

# Resin Sealed Bolt-in Filters



These filters are easily mounted in a tapped hole or through-hole with supplied nut and lock-washer. The rugged case with resin seals at both ends provides excellent environmental protection. Primarily used in filtering signal/data lines and DC power lines.

## Features

- Wide range of sizes: 4-40 thread through 5/16-24 thread
- Voltage ratings to 500 VDC/220 VAC (400 Hz)
- MIL-F-15733 QPL filters available
- Multiple circuit configurations: C, L and Pi
- Metric threaded filters available, consult factory

## 4-40 C Circuit



Figure 1



Figure 2



Figure 3



Figure 4

Dimensions in inches (mm)

# Resin Sealed Bolt-in Filters

## 4-40 C Circuit

| Part Number       | See Pg. LP12 for Fig. | Rated Voltage 125°C |     | I Amp | Min Cap      | A     |         | Minimum Insertion Loss (dB) |     |     |     |     |     |     |     |
|-------------------|-----------------------|---------------------|-----|-------|--------------|-------|---------|-----------------------------|-----|-----|-----|-----|-----|-----|-----|
|                   |                       | DC                  | AC  |       |              | In    | (mm)    | 1                           | 3   | 10  | 30  | 100 | 300 | 1   | 10  |
|                   |                       |                     |     |       |              |       |         | MHz                         | MHz | MHz | MHz | MHz | MHz | GHz | GHz |
| † SCI-9110-100    | 3                     | 50                  | —   | 10    | 10 pF        | 0.032 | (0.81)  | —                           | —   | —   | —   | —   | —   | 10  | 10  |
| † 9900-381-6004   | 2                     | 50                  | —   | 10    | 5000 pF      | —     | —       | —                           | —   | 15  | 22  | 30  | 35  | 45  | 55  |
| 9900-381-6026     | 2                     | 50                  | —   | 10    | 0.031 µF     | —     | —       | 12                          | 20  | 25  | 35  | 40  | 45  | 55  | 60  |
| † 9900-381-6006   | 2                     | 50                  | —   | 10    | 0.045 µF     | —     | —       | 14                          | 22  | 30  | 40  | 45  | 50  | 55  | 60  |
| † 54-790-023      | 1                     | 100                 | —   | 10    | 0.050 µF     | —     | —       | 15                          | 24  | 34  | 41  | 45  | 50  | 60  | 60  |
| † 54790001X5F101M | 1                     | 100                 | —   | 10    | 100 pF ± 20% | —     | —       | —                           | —   | —   | —   | —   | 10  | 20  | 25  |
| 54-790-019        | 1                     | 100                 | —   | 10    | 2700 pF      | —     | —       | —                           | —   | 9   | 18  | 27  | 33  | 35  | 35  |
| 9900-381-6013     | 2                     | 100                 | —   | 10    | 2700 pF      | —     | —       | —                           | —   | 10  | 18  | 25  | 33  | 40  | 50  |
| 54-790-020        | 1                     | 100                 | —   | 10    | 5600 pF      | —     | —       | —                           | —   | 15  | 24  | 33  | 37  | 40  | 40  |
| SCI-9112-273      | 3                     | 100                 | —   | 3     | 0.027 µF     | 0.016 | (0.41)* | 10                          | 20  | 30  | 37  | 45  | 45  | 55  | 60  |
| SCI-9110-273      | 3                     | 100                 | —   | 10    | 0.027 µF     | 0.020 | (0.51)  | 10                          | 20  | 30  | 37  | 45  | 45  | 55  | 60  |
| 54-790-022        | 1                     | 100                 | —   | 10    | 0.027 µF     | —     | —       | 10                          | 20  | 30  | 37  | 45  | 50  | 55  | 60  |
| † SCI-9112-503    | 3                     | 100                 | —   | 3     | 0.05 µF      | 0.016 | (0.41)* | 15                          | 24  | 35  | 41  | 45  | 50  | 60  | 60  |
| SCI-9110-503      | 3                     | 100                 | —   | 10    | 0.05 µF      | 0.020 | (0.51)  | 15                          | 24  | 35  | 41  | 45  | 50  | 60  | 60  |
| 54-862-001        | 4                     | 200                 | —   | 10    | 10 pF        | —     | —       | —                           | —   | —   | —   | —   | —   | 10  | 10  |
| 54-862-002        | 4                     | 200                 | —   | 10    | 100 pF       | —     | —       | —                           | —   | —   | —   | 3   | 10  | 20  | 28  |
| 54-862-003        | 4                     | 200                 | —   | 10    | 1000 pF      | —     | —       | —                           | —   | —   | —   | 15  | 25  | 35  | 40  |
| † 9900-381-6020   | 2                     | 200                 | —   | 10    | 100 pF       | —     | —       | —                           | —   | —   | —   | 3   | 10  | 20  | 28  |
| SCI-9122-101      | 3                     | 200                 | 115 | 3     | 100 pF       | 0.016 | (0.41)* | —                           | —   | —   | —   | —   | 10  | 20  | 20  |
| SCI-9120-101      | 3                     | 200                 | 115 | 10    | 100 pF       | 0.020 | (0.51)  | —                           | —   | —   | —   | —   | 10  | 20  | 20  |
| 9900-381-6021     | 2                     | 200                 | —   | 10    | 500 pF       | —     | —       | —                           | —   | —   | —   | 15  | 20  | 35  | 40  |
| SCI-9122-102      | 3                     | 200                 | 115 | 3     | 1000 pF      | 0.016 | (0.41)* | —                           | —   | —   | 11  | 20  | 28  | 28  | 40  |
| SCI-9120-102      | 3                     | 200                 | 115 | 10    | 1000 pF      | 0.020 | (0.51)  | —                           | —   | —   | 11  | 20  | 28  | 28  | 40  |
| † 9900-381-6022   | 2                     | 200                 | —   | 10    | 1200 pF      | —     | —       | —                           | —   | 5   | 9   | 20  | 28  | 35  | 45  |
| SCI-9122-502      | 3                     | 200                 | 115 | 3     | 5000 pF      | 0.016 | (0.41)* | —                           | —   | 15  | 24  | 33  | 37  | 40  | 50  |
| SCI-9120-502      | 3                     | 200                 | 115 | 10    | 5000 pF      | 0.020 | (0.51)  | —                           | —   | 15  | 24  | 33  | 37  | 40  | 50  |
| SCI-9122-103      | 3                     | 200                 | 115 | 3     | 0.01 µF      | 0.016 | (0.41)* | —                           | 12  | 20  | 29  | 38  | 45  | 50  | 55  |
| SCI-9120-103      | 3                     | 200                 | 115 | 10    | 0.01 µF      | 0.020 | (0.51)  | —                           | 12  | 20  | 29  | 38  | 45  | 50  | 55  |
| 9900-381-6005     | 2                     | 200                 | —   | 10    | 0.015 µF     | —     | —       | 7                           | 9   | 20  | 29  | 35  | 45  | 50  | 60  |
| † 54-790-018      | 1                     | 300                 | —   | 10    | 1000 pF      | —     | —       | —                           | —   | 9   | 20  | 28  | 28  | 40  | 40  |
| † 54-790-021      | 1                     | 300                 | —   | 10    | 0.01 µF      | —     | —       | —                           | 9   | 20  | 29  | 38  | 45  | 50  | 50  |

\* Tinned, steel leads.

† Also available through API's authorized distributors.

# Resin Sealed Bolt-in Filters



## 4-40 L and Pi Circuit



Figure 1

Dimensions in inches (mm)

| Part Number   | Figure | Rated Voltage<br>125°C |     | I<br>Amp | CKT | Min<br>Cap | A     |         | Minimum Insertion Loss (dB) |          |           |           |            |            |          |           |
|---------------|--------|------------------------|-----|----------|-----|------------|-------|---------|-----------------------------|----------|-----------|-----------|------------|------------|----------|-----------|
|               |        | DC                     | AC  |          |     |            | In    | (mm)    | 1<br>MHz                    | 3<br>MHz | 10<br>MHz | 30<br>MHz | 100<br>MHz | 300<br>MHz | 1<br>GHz | 10<br>GHz |
| +51-729-305   | 1      | 50                     | —   | 3        | Pi  | 5500 pF    | 0.018 | (0.46)  | —                           | 7        | 14        | 40        | 60         | 70         | 70       | 70        |
| +51-729-312   | 1      | 50                     | —   | 3        | Pi  | 7000 pF    | 0.018 | (0.46)  | —                           | 8        | 15        | 40        | 65         | 70         | 70       | 70        |
| SCI-3102-002  | 1      | 50                     | —   | 3        | LB  | 0.075 µF   | 0.016 | (0.41)* | 18                          | 25       | 37        | 42        | 52         | 55         | 70       | 70        |
| SCI-3102-000  | 1      | 50                     | —   | 5        | LB  | 0.075 µF   | 0.016 | (0.41)  | 18                          | 25       | 37        | 42        | 52         | 55         | 70       | 70        |
| SCI-3102-007  | 1      | 50                     | —   | 10       | LB  | 0.075 µF   | 0.025 | (0.64)  | 18                          | 25       | 37        | 42        | 52         | 55         | 70       | 70        |
| +51-729-304   | 1      | 100                    | —   | 3        | LB  | 0.022 µF   | 0.018 | (0.46)  | 7                           | 17       | 27        | 34        | 43         | 47         | 55       | 55        |
| +SCI-3112-002 | 1      | 100                    | —   | 5        | LB  | 0.027 µF   | 0.016 | (0.41)* | 10                          | 20       | 30        | 38        | 45         | 45         | 65       | 70        |
| +SCI-3112-000 | 1      | 100                    | —   | 5        | LB  | 0.027 µF   | 0.016 | (0.41)  | 10                          | 20       | 30        | 38        | 45         | 45         | 65       | 70        |
| SCI-3112-007  | 1      | 100                    | —   | 10       | LB  | 0.027 µF   | 0.025 | (0.64)  | 10                          | 20       | 30        | 38        | 45         | 45         | 65       | 70        |
| SCI-3112-102  | 1      | 100                    | —   | 3        | LB  | 0.05 µF    | 0.016 | (0.41)* | 15                          | 24       | 35        | 42        | 54         | 56         | 70       | 70        |
| SCI-3112-100  | 1      | 100                    | —   | 5        | LB  | 0.05 µF    | 0.016 | (0.41)  | 15                          | 24       | 35        | 42        | 54         | 56         | 70       | 70        |
| SCI-3112-107  | 1      | 100                    | —   | 10       | LB  | 0.05 µF    | 0.025 | (0.64)  | 15                          | 24       | 35        | 42        | 54         | 56         | 70       | 70        |
| +51-729-303   | 1      | 200                    | —   | 3        | Pi  | 1500 pF    | 0.018 | (0.46)  | —                           | —        | 5         | 15        | 42         | 65         | 70       | 70        |
| SCI-3122-002  | 1      | 200                    | 115 | 3        | LB  | 0.01 µF    | 0.016 | (0.41)* | —                           | 12       | 21        | 30        | 41         | 45         | 70       | 70        |
| SCI-3122-000  | 1      | 200                    | 115 | 5        | LB  | 0.01 µF    | 0.016 | (0.41)  | —                           | 12       | 21        | 30        | 41         | 45         | 70       | 70        |
| SCI-3122-007  | 1      | 200                    | 115 | 10       | LB  | 0.01 µF    | 0.025 | (0.64)  | —                           | 12       | 21        | 30        | 41         | 45         | 70       | 70        |

\* Tinned, steel leads.

+ Also available through API's authorized distributors.

# Resin Sealed Bolt-in Filters

## 6-32 C, L, Pi/6-40 Pi



| Part Number         | Figure | Rated Voltage<br>125°C |    | I<br>Amp | CKT | Min<br>Cap      | A     |        | Minimum Insertion Loss (dB) |          |           |           |            |            |          |           |
|---------------------|--------|------------------------|----|----------|-----|-----------------|-------|--------|-----------------------------|----------|-----------|-----------|------------|------------|----------|-----------|
|                     |        | DC                     | AC |          |     |                 | In    | (mm)   | 1<br>MHz                    | 3<br>MHz | 10<br>MHz | 30<br>MHz | 100<br>MHz | 300<br>MHz | 1<br>GHz | 10<br>GHz |
| † 51-726-008        | 1      | 50                     | —  | 3        | Pi  | 5500 pF         | 0.018 | (0.46) | —                           | 7        | 14        | 30        | 55         | 70         | 70       | 70        |
| 51-726-017          | 1      | 50                     | —  | 3        | Pi  | 9000 pF         | 0.018 | (0.46) | —                           | 8        | 18        | 45        | 65         | 70         | 70       | 70        |
| 54-779-019          | 1      | 50                     | —  | 10       | C   | 0.10 $\mu$ F    | 0.032 | (0.81) | 22                          | 31       | 40        | 44        | 47         | 55         | 65       | 65        |
| † 54779001X5F100M   | 1      | 100                    | —  | 10       | C   | 10 pF $\pm$ 20% | 0.032 | (0.81) | —                           | —        | —         | —         | —          | —          | 10       | 10        |
| † 54779001X5U102P € | 1      | 100                    | —  | 10       | C   | 1000 pF         | 0.032 | (0.81) | —                           | —        | —         | 10        | 21         | 28         | 28       | 28        |
| 54-779-014          | 1      | 100                    | —  | 10       | C   | 2700 pF         | 0.032 | (0.81) | —                           | —        | 9         | 18        | 27         | 33         | 35       | 35        |
| 54-779-016          | 1      | 100                    | —  | 10       | C   | 0.01 $\mu$ F    | 0.032 | (0.81) | —                           | 9        | 20        | 29        | 38         | 45         | 50       | 50        |
| † 51-726-002        | 3      | 100                    | —  | 10       | LB  | 0.022 $\mu$ F   | 0.032 | (0.81) | 7                           | 17       | 27        | 34        | 43         | 50         | 60       | 60        |
| 54-779-017          | 1      | 100                    | —  | 10       | C   | 0.027 $\mu$ F   | 0.032 | (0.81) | 10                          | 20       | 30        | 37        | 45         | 50         | 55       | 60        |
| 54-779-018          | 1      | 100                    | —  | 10       | C   | 0.050 $\mu$ F   | 0.032 | (0.81) | 15                          | 24       | 34        | 41        | 45         | 50         | 60       | 60        |
| † 51-726-001        | 1      | 200                    | —  | 3        | Pi  | 1500 pF         | 0.018 | (0.46) | —                           | —        | 5         | 15        | 42         | 65         | 70       | 70        |
| † 1289-001          | 2      | 200                    | —  | 10       | Pi  | 1500 pF         | 0.032 | (0.81) | —                           | —        | 5         | 15        | 40         | 60         | 60       | 60        |
| † 1289-004          | 2      | 200                    | —  | 10       | Pi  | 3000 pF         | 0.032 | (0.81) | —                           | —        | 8         | 15        | 50         | 65         | 70       | 70        |
| 54-779-015          | 1      | 200                    | —  | 10       | C   | 5600 pF         | 0.032 | (0.81) | —                           | —        | 15        | 24        | 33         | 37         | 40       | 40        |

† Also available through API's authorized distributors.

€ Also available through API's authorized European distributors/agents.

# Resin Sealed Bolt-in Filters



## 8-32 C Circuit



| Part Number       | Figure | Rated Voltage<br>125°C |     | I<br>Amp | Min<br>Cap    | Minimum Insertion Loss (dB) |          |           |           |            |            |          |           |
|-------------------|--------|------------------------|-----|----------|---------------|-----------------------------|----------|-----------|-----------|------------|------------|----------|-----------|
|                   |        | DC                     | AC  |          |               | 1<br>MHz                    | 3<br>MHz | 10<br>MHz | 30<br>MHz | 100<br>MHz | 300<br>MHz | 1<br>GHz | 10<br>GHz |
| SCI-9200-503      | 2      | 50                     | —   | 10       | 0.05 $\mu$ F  | 15                          | 24       | 35        | 41        | 45         | 50         | 60       | 60        |
| 9950-381-6009     | 3      | 50                     | —   | 10       | 0.12 $\mu$ F  | 20                          | 30       | 43        | 45        | 55         | 55         | 55       | 55        |
| 54-785-017        | 1      | 50                     | —   | 10       | 0.21 $\mu$ F  | 28                          | 37       | 45        | 50        | 55         | 60         | 70       | 70        |
| 9950-381-6008     | 3      | 70                     | —   | 10       | 0.08 $\mu$ F  | 15                          | 24       | 37        | 41        | 51         | 51         | 55       | 55        |
| † 54713001X5F101M | 4      | 100                    | —   | 10       | 80 pF         | —                           | —        | —         | —         | —          | 10         | 20       | 20        |
| † 54713001X5U102P | 4      | 100                    | —   | 10       | 1000 pF       | —                           | —        | —         | 11        | 20         | 28         | 28       | 28        |
| 54-785-013        | 1      | 100                    | —   | 10       | 0.01 $\mu$ F  | —                           | 9        | 20        | 29        | 38         | 45         | 50       | 55        |
| SCI-9210-103      | 2      | 100                    | —   | 10       | 0.01 $\mu$ F  | —                           | 12       | 20        | 29        | 38         | 45         | 50       | 50        |
| SCI-9210-273      | 2      | 100                    | —   | 10       | 0.027 $\mu$ F | 10                          | 20       | 30        | 36        | 45         | 50         | 55       | 60        |
| † 54-785-005      | 1      | 100                    | —   | 10       | 0.05 $\mu$ F  | 15                          | 24       | 34        | 41        | 45         | 50         | 60       | 60        |
| 54-785-016        | 1      | 100                    | —   | 10       | 0.1 $\mu$ F   | 20                          | 29       | 38        | 44        | 47         | 55         | 65       | 65        |
| 54-785-011        | 1      | 150                    | —   | 10       | 2000 pF       | —                           | —        | 8         | 17        | 26         | 32         | 34       | 35        |
| 54-785-012        | 1      | 150                    | —   | 10       | 5000 pF       | —                           | 6        | 15        | 24        | 33         | 37         | 40       | 40        |
| SCI-9220-101      | 2      | 200                    | 115 | 10       | 100 pF        | —                           | —        | —         | —         | —          | 10         | 20       | 25        |
| SCI-9220-102      | 2      | 200                    | 115 | 10       | 1000 pF       | —                           | —        | —         | 11        | 20         | 28         | 28       | 28        |
| SCI-9220-502      | 2      | 200                    | 115 | 10       | 5000 pF       | —                           | 6        | 15        | 24        | 33         | 37         | 40       | 40        |

† Also available through API's authorized distributors.

# Resin Sealed Bolt-in Filters

## 8-32 L & Pi Circuit



| Part Number    | M15733 MIL Number | Fig. | Rated Voltage 125°C |     | I Amp | CKT | Min Cap  | In    | H (mm) | L In (mm) | Minimum Insertion Loss (dB) |       |        |        |         |         |       |        |    |
|----------------|-------------------|------|---------------------|-----|-------|-----|----------|-------|--------|-----------|-----------------------------|-------|--------|--------|---------|---------|-------|--------|----|
|                |                   |      | DC                  | AC  |       |     |          |       |        |           | 1 MHz                       | 3 MHz | 10 MHz | 30 MHz | 100 MHz | 300 MHz | 1 GHz | 10 GHz |    |
| 51-712-069 €   | —                 | 2    | 50                  | —   | 10    | Pi  | 0.012 µF | 0.265 | (6.73) | 0.413     | (10.49)                     | 5     | 9      | 18     | 45      | 65      | 70    | 70     | 70 |
| † 51-712-065   | /61-0014          | 4    | 50                  | —   | 20    | Pi  | 0.012 µF | 0.310 | (7.87) | 0.490     | (12.45)                     | —     | 10     | 20     | 30      | 65      | 70    | 70     | 70 |
| † 1250-054     | —                 | 2    | 70                  | —   | 10    | Pi  | 5000 pF  | 0.312 | (7.92) | 0.500     | (12.70)                     | —     | —      | 20     | 30      | 65      | 65    | 70     | 70 |
| † 1293-001     | —                 | 3    | 70                  | —   | 10    | Pi  | 0.028 µF | —     | —      | —         | —                           | 10    | 14     | 38     | 65      | 75      | 75    | 75     | 75 |
| 51-712-055     | /43-0002          | 2    | 100                 | 70  | 10    | Pi  | 3000 pF  | 0.312 | (7.92) | 0.578     | (14.68)                     | —     | —      | 5      | 15      | 45      | 50    | 50     | 50 |
| † 51-712-014   | /28-0001          | 2    | 100                 | 70  | 10    | Pi  | 3000 pF  | 0.312 | (7.92) | 0.890     | (22.61)                     | —     | —      | 5      | 15      | 45      | 60    | 60     | 60 |
| 51-712-028     | /28-0002          | 5    | 100                 | 70  | 10    | Pi  | 3000 pF  | —     | —      | —         | —                           | —     | —      | 5      | 15      | 45      | 60    | 60     | 60 |
| † 51-712-063*  | /61-0008          | 2    | 100                 | 70  | 10    | Pi  | 5500 pF  | 0.312 | (7.92) | 0.500     | (12.70)                     | —     | —      | 15     | 35      | 65      | 70    | 70     | 70 |
| † 51-712-003 ◊ | —                 | 2    | 100                 | —   | 10    | LB  | 0.022 µF | 0.280 | (7.11) | 0.850     | (21.59)                     | 7     | 17     | 27     | 34      | 43      | 50    | 60     | 60 |
| 51-712-060 ◊   | /28-0004          | 2    | 100                 | 70  | 10    | LB  | 0.022 µF | 0.312 | (7.92) | 0.890     | (22.61)                     | 10    | 17     | 28     | 34      | 41      | 50    | 60     | 60 |
| † 51-712-067   | /61-0013          | 2    | 100                 | —   | 10    | LB  | 0.031 µF | 0.280 | (7.11) | 0.890     | (22.61)                     | 10    | 20     | 30     | 38      | 42      | 52    | 60     | 60 |
| 51-762-006     | /44-0003          | 6    | 125                 | 85  | 15    | Pi  | 65 pF    | —     | —      | —         | —                           | —     | —      | —      | —       | —       | —     | 16     | 42 |
| † 1250-059     | —                 | 6    | 125                 | —   | 15    | Pi  | 1500 pF  | —     | —      | —         | —                           | —     | —      | 5      | 15      | 35      | 45    | 60     | 60 |
| † 51-762-005   | /44-0002          | 6    | 125                 | 85  | 15    | Pi  | 1500 pF  | —     | —      | —         | —                           | —     | —      | 5      | 15      | 25      | 35    | 50     | 50 |
| 1250-062       | —                 | 1    | 125                 | —   | 15    | Pi  | 3000 pF  | —     | —      | —         | —                           | —     | —      | 5      | 15      | 45      | 45    | 70     | 70 |
| † 51-744-003*  | /44-0001          | 1    | 125                 | 85  | 15    | Pi  | 3000 pF  | —     | —      | —         | —                           | —     | —      | 10     | 15      | 30      | 40    | 65     | 65 |
| † SCI-3223-000 | —                 | 2    | 200                 | 115 | 10    | Pi  | 2000 pF  | 0.312 | (7.92) | 0.890     | (22.61)                     | —     | —      | 8      | 10      | 48      | 50    | 70     | 70 |
| † 1250-003 €   | —                 | 2    | 200                 | —   | 10    | Pi  | 3000 pF  | 0.312 | (7.92) | 0.890     | (22.61)                     | —     | —      | 5      | 15      | 45      | 65    | 70     | 70 |
| † 51-712-001*  | —                 | 2    | 200                 | —   | 10    | Pi  | 3000 pF  | 0.312 | (7.92) | 0.890     | (22.61)                     | —     | —      | 5      | 15      | 45      | 65    | 70     | 70 |
| 1250-049       | —                 | 2    | 200                 | —   | 10    | Pi  | 3000 pF  | 0.312 | (7.92) | 0.578     | (14.68)                     | —     | —      | 5      | 15      | 45      | 65    | 65     | 60 |
| † 51-744-002 ◊ | —                 | 2    | 200                 | —   | 10    | Pi  | 5500 pF  | 0.265 | (6.73) | 0.413     | (10.49)                     | —     | 7      | 14     | 30      | 55      | 70    | 70     | 70 |
| † 1293-000     | —                 | 3    | 200                 | —   | 10    | Pi  | 0.012 µF | —     | —      | —         | —                           | 5     | 10     | 28     | 40      | 65      | 70    | 70     | 70 |

† Also available through API's authorized distributors.

◊ Supplied with .040" (1.02mm) diameter lead.

€ Also available through API's authorized European distributors/agents.

\* Denotes parts with turret lead.

# Resin Sealed Bolt-in Filters



## 10-32 C & Pi Circuit



Figure 1



Figure 2

Dimensions in inches (mm)

| Part Number  | Figure | Rated Voltage<br>125°C |    | I<br>Amp | CKT | Min<br>Cap | A     |        | Minimum Insertion Loss (dB) |          |           |           |            |            |          |           |
|--------------|--------|------------------------|----|----------|-----|------------|-------|--------|-----------------------------|----------|-----------|-----------|------------|------------|----------|-----------|
|              |        | DC                     | AC |          |     |            | In    | (mm)   | 1<br>MHz                    | 3<br>MHz | 10<br>MHz | 30<br>MHz | 100<br>MHz | 300<br>MHz | 1<br>GHz | 10<br>GHz |
| 51-761-002   | 1      | 50                     | —  | 10       | Pi  | 0.018 µF   | 0.032 | (0.81) | 7                           | 14       | 30        | 55        | 70         | 70         | 70       | 70        |
| † 54-786-013 | 1      | 50                     | —  | 10       | C   | 0.3 µF     | 0.040 | (1.02) | 30                          | 38       | 47        | 50        | 55         | 60         | 70       | 70        |
| 54-786-028   | 1      | 50                     | —  | 10       | C   | 0.56 µF    | 0.040 | (1.02) | 35                          | 43       | 50        | 52        | 60         | 65         | 70       | 70        |
| † 54-786-014 | 2      | 50                     | —  | 10       | C   | 0.8 µF     | 0.040 | (1.02) | 40                          | 46       | 52        | 54        | 70         | 70         | 70       | 70        |
| 51-761-001   | 1      | 100                    | —  | 10       | Pi  | 0.01 µF    | 0.032 | (0.81) | —                           | 10       | 20        | 45        | 65         | 70         | 70       | 70        |
| 54-786-027   | 1      | 200                    | —  | 10       | C   | 0.1 µF     | 0.040 | (1.02) | 20                          | 29       | 38        | 44        | 47         | 55         | 65       | 65        |

† Also available through API's authorized distributors.

# Resin Sealed Bolt-in Filters

## 12-28 C /12-32 C Circuit



| Part Number       | Figure | Rated Voltage<br>125°C |    | I<br>Amp | CKT | Min<br>Cap    | Minimum Insertion Loss (dB) |          |           |           |            |            |          |           |
|-------------------|--------|------------------------|----|----------|-----|---------------|-----------------------------|----------|-----------|-----------|------------|------------|----------|-----------|
|                   |        | DC                     | AC |          |     |               | 1<br>MHz                    | 3<br>MHz | 10<br>MHz | 30<br>MHz | 100<br>MHz | 300<br>MHz | 1<br>GHz | 10<br>GHz |
| 9910-381-6004     | 4      | 35                     | —  | 15       | C   | 1 $\mu$ F     | 38                          | 40       | 52        | 52        | 70         | 70         | 78       | 80        |
| 9910-381-6003     | 4      | 50                     | —  | 15       | C   | 0.75 $\mu$ F  | 35                          | 37       | 51        | 51        | 61         | 61         | 65       | 70        |
| SCI-9310-273      | 3      | 100                    | —  | 10       | C   | 0.027 $\mu$ F | 10                          | 20       | 30        | 37        | 45         | 50         | 55       | 60        |
| 9910-381-6002     | 4      | 100                    | —  | 15       | C   | 0.30 $\mu$ F  | 28                          | 30       | 45        | 50        | 55         | 55         | 60       | 65        |
| 54804002X5R101M   | 2      | 250                    | —  | 10       | C   | 100 pF ± 20%  | —                           | —        | —         | —         | —          | 10         | 20       | 25        |
| † 54804002X5R471M | 2      | 250                    | —  | 10       | C   | 470 pF ± 20%  | —                           | —        | —         | —         | 12         | 22         | 25       | 28        |
| † 54804002X5V102P | 2      | 250                    | —  | 10       | C   | 1000 pF       | —                           | —        | —         | 10        | 21         | 28         | 28       | 28        |
| 54743001X5U102Z   | 1      | 250                    | —  | 15       | C   | 1000 pF       | —                           | —        | —         | —         | 20         | 28         | 28       | 28        |

† Also available through API's authorized distributors.



# Resin Sealed Bolt-in Filters



## 12-28 & 12-32 Pi Circuit



# Resin Sealed Bolt-in Filters

## 12-28 & 12-32 Pi Circuit

| Part Number     | M15733 MIL Number | See Pg. LP20 for Fig. | Rated Voltage 125°C |     | I Amp | Min Cap  | A     |        | B     |         | Minimum Insertion Loss (dB) |       |        |        |         |         |       |        |
|-----------------|-------------------|-----------------------|---------------------|-----|-------|----------|-------|--------|-------|---------|-----------------------------|-------|--------|--------|---------|---------|-------|--------|
|                 |                   |                       | DC                  | AC  |       |          | In    | (mm)   | In    | (mm)    | 1 MHz                       | 3 MHz | 10 MHz | 30 MHz | 100 MHz | 300 MHz | 1 GHz | 10 GHz |
| 51-709-013      | —                 | 3                     | 50                  | —   | 10    | 0.1 µF   | 0.040 | (1.02) | 0.437 | (11.10) | 10                          | 40    | 52     | 70     | 70      | 70      | 70    | 70     |
| SCI-3303-000*   | —                 | 2                     | 50                  | —   | 10    | 0.15 µF  | 0.032 | (0.81) | 0.250 | (6.35)  | 12                          | 43    | 68     | 70     | 70      | 70      | 70    | 70     |
| 51-709-015      | /61-0009          | 3                     | 70                  | —   | 10    | 0.012 µF | 0.032 | (0.81) | 0.470 | (11.94) | —                           | —     | —      | —      | 65      | 65      | 65    | 65     |
| † 1216-001      | —                 | 3                     | 70                  | —   | 10    | 0.050 µF | 0.032 | (0.81) | 0.468 | (11.89) | 15                          | 20    | 60     | 65     | 75      | 75      | 75    | 75     |
| † 1270-016*     | —                 | 2                     | 100                 | —   | 10    | 5500 pF  | 0.032 | (0.81) | 0.250 | (6.35)  | —                           | 7     | 20     | 35     | 65      | 70      | 70    | 70     |
| † 1270-025      | —                 | 2                     | 100                 | —   | 10    | 5500 pF  | 0.032 | (0.81) | 0.235 | (5.97)  | —                           | 7     | 20     | 35     | 65      | 70      | 70    | 70     |
| † 1201-066      | —                 | 1                     | 100                 | —   | 10    | 5500 pF  | 0.032 | (0.81) | —     | —       | —                           | 7     | 20     | 40     | 68      | 70      | 70    | 70     |
| 51-714-055*     | /61-0011          | 2                     | 100                 | —   | 10    | 5500 pF  | 0.032 | (0.81) | 0.235 | (5.97)  | —                           | 7     | 20     | —      | 65      | 70      | 70    | 70     |
| 51-714-054*     | /61-0010          | 2                     | 100                 | —   | 10    | 5500 pF  | 0.032 | (0.81) | 0.250 | (6.35)  | —                           | 7     | 20     | —      | 65      | 70      | 70    | 70     |
| 51-714-053*     | /61-0007          | 2                     | 100                 | 70  | 10    | 5500 pF  | 0.032 | (0.81) | 0.250 | (6.35)  | —                           | 7     | —      | —      | 65      | 70      | 70    | 70     |
| 51-714-058*     | —                 | 2                     | 100                 | —   | 10    | 0.025 µF | 0.032 | (0.81) | 0.250 | (6.35)  | 10                          | 15    | 40     | 60     | 70      | 70      | 70    | 70     |
| 51-714-056      | /61-0012          | 6                     | 100                 | —   | 10    | 0.025 µF | 0.032 | (0.81) | 0.235 | (5.97)  | —                           | —     | —      | —      | 65      | 65      | 65    | 65     |
| † SCI-3313-000* | —                 | 2                     | 100                 | —   | 10    | 0.10 µF  | 0.032 | (0.81) | 0.250 | (6.35)  | 10                          | 40    | 65     | 70     | 70      | 70      | 70    | 70     |
| 51-719-022      | —                 | 1                     | 200                 | —   | 10    | 1300 pF  | 0.040 | (1.02) | —     | —       | —                           | —     | 5      | 10     | 35      | 60      | 70    | 70     |
| † 1201-052      | —                 | 5                     | 200                 | —   | 10    | 3000 pF  | 0.032 | (0.81) | —     | —       | —                           | —     | 5      | 15     | 45      | 45      | 70    | 70     |
| † 1201-054      | —                 | 1                     | 200                 | —   | 10    | 3000 pF  | 0.032 | (0.81) | —     | —       | —                           | —     | 5      | 15     | 45      | 45      | 70    | 70     |
| 51-714-001*     | —                 | 2                     | 200                 | —   | 10    | 3000 pF  | 0.032 | (0.81) | 0.250 | (6.35)  | —                           | —     | 5      | 15     | 43      | 60      | 70    | 70     |
| † 1270-024      | —                 | 2                     | 200                 | —   | 10    | 3000 pF  | 0.032 | (0.81) | 0.235 | (5.97)  | —                           | —     | 5      | 15     | 45      | 45      | 70    | 70     |
| 51-714-003*     | —                 | 2                     | 200                 | —   | 10    | 3000 pF  | 0.032 | (0.81) | 0.235 | (5.97)  | —                           | —     | 5      | 15     | 43      | 60      | 70    | 70     |
| † 1270-009      | —                 | 2                     | 200                 | —   | 10    | 3000 pF  | 0.032 | (0.81) | 0.250 | (6.35)  | —                           | —     | 5      | 15     | 45      | 45      | 70    | 70     |
| 51-719-053**    | /61-0001          | 5                     | 200                 | 140 | 10    | 3000 pF  | 0.032 | (0.81) | —     | —       | —                           | —     | —      | —      | 45      | —       | 70    | 70     |
| 51-719-054*     | /61-0002          | 1                     | 200                 | 140 | 10    | 1500 pF  | 0.032 | (0.81) | —     | —       | —                           | —     | —      | —      | 45      | 45      | 70    | 70     |
| 51-714-051*     | /61-0005          | 2                     | 200                 | 140 | 10    | 1500 pF  | 0.032 | (0.81) | 0.250 | (6.35)  | —                           | —     | —      | —      | 45      | 45      | 70    | 70     |
| 51-719-023*     | /43-0001          | 5                     | 200                 | 140 | 10    | 3000 pF  | 0.032 | (0.81) | —     | —       | —                           | —     | —      | —      | 45      | 45      | 45    | 45     |
| 51-714-052*     | /61-0006          | 2                     | 200                 | 140 | 10    | 3000 pF  | 0.032 | (0.81) | 0.235 | (5.97)  | —                           | —     | —      | —      | 45      | 45      | 70    | 70     |
| 51-714-004*     | —                 | 2                     | 200                 | —   | 10    | 5500 pF  | 0.032 | (0.81) | 0.235 | (5.97)  | —                           | 7     | 14     | 35     | 60      | 70      | 70    | 70     |
| † 51-719-021    | —                 | 1                     | 200                 | —   | 10    | 5500 pF  | 0.040 | (1.02) | —     | —       | —                           | 7     | 14     | 30     | 50      | 65      | 65    | 65     |
| € 51-714-002*   | —                 | 2                     | 200                 | —   | 10    | 5500 pF  | 0.032 | (0.81) | 0.250 | (6.35)  | —                           | 7     | 14     | 35     | 60      | 70      | 70    | 70     |
| † SCI-3323-000* | —                 | 2                     | 200                 | 115 | 10    | 0.012 µF | 0.032 | (0.81) | 0.250 | (6.35)  | —                           | —     | 27     | 30     | 70      | 70      | 70    | 70     |
| † 1221-001      | —                 | 4                     | 300                 | —   | 10    | 5500 pF  | 0.032 | (0.81) | 0.437 | (11.10) | —                           | —     | 15     | 30     | 65      | 70      | 70    | 70     |
| † 51-709-004    | /46-0001          | 4                     | 300                 | —   | 10    | 5500 pF  | 0.032 | (0.81) | 0.437 | (11.10) | —                           | —     | —      | —      | 65      | 70      | 70    | 70     |
| 1201-086        | —                 | 1                     | 350                 | —   | 10    | 2500 pF  | 0.040 | (1.02) | —     | —       | —                           | —     | 5      | 10     | 50      | 50      | 65    | 65     |
| † 51-719-011 €  | —                 | 1                     | 500                 | —   | 10    | 3000 pF  | 0.040 | (1.02) | —     | —       | —                           | —     | 12     | 20     | 45      | 60      | 60    | 60     |

† Also available through API's authorized distributors.

€ Also available through API's authorized European distributors/agents.

\* Denotes parts supplied with lead as shown in Figure 7.

\*\* Bushing housing will have 1 1/2 imperfect threads at hex to thread interface.

# Resin Sealed Bolt-in Filters

## 5/16-24 & 5/16-32 C & Pi Circuit



| Part Number  | M15733 MIL Number | Fig. | Rated Voltage 125°C |     | I Amp | CKT | Min Cap  | Minimum Insertion Loss (dB) |       |        |        |         |         |       |        |
|--------------|-------------------|------|---------------------|-----|-------|-----|----------|-----------------------------|-------|--------|--------|---------|---------|-------|--------|
|              |                   |      | DC                  | AC  |       |     |          | 1 MHz                       | 3 MHz | 10 MHz | 30 MHz | 100 MHz | 300 MHz | 1 GHz | 10 GHz |
| SCI-9510-503 | —                 | 1    | 100                 | —   | 25    | C   | 0.05 µF  | 15                          | 24    | 35     | 41     | 45      | 60      | 60    | 60     |
| SCI-3513-000 | —                 | 1    | 100                 | —   | 25    | Pi  | 0.1 µF   | 10                          | 18    | 28     | 37     | 70      | 70      | 70    | 70     |
| SCI-3523-000 | —                 | 1    | 200                 | 115 | 25    | Pi  | 0.02 µF  | —                           | —     | 25     | 50     | 66      | 66      | 70    | 70     |
| SCI-3543-000 | —                 | 1    | 400                 | 220 | 25    | Pi  | 6000 pF  | —                           | —     | 15     | 35     | 54      | 65      | 70    | 70     |
| SCI-9550-102 | —                 | 1    | 500                 | 115 | 25    | C   | 1000 pF  | —                           | —     | —      | 11     | 20      | 28      | 28    | 28     |
| † 1202-052   | —                 | 1    | 500                 | —   | 25    | Pi  | 3000 pF  | —                           | —     | 10     | 35     | 55      | 55      | 70    | 70     |
| † 1202-054   | —                 | 2    | 500                 | —   | 25    | Pi  | 3000 pF  | —                           | —     | 10     | 35     | 55      | 55      | 70    | 70     |
| 51-702-020*  | /61-0003          | 3    | 500                 | 350 | 25    | Pi  | 3000 pF  | —                           | —     | —      | 35     | 55      | 55      | 70    | 70     |
| 51-702-021   | /61-0004          | 3    | 500                 | 350 | 25    | Pi  | 3000 pF  | —                           | —     | 10     | 35     | 55      | 55      | 70    | 70     |
| SCI-9550-332 | —                 | 1    | 500                 | 115 | 25    | C   | 3300 pF  | —                           | —     | 12     | 20     | 30      | 33      | 40    | 40     |
| SCI-3553-000 | —                 | 1    | 500                 | 220 | 25    | Pi  | 0.012 µF | —                           | —     | 18     | 28     | 52      | 52      | 70    | 70     |
| † 1202-005   | —                 | 2    | 700                 | —   | 25    | Pi  | 2000 pF  | —                           | —     | 5      | 20     | 50      | 55      | 70    | 70     |

† Also available through API's authorized distributors.

\* Denotes parts with 5/16-24 Threads

# Metric Resin Sealed Bolt-in Filters

## M3 Pi Circuit & M4 C Circuit



| Part Number | Figure | Rated Voltage<br>125°C |  | I<br>Amp | CKT | Min<br>Cap | Temperature<br>Range |
|-------------|--------|------------------------|--|----------|-----|------------|----------------------|
|             |        | DC                     |  |          |     |            |                      |
| 51-831-004  | 1      | 100                    |  | 3        | Pi  | 1000 pF    | -55°C to +125°C      |
| 51-831-011  | 1      | 100                    |  | 10       | Pi  | 100 pF     | -55°C to +125°C      |
| 51-831-012  | 1      | 100                    |  | 10       | Pi  | 1500 pF    | -55°C to +125°C      |
| 51-831-013  | 1      | 100                    |  | 10       | Pi  | 3000 pF    | -55°C to +125°C      |
| 51-831-014  | 1      | 70                     |  | 10       | Pi  | 5500 pF    | -55°C to +125°C      |
| 51-831-015  | 1      | 100                    |  | 10       | Pi  | 12000 pF   | -55°C to +125°C      |
| 54-863-004  | 2      | 100                    |  | 10       | C   | 10000 pF   | -55°C to +125°C      |
| 54-863-005  | 2      | 100                    |  | 10       | C   | 100 pF     | -55°C to +125°C      |
| 54-863-007  | 2      | 100                    |  | 10       | C   | 1000 pF    | -55°C to +125°C      |
| 54-863-008  | 2      | 100                    |  | 10       | C   | 2000 pF    | -55°C to +125°C      |
| 54-863-010  | 2      | 100                    |  | 10       | C   | 4700 pF    | -55°C to +125°C      |

RoHS available.