

# 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 $\Omega$ )	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 <sup>2</sup> )	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 $\mu$ H	6 to 12	3.65	18	700
		TF3524V-1H	25 to 120 $\mu$ 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)<sup>2</sup>. 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 $\mu$ H $\times$ 10<sup>2</sup>=6mH

(6)Rated current value

Example) 2R5: 2.5A

(7)Product management number

# EMC Components

## TF Series

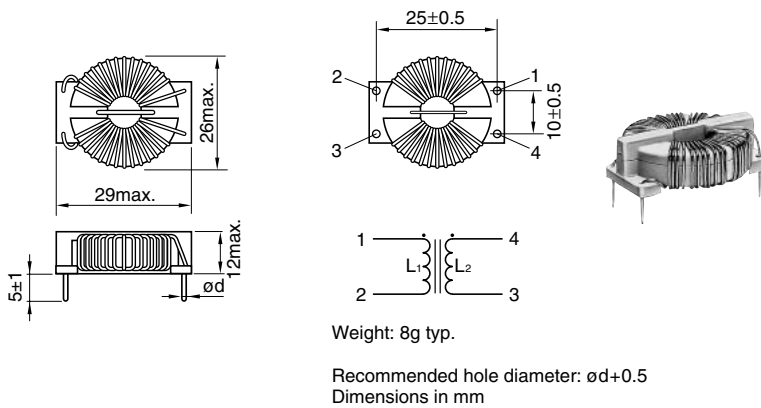
### Common Mode Choke Coils(Line Filters) for AC Power Supply Toroidal Core Type

#### HORIZONTAL TYPE TF SERIES

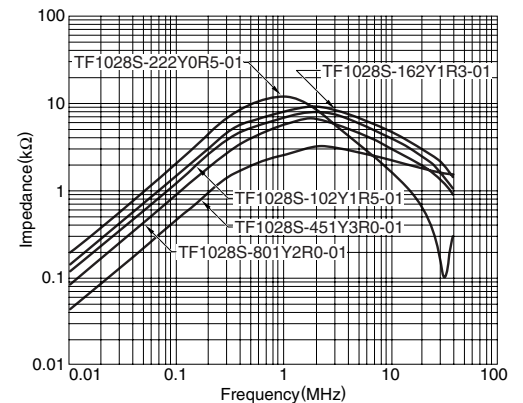
#### FEATURES

- 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 ( $\Omega$ )max.	Rated current (A)max.	Dimensions(mm) $\phi d$
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

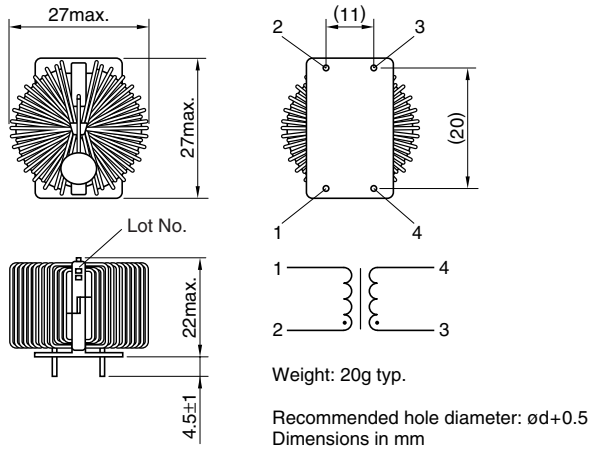
TF1028S	900pieces/box
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# EMC Components

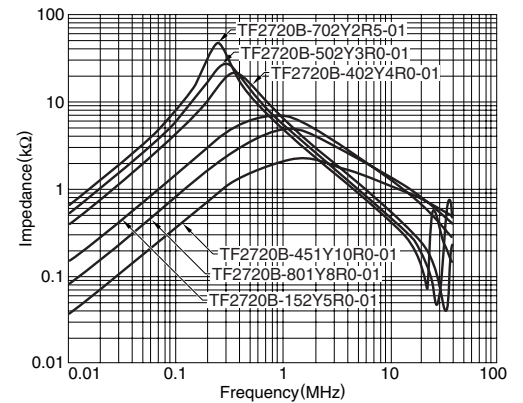
## TF Series

### 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

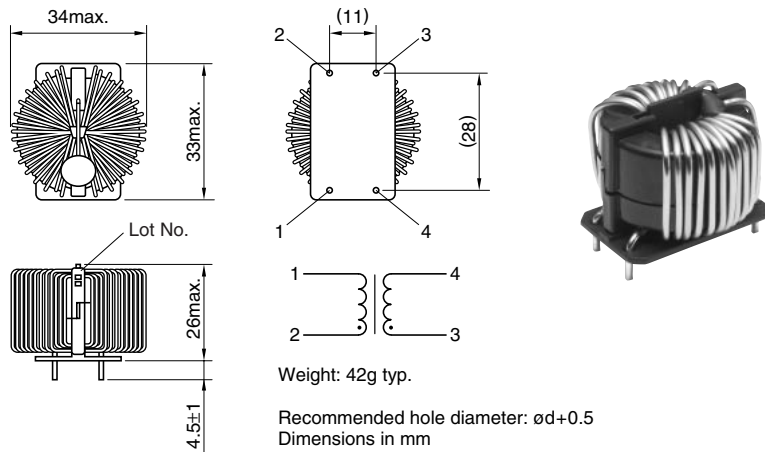
TF2720B	400pieces/box
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# EMC Components

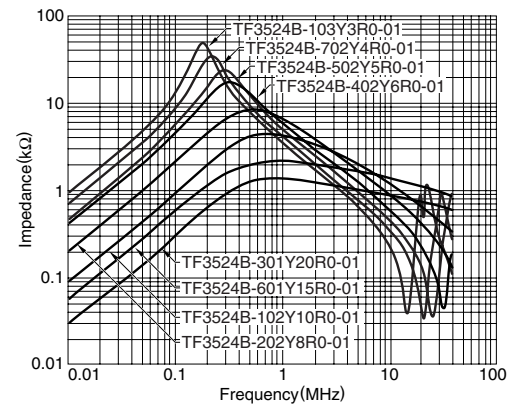
## TF Series

### 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 ( $\Omega$ )max.	Rated current (A)max.	Dimensions(mm) $\phi d$
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

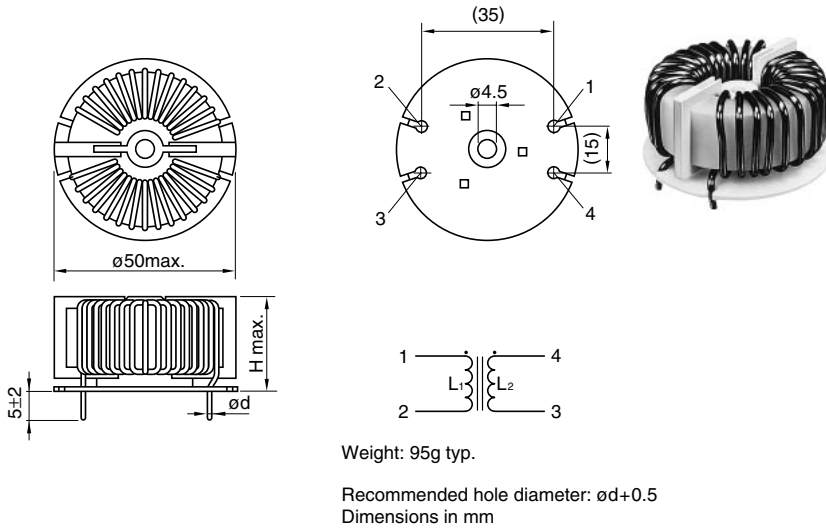
TF3524B	300pieces/box
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# EMC Components

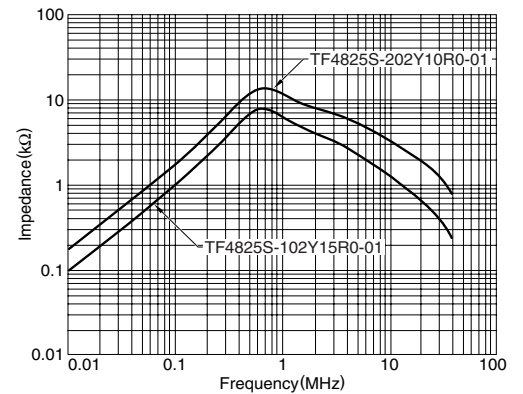
## TF Series

### 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)	
				$\phi d$	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

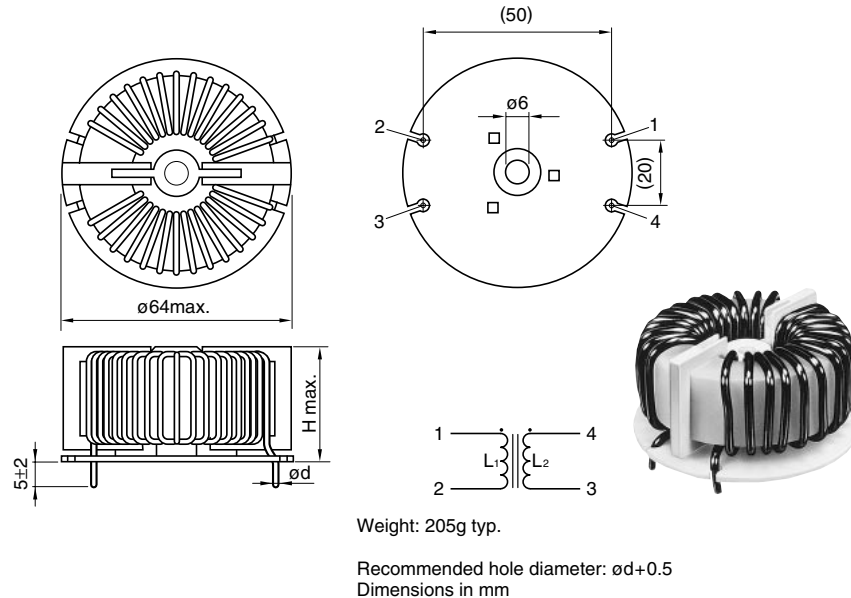
TF4825S	120pieces/box
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# EMC Components

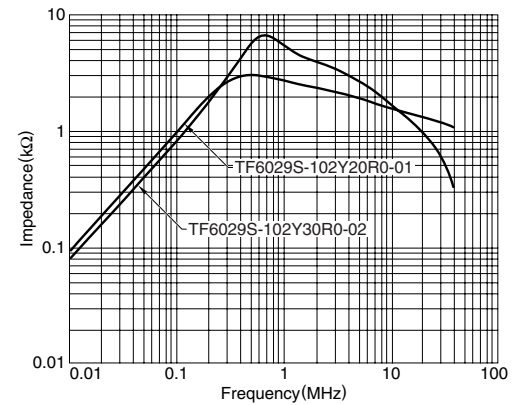
## TF Series

### 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)	
				$\phi d$	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
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# EMC Components

## TF Series

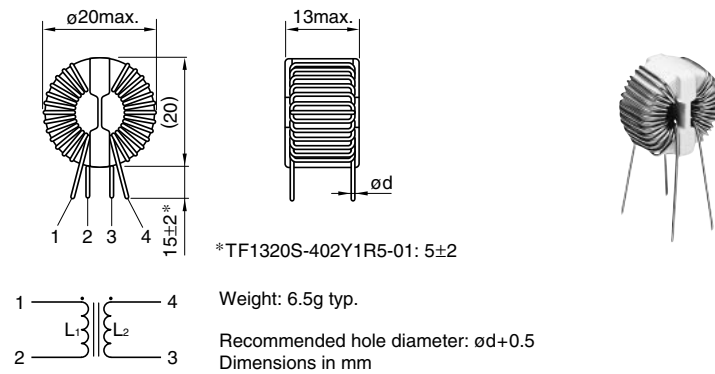
### Common Mode Choke Coils(Line Filters) for AC Power Supply Toroidal Core Type

#### VERTICAL TYPE TF SERIES

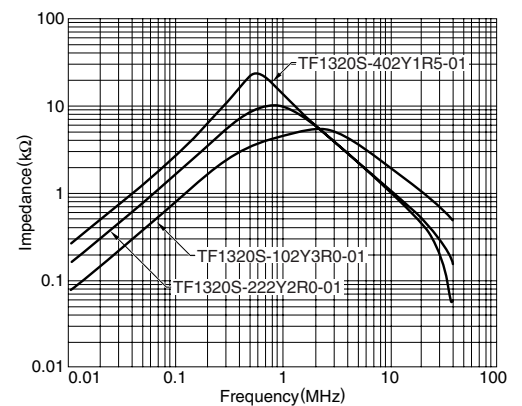
#### FEATURES

- 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 ( $\Omega$ )max.	Rated current (A)max.	Dimensions(mm) $\phi d$
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

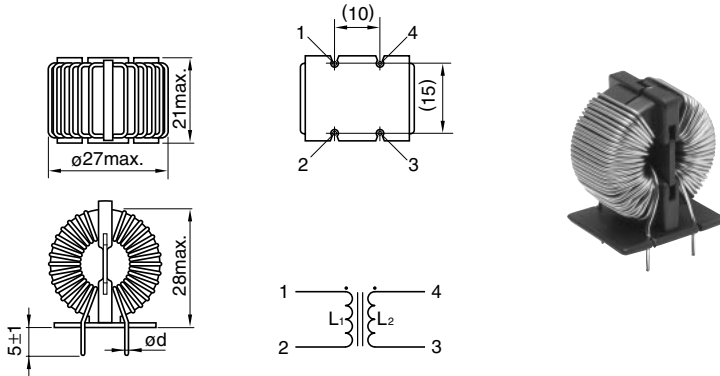
TF1320S	1000pieces/box
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# EMC Components

## TF Series

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

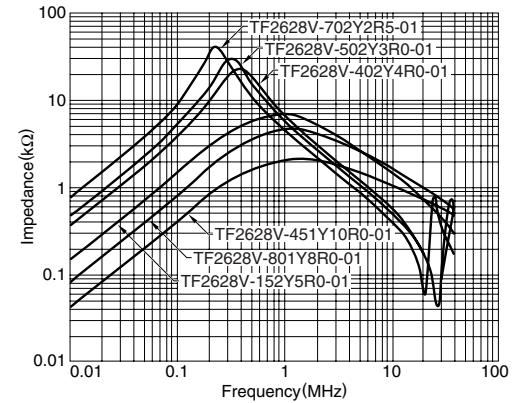
### TF2628V(VERTICAL TYPE WITH TERMINAL BASE) TYPE SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



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 ( $\Omega$ )max.	Rated current (A)max.	Dimensions(mm) $\phi d$
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
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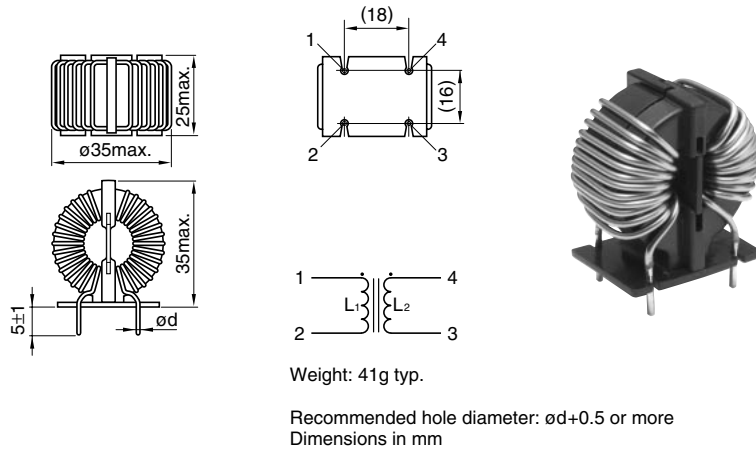


# EMC Components

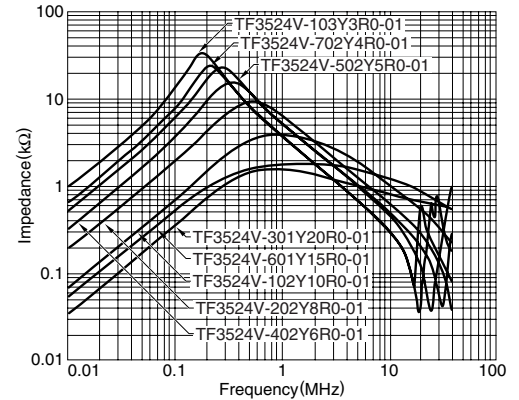
## TF Series

### 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 ( $\Omega$ )max.	Rated current (A)max.	Dimensions(mm)	
				$\phi d$	
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
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# EMC Components

## TF Series

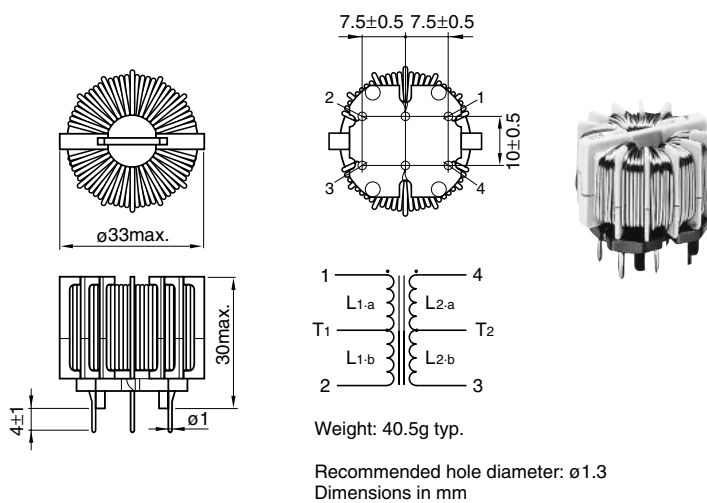
### Common Mode Choke Coils(Line Filters) for AC Power Supply Separable Case Type

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

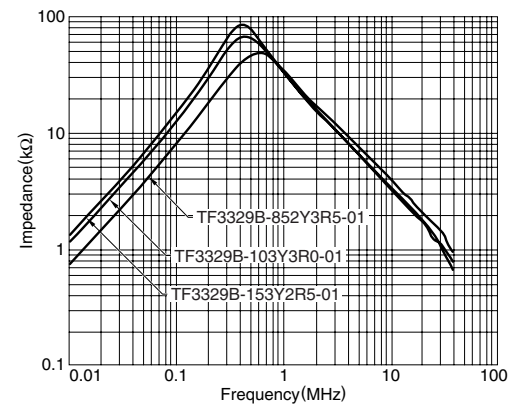
#### FEATURES

- 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 ( $\Omega$ )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
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# EMC Components

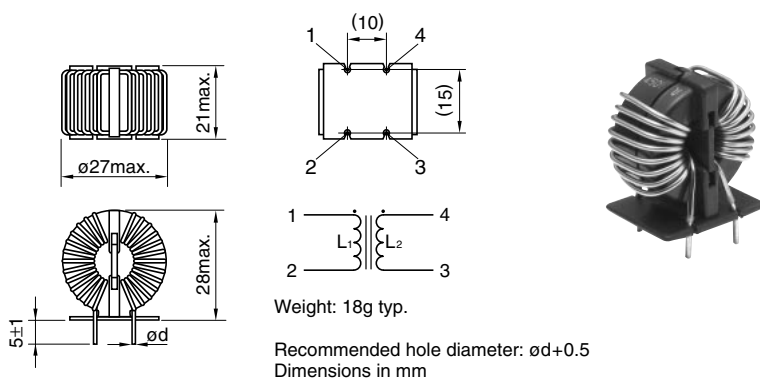
## TF Series

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

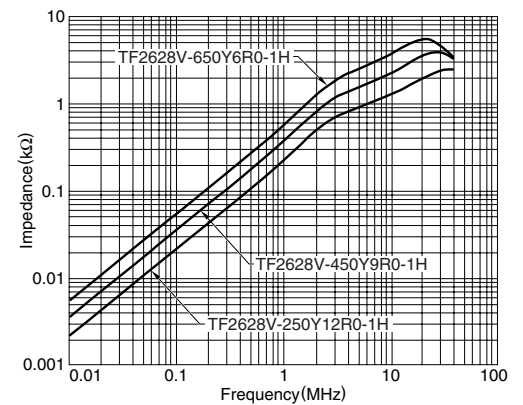
#### FEATURES

- 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 ( $\mu$ H)min.	DC resistance ( $\Omega$ )max.	Rated current (A)max.	Dimensions(mm) $\phi d$
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

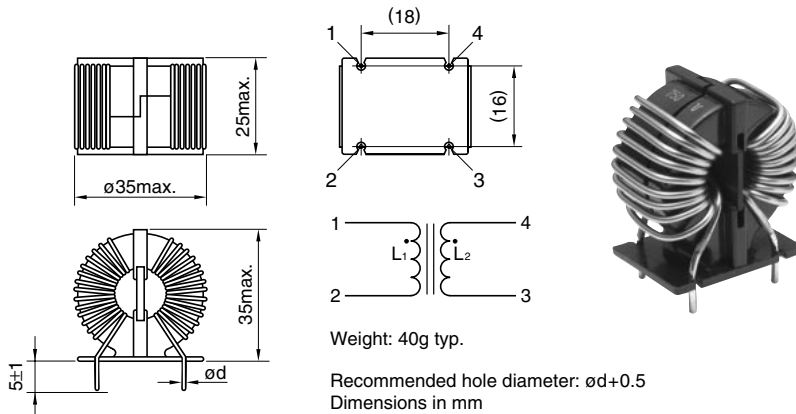
TF2628V	700pieces/box
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# EMC Components

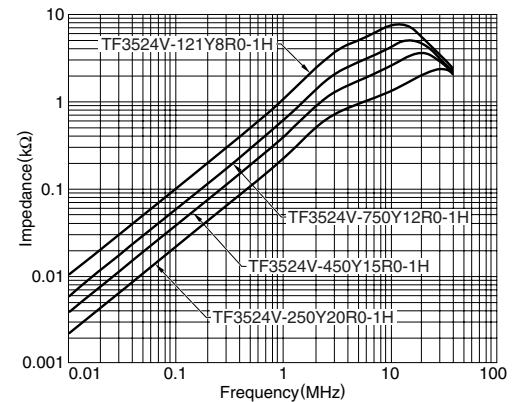
## TF Series

### 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 ( $\mu\text{H}$ )min.	DC resistance ( $\Omega$ )max.	Rated current (A)max.	Dimensions(mm) $\phi d$
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
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# EMC Components

## TF Series

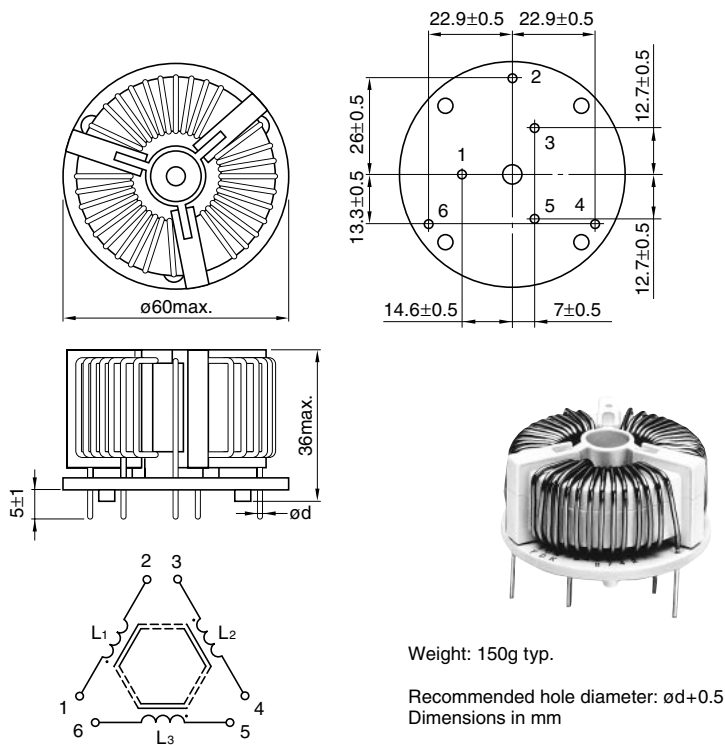
### Common Mode Choke Coils(Line Filters) for AC Power Supply Toroidal Core Type for 3-Phase

#### 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.

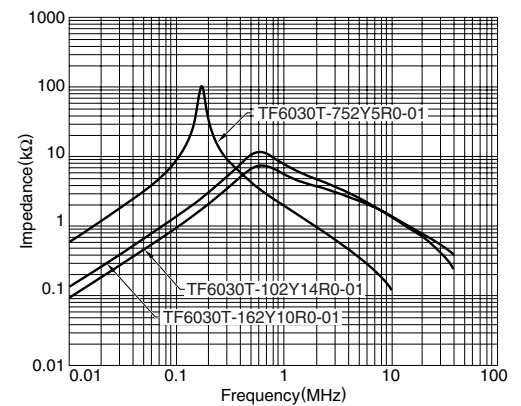
#### TF6030T(HORIZONTAL TYPE WITH TERMINAL BASE) TYPE SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



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 ( $\Omega$ )max.	Rated current (A)max.	Dimensions(mm)
				$\phi d$
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

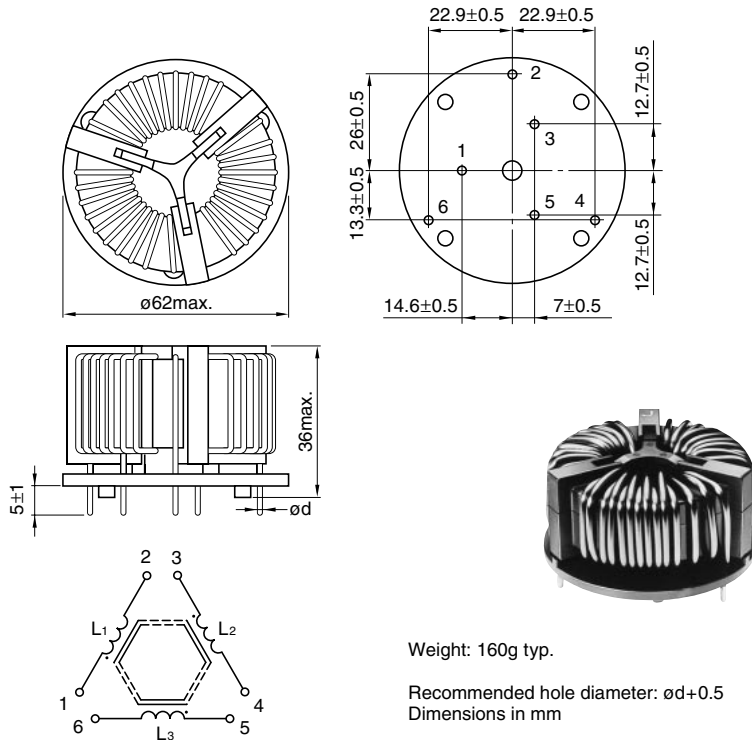
TF6030T	70pieces/box
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# EMC Components

## TF Series

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

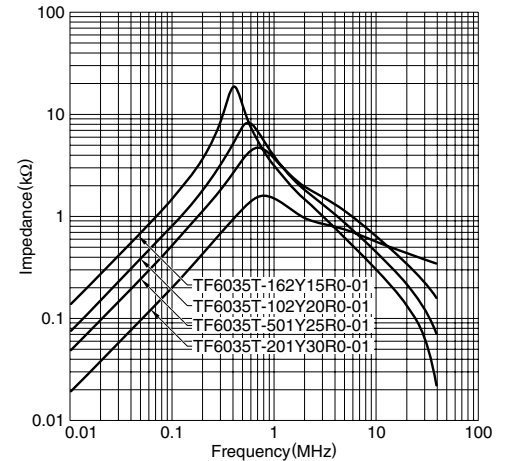
### TF6035T (HORIZONTAL TYPE WITH TERMINAL BASE) TYPE SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



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) $\phi d$
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
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