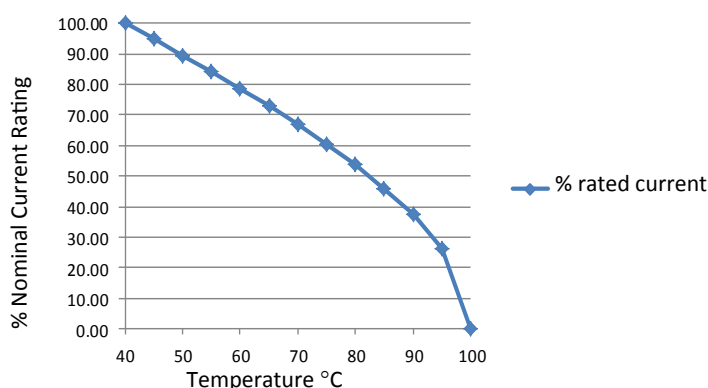


# RES10-M General Purpose EMI Filters

## Medical Applications

Roxburgh EMC's RES10-M range are single phase filters, designed specifically for the medical industry. They offer a general purpose filtering performance with eight versions to select from and an operating frequency from dc to 400Hz.

Temperature Derating Curve for EMC Filters Rated at 40°C Ambient and 100°C Maximum



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### Features:

- 1 Amp to 30 Amp Options
- Single Phase
- General Purpose Filtering Performance
- UL Approved E191581

### Benefits:

- Compact size for rated current
- Fast-on, screw or wire terminations
- Quick and Easy Mounting
- Available from UK Stock

### Applications:

These filters are designed for applications within the **medical industry**.

Full technical specification on page 2

Performance curves on page 3

Other options in this range on page 4

### DEM Manufacturing

Deltron Emcon House  
Hargreaves Way  
Sawcliffe Industrial Park  
Scunthorpe, North Lincolnshire.  
DN15 8RF

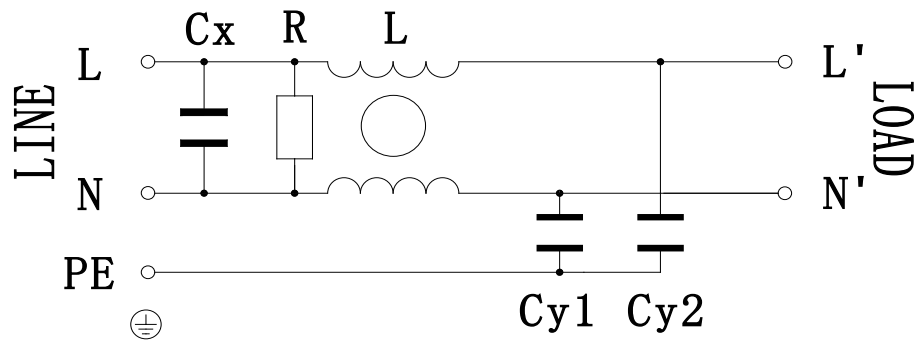
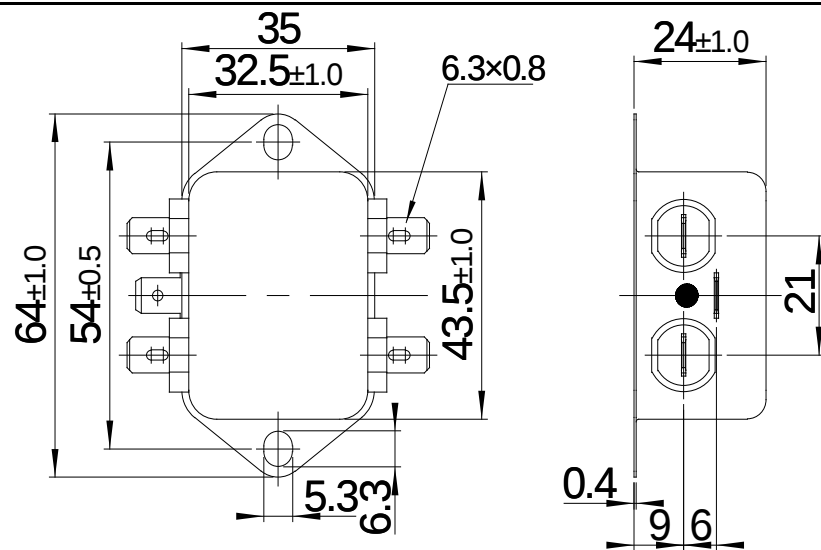
**ROXBURGH** EMC



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|                                                                                  |                                     |                                                                                     |                                     |                         |             |          |  |
|----------------------------------------------------------------------------------|-------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------|-------------------------|-------------|----------|--|
| Circuit diagram:                                                                 |                                     | Dimensions(mm):                                                                     |                                     |                         |             |          |  |
|  |                                     |  |                                     |                         |             |          |  |
| Electrical parameters:                                                           |                                     |                                                                                     |                                     |                         |             |          |  |
| Rated Voltage:                                                                   |                                     | 120/250VAC                                                                          |                                     |                         |             |          |  |
| Rated Current at an ambient temp:                                                |                                     | 1A@40°C                                                                             |                                     |                         |             |          |  |
| Operating Frequency:                                                             |                                     | 50/60Hz                                                                             |                                     |                         |             |          |  |
| Climatic Class(IEC60068-1):                                                      |                                     | 25/100/21                                                                           |                                     |                         |             |          |  |
| Operational Leakage current:<br>(at 250VAC/50Hz and Total C +/-20%)              |                                     | 0.8mA max<br>(RES10F01-M 0mA)                                                       |                                     |                         |             |          |  |
| Operational Leakage current:<br>(at 120VAC/60Hz and Total C +/-20%)              |                                     | 0.46mA max<br>(RES10F01-M 0mA)                                                      |                                     |                         |             |          |  |
| Test Voltage(100%)for 2 sec:                                                     |                                     |                                                                                     |                                     |                         |             |          |  |
| L-N:                                                                             |                                     | 1100VDC/20mA                                                                        |                                     |                         |             |          |  |
| L/N-PE:                                                                          |                                     | 2250VDC/20mA                                                                        |                                     |                         |             |          |  |
| Filter parameters:                                                               |                                     |                                                                                     |                                     |                         |             |          |  |
| Total Inductance(L-L'/N-N'):                                                     |                                     |                                                                                     |                                     | 12mH +50%,-35%          |             |          |  |
| Total Capacitance(L-N/L'-N'):                                                    |                                     |                                                                                     |                                     | 0.1uF +/-20%            |             |          |  |
| Total Capacitance(L/N-PE) (RES10F01-M):                                          |                                     |                                                                                     |                                     | 9.4nF +/-20% (0nF)      |             |          |  |
| Total Resistance(L-N/L'-N'):                                                     |                                     |                                                                                     |                                     | 1MΩ +/-10%              |             |          |  |
| Weight(Approximate):                                                             |                                     |                                                                                     |                                     | 55g                     |             |          |  |
| Safety certification                                                             |                                     |                                                                                     |                                     | Technical Specification |             |          |  |
| UL                                                                               | <input checked="" type="checkbox"/> | CSA                                                                                 | <input checked="" type="checkbox"/> | compiled by             | Jay Zhang   | 2020-8-5 |  |
| ENEC                                                                             | <input checked="" type="checkbox"/> | CQC                                                                                 | <input type="checkbox"/>            | reviewed by             | Pallas Wang | 2020-8-5 |  |
| CE                                                                               | <input checked="" type="checkbox"/> | VDE                                                                                 | <input type="checkbox"/>            | approved by             | Henry Huang | 2020-8-5 |  |
| Part RES10F01                                                                    |                                     |                                                                                     |                                     | single-phase emc filter |             |          |  |
| Number (Alternate RES10F01-M - no Y caps)                                        |                                     |                                                                                     |                                     | stage marker            |             | V1.03    |  |

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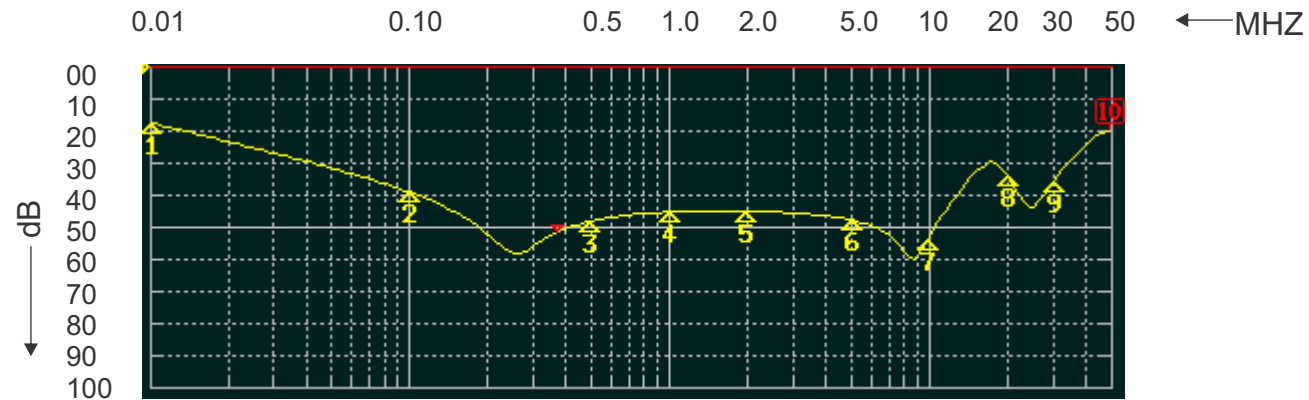
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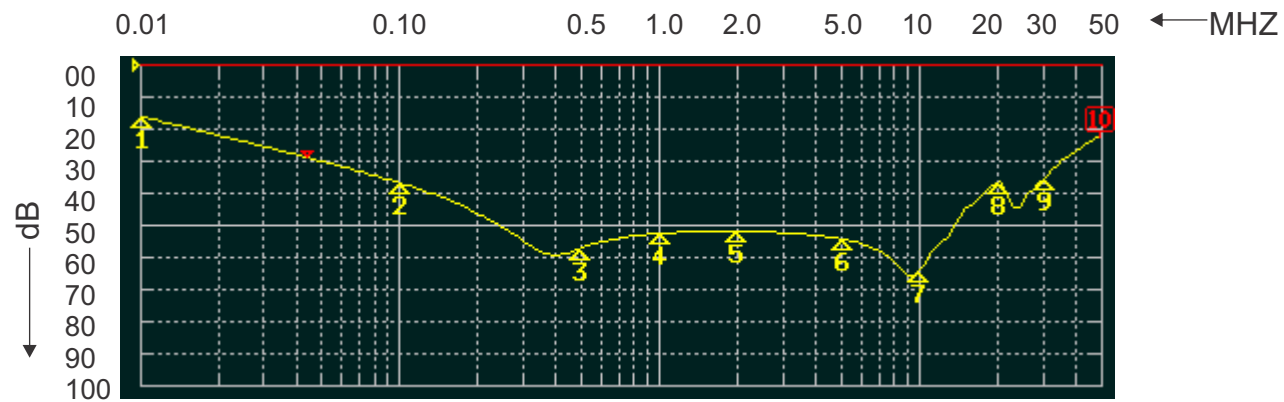
# ROXBURGH EMC

## FILTER INSERTION LOSS CHARACTERISTICS CISPR 17 - 50 OHM METHOD

RES10F01



COMMON MODE



DIFFERENTIAL MODE



# RES10-M General Purpose EMI Filter

## Medical Applications

### Options Available:

| Part Number | Rated Current<br>@40°C<br>A | Leakage Current @<br>230V/50Hz<br>mA | Inductance<br>ΣL<br>mH | Capacitance<br>ΣCx<br>uF | Resistance<br>ΣR<br>KΩ | Connection Type                                                                     |                                                                                     |                                                                                     |
|-------------|-----------------------------|--------------------------------------|------------------------|--------------------------|------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|             |                             |                                      |                        |                          |                        |  |  |  |
| RES10F01-M  | 1                           | 0.002                                | 12                     | 0.1                      | 1000                   | F                                                                                   | W                                                                                   |                                                                                     |
| RES10F03-M  | 3                           | 0.002                                | 2.5                    | 0.1                      | 1000                   | F                                                                                   | W                                                                                   |                                                                                     |
| RES10F06-M  | 6                           | 0.002                                | 1.0                    | 0.1                      | 1000                   | F                                                                                   | W                                                                                   |                                                                                     |
| RES10F10-M  | 10                          | 0.002                                | 0.8                    | 0.1                      | 1000                   | F                                                                                   | W                                                                                   |                                                                                     |
| RES10F12-M  | 12                          | 0.002                                | 0.7                    | 0.1                      | 1000                   | F                                                                                   | W                                                                                   |                                                                                     |
| RES10F16-M  | 16                          | 0.002                                | 0.7                    | 0.1                      | 1000                   | F                                                                                   | W                                                                                   |                                                                                     |
| RES10F20-M  | 20                          | 0.002                                | 0.6                    | 0.1                      | 1000                   | F                                                                                   | W                                                                                   |                                                                                     |
| RES10S30-M  | 30                          | 0.002                                | 0.7                    | 0.47                     | 1000                   |                                                                                     |                                                                                     | S                                                                                   |

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#### DEM Manufacturing

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