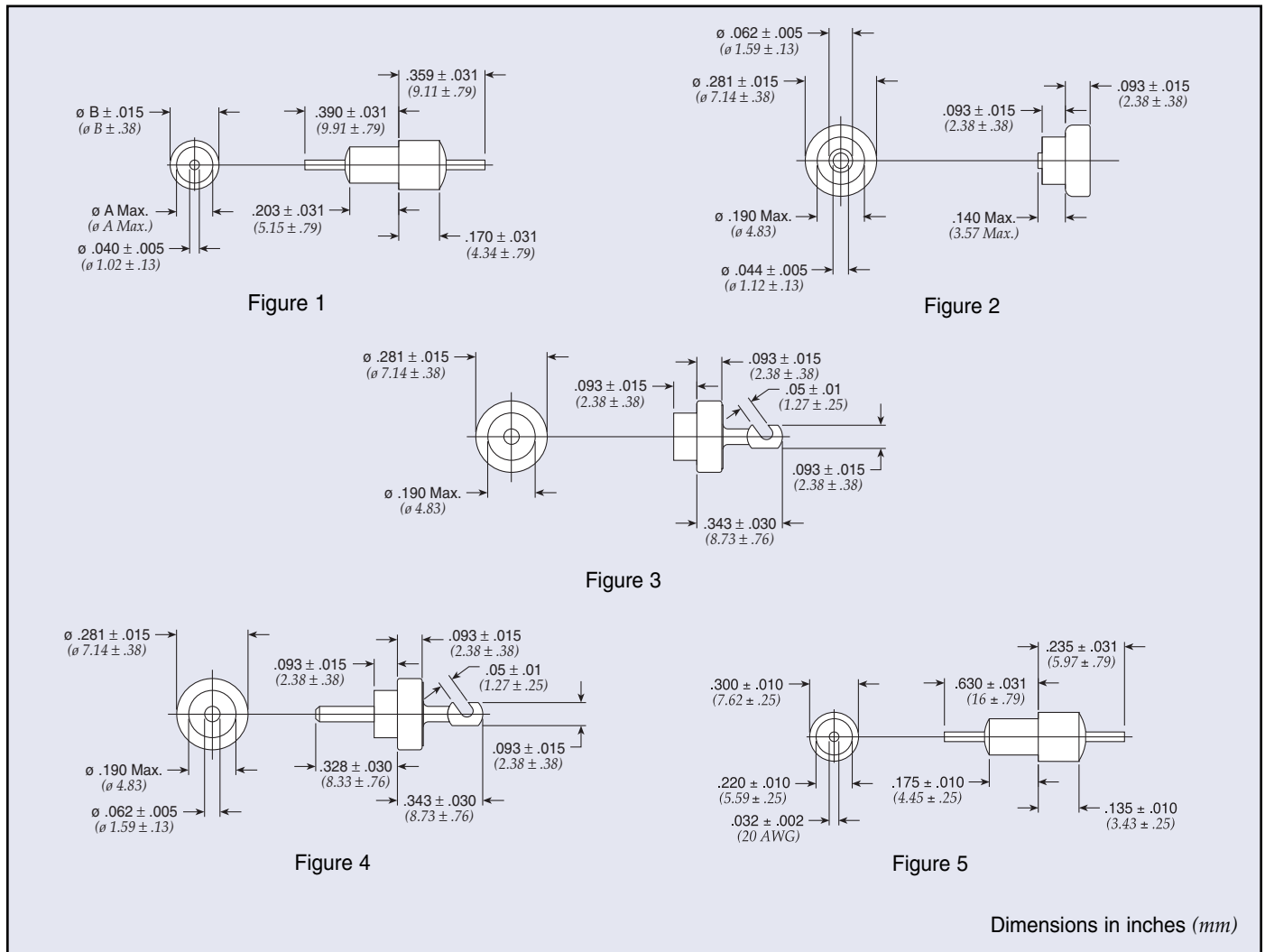
# Solder-in Filters



Solder-in filters are ideal for use in critical areas where space does not allow use of mounting tools or hardware. The solder-in feature also allows installation in unison with other board mounted components. Primarily used in filtering signal/data lines and DC power lines.

## Features

- Small size to allow effective use of space
- Voltage ratings to 750 VDC
- Multiple circuit configurations: C, L & Pi available
- High temperature construction to prevent reflow during installation
- MIL-F-15733 QPL versions available



# Solder-in Filters

## Solder-in C Circuit

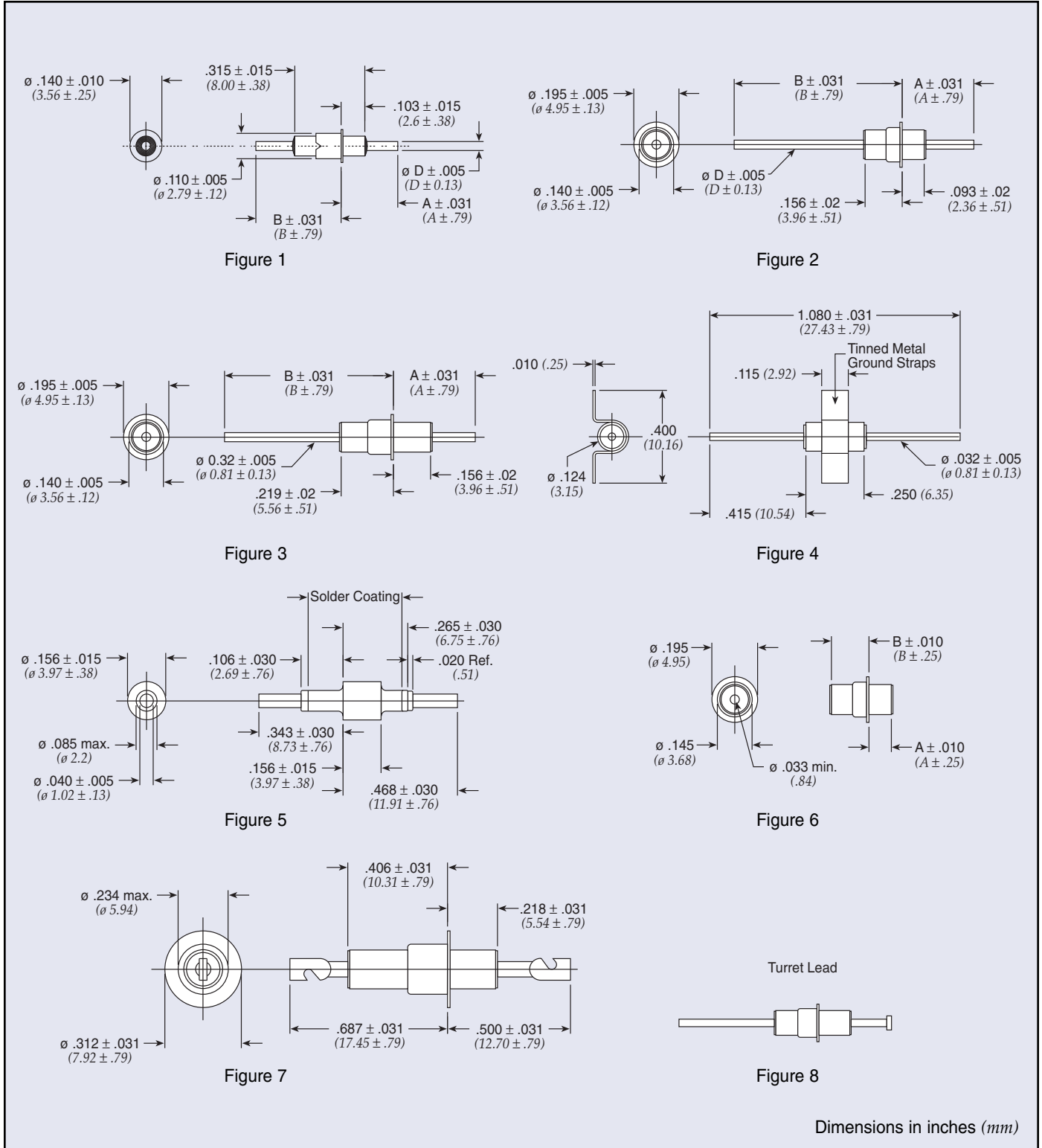
| Part Number       | See Pg. LP3 for Fig. | A     |        | B     |        | Rated Voltage 125°C DC | I Amp | Cap*               | Minimum Insertion Loss (dB) |        |        |         |         |       |        |
|-------------------|----------------------|-------|--------|-------|--------|------------------------|-------|--------------------|-----------------------------|--------|--------|---------|---------|-------|--------|
|                   |                      | In    | (mm)   | In    | (mm)   |                        |       |                    | 1 MHz                       | 10 MHz | 30 MHz | 100 MHz | 300 MHz | 1 GHz | 10 GHz |
| 54-786-003        | 1                    | 0.156 | (3.96) | 0.203 | (5.16) | 50                     | 10    | 0.30 $\mu$ F       | 32                          | 47     | 54     | 60      | 66      | 70    | 70     |
| 54-785-002        | 1                    | 0.125 | (3.18) | 0.184 | (4.67) | 100                    | 10    | 0.05 $\mu$ F (min) | 16                          | 33     | 41     | 45      | 48      | 50    | 50     |
| 54794002X5R101M   | 4                    | —     | —      | —     | —      | 250                    | 25    | 100 pF $\pm$ 20%   | —                           | —      | —      | —       | 10      | 20    | 20     |
| 54803004X5R101M   | 3                    | —     | —      | —     | —      | 250                    | 25    | 100 pF $\pm$ 20%   | —                           | —      | —      | —       | 10      | 20    | 20     |
| 54802002X5R101M   | 2                    | —     | —      | —     | —      | 250                    | 25    | 100 pF $\pm$ 20%   | —                           | —      | —      | —       | 10      | 20    | 20     |
| † 54794002X5R471M | 4                    | —     | —      | —     | —      | 250                    | 25    | 470 pF $\pm$ 20%   | —                           | —      | —      | 12      | 22      | 25    | 25     |
| † 54803004X5R471M | 3                    | —     | —      | —     | —      | 250                    | 25    | 470 pF $\pm$ 20%   | —                           | —      | —      | 12      | 22      | 25    | 25     |
| 54802002X5R471M   | 2                    | —     | —      | —     | —      | 250                    | 25    | 470 pF $\pm$ 20%   | —                           | —      | —      | 12      | 22      | 25    | 25     |
| † 54802002X5V102P | 2                    | —     | —      | —     | —      | 250                    | 25    | 1000 pF            | —                           | —      | —      | 15      | 25      | 35    | 40     |
| † 54803004X5V102P | 3                    | —     | —      | —     | —      | 250                    | 25    | 1000 pF            | —                           | —      | —      | 15      | 25      | 35    | 40     |
| † 54794002X5V102P | 4                    | —     | —      | —     | —      | 250                    | 25    | 1000 pF            | —                           | —      | —      | 15      | 25      | 35    | 40     |
| † 54-786-077      | 5                    | —     | —      | —     | —      | 750                    | 10    | 1000pF             | —                           | 4      | —      | 20      | 25      | 35    | 40     |

† Also available through API's authorized distributors.

\* Tolerances are +100/-0% unless noted.

# Solder-in Filters

## Solder-in Pi Circuit



# Solder-in Filters

## Solder-in Pi Circuit

| Part Number   | M15733 MIL Number | See Pg. LP5 for Fig. | A           |          | B     |         | D      |        | Rated Voltage 125°C |       | I Amp | Min Cap  | Minimum Insertion Loss (dB) |        |        |         |         |       |        |
|---------------|-------------------|----------------------|-------------|----------|-------|---------|--------|--------|---------------------|-------|-------|----------|-----------------------------|--------|--------|---------|---------|-------|--------|
|               |                   |                      | In          | (mm)     | In    | (mm)    | In     | (mm)   | DC                  | AC    |       |          | 1 MHz                       | 10 MHz | 30 MHz | 100 MHz | 300 MHz | 1 GHz | 10 GHz |
|               |                   |                      | 51-703-013* | /62-0003 | 3     | 0.312   | (7.92) | 0.469  | (11.91)             | 0.032 |       |          | (0.81)                      | 70     | —      | 10      | 1500 pF | —     | 5      |
| 51-750-309*   | /62-0004          | 2                    | 0.268       | (6.81)   | 0.780 | (19.81) | 0.032  | (0.81) | 70                  | —     | 10    | 0.012 µF | 5                           | 22     | 50     | 70      | 70      | 65    | 65     |
| † 1234-000* € | —                 | 2                    | 0.257       | (6.53)   | 0.780 | (19.81) | 0.032  | (0.81) | 70                  | —     | 10    | 0.012 µF | 5                           | 25     | 50     | 70      | 70      | 70    | 70     |
| 51-749-304    | —                 | 4                    | —           | —        | —     | —       | —      | —      | 70                  | —     | 10    | 0.012 µF | 5                           | 25     | 50     | 70      | 70      | 65    | 65     |
| 1234-001      | —                 | 4                    | —           | —        | —     | —       | —      | —      | 70                  | —     | 10    | 0.012 µF | 5                           | 25     | 50     | 70      | 70      | 65    | 65     |
| † 51-750-301* | —                 | 2                    | 0.250       | (6.35)   | 0.780 | (19.81) | 0.032  | (0.81) | 70                  | —     | 10    | 0.012 µF | 5                           | 25     | 50     | 70      | 70      | 70    | 70     |
| † 1233-000* € | —                 | 3                    | 0.312       | (7.92)   | 0.780 | (19.81) | 0.032  | (0.81) | 70                  | —     | 10    | 0.022 µF | 7                           | 35     | 60     | 70      | 70      | 70    | 70     |
| † 51-750-302* | —                 | 3                    | 0.312       | (7.92)   | 0.780 | (19.81) | 0.032  | (0.81) | 70                  | —     | 10    | 0.022 µF | 7                           | 25     | 60     | 70      | 70      | 70    | 70     |
| 51-750-313    | /51-0002          | 3                    | 0.312       | (7.92)   | 0.780 | (19.81) | 0.032  | (0.81) | 70                  | —     | 10    | 0.022 µF | 7                           | 25     | 60     | 70      | 70      | 70    | 70     |
| † 51-723-303  | —                 | 5                    | —           | —        | —     | —       | —      | —      | 200                 | —     | 10    | 1300 pF  | —                           | 5      | 15     | 30      | 45      | 55    | 55     |
| 51-713-010    | /62-0002          | 1                    | 1.140       | (28.96)  | 1.277 | (32.44) | 0.032  | (0.81) | 200                 | —     | 10    | 1500 pF  | —                           | 5      | 12     | 45      | 50      | 70    | 70     |
| † 1251-001 €  | —                 | 1                    | 1.109       | (28.17)  | 1.206 | (30.63) | 0.032  | (0.81) | 200                 | —     | 10    | 1500 pF  | —                           | 5      | 15     | 40      | 50      | 70    | 70     |
| 51-703-001*   | —                 | 3                    | 0.312       | (7.92)   | 0.406 | (10.31) | 0.032  | (0.81) | 200                 | —     | 10    | 1500 pF  | —                           | 8      | 17     | 45      | 65      | 70    | 70     |
| † 1203-050 €  | —                 | 3                    | 0.312       | (7.92)   | 0.406 | (10.31) | 0.032  | (0.81) | 200                 | —     | 10    | 1500 pF  | —                           | 5      | 15     | 45      | 50      | 70    | 70     |
| 51-703-012*   | /62-0001          | 3                    | 0.312       | (7.92)   | 0.406 | (10.31) | 0.032  | (0.81) | 200                 | 140   | 10    | 1500 pF  | —                           | 3      | 15     | 45      | 50      | 70    | 70     |
| 51-713-002    | —                 | 1                    | 1.103       | (28.01)  | 1.212 | (30.78) | 0.032  | (0.81) | 200                 | —     | 10    | 1500 pF  | —                           | 5      | 12     | 40      | 70      | 70    | 70     |
| 1214-029      | —                 | 2                    | 0.288       | (7.31)   | 0.780 | (19.81) | 0.032  | (0.81) | 200                 | —     | 10    | 1750 pF  | —                           | 5      | 15     | 50      | 60      | 60    | 70     |
| † 1214-007 €  | —                 | 6                    | 0.093       | (2.36)   | 0.157 | (3.99)  | —      | —      | 200                 | —     | 10    | 1750 pF  | —                           | 5      | 15     | 35      | 50      | 60    | 60     |
| 51-707-002*   | —                 | 2                    | 0.288       | (7.31)   | 0.780 | (19.81) | 0.032  | (0.81) | 200                 | —     | 10    | 1750 pF  | —                           | 8      | 17     | 50      | 65      | 70    | 70     |
| † 1214-001*   | —                 | 2                    | 0.288       | (7.31)   | 0.780 | (19.81) | 0.032  | (0.81) | 200                 | —     | 10    | 1750 pF  | —                           | 5      | 15     | 50      | 50      | 60    | 60     |
| † 51-707-006* | /33-0001          | 2                    | 0.288       | (7.31)   | 0.780 | (19.81) | 0.032  | (0.81) | 200                 | 90    | 10    | 1750 pF  | —                           | 5      | 15     | 50      | 50      | 60    | 60     |
| 51-707-007    | /33-0002          | 2                    | 0.288       | (7.31)   | 0.780 | (19.81) | 0.032  | (0.81) | 200                 | 90    | 10    | 1750 pF  | —                           | 5      | 15     | 50      | 50      | 60    | 60     |
| 51-707-026    | /66-0001          | 6                    | 0.288       | (7.31)   | 0.157 | (3.99)  | —      | —      | 200                 | —     | 10    | 1750 pF  | —                           | 5      | 15     | 35      | 50      | 50    | 50     |
| † 51-750-322  | —                 | 2                    | 1.123       | (28.52)  | 1.347 | (34.21) | 0.040  | (1.02) | 200                 | —     | 10    | 3000 pF  | —                           | 7      | 25     | 50      | 65      | 65    | 65     |
| 51-703-007*   | /51-0001          | 3                    | 0.312       | (7.92)   | 0.406 | (10.31) | 0.032  | (0.81) | 200                 | 200   | 10    | 5500 pF  | —                           | 15     | 30     | 55      | 65      | 70    | 70     |
| 1223-012      | —                 | 1                    | 0.240       | (6.10)   | 0.360 | (9.14)  | 0.040  | (1.02) | 200                 | —     | 15    | 3000 pF  | —                           | 7      | 25     | 50      | 65      | 65    | 65     |
| † 1204-050 €  | —                 | 7                    | 0.210       | (5.34)   | —     | —       | —      | —      | 500                 | —     | 25    | 3000 pF  | —                           | 8      | 25     | 50      | 65      | 70    | 70     |
| 51-704-002    | /40-0001          | 7                    | 0.234       | (5.94)   | —     | —       | —      | —      | 500                 | 350   | 25    | 3000 pF  | —                           | 7      | 25     | 55      | 65      | 70    | 70     |

\* Denotes parts with turret on one end per Figure 8.  
 † Also available through API's authorized distributors.  
 € Also available through API's authorized European distributors/agents.

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