

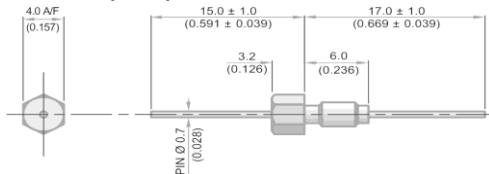
## Feedthrough EMI Filter Datasheet

(4-40 UNC Thread : 4.0mm Hexagonal Head)

### Circuit Configuration



Dimensions mm (inches)



4-40 UNC Class 2A Thread

### Electrical Details

|                              |                 |
|------------------------------|-----------------|
| Electrical Configuration     | C Filter        |
| Capacitance Measurement      | @ 1000hr Point  |
| Current Rating               | 10A             |
| Insulation Resistance (IR)   | 10GΩ or 1000ΩF  |
| Temperature Rating           | -55°C to +125°C |
| Ferrite Inductance (Typical) | Not Applicable  |

### Mechanical Details

|                        |                                  |
|------------------------|----------------------------------|
| Head (A/F)             | 4mm (0.157")                     |
| Mounting Torque        | 0.15Nm (1.32lbf in) max.         |
| Mounting Hole Diameter | 4-40 UNC Class 2B                |
| Max. Panel Thickness   | N/a                              |
| Weight (Typical)       | 0.5g (0.017oz)                   |
| Finish                 | Silver plate on copper undercoat |

| Product Code    | Hardware<br>(Nuts & Washers<br>etc.)                                         | Capacitance<br>±20% UOS | Dielectric | Rated<br>Voltage<br>(dc) | DWV<br>(dc) | Typical No-Load Insertion Loss (db) |        |      |       |        |      |
|-----------------|------------------------------------------------------------------------------|-------------------------|------------|--------------------------|-------------|-------------------------------------|--------|------|-------|--------|------|
|                 |                                                                              |                         |            |                          |             | 0.01MHz                             | 0.1MHz | 1MHz | 10MHz | 100MHz | 1GHz |
| *SFAAC5000100ZC | 0 = No hardware supplied<br>Other options available - please contact factory | 10pF -20% / +80%        | C0G        | 500#                     | 750         |                                     |        |      |       |        | 4    |
| SFAAC5000150ZC  |                                                                              | 15pF -20% / +80%        | C0G        | 500#                     | 750         |                                     |        |      |       |        | 7    |
| SFAAC5000220ZC  |                                                                              | 22pF -20% / +80%        | C0G        | 500#                     | 750         |                                     |        |      |       |        | 10   |
| SFAAC5000330ZC  |                                                                              | 33pF -20% / +80%        | C0G        | 500#                     | 750         |                                     |        |      |       |        | 12   |
| *SFAAC5000470ZC |                                                                              | 47pF -20% / +80%        | C0G        | 500#                     | 750         |                                     |        |      |       | 1      | 15   |
| *SFAAC5000680MC |                                                                              | 68pF                    | C0G        | 500#                     | 750         |                                     |        |      |       | 2      | 18   |
| *SFAAC5000101MC |                                                                              | 100pF                   | C0G        | 500#                     | 750         |                                     |        |      |       | 4      | 22   |
| SFAAC5000151MC  |                                                                              | 150pF                   | C0G        | 500#                     | 750         |                                     |        |      |       | 7      | 25   |
| *SFAAC5000221MC |                                                                              | 220pF                   | C0G        | 500#                     | 750         |                                     |        |      |       | 10     | 29   |
| *SFAAC5000331MC |                                                                              | 330pF                   | C0G        | 500#                     | 750         |                                     |        |      |       | 13     | 33   |
| *SFAAC5000471MX |                                                                              | 470pF                   | †X7R       | 500#                     | 750         |                                     |        |      | 1     | 16     | 35   |
| SFAAC5000681MX  |                                                                              | 680pF                   | †X7R       | 500#                     | 750         |                                     |        |      | 2     | 19     | 36   |
| *SFAAC5000102MX |                                                                              | 1.0nF                   | X7R        | 500#                     | 750         |                                     |        |      | 4     | 23     | 41   |
| SFAAC5000152MX  |                                                                              | 1.5nF                   | X7R        | 500#                     | 750         |                                     |        |      | 7     | 26     | 45   |
| *SFAAC5000222MX |                                                                              | 2.2nF                   | X7R        | 500#                     | 750         |                                     |        |      | 10    | 30     | 50   |
| SFAAC5000332MX  |                                                                              | 3.3nF                   | X7R        | 500#                     | 750         |                                     |        |      | 13    | 33     | 52   |
| *SFAAC5000472MX |                                                                              | 4.7nF                   | X7R        | 500#                     | 750         |                                     |        | 1    | 16    | 36     | 55   |
| SFAAC5000682MX  |                                                                              | 6.8nF                   | X7R        | 500#                     | 750         |                                     |        | 2    | 19    | 39     | 57   |
| *SFAAC5000103MX |                                                                              | 10nF                    | X7R        | 500#                     | 750         |                                     |        | 4    | 22    | 41     | 60   |
| *SFAAC5000153MX |                                                                              | 15nF                    | X7R        | 500#                     | 750         |                                     |        | 7    | 25    | 44     | 62   |
| *SFAAC5000223MX |                                                                              | 22nF                    | X7R        | 500#                     | 750         |                                     |        | 10   | 29    | 46     | 65   |
| SFAAC5000333MX  |                                                                              | 33nF                    | X7R        | 500#                     | 750         |                                     |        | 13   | 33    | 48     | 68   |
| *SFAAC2000473MX |                                                                              | 47nF                    | X7R        | 200                      | 500         |                                     | 1      | 16   | 35    | 50     | 70   |
| SFAAC2000683MX  |                                                                              | 68nF                    | X7R        | 200                      | 500         |                                     | 2      | 19   | 39    | 54     | >70  |
| *SFAAC1000104MX |                                                                              | 100nF                   | X7R        | 100                      | 250         |                                     | 4      | 22   | 41    | 57     | >70  |
| *SFAAC0500154MX |                                                                              | 150nF                   | X7R        | 50                       | 125         |                                     | 7      | 25   | 45    | 60     | >70  |

# - Also rated for operation at 115Vac 400Hz. Self-heating will occur - evaluation in situ recommended

\* Recommended values

† Also available in C0G

### Ordering Information

| Type         | Case Style     | Thread   | Electrical configuration | Voltage (dc)                                        | Capacitance in picofarads (pF)                                                                                                                                                       | Capacitance Tolerance   | Dielectric             | Hardware    |
|--------------|----------------|----------|--------------------------|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|------------------------|-------------|
| SF           | A              | A        | C                        | 500                                                 | 0333                                                                                                                                                                                 | M                       | X                      | 0           |
| Syfer Filter | 4.0mm Hex Head | 4-40 UNC | C = C Filter             | 050 = 50V<br>100 = 100V<br>200 = 200V<br>500 = 500V | First digit is 0. Second and third digits are significant figures of capacitance code. The fourth digit is the number of zeros following.<br>Examples: 0101 = 100pF<br>0332 = 3300pF | M = ±20%<br>Z = -20+80% | C = C0G/NP0<br>X = X7R | 0 = Without |

Note: The addition of a 4-digit numerical suffix code can be used to denote changes to the standard part.

Options include for example: change of pin length / custom body dimensions or threads / alternative voltage rating / non-standard intermediate capacitance values / test requirements.

Please refer specific requests to the factory.



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