

## High Performance RFI Power Line Filters for Switching Power Supplies

# T Series



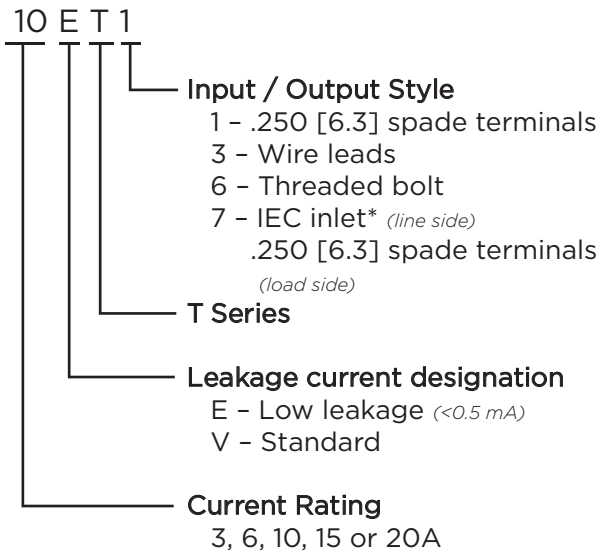
UL Recognized  
CSA Certified  
VDE Approved



## T Series

- Superior common-mode and premium differential-mode attenuation
- Smaller package sizes than the EP Series
- Size and cost-effective
- ET models can help meet very low leakage current requirements

## Ordering Information



\*IEC 60320-1 C14 inlet mates with C13 connector

## Specifications

### Maximum leakage current each Line to Ground:

|                       | ET Models | VT Models |
|-----------------------|-----------|-----------|
| <b>3, 6 &amp; 10A</b> |           |           |
| @120 VAC 60 Hz:       | .30 mA    | .75 mA    |
| @250 VAC 50 Hz:       | .50 mA    | 1.2 mA    |
| <b>15 &amp; 20A</b>   |           |           |
| @120 VAC 60 Hz:       | .30 mA    | 1.2 mA    |
| @250 VAC 50 Hz:       | .50 mA    | 2.0 mA    |

### Hipot rating (one minute):

|                 |          |
|-----------------|----------|
| Line to Ground: | 2250 VDC |
| Line to Line:   | 1450 VDC |

**Rated Voltage (max):** 250 VAC

**Operating Frequency:** 50/60 Hz

**Rated Current:** 3 to 20A

### Operating Ambient Temperature Range

(at rated current  $I_r$ ): -10°C to +40°C  
In an ambient temperature ( $T_a$ ) higher than +40°C the maximum operating current ( $I_o$ ) is calculated as follows:  $I_o = I_r \sqrt{(85-T_a)/45}$

## Available Part Numbers

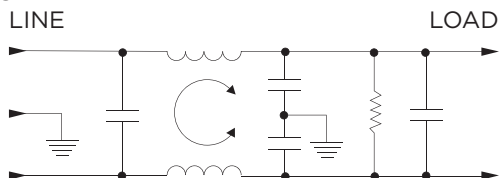
|      |       |       |
|------|-------|-------|
| 3ET1 | 10ET1 | 10VT1 |
| 3ET3 | 10ET3 | 10VT3 |
| 3ET7 | 15ET1 | 15VT1 |
| 6ET1 | 15ET6 | 15VT6 |
| 6ET3 | 20ET1 | 20VT1 |
| 6ET7 | 20ET6 | 20VT6 |

## High Performance RFI Filters for Switching Power Supplies *(continued)*

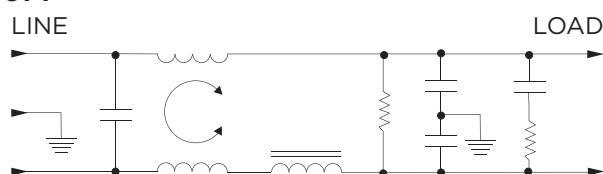
# T Series

## Electrical Schematics

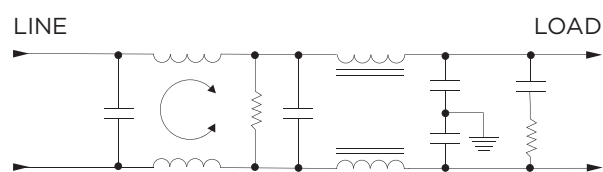
### 3 & 6A



### 10A

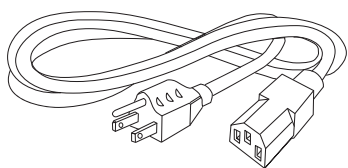


### 15 & 20A



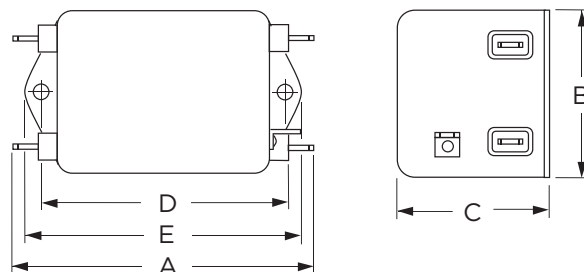
## Accessories

GA400: NEMA 5-15P to IEC 60320-1 C-13 line cord



## Case Styles

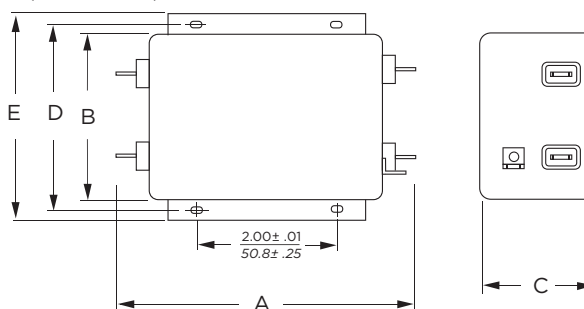
### T1 (3, 6, 10A)



Typical Dimensions:

|                          |                                            |
|--------------------------|--------------------------------------------|
| Line/Load Terminals (4): | .250 [6.3] with .07 [1.8] Dia. hole        |
| Ground Terminal (1):     | .250 [6.3] with .07 x .16 [1.8 x 3.8] slot |
| Mounting Holes (2):      | .188 [4.78] Dia.                           |

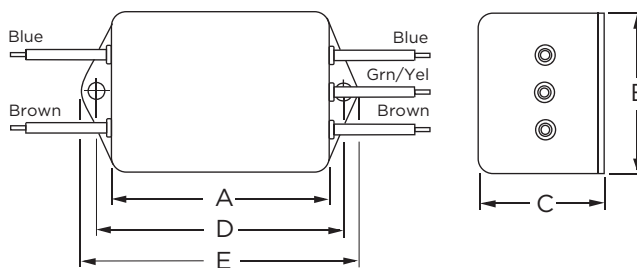
### T1 (15 & 20A)



Typical Dimensions:

|                          |                                            |
|--------------------------|--------------------------------------------|
| Line/Load Terminals (4): | .250 [6.3] with .07 [1.8] Dia. hole        |
| Ground Terminal (1):     | .250 [6.3] with .07 x .16 [1.8 x 3.8] slot |
| Mounting Slots (4):      | .250 x .156 [6.35 x 3.96] Dia.             |

### T3



Typical Dimensions:

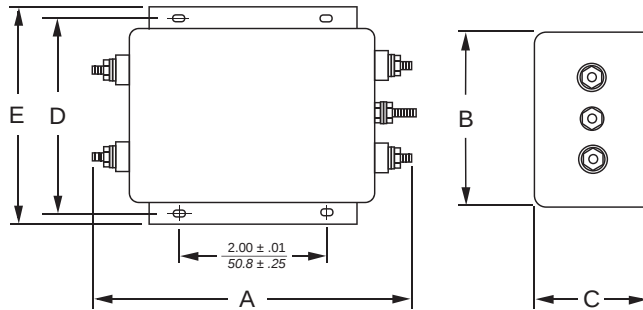
|                     |                         |
|---------------------|-------------------------|
| Wire Leads (5):     | 4.0 [101.6] Min., AWG18 |
| Mounting Holes (2): | .188 [4.78] Dia.        |

## High Performance RFI Filters for Switching Power Supplies *(continued)*

# T Series

## Case Styles *(continued)*

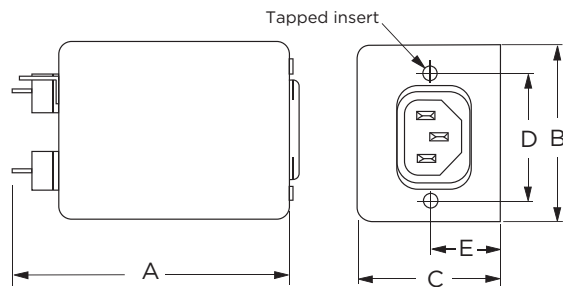
### T6



Typical Dimensions:

Terminals (5): 8-32, Torque 18 lbf-in. [2.03 N-m] max. ± 2 [22]  
Mounting Slots (4): .250 x .156 [6.35 x 3.96] Dia.

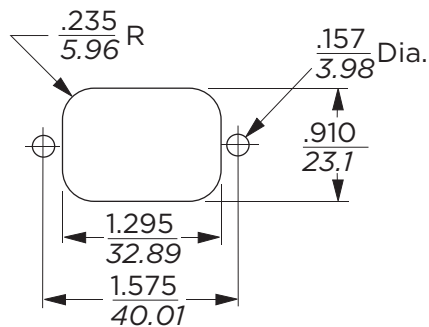
### T7



Typical Dimensions:

Load Terminals (2): .250 [6.3] with .07 [1.8] Dia. hole  
Ground Terminal (1): .250 [6.3] with .07 x .16 [1.8 x 3.8] slot  
Line Inlet (1): IEC 60320-1 C14  
Tapped Inserts (2): 6-32 x 1/4

## Recommended Panel Cutout



Tolerance ± .005 [0.13]

## Case Dimensions

| Part No.                      | A<br>(max)    | B<br>(max)   | C<br>(max)   | D<br>$\pm .015$<br>$\pm .38$ | E<br>(max)     |
|-------------------------------|---------------|--------------|--------------|------------------------------|----------------|
| 3ET1, 6ET1                    | 3.56<br>90.4  | 2.15<br>54.6 | 1.81<br>46.0 | 2.938<br>74.63               | 3.38<br>85.9   |
| 3ET3, 6ET3                    | 2.55<br>64.8  | 2.15<br>54.6 | 1.81<br>46.0 | 2.938<br>74.63               | 3.38<br>85.9   |
| 3ET7, 6ET7                    | 3.52<br>89.4  | 2.25<br>57.2 | 1.78<br>45.2 | 1.575<br>40.01               | 0.63*<br>16.0* |
| 10ET1, 10VT1                  | 4.69<br>119.1 | 2.27<br>57.7 | 1.80<br>45.7 | 4.063<br>103.2               | 4.47<br>113.5  |
| 10ET3, 10VT3                  | 3.69<br>93.7  | 2.27<br>57.7 | 1.80<br>45.7 | 4.063<br>103.2               | 4.47<br>113.5  |
| 15ET1, 15VT1,<br>20ET1, 20VT1 | 5.45<br>138.4 | 3.12<br>79.2 | 2.18<br>55.4 | 3.5<br>88.9                  | 3.96<br>100.6  |
| 15ET6, 15VT6,<br>20ET6, 20VT6 | 5.95<br>151.1 | 3.12<br>79.2 | 2.18<br>55.4 | 3.5<br>88.9                  | 3.96<br>100.6  |

\*±0.02 [0.5]

## High Performance RFI Filters for Switching Power Supplies *(continued)*

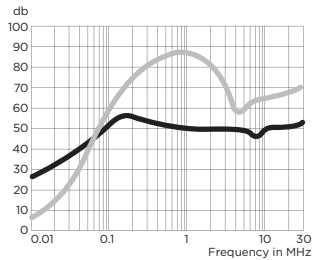
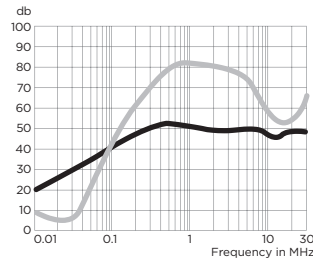
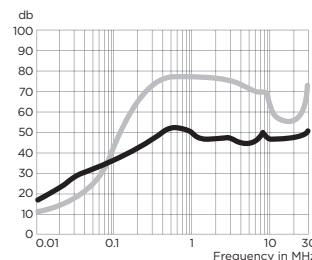
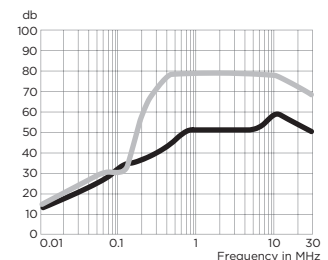
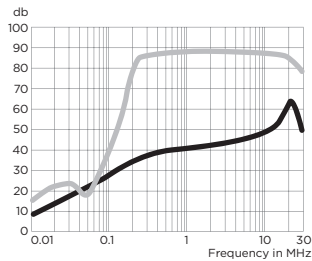
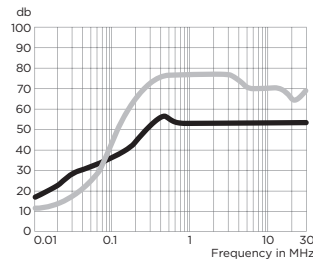
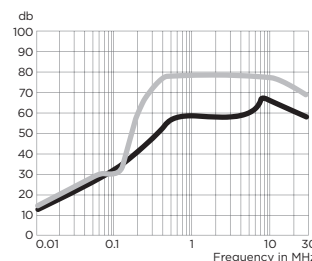
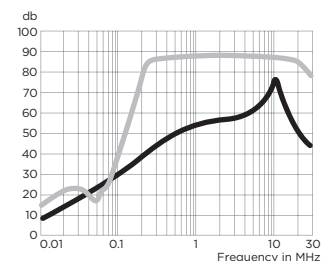
# T Series

## Performance Data

### Typical Insertion Loss

Measured in closed 50 Ohm system

— Common Mode / Asymmetrical (L-G)  
— Differential Mode / Symmetrical (L-L)

**3ET**

**6ET**

**10ET**

**15ET**

**20ET**

**10VT**

**15VT**

**20VT**


### Minimum Insertion Loss

Measured in closed 50 Ohm system

Common Mode / Asymmetrical (Line to Ground)

| Current Rating   | Frequency – MHz |     |     |     |    |    |    |    |    |    |    |
|------------------|-----------------|-----|-----|-----|----|----|----|----|----|----|----|
|                  | .01             | .03 | .05 | .15 | .5 | 1  | 2  | 5  | 10 | 20 | 30 |
| <b>ET Models</b> |                 |     |     |     |    |    |    |    |    |    |    |
| 3A               | 22              | 32  | 36  | 46  | 47 | 44 | 43 | 40 | 42 | 42 | 42 |
| 6A               | 16              | 26  | 30  | 41  | 47 | 44 | 43 | 43 | 40 | 42 | 42 |
| 10A              | 12              | 22  | 26  | 36  | 47 | 42 | 42 | 40 | 42 | 42 | 45 |
| 15A              | 8               | 17  | 22  | 31  | 43 | 44 | 44 | 42 | 47 | 52 | 43 |
| 20A              | 3               | 12  | 17  | 26  | 34 | 36 | 37 | 37 | 42 | 47 | 38 |

#### VT Models

|     |    |    |    |    |    |    |    |    |    |    |    |
|-----|----|----|----|----|----|----|----|----|----|----|----|
| 10A | 12 | 22 | 26 | 38 | 52 | 50 | 50 | 50 | 50 | 50 | 50 |
| 15A | 8  | 17 | 22 | 33 | 52 | 52 | 52 | 52 | 57 | 45 | 35 |
| 20A | 3  | 12 | 17 | 29 | 42 | 47 | 50 | 51 | 55 | 40 | 30 |

Differential Mode / Symmetrical (Line to Line)

| Current Rating   | Frequency – MHz |     |     |     |    |    |    |    |    |    |    |
|------------------|-----------------|-----|-----|-----|----|----|----|----|----|----|----|
|                  | .01             | .03 | .05 | .15 | .5 | 1  | 2  | 5  | 10 | 20 | 30 |
| <b>ET Models</b> |                 |     |     |     |    |    |    |    |    |    |    |
| 3A               | 3               | 1   | 30  | 61  | 70 | 70 | 70 | 50 | 50 | 50 | 55 |
| 6A               | 4               | 2   | 14  | 51  | 70 | 70 | 70 | 65 | 47 | 50 | 55 |
| 10A              | 7               | 12  | 17  | 52  | 70 | 70 | 70 | 65 | 55 | 50 | 60 |
| 15A              | 12              | 19  | 15  | 51  | 70 | 70 | 70 | 70 | 70 | 65 | 60 |
| 20A              | 10              | 17  | 13  | 51  | 70 | 70 | 70 | 70 | 67 | 65 | 60 |

#### VT Models

|     |    |    |    |    |    |    |    |    |    |    |    |
|-----|----|----|----|----|----|----|----|----|----|----|----|
| 10A | 7  | 12 | 17 | 52 | 70 | 70 | 70 | 65 | 65 | 50 | 65 |
| 15A | 12 | 19 | 15 | 51 | 70 | 70 | 70 | 70 | 70 | 65 | 60 |
| 20A | 10 | 17 | 13 | 51 | 70 | 70 | 70 | 70 | 67 | 65 | 60 |