

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

Toroidal Core Type TF Series

Conformity to RoHS Directive

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.

FEATURES

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

PRODUCT IDENTIFICATION

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

- (1) Core shape
TF: Toroidal core
- (2) Dimensional code
Width×Depth
- (3) External shape code
V: Vertical type H: Horizontal type
- (4) High μ material
- (5) Inductance value
Example) 133:13mH
- (6) Rated current value
Example) 3R0:3.0A
- (7) Product management number

SELECTION CHART

| Series | Configuration | Type | Inductance value min. | Rated current (A) | Handling power* $L \times I^2$ (mH×A ²) | Weight (g)typ. | Minimum package quantity (pieces/box) |
|--------|---------------------------------------|------------|-----------------------|-------------------|--|----------------|---------------------------------------|
| TF | Vertical type | TF1813V | 2 to 20mH | 0.7 to 3.2 | 20 | 5 | 960 |
| | | TF2518V | 0.65 to 9mH | 2.5 to 10 | 50 | 15 | 560 |
| | | TF2721V | 1 to 13mH | 2.5 to 10 | 75 | 20 | 460 |
| | | TF3020V | 0.35 to 13mH | 3 to 20 | 130 | 30 | 440 |
| | | TF3525V | 0.65 to 20mH | 3 to 20 | 195 | 41 | 240 |
| | Horizontal type | TF1713H | 2 to 20mH | 0.7 to 3.2 | 20 | 5.3 | 960 |
| | | TF2520H | 0.65 to 9mH | 2.5 to 10 | 50 | 15 | 550 |
| | | TF2722H | 1 to 13mH | 2.5 to 10 | 75 | 20 | 380 |
| | | TF3022H | 0.35 to 13mH | 3 to 20 | 130 | 32 | 320 |
| | | TF3526H | 0.65 to 20mH | 3 to 20 | 195 | 42 | 280 |
| | Vertical type (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 |

* Handling power=(Inductance value)×(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.

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

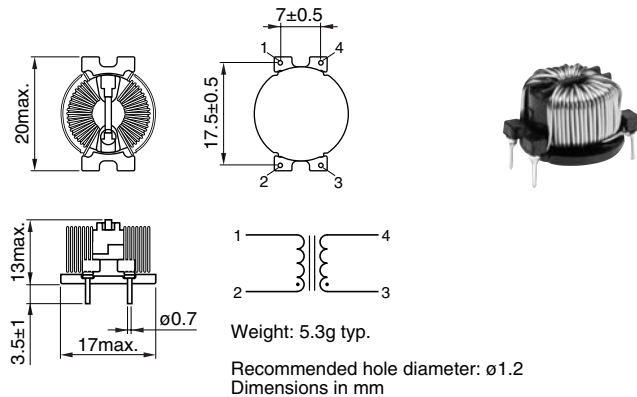
• All specifications are subject to change without notice.

Horizontal Type TF Series

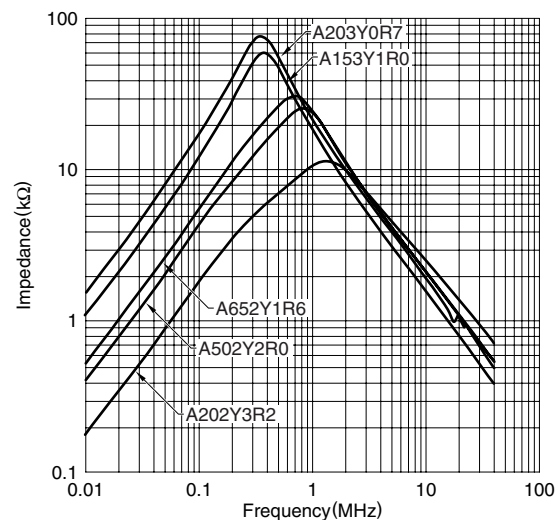
FEATURES

- This series uses a high permeability toroidal ferrite core and therefore provide 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.

TF1713H-A(HORIZONTAL TYPE WITH TERMINAL BASE) TYPE SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



TYPICAL ELECTRICAL CHARACTERISTICS IMPEDANCE vs. FREQUENCY CHARACTERISTICS



ELECTRICAL CHARACTERISTICS (STANDARD LINE UP)

| Part No. | Inductance (mH)min. | DC resistance (Ω)max. | Rated current Iac(A)max. |
|---------------------|---------------------|-----------------------|--------------------------|
| TF1713H-A203Y0R7-01 | 20 | 0.73 | 0.7 |
| TF1713H-A153Y1R0-01 | 15 | 0.44 | 1 |
| TF1713H-A652Y1R6-01 | 6.5 | 0.19 | 1.6 |
| TF1713H-A502Y2R0-01 | 5 | 0.14 | 2 |
| TF1713H-A202Y3R2-01 | 2 | 0.065 | 3.2 |

- Measuring equipment of inductance value:
LCR meter(HP4261A, HP4263B or equivalent)[f=1kHz]

PACKAGING QUANTITIES

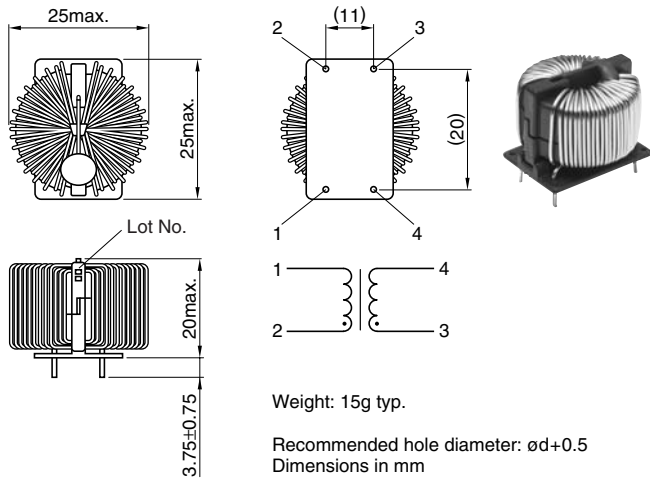
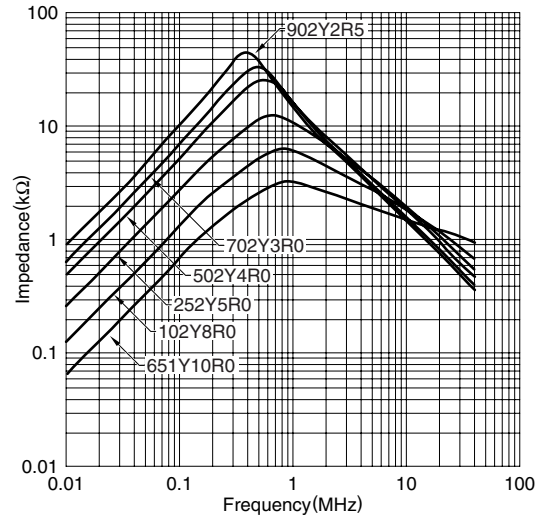
| | |
|-----------|---------------|
| TF1713H-A | 960pieces/box |
|-----------|---------------|

RATINGS

| Item | Standard value | Conditions |
|---------------------------------------|---|-----------------------------------|
| Rated voltage(V) | 80 to 280 | 50Hz/60Hz |
| Dielectric withstanding voltage(V) | 2000 | Between each winding for 1 minute |
| Insulation resistance (MΩ) | 100min. | Between each winding for DC.500V |
| Temperature rise(°C) | 45max. | With line resistance |
| Operating temperature range(°C) | -20 to +120 | Including self-temperature rise |
| Storage temperature range(°C) | -20 to +85 | |
| Resistance to soldering temperature*1 | 260±5°C, 10±1sec | Solder bath method |
| Applicable safety standard*2 | 350±5°C, 5sec max. | Soldering iron method |
| | Electrical Appliance and Material Safety Law ("DENAN"), IEC60065, UL6500, CSA C22.2 | |

*1 Pb free solder(Sn-3Ag-0.5Cu)

*2 However, this product is not recognized by each regulations.

**TF2520H-A(HORIZONTAL TYPE WITH TERMINAL BASE) TYPE
SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM**

**TYPICAL ELECTRICAL CHARACTERISTICS
IMPEDANCE vs. FREQUENCY CHARACTERISTICS**

**ELECTRICAL CHARACTERISTICS
(STANDARD LINE UP)**

| Part No. | Inductance (mH)min. | DC resistance (Ω)max. | Rated current Iac(A)max. | ϕd (mm) |
|----------------------|---------------------|--------------------------------|--------------------------|---------------|
| TF2520H-A902Y2R5-01 | 9 | 0.12 | 2.5 | 0.6 |
| TF2520H-A702Y3R0-01 | 7 | 0.095 | 3 | 0.65 |
| TF2520H-A502Y4R0-01 | 5 | 0.075 | 4 | 0.7 |
| TF2520H-A252Y5R0-01 | 2.5 | 0.05 | 5 | 0.75 |
| TF2520H-A102Y8R0-01 | 1 | 0.025 | 8 | 0.95 |
| TF2520H-A651Y10R0-01 | 0.65 | 0.02 | 10 | 1 |

- Measuring equipment of inductance value:
LCR meter(HP4261A, HP4263B or equivalent)[f=1kHz]

PACKAGING QUANTITIES

| | |
|-----------|---------------|
| TF2520H-A | 550pieces/box |
|-----------|---------------|

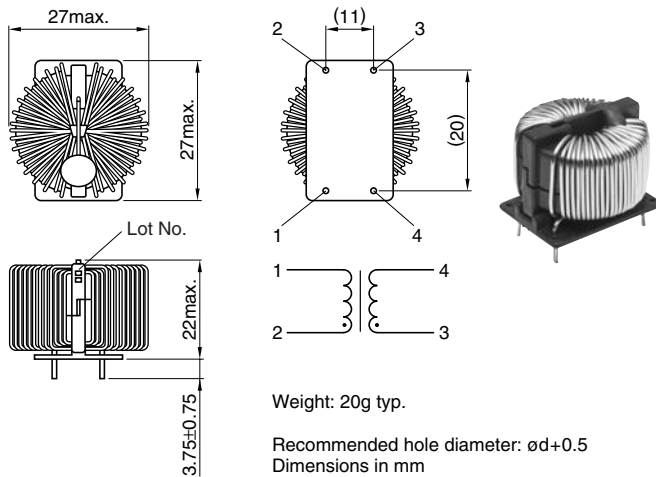
RATINGS

| Item | Standard value | Conditions |
|--|---|-----------------------------------|
| Rated voltage(V) | 80 to 280 | 50Hz/60Hz |
| Dielectric withstanding voltage(V) | 2000 | Between each winding for 1 minute |
| Insulation resistance (M Ω) | 100min. | Between each winding for DC.500V |
| Temperature rise($^{\circ}$ C) | 45max. | With line resistance |
| Operating temperature range($^{\circ}$ C) | -20 to +120 | Including self-temperature rise |
| Storage temperature range($^{\circ}$ C) | -20 to +85 | |
| Resistance to soldering temperature*1 | 260 \pm 5 $^{\circ}$ C, 10 \pm 1sec | Solder bath method |
| Applicable safety standard*2 | 350 \pm 5 $^{\circ}$ C, 5sec max. | Soldering iron method |
| | Electrical Appliance and Material Safety Law ("DENAN"), IEC60065, UL6500, CSA C22.2 | |

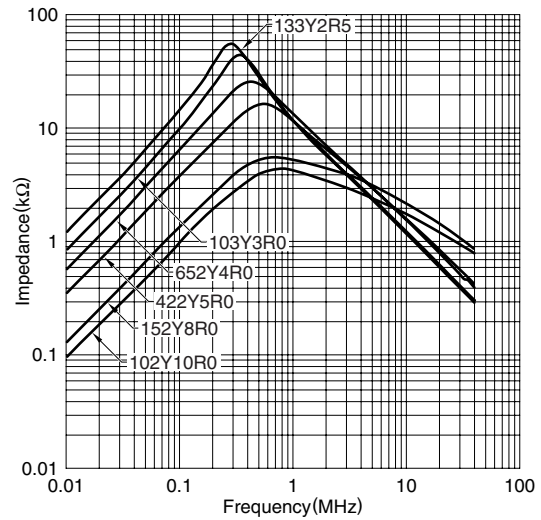
*1 Pb free solder(Sn-3Ag-0.5Cu)

*2 However, this product is not recognized by each regulations.

TF2722H-A(HORIZONTAL TYPE WITH TERMINAL BASE) TYPE SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



TYPICAL ELECTRICAL CHARACTERISTICS IMPEDANCE vs. FREQUENCY CHARACTERISTICS



ELECTRICAL CHARACTERISTICS (STANDARD LINE UP)

| Part No. | Inductance (mH)min. | DC resistance (mΩ)max. | Rated current Iac(A)max. | ød (mm) |
|----------------------|------------------------|------------------------------|--------------------------------|------------|
| TF2722H-A133Y2R5-01 | 13 | 130 | 2.5 | 0.65 |
| TF2722H-A103Y3R0-01 | 10 | 90 | 3 | 0.7 |
| TF2722H-A652Y4R0-01 | 6.5 | 60 | 4 | 0.8 |
| TF2722H-A422Y5R0-01 | 4.2 | 40 | 5 | 0.9 |
| TF2722H-A152Y8R0-01 | 1.5 | 20 | 8 | 1 |
| TF2722H-A102Y10R0-01 | 1 | 11 | 10 | 1.2 |

- Measuring equipment of inductance value:
LCR meter(HP4261A, HP4263B or equivalent)[f=1kHz]

PACKAGING QUANTITIES

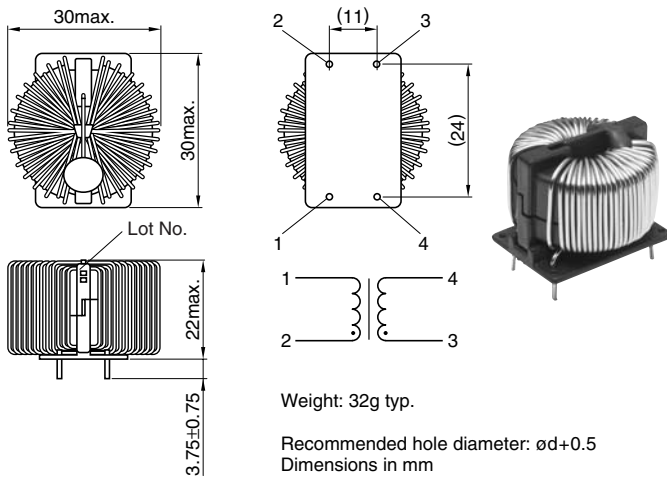
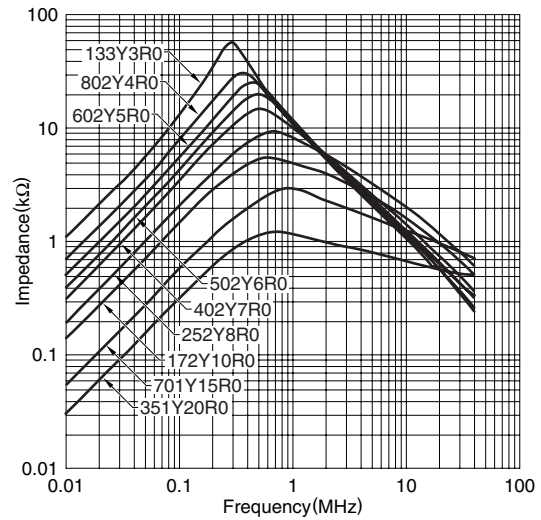
| | |
|-----------|---------------|
| TF2722H-A | 380pieces/box |
|-----------|---------------|

RATINGS

| Item | Standard value | Conditions |
|--|--|--------------------------------------|
| Rated voltage(V) | 80 to 280 | 50Hz/60Hz |
| Dielectric withstanding voltage(V) | 2000 | Between each winding for 1 minute |
| Insulation resistance (MΩ) | 100min. | Between each winding for DC.500V |
| Temperature rise(°C) | 45max. | With line resistance |
| Operating temperature range(°C) | -20 to +120 | Including self-temperature rise |
| Storage temperature range(°C) | -20 to +85 | |
| Resistance to soldering temperature*1 | 260±5°C, 10±1sec | Solder bath method |
| Applicable safety standard*2 | 350±5°C, 5sec max. | Soldering iron method |
| | Electrical Appliance and Material Safety Law ("DENAN"), IEC60065, UL6500, CSA C22.2 | |

*1 Pb free solder(Sn-3Ag-0.5Cu)

*2 However, this product is not recognized by each regulations.

**TF3022H-A(HORIZONTAL TYPE WITH TERMINAL BASE) TYPE
SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM**

**TYPICAL ELECTRICAL CHARACTERISTICS
IMPEDANCE vs. FREQUENCY CHARACTERISTICS**

**ELECTRICAL CHARACTERISTICS
(STANDARD LINE UP)**

| Part No. | Inductance (mH)min. | DC resistance (Ω)max. | Rated current Iac(A)max. | ϕ d (mm) |
|----------------------|------------------------|--------------------------------------|--------------------------------|------------------|
| TF3022H-A133Y3R0-01 | 13 | 0.1 | 3 | 0.75 |
| TF3022H-A802Y4R0-01 | 8 | 0.07 | 4 | 0.8 |
| TF3022H-A602Y5R0-01 | 6 | 0.05 | 5 | 0.9 |
| TF3022H-A502Y6R0-01 | 5 | 0.04 | 6 | 0.95 |
| TF3022H-A402Y7R0-01 | 4 | 0.035 | 7 | 1 |
| TF3022H-A252Y8R0-01 | 2.5 | 0.025 | 8 | 1.1 |
| TF3022H-A172Y10R0-01 | 1.7 | 0.015 | 10 | 1.3 |
| TF3022H-A701Y15R0-01 | 0.7 | 0.007 | 15 | 1.6 |
| TF3022H-A351Y20R0-01 | 0.35 | 0.005 | 20 | 1.7 |

- Measuring equipment of inductance value:
LCR meter(HP4261A, HP4263B or equivalent)[f=1kHz]

PACKAGING QUANTITIES

| | |
|-----------|---------------|
| TF3022H-A | 320pieces/box |
|-----------|---------------|

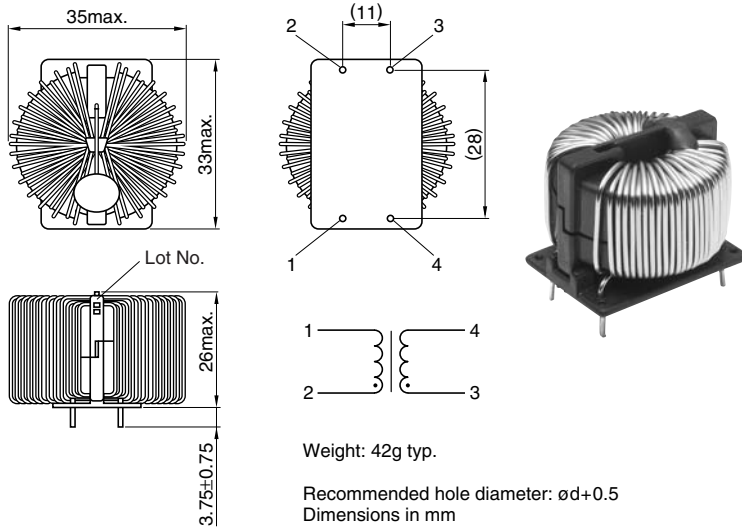
RATINGS

| Item | Standard value | Conditions |
|--|---|-----------------------------------|
| Rated voltage(V) | 80 to 280 | 50Hz/60Hz |
| Dielectric withstanding voltage(V) | 2000 | Between each winding for 1 minute |
| Insulation resistance (M Ω) | 100min. | Between each winding for DC.500V |
| Temperature rise($^{\circ}$ C) | 45max. | With line resistance |
| Operating temperature range($^{\circ}$ C) | -20 to +120 | Including self-temperature rise |
| Storage temperature range($^{\circ}$ C) | -20 to +85 | |
| Resistance to soldering temperature*1 | 260 \pm 5 $^{\circ}$ C, 10 \pm 1sec | Solder bath method |
| Applicable safety standard*2 | 350 \pm 5 $^{\circ}$ C, 5sec max. | Soldering iron method |
| | Electrical Appliance and Material Safety Law ("DENAN"), IEC60065, UL6500, CSA C22.2 | |

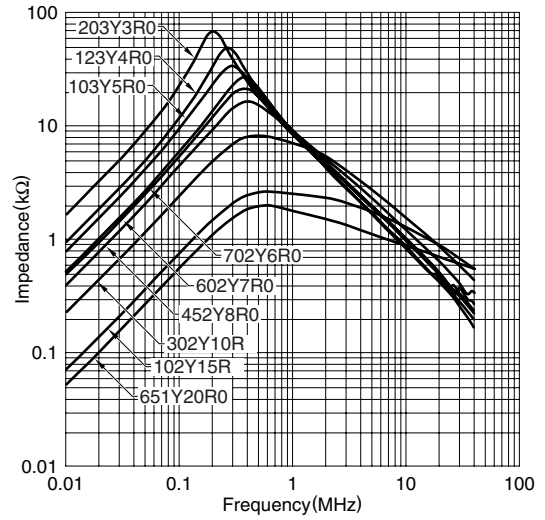
*1 Pb free solder(Sn-3Ag-0.5Cu)

*2 However, this product is not recognized by each regulations.

TF3526H-A(HORIZONTAL TYPE WITH TERMINAL BASE) TYPE SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



TYPICAL ELECTRICAL CHARACTERISTICS IMPEDANCE vs. FREQUENCY CHARACTERISTICS



ELECTRICAL CHARACTERISTICS (STANDARD LINE UP)

| Part No. | Inductance (mH)min. | DC resistance (mΩ)max. | Rated current Iac(A)max. | ød (mm) |
|----------------------|---------------------|------------------------|--------------------------|---------|
| TF3526H-A203Y3R0-01 | 20 | 130 | 3 | 0.75 |
| TF3526H-A123Y4R0-01 | 12 | 75 | 4 | 0.85 |
| TF3526H-A103Y5R0-01 | 10 | 55 | 5 | 0.95 |
| TF3526H-A702Y6R0-01 | 7 | 45 | 6 | 1 |
| TF3526H-A602Y7R0-01 | 6 | 35 | 7 | 1.1 |
| TF3526H-A452Y8R0-01 | 4.5 | 25 | 8 | 1.2 |
| TF3526H-A302Y10R0-01 | 3 | 18 | 10 | 1.3 |
| TF3526H-A102Y15R0-01 | 1 | 6 | 15 | 1.7 |
| TF3526H-A651Y20R0-01 | 0.65 | 4 | 20 | 1.8 |

- Measuring equipment of inductance value: LCR meter(HP4261A, HP4263B or equivalent)[f=1kHz]

PACKAGING QUANTITIES

| | |
|-----------|---------------|
| TF3526H-A | 280pieces/box |
|-----------|---------------|

RATINGS

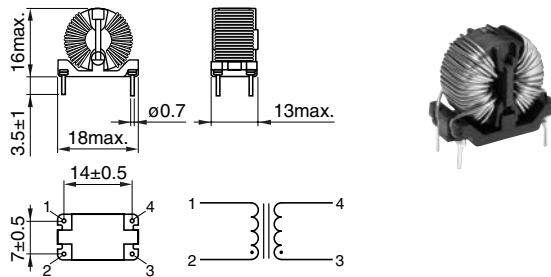
| Item | Standard value | Conditions |
|---------------------------------------|---|-----------------------------------|
| Rated voltage(V) | 80 to 280 | 50Hz/60Hz |
| Dielectric withstanding voltage(V) | 2000 | Between each winding for 1 minute |
| Insulation resistance (MΩ) | 100min. | Between each winding for DC.500V |
| Temperature rise(°C) | 45max. | With line resistance |
| Operating temperature range(°C) | -20 to +120 | Including self-temperature rise |
| Storage temperature range(°C) | -20 to +85 | |
| Resistance to soldering temperature*1 | 260±5°C, 10±1sec | Solder bath method |
| | 350±5°C, 5sec max. | Soldering iron method |
| Applicable safety standard*2 | Electrical Appliance and Material Safety Law ("DENAN"), IEC60065, UL6500, CSA C22.2 | |

*1 Pb free solder(Sn-3Ag-0.5Cu)

*2 However, this product is not recognized by each regulations.

Vertical Type TF Series

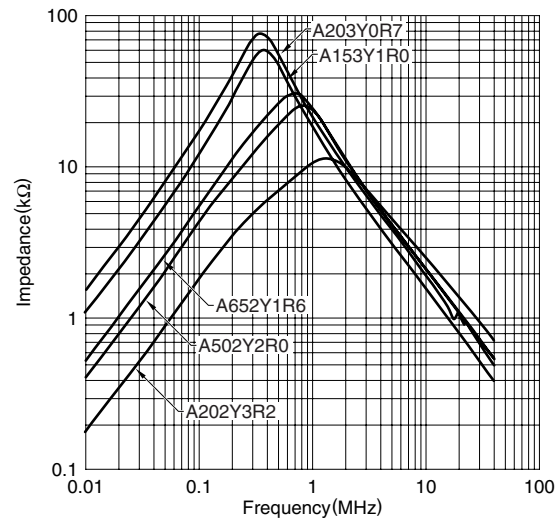
TF1813V-A(VERTICAL TYPE WITH TERMINAL BASE) TYPE SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



Weight: 5g typ.

Recommended hole diameter: $\phi 1.2$
Dimensions in mm

TYPICAL ELECTRICAL CHARACTERISTICS IMPEDANCE vs. FREQUENCY CHARACTERISTICS



ELECTRICAL CHARACTERISTICS (STANDARD LINE UP)

| Part No. | Inductance (mH)min. | DC resistance (Ω)max. | Rated current Iac(A)max. |
|---------------------|------------------------|-----------------------------------|-----------------------------|
| TF1813V-A203Y0R7-01 | 20 | 0.73 | 0.7 |
| TF1813V-A153Y1R0-01 | 15 | 0.44 | 1 |
| TF1813V-A652Y1R6-01 | 6.5 | 0.19 | 1.6 |
| TF1813V-A502Y2R0-01 | 5 | 0.14 | 2 |
| TF1813V-A202Y3R2-01 | 2 | 0.065 | 3.2 |

- Measuring equipment of inductance value:
LCR meter(HP4261A, HP4263B or equivalent)[f=1kHz]

PACKAGING QUANTITIES

| | |
|-----------|---------------|
| TF1813V-A | 960pieces/box |
|-----------|---------------|

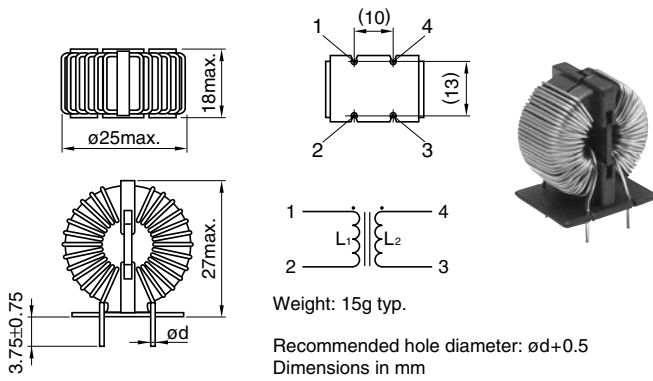
RATINGS

| Item | Standard value | Conditions |
|--|---|-----------------------------------|
| Rated voltage(V) | 80 to 280 | 50Hz/60Hz |
| Dielectric withstanding voltage(V) | 2000 | Between each winding for 1 minute |
| Insulation resistance (M Ω) | 100min. | Between each winding for DC.500V |
| Temperature rise($^{\circ}$ C) | 45max. | With line resistance |
| Operating temperature range($^{\circ}$ C) | -20 to +120 | Including self-temperature rise |
| Storage temperature range($^{\circ}$ C) | -20 to +85 | |
| Resistance to soldering temperature*1 | 260 \pm 5 $^{\circ}$ C, 10 \pm 1sec | Solder bath method |
| Applicable safety standard*2 | 350 \pm 5 $^{\circ}$ C, 5sec max. | Soldering iron method |
| | Electrical Appliance and Material Safety Law ("DENAN"), IEC60065, UL6500, CSA C22.2 | |

*1 Pb free solder(Sn-3Ag-0.5Cu)

*2 However, this product is not recognized by each regulations.

TF2518V-A(VERTICAL TYPE WITH TERMINAL BASE) TYPE SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



ELECTRICAL CHARACTERISTICS (STANDARD LINE UP)

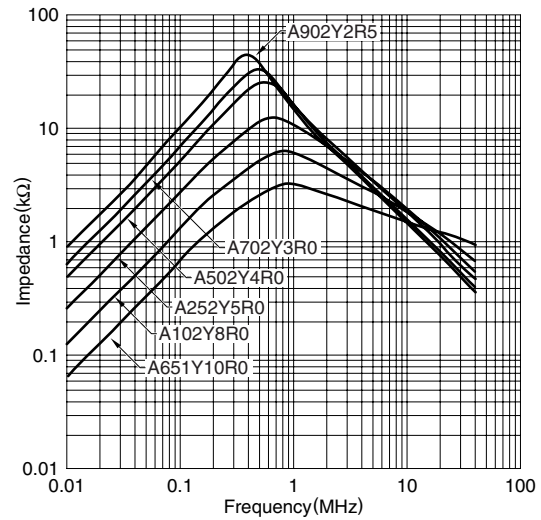
| Part No. | Inductance (mH)min. | DC resistance (Ω)max. | Rated current Iac(A)max. | ϕd (mm) |
|----------------------|------------------------|--------------------------------------|--------------------------------|------------------|
| TF2518V-A902Y2R5-01 | 9 | 0.12 | 2.5 | 0.6 |
| TF2518V-A702Y3R0-01 | 7 | 0.095 | 3 | 0.65 |
| TF2518V-A502Y4R0-01 | 5 | 0.075 | 4 | 0.7 |
| TF2518V-A252Y5R0-01 | 2.5 | 0.05 | 5 | 0.75 |
| TF2518V-A102Y8R0-01 | 1 | 0.025 | 8 | 0.95 |
| TF2518V-A651Y10R0-01 | 0.65 | 0.02 | 10 | 1 |

- Measuring equipment of inductance value:
LCR meter(HP4261A, HP4263B or equivalent)[f]=1kHz]

PACKAGING QUANTITIES

| | |
|-----------|---------------|
| TF2518V-A | 560pieces/box |
|-----------|---------------|

TYPICAL ELECTRICAL CHARACTERISTICS IMPEDANCE vs. FREQUENCY CHARACTERISTICS

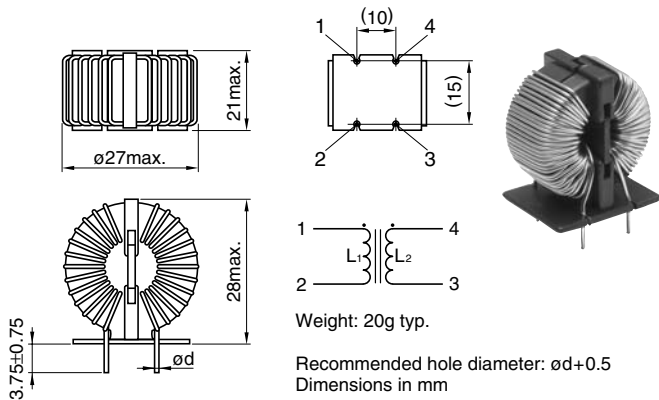


RATINGS

| Item | Standard value | Conditions |
|--|---|-----------------------------------|
| Rated voltage(V) | 80 to 280 | 50Hz/60Hz |
| Dielectric withstanding voltage(V) | 2000 | Between each winding for 1 minute |
| Insulation resistance (M Ω) | 100min. | Between each winding for DC.500V |
| Temperature rise($^{\circ}$ C) | 45max. | With line resistance |
| Operating temperature range($^{\circ}$ C) | -20 to +120 | Including self-temperature rise |
| Storage temperature range($^{\circ}$ C) | -20 to +85 | |
| Resistance to soldering temperature*1 | 260 \pm 5 $^{\circ}$ C, 10 \pm 1sec | Solder bath method |
| Applicable safety standard*2 | 350 \pm 5 $^{\circ}$ C, 5sec max. | Soldering iron method |
| | Electrical Appliance and Material Safety Law ("DENAN"), IEC60065, UL6500, CSA C22.2 | |

*1 Pb free solder(Sn-3Ag-0.5Cu)

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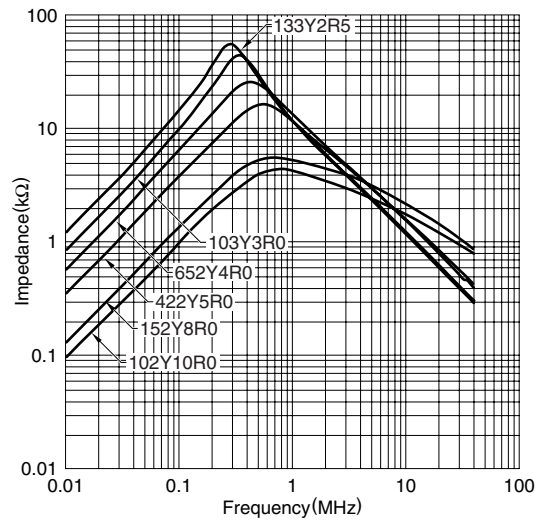
**TF2721V-A(VERTICAL TYPE WITH TERMINAL BASE) TYPE
SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM**

**ELECTRICAL CHARACTERISTICS
(STANDARD LINE UP)**

| Part No. | Inductance (mH)min. | DC resistance (mΩ)max. | Rated current lac(A)max. | ød (mm) |
|----------------------|---------------------|------------------------|--------------------------|---------|
| TF2721V-A133Y2R5-01 | 13 | 130 | 2.5 | 0.65 |
| TF2721V-A103Y3R0-01 | 10 | 90 | 3 | 0.7 |
| TF2721V-A652Y4R0-01 | 6.5 | 60 | 4 | 0.8 |
| TF2721V-A422Y5R0-01 | 4.2 | 40 | 5 | 0.9 |
| TF2721V-A152Y8R0-01 | 1.5 | 20 | 8 | 1 |
| TF2721V-A102Y10R0-01 | 1 | 11 | 10 | 1.2 |

- Measuring equipment of inductance value:
LCR meter(HP4261A, HP4263B or equivalent)[f=1kHz]

PACKAGING QUANTITIES

| | |
|-----------|---------------|
| TF2721V-A | 460pieces/box |
|-----------|---------------|

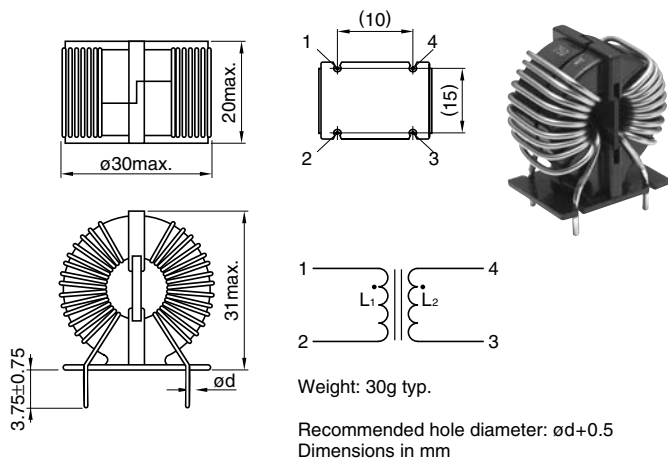
**TYPICAL ELECTRICAL CHARACTERISTICS
IMPEDANCE vs. FREQUENCY CHARACTERISTICS**

RATINGS

| Item | Standard value | Conditions |
|---------------------------------------|---|-----------------------------------|
| Rated voltage(V) | 80 to 280 | 50Hz/60Hz |
| Dielectric withstanding voltage(V) | 2000 | Between each winding for 1 minute |
| Insulation resistance (MΩ) | 100min. | Between each winding for DC.500V |
| Temperature rise(°C) | 45max. | With line resistance |
| Operating temperature range(°C) | -20 to +120 | Including self-temperature rise |
| Storage temperature range(°C) | -20 to +85 | |
| Resistance to soldering temperature*1 | 260±5°C, 10±1sec | Solder bath method |
| Applicable safety standard*2 | 350±5°C, 5sec max. | Soldering iron method |
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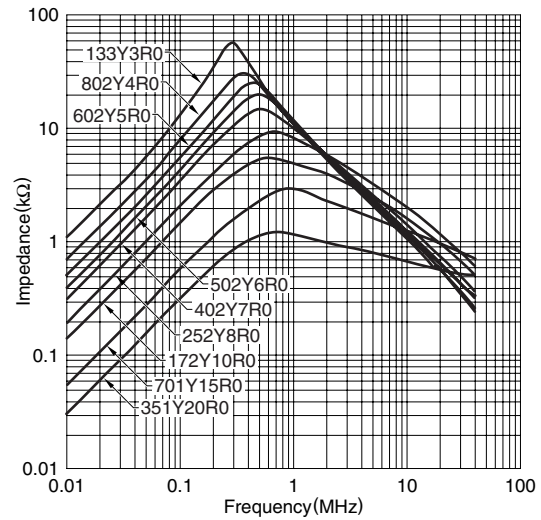
*1 Pb free solder(Sn-3Ag-0.5Cu)

*2 However, this product is not recognized by each regulations.

TF3020V-A(VERTICAL TYPE WITH TERMINAL BASE) TYPE SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



TYPICAL ELECTRICAL CHARACTERISTICS IMPEDANCE vs. FREQUENCY CHARACTERISTICS



ELECTRICAL CHARACTERISTICS (STANDARD LINE UP)

| Part No. | Inductance (mH)min. | DC resistance (Ω)max. | Rated current lac(A)max. | ϕd (mm) |
|----------------------|---------------------|--------------------------------|--------------------------|---------------|
| TF3020V-A133Y3R0-01 | 13 | 0.1 | 3 | 0.75 |
| TF3020V-A802Y4R0-01 | 8 | 0.07 | 4 | 0.8 |
| TF3020V-A602Y5R0-01 | 6 | 0.05 | 5 | 0.9 |
| TF3020V-A502Y6R0-01 | 5 | 0.04 | 6 | 0.95 |
| TF3020V-A402Y7R0-01 | 4 | 0.035 | 7 | 1 |
| TF3020V-A252Y8R0-01 | 2.5 | 0.025 | 8 | 1.1 |
| TF3020V-A172Y10R0-01 | 1.7 | 0.015 | 10 | 1.3 |
| TF3020V-A701Y15R0-01 | 0.7 | 0.007 | 15 | 1.6 |
| TF3020V-A351Y20R0-01 | 0.35 | 0.005 | 20 | 1.7 |

- Measuring equipment of inductance value:
LCR meter(HP4261A, HP4263B or equivalent)[f=1kHz]

PACKAGING QUANTITIES

| | |
|-----------|---------------|
| TF3020V-A | 440pieces/box |
|-----------|---------------|

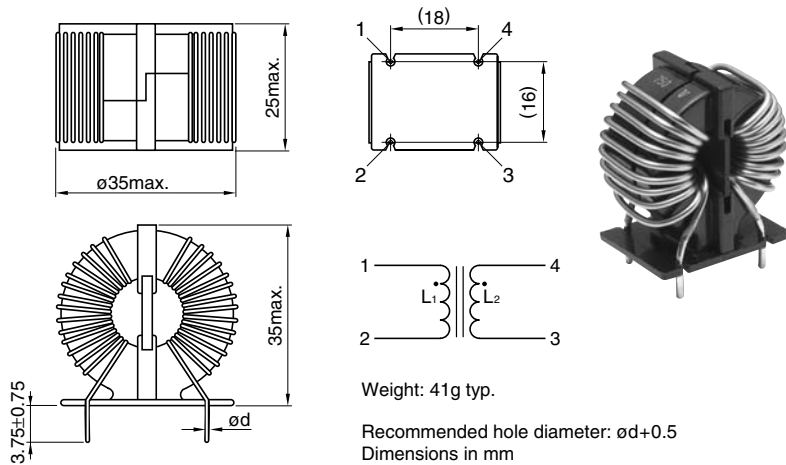
RATINGS

| Item | Standard value | Conditions |
|--|---|-----------------------------------|
| Rated voltage(V) | 80 to 280 | 50Hz/60Hz |
| Dielectric withstanding voltage(V) | 2000 | Between each winding for 1 minute |
| Insulation resistance (M Ω) | 100min. | Between each winding for DC.500V |
| Temperature rise($^{\circ}$ C) | 45max. | With line resistance |
| Operating temperature range($^{\circ}$ C) | -20 to +120 | Including self-temperature rise |
| Storage temperature range($^{\circ}$ C) | -20 to +85 | |
| Resistance to soldering temperature*1 | 260 \pm 5 $^{\circ}$ C, 10 \pm 1sec | Solder bath method |
| | 350 \pm 5 $^{\circ}$ C, 5sec max. | Soldering iron method |

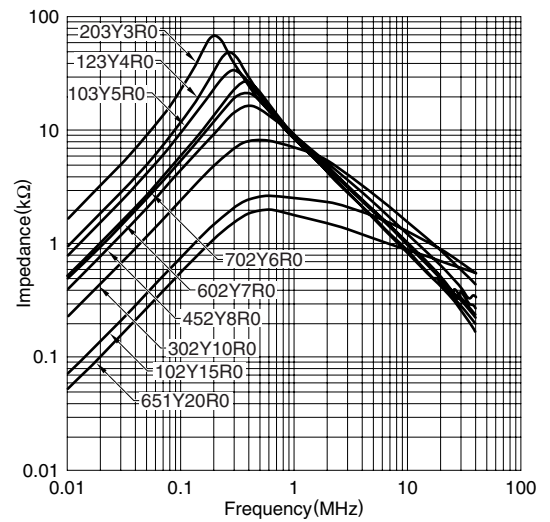
*1 Pb free solder(Sn-3Ag-0.5Cu)

*2 However, this product is not recognized by each regulations.

TF3525V-A(VERTICAL TYPE WITH TERMINAL BASE) TYPE SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



TYPICAL ELECTRICAL CHARACTERISTICS IMPEDANCE vs. FREQUENCY CHARACTERISTICS



ELECTRICAL CHARACTERISTICS (STANDARD LINE UP)

| Part No. | Inductance (mH)min. | DC resistance (mΩ)max. | Rated current Iac(A)max. | ϕd (mm) |
|----------------------|---------------------|------------------------|--------------------------|---------------|
| TF3525V-A203Y3R0-01 | 20 | 130 | 3 | 0.75 |
| TF3525V-A123Y4R0-01 | 12 | 75 | 4 | 0.85 |
| TF3525V-A103Y5R0-01 | 10 | 55 | 5 | 0.95 |
| TF3525V-A702Y6R0-01 | 7 | 45 | 6 | 1 |
| TF3525V-A602Y7R0-01 | 6 | 35 | 7 | 1.1 |
| TF3525V-A452Y8R0-01 | 4.5 | 25 | 8 | 1.2 |
| TF3525V-A302Y10R0-01 | 3 | 18 | 10 | 1.3 |
| TF3525V-A102Y15R0-01 | 1 | 6 | 15 | 1.7 |
| TF3525V-A651Y20R0-01 | 0.65 | 4 | 20 | 1.8 |

- Measuring equipment of inductance value:
LCR meter(HP4261A, HP4263B or equivalent)[f=1kHz]

PACKAGING QUANTITIES

| | |
|-----------|---------------|
| TF3525V-A | 240pieces/box |
|-----------|---------------|

RATINGS

| Item | Standard value | Conditions |
|---------------------------------------|---|-----------------------------------|
| Rated voltage(V) | 80 to 280 | 50Hz/60Hz |
| Dielectric withstanding voltage(V) | 2000 | Between each winding for 1 minute |
| Insulation resistance (MΩ) | 100min. | Between each winding for DC.500V |
| Temperature rise(°C) | 45max. | With line resistance |
| Operating temperature range(°C) | -20 to +120 | Including self-temperature rise |
| Storage temperature range(°C) | -20 to +85 | |
| Resistance to soldering temperature*1 | 260±5°C, 10±1sec | Solder bath method |
| | 350±5°C, 5sec max. | Soldering iron method |
| Applicable safety standard*2 | Electrical Appliance and Material Safety Law ("DENAN"), IEC60065, UL6500, CSA C22.2 | |

*1 Pb free solder(Sn-3Ag-0.5Cu)

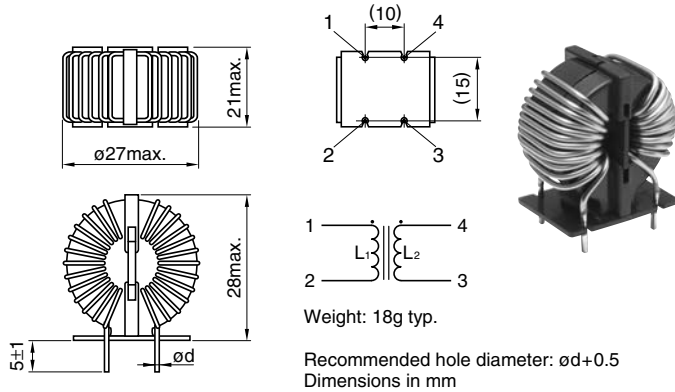
*2 However, this product is not recognized by each regulations.

Vertical Type (For High Frequency) TF Series

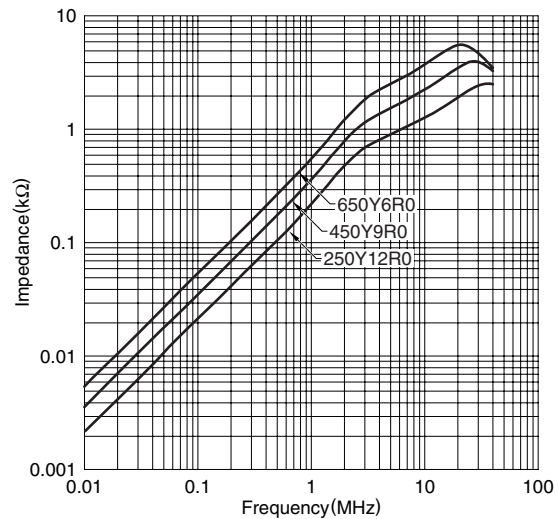
FEATURES

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



TYPICAL ELECTRICAL CHARACTERISTICS IMPEDANCE vs. FREQUENCY CHARACTERISTICS



ELECTRICAL CHARACTERISTICS (STANDARD LINE UP)

| Part No. | Inductance (μ H)min. | DC resistance (m Ω)max. | Rated current Iac(A)max. | ϕd (mm) |
|---------------------|------------------------------|---------------------------------------|--------------------------------|------------------|
| TF2628V-650Y6R0-1H | 65 | 20 | 6 | 0.8 |
| TF2628V-450Y9R0-1H | 45 | 12 | 9 | 1 |
| TF2628V-250Y12R0-1H | 25 | 9 | 12 | 1.2 |

- Measuring equipment of inductance value:
LCR meter(HP4261A, HP4263B or equivalent)[f=10kHz]

PACKAGING QUANTITIES

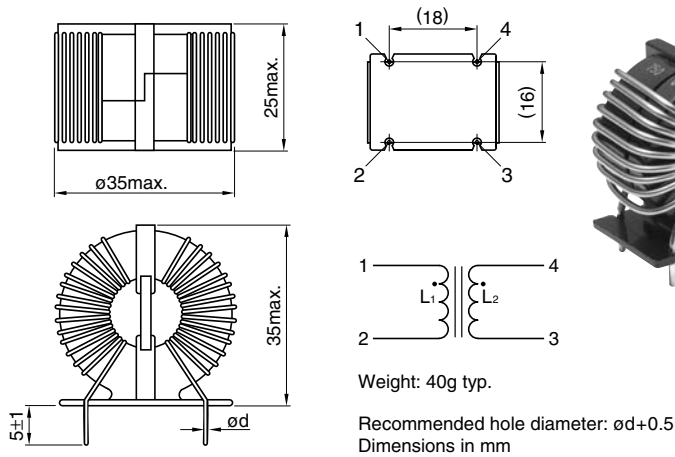
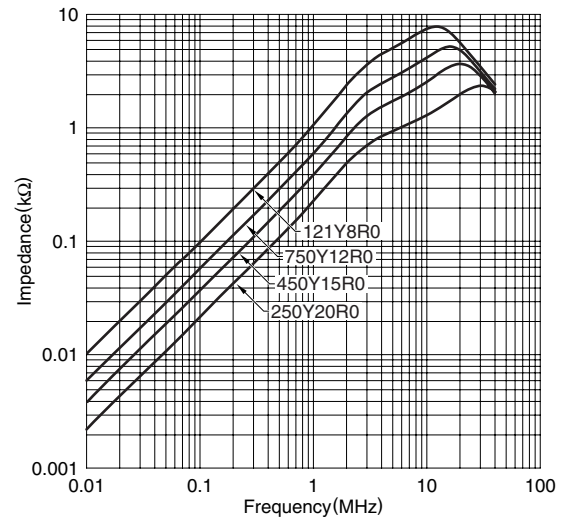
| | |
|------------|---------------|
| TF2628V-1H | 700pieces/box |
|------------|---------------|

RATINGS

| Item | Standard value | Conditions |
|--|---|-----------------------------------|
| Rated voltage(V) | 80 to 280 | 50Hz/60Hz |
| Dielectric withstanding voltage(V) | 2000 | Between each winding for 1 minute |
| Insulation resistance (M Ω) | 100min. | Between each winding for DC.500V |
| Temperature rise($^{\circ}$ C) | 45max. | With line resistance |
| Operating temperature range($^{\circ}$ C) | -20 to +120 | Including self-temperature rise |
| Storage temperature range($^{\circ}$ C) | -20 to +85 | |
| Resistance to soldering temperature*1 | 260 \pm 5 $^{\circ}$ C, 10 \pm 1sec | Solder bath method |
| | 350 \pm 5 $^{\circ}$ C, 5sec max. | Soldering iron method |
| Applicable safety standard*2 | Electrical Appliance and Material Safety Law ("DENAN"), IEC60065, UL6500, CSA C22.2 | |

*1 Pb free solder(Sn-3Ag-0.5Cu)

*2 However, this product is not recognized by each regulations.

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

**TYPICAL ELECTRICAL CHARACTERISTICS
IMPEDANCE vs. FREQUENCY CHARACTERISTICS**

**ELECTRICAL CHARACTERISTICS
(STANDARD LINE UP)**

| Part No. | Inductance (μH)min. | DC resistance ($\text{m}\Omega$)max. | Rated current Iac(A)max. | ϕd (mm) |
|---------------------|-------------------------------------|--|--------------------------------|------------------|
| TF3524V-121Y8R0-1H | 120 | 20 | 8 | 1 |
| TF3524V-750Y12R0-1H | 75 | 10 | 12 | 1.3 |
| TF3524V-450Y15R0-1H | 45 | 7 | 15 | 1.6 |
| TF3524V-250Y20R0-1H | 25 | 5 | 20 | 1.8 |

- Measuring equipment of inductance value:
LCR meter(HP4261A, HP4263B or equivalent)[f=10kHz]

PACKAGING QUANTITIES

| | |
|------------|---------------|
| TF3524V-1H | 320pieces/box |
|------------|---------------|

RATINGS

| Item | Standard value | Conditions |
|---|---|-----------------------------------|
| Rated voltage(V) | 80 to 280 | 50Hz/60Hz |
| Dielectric withstanding voltage(V) | 2000 | Between each winding for 1 minute |
| Insulation resistance ($\text{M}\Omega$) | 100min. | Between each winding for DC.500V |
| Temperature rise($^{\circ}\text{C}$) | 45max. | With line resistance |
| Operating temperature range($^{\circ}\text{C}$) | -20 to +120 | Including self-temperature rise |
| Storage temperature range($^{\circ}\text{C}$) | -20 to +85 | |
| Resistance to soldering temperature*1 | 260 \pm 5 $^{\circ}\text{C}$, 10 \pm 1sec | Solder bath method |
| | 350 \pm 5 $^{\circ}\text{C}$, 5sec max. | Soldering iron method |
| Applicable safety standard*2 | Electrical Appliance and Material Safety Law ("DENAN"), IEC60065, UL6500, CSA C22.2 | |

*1 Pb free solder(Sn-3Ag-0.5Cu)

*2 However, this product is not recognized by each regulations.