

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. 64 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 μ F | 32 | 47 | 54 | 60 | 66 | 70 | 70 |
| 54-785-002 | 1 | 0.125 | (3.18) | 0.184 | (4.67) | 100 | 10 | 0.05 μ 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 Spectrum Control's authorized distributors.

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

Solder-in Filters



Solder-in Pi Circuit

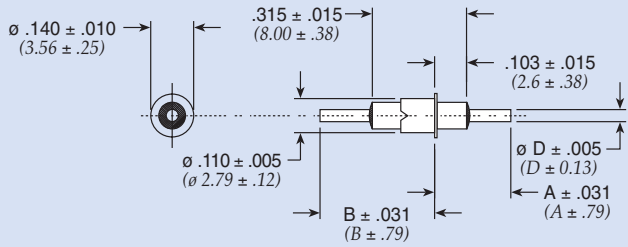


Figure 1



Figure 2

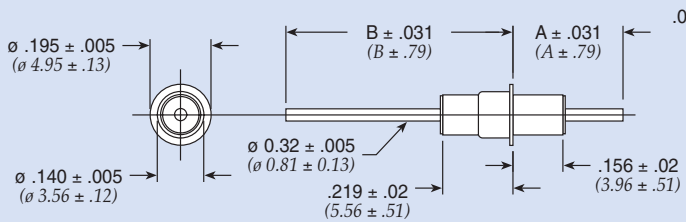


Figure 3

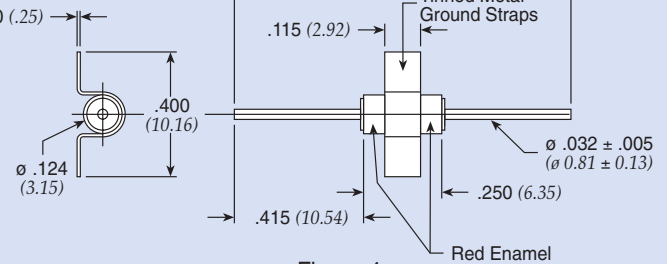


Figure 4

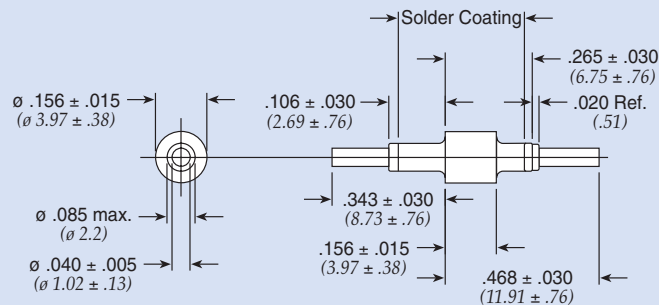


Figure 5



Figure 6



Figure 7



Figure 8

Dimensions in inches (mm)

Solder-in Filters

Solder-in Pi Circuit

| Part Number | M15733 MIL Number | See Pg. 66 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 Spectrum Control's authorized distributors.
 € Also available through Spectrum Control's authorized European distributors/agents.