

EMC Components

TF Series

Common Mode Choke Coils(Line Filters) for AC Power Supply Toroidal Core Type

TDK common mode choke coils(line filters) are used in a wide range of prevention of electromagnetic interference(EMI) and radio frequency interference(RFI) from power supply lines and for prevention of multifunctioning of products such as measuring equipment and system equipment.

RATINGS

| Item | Standard value | Conditions |
|-------------------------------------|--|---|
| Rated voltage(V) | 80 to 280* | |
| Dielectric withstanding voltage(V) | 2000 | Between each winding for 1 minute |
| Insulation resistance (M Ω) | 100min. | Between each winding for 1 minute, Edc 500V |
| Temperature rise(°C) | 45max.* | With line resistance |
| Operating temperature range(°C) | -20 to +120 | Including self-temperature rise |
| Safety standard | Japan Electric/Electronic Products Control Law, UL, CSA and IEC conformed(The safety standard is not acquired with the unit only.) | |

* Except particular items.

- Measuring equipment of inductance value:
LCR meter(HP4261A, HP4263B or equivalent)

FEATURES

- Wide range of selection.
- High impedance at applicable frequency.
- High self-resonant frequency.

SELECTION CHART

| Series | Configuration | Type | Inductance value min. | Rated current (A) | Handling power* $L \times I^2$ (mH \times A ²) | Weight (g)typ. | Minimum package quantity (pieces/box) |
|--------|---|--|-----------------------|-------------------|---|----------------|---------------------------------------|
| TF | Horizontal types (Toroidal core) | TF1028S | 0.45 to 2.2mH | 0.5 to 3 | 2.5 | 8 | 900 |
| | | TF2720B | 0.45 to 7mH | 2.5 to 10 | 50 | 20 | 400 |
| | | TF3524B | 0.25 to 10mH | 3 to 20 | 130 | 42 | 300 |
| | | TF4825S | 1, 2mH | 10 to 15 | 200 | 95 | 120 |
| | | TF6029S | 1mH | 20 to 30 | 400 | 205 | 70 |
| | | TF1320S | 1 to 4mH | 1.5 to 3 | 9 | 6.5 | 1000 |
| | Vertical types (Toroidal core) | TF2628V | 0.45 to 7mH | 2.5 to 10 | 50 | 19.5 | 700 |
| | | TF3524V | 0.25 to 10mH | 3 to 20 | 130 | 41 | 320 |
| | | Multi-section case types (For high frequency) | TF3329B | 8.5 to 15mH | 2.5 to 3.5 | 100 | 40.5 |
| | Vertical types(Toroidal core) (For high frequency) | TF2628V-1H | 25 to 65 μ H | 6 to 12 | 3.65 | 18 | 700 |
| | | TF3524V-1H | 25 to 120 μ H | 8 to 20 | 10.8 | 40 | 320 |
| | For three phase lines (Toroidal core) | TF6030T | 1 to 7.5mH | 5 to 14 | 160 | 150 | 70 |
| | | TF6035T | 0.2 to 1.6mH | 15 to 30 | 400 | 160 | 70 |

* Handling power=(Inductance value) \times (Current)². It is possible to design within the range below this value.
[Example] The coil for 2A can make even the inductance of 2.5mH or less a product for handling power 10.

PRODUCT IDENTIFICATION

UF □□□□ V □ - □□□Y □R□ - 01
(1) (2) (3) (4) (5) (6) (7)

(1)Core shape

UF: U-type core

TF: Toroidal core

HF: Square shaped closed magnetic circuit core type

Double-square shaped closed magnetic circuit core type

(2)Dimensional code(Length \times Height)

(3)External shape code

(4)TDK's internal code

(5)Inductance value

Example) 602: 60 μ H \times 10²=6mH

(6)Rated current value

Example) 2R5: 2.5A

(7)Product management number

EMC Components

TF Series

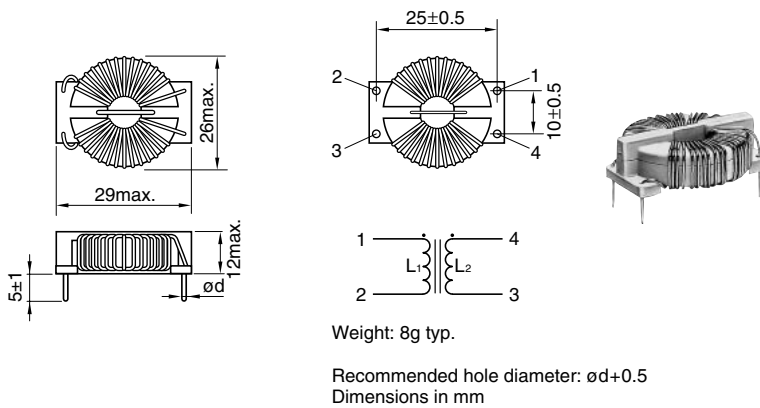
Common Mode Choke Coils(Line Filters) for AC Power Supply Toroidal Core Type

HORIZONTAL TYPE TF SERIES

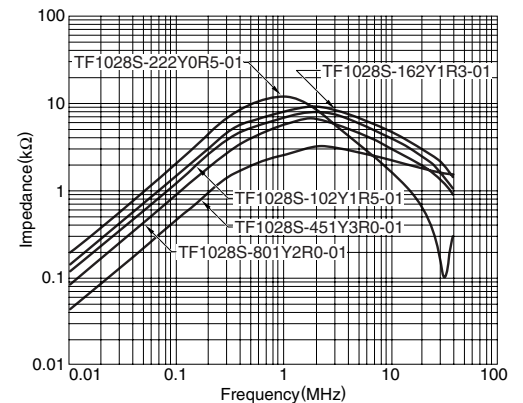
FEATURES

- This series uses a high permeability toroidal ferrite core and therefore provides large inductance with a little number of turns.
- Therefore its stray capacity is small and it keeps the impedance required to effectively suppress high frequency noises.
- Products mounted on a base with fixed leads are easy to insert to circuit boards.

TF1028S(HORIZONTAL TYPE WITH TERMINAL BASE) TYPE SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



TYPICAL ELECTRICAL CHARACTERISTICS IMPEDANCE vs. FREQUENCY CHARACTERISTICS



ELECTRICAL CHARACTERISTICS

| Part No. | Inductance (mH)min. | DC resistance (Ω)max. | Rated current (A)max. | Dimensions(mm) ϕd |
|--------------------|---------------------|--------------------------------|-----------------------|----------------------------|
| TF1028S-222Y0R5-01 | 2.2 | 0.2 | 0.5 | 0.4 |
| TF1028S-162Y1R3-01 | 1.6 | 0.2 | 1.3 | 0.4 |
| TF1028S-102Y1R5-01 | 1 | 0.1 | 1.5 | 0.45 |
| TF1028S-801Y2R0-01 | 0.8 | 0.1 | 2 | 0.5 |
| TF1028S-451Y3R0-01 | 0.45 | 0.06 | 3 | 0.6 |

APPLICABLE SAFETY STANDARD

Electrical Appliance and Material Safety Law ("DENAN"), IEC60065, UL6500, CSA C22.2

- However, this product is not recognized by each regulations.

PACKAGING QUANTITIES

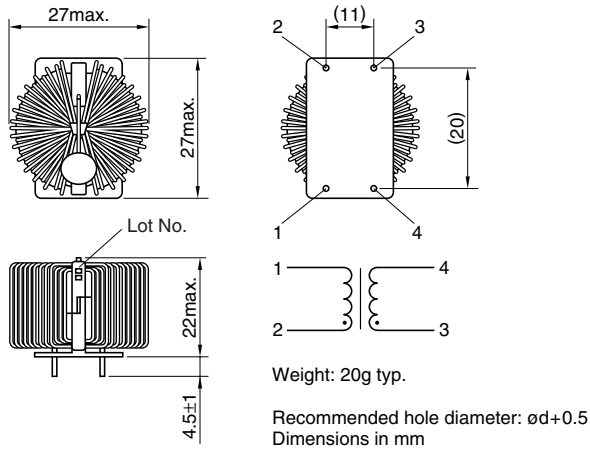
| | |
|---------|---------------|
| TF1028S | 900pieces/box |
|---------|---------------|

EMC Components

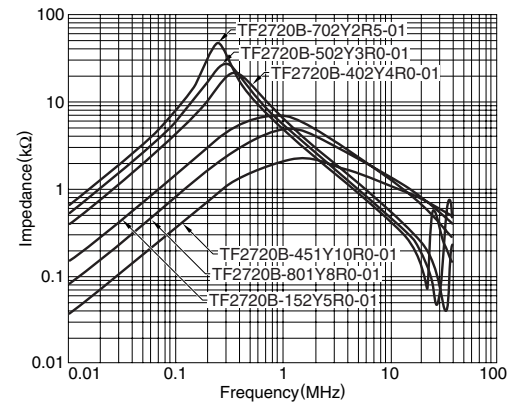
TF Series

Common Mode Choke Coils(Line Filters) for AC Power Supply Toroidal Core Type

TF2720B(HORIZONTAL TYPE WITH TERMINAL BASE) TYPE SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



TYPICAL ELECTRICAL CHARACTERISTICS IMPEDANCE vs. FREQUENCY CHARACTERISTICS



ELECTRICAL CHARACTERISTICS

| Part No. | Inductance (mH)min. | DC resistance (Ω)max. | Rated current (A)max. | Dimensions(mm) ød |
|---------------------|---------------------|-----------------------|-----------------------|----------------------|
| TF2720B-702Y2R5-01 | 7 | 0.2 | 2.5 | 0.6 |
| TF2720B-502Y3R0-01 | 5 | 0.15 | 3 | 0.65 |
| TF2720B-402Y4R0-01 | 4 | 0.1 | 4 | 0.7 |
| TF2720B-152Y5R0-01 | 1.5 | 0.05 | 5 | 0.8 |
| TF2720B-801Y8R0-01 | 0.8 | 0.02 | 8 | 1 |
| TF2720B-451Y10R0-01 | 0.45 | 0.015 | 10 | 1.1 |

APPLICABLE SAFETY STANDARD

Electrical Appliance and Material Safety Law ("DENAN"), IEC60065, UL6500, CSA C22.2

- However, this product is not recognized by each regulations.

PACKAGING QUANTITIES

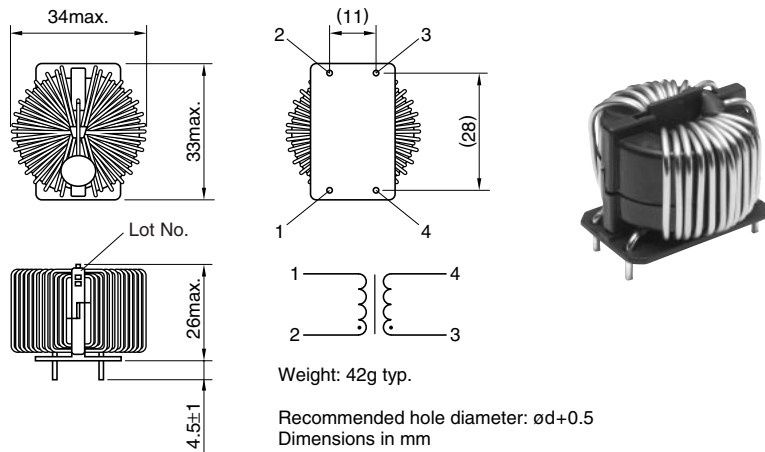
| | |
|---------|---------------|
| TF2720B | 400pieces/box |
|---------|---------------|

EMC Components

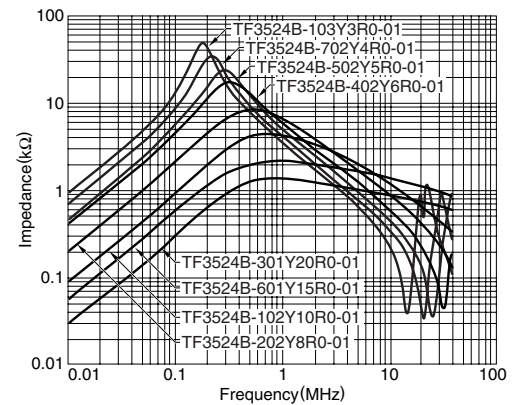
TF Series

Common Mode Choke Coils(Line Filters) for AC Power Supply Toroidal Core Type

TF3524B(HORIZONTAL TYPE WITH TERMINAL BASE) TYPE SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



TYPICAL ELECTRICAL CHARACTERISTICS IMPEDANCE vs. FREQUENCY CHARACTERISTICS



ELECTRICAL CHARACTERISTICS

| Part No. | Inductance (mH)min. | DC resistance (Ω)max. | Rated current (A)max. | Dimensions(mm) ϕd |
|---------------------|------------------------|-----------------------------------|--------------------------|----------------------------|
| TF3524B-103Y3R0-01 | 10 | 0.15 | 3 | 0.7 |
| TF3524B-702Y4R0-01 | 7 | 0.1 | 4 | 0.8 |
| TF3524B-502Y5R0-01 | 5 | 0.05 | 5 | 0.9 |
| TF3524B-402Y6R0-01 | 4 | 0.035 | 6 | 1 |
| TF3524B-202Y8R0-01 | 2 | 0.025 | 8 | 1.2 |
| TF3524B-102Y10R0-01 | 1 | 0.02 | 10 | 1.3 |
| TF3524B-601Y15R0-01 | 0.6 | 0.007 | 15 | 1.6 |
| TF3524B-301Y20R0-01 | 0.3 | 0.005 | 20 | 1.8 |

APPLICABLE SAFETY STANDARD

Electrical Appliance and Material Safety Law ("DENAN"), IEC60065, UL6500, CSA C22.2

- However, this product is not recognized by each regulations.

PACKAGING QUANTITIES

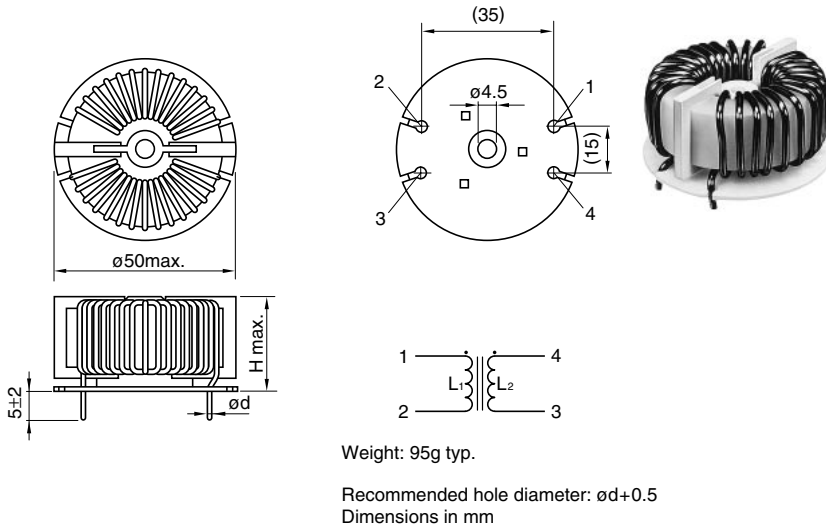
| | |
|---------|---------------|
| TF3524B | 300pieces/box |
|---------|---------------|

EMC Components

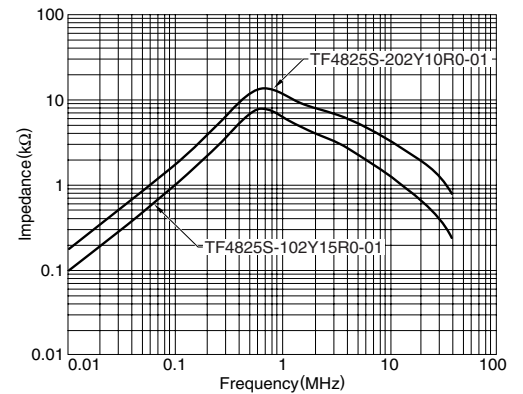
TF Series

Common Mode Choke Coils(Line Filters) for AC Power Supply Toroidal Core Type

TF4825S(HORIZONTAL TYPE WITH TERMINAL BASE) TYPE SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



TYPICAL ELECTRICAL CHARACTERISTICS IMPEDANCE vs. FREQUENCY CHARACTERISTICS



ELECTRICAL CHARACTERISTICS

| Part No. | Inductance (mH)min. | DC resistance (mΩ)max. | Rated current (A)max. | Dimensions(mm) | |
|---------------------|------------------------|---------------------------|--------------------------|----------------|--------|
| | | | | ϕd | H max. |
| TF4825S-202Y10R0-01 | 2 | 20 | 10 | 1.3 | 28 |
| TF4825S-102Y15R0-01 | 1 | 7.5 | 15 | 1.8 | 31 |

APPLICABLE SAFETY STANDARD

Electrical Appliance and Material Safety Law ("DENAN"), IEC60065, UL6500, CSA C22.2

- However, this product is not recognized by each regulations.

PACKAGING QUANTITIES

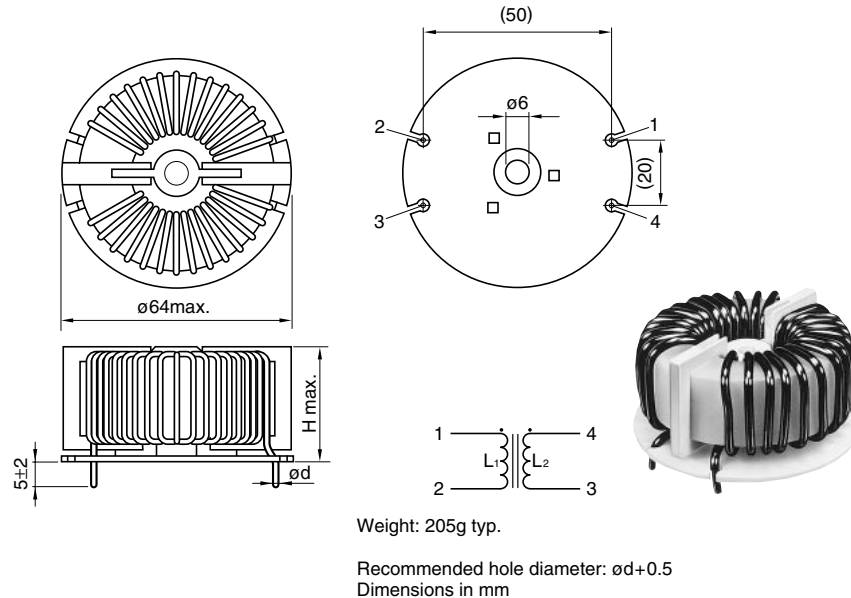
| | |
|---------|---------------|
| TF4825S | 120pieces/box |
|---------|---------------|

EMC Components

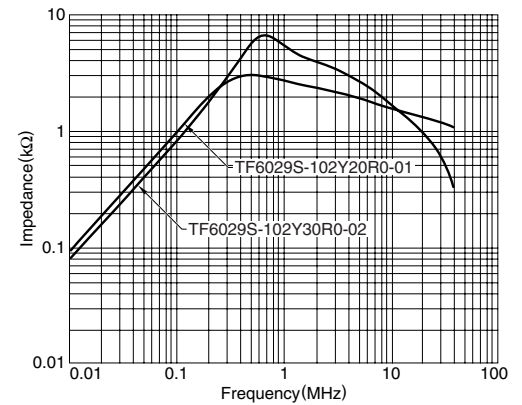
TF Series

Common Mode Choke Coils(Line Filters) for AC Power Supply Toroidal Core Type

TF6029S(HORIZONTAL TYPE WITH TERMINAL BASE) TYPE SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



TYPICAL ELECTRICAL CHARACTERISTICS IMPEDANCE vs. FREQUENCY CHARACTERISTICS



ELECTRICAL CHARACTERISTICS

| Part No. | Inductance (mH)min. | DC resistance (mΩ)max. | Rated current (A)max. | Dimensions(mm) | |
|---------------------|------------------------|---------------------------|--------------------------|----------------|--------|
| | | | | ϕd | H max. |
| TF6029S-102Y20R0-01 | 1 | 5 | 20 | 2.3 | 36 |
| TF6029S-102Y30R0-02 | 1 | 4 | 30 | 2.6 | 40 |

APPLICABLE SAFETY STANDARD

Electrical Appliance and Material Safety Law ("DENAN"), IEC60065, UL6500, CSA C22.2

- However, this product is not recognized by each regulations.

PACKAGING QUANTITIES

| | |
|---------|--------------|
| TF6029S | 70pieces/box |
|---------|--------------|

EMC Components

TF Series

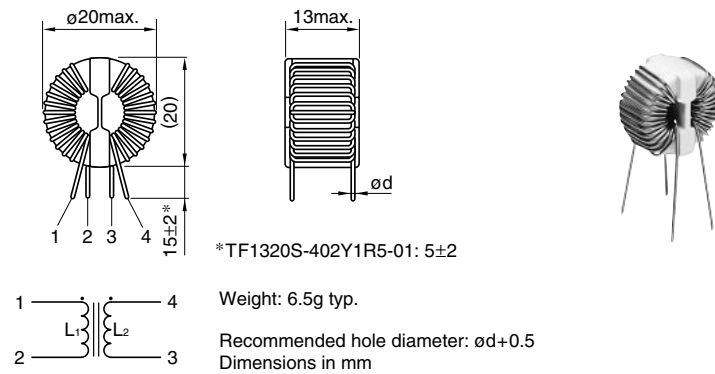
Common Mode Choke Coils(Line Filters) for AC Power Supply Toroidal Core Type

VERTICAL TYPE TF SERIES

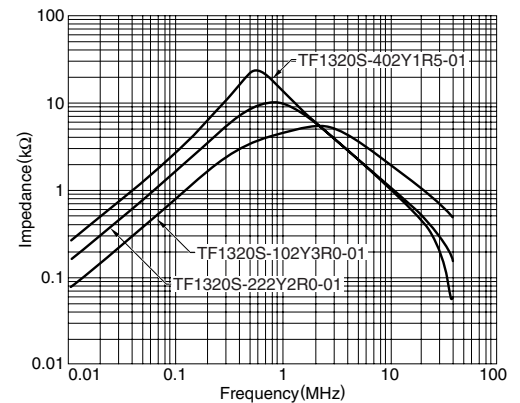
FEATURES

- This series uses a high permeability toroidal ferrite core and therefore provides large inductance with a little number of turns.
- Therefore its stray capacity is small and it provides the impedance levels required to effectively suppress high frequency noises.
- Products mounted on a base with fixed leads are easy to insert to circuit boards.

TF1320S(VERTICAL TYPE WITHOUT TERMINAL BASE) TYPE SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



TYPICAL ELECTRICAL CHARACTERISTICS IMPEDANCE vs. FREQUENCY CHARACTERISTICS



ELECTRICAL CHARACTERISTICS

| Part No. | Inductance (mH)min. | DC resistance (Ω)max. | Rated current (A)max. | Dimensions(mm) ϕd |
|--------------------|------------------------|-----------------------------------|--------------------------|----------------------------|
| TF1320S-402Y1R5-01 | 4 | 0.2 | 1.5 | 0.4 |
| TF1320S-222Y2R0-01 | 2.2 | 0.1 | 2 | 0.5 |
| TF1320S-102Y3R0-01 | 1 | 0.04 | 3 | 0.6 |

APPLICABLE SAFETY STANDARD

Electrical Appliance and Material Safety Law ("DENAN")

- However, this product is not recognized by each regulations.

PACKAGING QUANTITIES

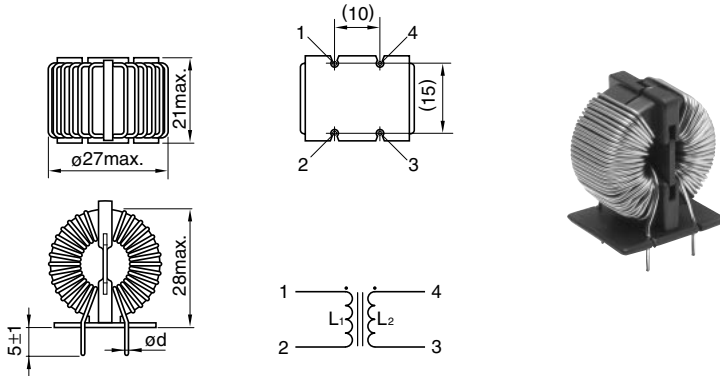
| | |
|---------|----------------|
| TF1320S | 1000pieces/box |
|---------|----------------|

EMC Components

TF Series

Common Mode Choke Coils(Line Filters) for AC Power Supply
Toroidal Core Type

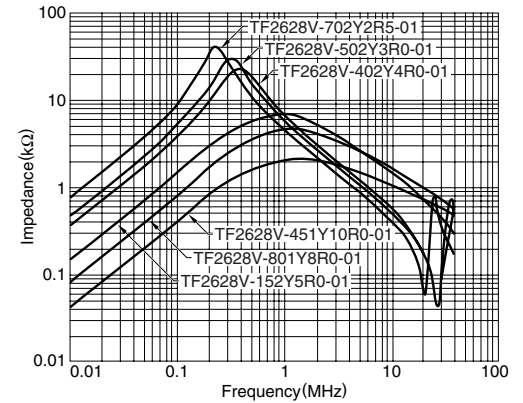
TF2628V(VERTICAL TYPE WITH TERMINAL BASE) TYPE SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



Weight: 20g typ.

Recommended hole diameter: $\phi d + 0.5$
Dimensions in mm

TYPICAL ELECTRICAL CHARACTERISTICS IMPEDANCE vs. FREQUENCY CHARACTERISTICS



ELECTRICAL CHARACTERISTICS

| Part No. | Inductance (mH)min. | DC resistance (Ω)max. | Rated current (A)max. | Dimensions(mm) ϕd |
|---------------------|------------------------|-----------------------------------|--------------------------|----------------------------|
| TF2628V-702Y2R5-01 | 7 | 0.2 | 2.5 | 0.6 |
| TF2628V-502Y3R0-01 | 5 | 0.15 | 3 | 0.65 |
| TF2628V-402Y4R0-01 | 4 | 0.1 | 4 | 0.7 |
| TF2628V-152Y5R0-01 | 1.5 | 0.05 | 5 | 0.8 |
| TF2628V-801Y8R0-01 | 0.8 | 0.02 | 8 | 1 |
| TF2628V-451Y10R0-01 | 0.45 | 0.015 | 10 | 1.1 |

APPLICABLE SAFETY STANDARD

Electrical Appliance and Material Safety Law ("DENAN"), IEC60065, UL6500, CSA C22.2

- However, this product is not recognized by each regulations.

PACKAGING QUANTITIES

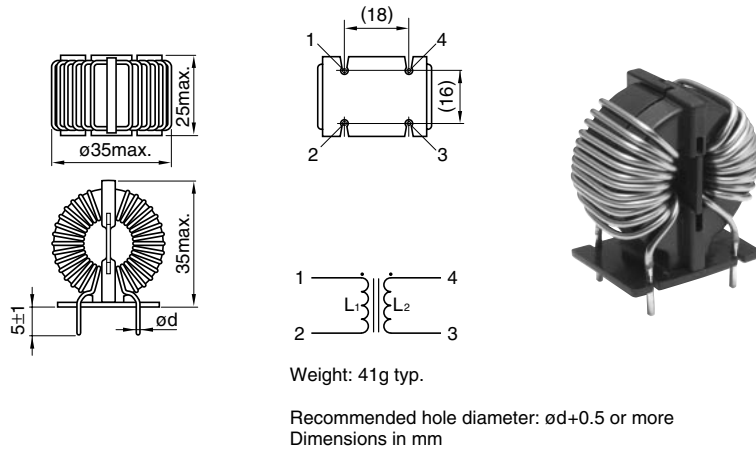
| | |
|---------|---------------|
| TF2628V | 700pieces/box |
|---------|---------------|

EMC Components

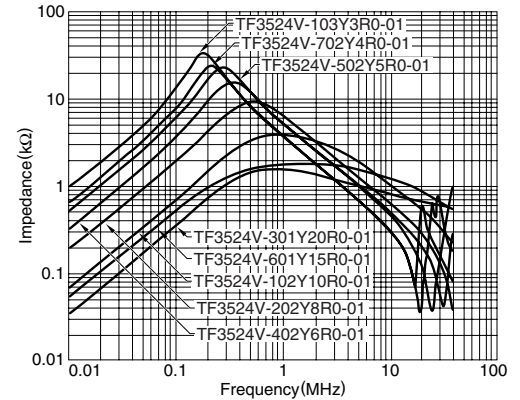
TF Series

Common Mode Choke Coils(Line Filters) for AC Power Supply Toroidal Core Type

TF3524V(VERTICAL TYPE WITH TERMINAL BASE) TYPE SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



TYPICAL ELECTRICAL CHARACTERISTICS IMPEDANCE vs. FREQUENCY CHARACTERISTICS



ELECTRICAL CHARACTERISTICS

| Part No. | Inductance (mH)min. | DC resistance (Ω)max. | Rated current (A)max. | Dimensions(mm) | |
|---------------------|------------------------|-----------------------------------|--------------------------|----------------|--|
| | | | | ϕd | |
| TF3524V-103Y3R0-01 | 10 | 0.15 | 3 | 0.7 | |
| TF3524V-702Y4R0-01 | 7 | 0.1 | 4 | 0.8 | |
| TF3524V-502Y5R0-01 | 5 | 0.05 | 5 | 0.9 | |
| TF3524V-402Y6R0-01 | 4 | 0.035 | 6 | 1 | |
| TF3524V-202Y8R0-01 | 2 | 0.025 | 8 | 1.2 | |
| TF3524V-102Y10R0-01 | 1 | 0.02 | 10 | 1.3 | |
| TF3524V-601Y15R0-01 | 0.6 | 0.007 | 15 | 1.6 | |
| TF3524V-301Y20R0-01 | 0.3 | 0.005 | 20 | 1.8 | |

APPLICABLE SAFETY STANDARD

Electrical Appliance and Material Safety Law ("DENAN"), IEC60065, UL6500, CSA C22.2

- However, this product is not recognized by each regulations.

PACKAGING QUANTITIES

| | |
|---------|---------------|
| TF3524V | 320pieces/box |
|---------|---------------|

EMC Components

TF Series

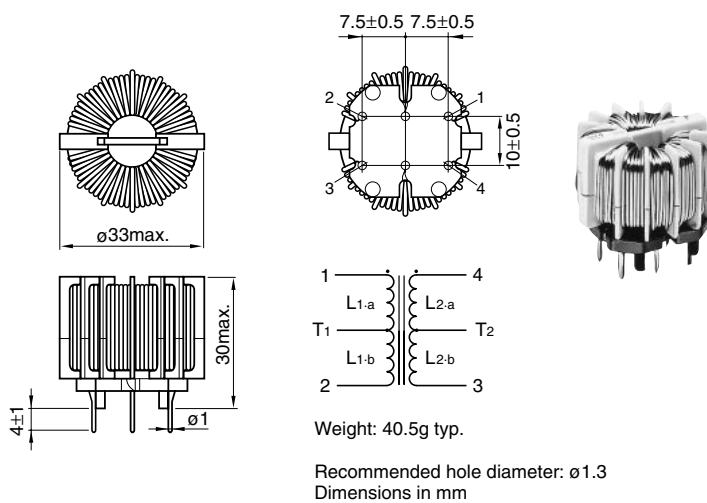
Common Mode Choke Coils(Line Filters) for AC Power Supply Separable Case Type

MULTI-SECTION CASE TYPE (FOR HIGH FREQUENCY) TF SERIES

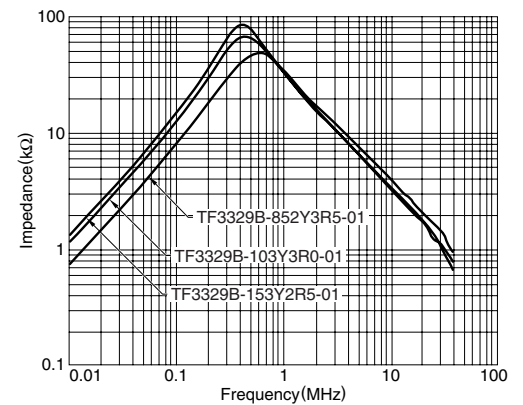
FEATURES

- This series uses six-section windings for each line, which contribute to reduced stray capacity and excellent impedance characteristics in high frequency ranges.

TF3329B(FOR HIGH FREQUENCY) TYPE SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



TYPICAL ELECTRICAL CHARACTERISTICS IMPEDANCE vs. FREQUENCY CHARACTERISTICS



ELECTRICAL CHARACTERISTICS

| Part No. | Inductance (mH)min. | DC resistance (Ω)max. | Rated current (A)max. |
|--------------------|---------------------|--------------------------------|-----------------------|
| TF3329B-153Y2R5-01 | 15 | 120 | 2.5 |
| TF3329B-103Y3R0-01 | 10 | 100 | 3 |
| TF3329B-852Y3R5-01 | 8.5 | 70 | 3.5 |

APPLICABLE SAFETY STANDARD

Electrical Appliance and Material Safety Law ("DENAN"), IEC60065, UL6500, CSA C22.2

- However, this product is not recognized by each regulations.

PACKAGING QUANTITIES

| | |
|---------|---------------|
| TF3329B | 375pieces/box |
|---------|---------------|

EMC Components

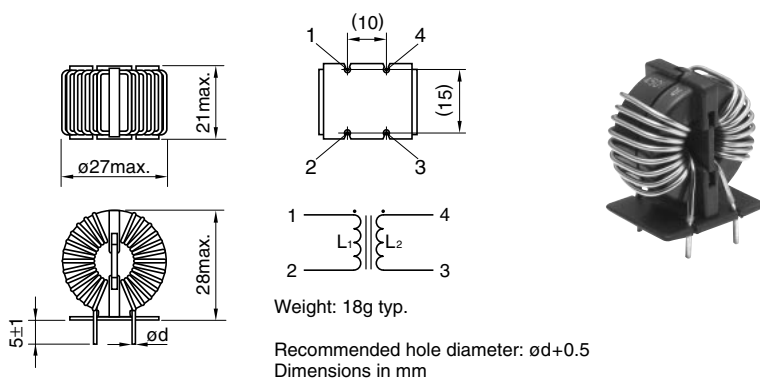
TF Series

Common Mode Choke Coils(Line Filters) for AC Power Supply Toroidal Core Type

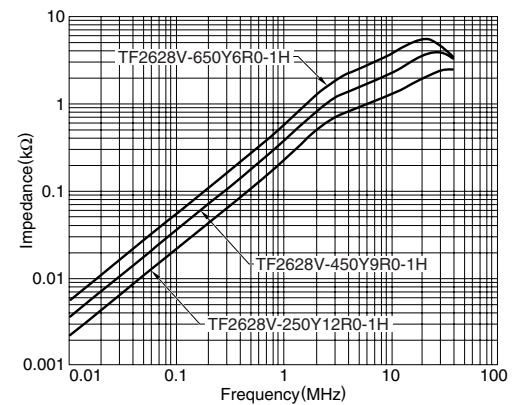
FEATURES

- This series is designed to reduce stray capacity between windings by using a single-layer coil construction on Ni-Zn ferrite cores, which offer excellent high frequency characteristics.
- This series provides excellent noise suppression for high frequency ranges including the FM band.

TF2628V-1H(HORIZONTAL TYPE WITH TERMINAL BASE) TYPE SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



TYPICAL ELECTRICAL CHARACTERISTICS IMPEDANCE vs. FREQUENCY CHARACTERISTICS



ELECTRICAL CHARACTERISTICS

| Part No. | Inductance (μ H)min. | DC resistance (Ω)max. | Rated current (A)max. | Dimensions(mm) ϕd |
|---------------------|------------------------------|-----------------------------------|--------------------------|----------------------------|
| TF2628V-650Y6R0-1H | 65 | 0.02 | 6 | 0.8 |
| TF2628V-450Y9R0-1H | 45 | 0.012 | 9 | 1.0 |
| TF2628V-250Y12R0-1H | 25 | 0.009 | 12 | 1.2 |

APPLICABLE SAFETY STANDARD

Electrical Appliance and Material Safety Law ("DENAN"), IEC60065, UL6500, CSA C22.2

- However, this product is not recognized by each regulations.

PACKAGING QUANTITIES

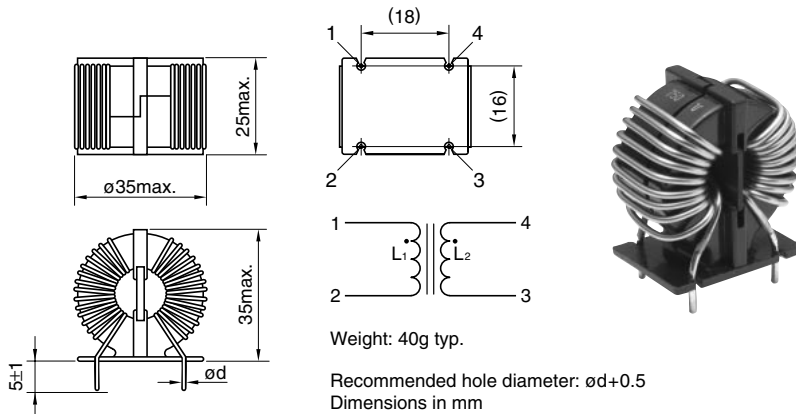
| | |
|---------|---------------|
| TF2628V | 700pieces/box |
|---------|---------------|

EMC Components

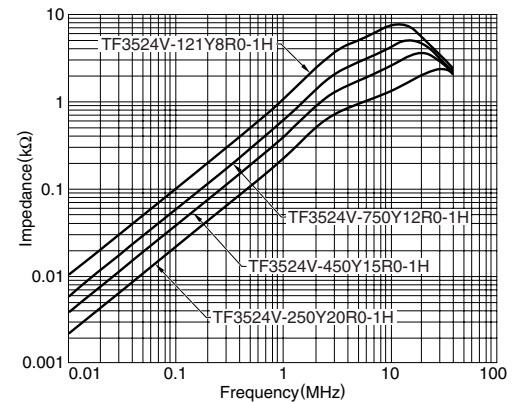
TF Series

Common Mode Choke Coils(Line Filters) for AC Power Supply Toroidal Core Type

TF3524V-1H(HORIZONTAL TYPE WITH TERMINAL BASE) TYPE SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



TYPICAL ELECTRICAL CHARACTERISTICS IMPEDANCE vs. FREQUENCY CHARACTERISTICS



ELECTRICAL CHARACTERISTICS

| Part No. | Inductance (μH)min. | DC resistance (Ω)max. | Rated current (A)max. | Dimensions(mm) ϕd |
|---------------------|-------------------------------------|-----------------------------------|--------------------------|----------------------------|
| TF3524V-121Y8R0-1H | 120 | 0.02 | 8 | 1.0 |
| TF3524V-750Y12R0-1H | 75 | 0.01 | 12 | 1.3 |
| TF3524V-450Y15R0-1H | 45 | 0.007 | 15 | 1.6 |
| TF3524V-250Y20R0-1H | 25 | 0.005 | 20 | 1.8 |

APPLICABLE SAFETY STANDARD

Electrical Appliance and Material Safety Law ("DENAN"), IEC60065, UL6500, CSA C22.2

- However, this product is not recognized by each regulations.

PACKAGING QUANTITIES

| | |
|---------|---------------|
| TF3524V | 320pieces/box |
|---------|---------------|

EMC Components

TF Series

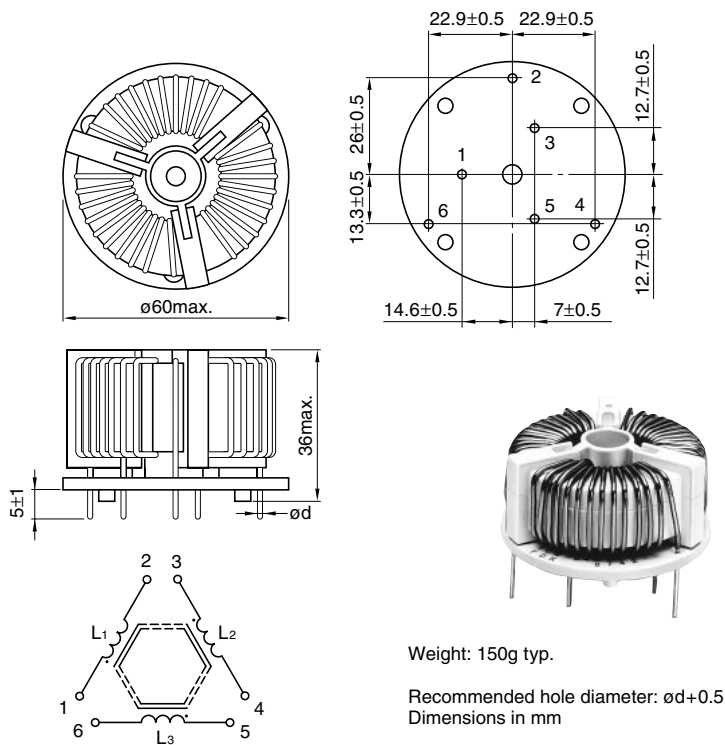
Common Mode Choke Coils(Line Filters) for AC Power Supply Toroidal Core Type for 3-Phase

TOROIDAL CORE TYPE FOR THREE PHASE LINES TF SERIES

FEATURES

- This series uses a high permeability toroidal ferrite core and can handle heavy currents with fewer number of turns.

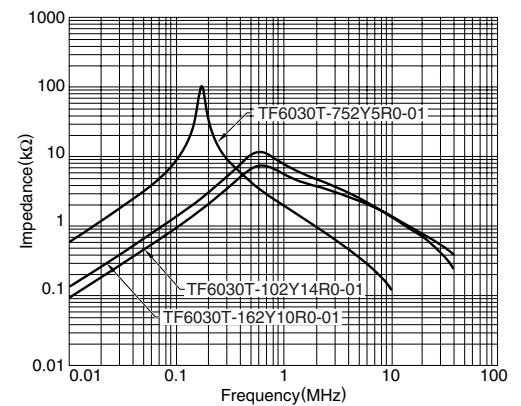
TF6030T(HORIZONTAL TYPE WITH TERMINAL BASE) TYPE SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



Weight: 150g typ.

Recommended hole diameter: $\phi d + 0.5$
Dimensions in mm

TYPICAL ELECTRICAL CHARACTERISTICS IMPEDANCE vs. FREQUENCY CHARACTERISTICS



ELECTRICAL CHARACTERISTICS

| Part No. | Inductance (mH)min. | DC resistance (Ω)max. | Rated current (A)max. | Dimensions(mm) |
|---------------------|------------------------|-----------------------------------|--------------------------|----------------|
| | | | | ϕd |
| TF6030T-752Y5R0-01 | 7.5 | 0.1 | 5 | 0.9 |
| TF6030T-162Y10R0-01 | 1.6 | 0.02 | 10 | 1.3 |
| TF6030T-102Y14R0-01 | 1 | 0.02 | 14 | 1.5 |

APPLICABLE SAFETY STANDARD

Electrical Appliance and Material Safety Law ("DENAN"), IEC60065, UL6500, CSA C22.2

- However, this product is not recognized by each regulations.

PACKAGING QUANTITIES

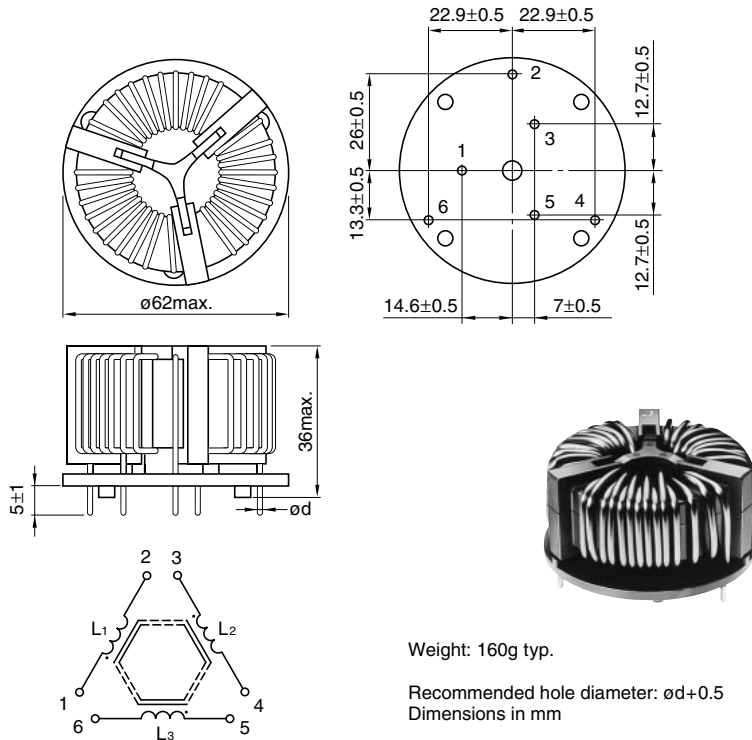
| | |
|---------|--------------|
| TF6030T | 70pieces/box |
|---------|--------------|

EMC Components

TF Series

Common Mode Choke Coils (Line Filters) for AC Power Supply
Toroidal Core Type for 3-Phase

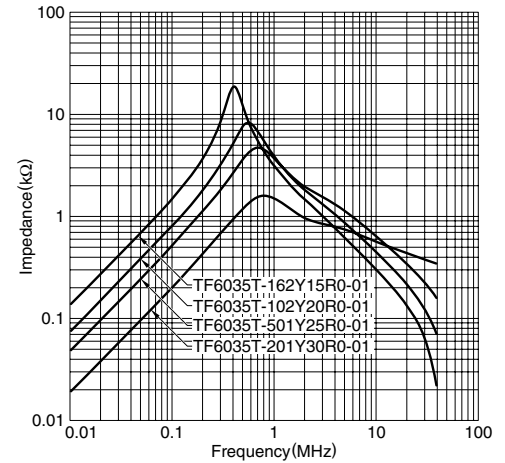
TF6035T (HORIZONTAL TYPE WITH TERMINAL BASE) TYPE SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



Weight: 160g typ.

Recommended hole diameter: $\phi d + 0.5$
Dimensions in mm

TYPICAL ELECTRICAL CHARACTERISTICS IMPEDANCE vs. FREQUENCY CHARACTERISTICS



ELECTRICAL CHARACTERISTICS

| Part No. | Inductance (mH) min. | DC resistance (mΩ) max. | Rated current (A) max. | Dimensions (mm) ϕd |
|---------------------|----------------------|-------------------------|------------------------|--------------------------|
| TF6035T-162Y15R0-01 | 1.6 | 12 | 15 | 1.8 |
| TF6035T-102Y20R0-01 | 1 | 8 | 20 | 2 |
| TF6035T-501Y25R0-01 | 0.5 | 5 | 25 | 2.3 |
| TF6035T-201Y30R0-01 | 0.2 | 3 | 30 | 2.6 |

APPLICABLE SAFETY STANDARD

Electrical Appliance and Material Safety Law ("DENAN"), IEC60065, UL6500, CSA C22.2

- However, this product is not recognized by each regulations.

PACKAGING QUANTITIES

| | |
|---------|---------------|
| TF6035T | 70 pieces/box |
|---------|---------------|