

EMC Components

UF Series

Common Mode Choke Coils(Line Filters) for AC Power Supply Compact and Separable Bobbin 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 Eac(V)	80 to 280	
Dielectric withstanding voltage Eac(V)	2000	Between each winding for 1 minute
Insulation resistance Edc(MΩ)	100min.	Between each winding for 1 minute, Edc 500V
Temperature rise(°C)	45max.*	With line resistance, each line
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×I ² (mH×A ²)	Weight (g)typ.	Minimum package quantity (pieces/box)
UF	Two sections bobbin types	UF1717V	0.2 to 10mH	0.25 to 1.6	0.6	3.5	640
		UF1717H	0.2 to 10mH	0.25 to 1.6	0.6	3.5	480
		UF2327L	2 to 45mH	0.5 to 2	10	17.5	1000
	Two sections bobbin types (For high frequency)	UF1717V	10 to 30μH	1.2 to 3	0.08	3	640
		UF1815SG	50 to 280μH	1.2 to 5	1.2	4.6	1280
	Four sections bobbin types	UF2327S4	2.7 to 45mH	0.4 to 1.6	7.5	17.5	1000

* 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.

THE LINE-UP OF TDK LINE FILTER

Rated current (A)	Inductance(mH)						
	0.1 to 1	1 to 2	2 to 5	5 to 10	10 to 20	20 to 40	40min.
0.2					UF1717		
0.3				UF1717			
0.5			UF1717				
0.7		UF1717					
1.0	UF1717						
1.5							
2.0							

• Classification by application  Battery chargers, adapters

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×Height)

(3)External shape code

(4)TDK's internal code

(5)Inductance value

Example) 602: 60μH×10²=6mH

(6)Rated current value

Example) 2R5: 2.5A

(7)Product management number

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TWO SECTIONS BOBBIN TYPE

UF SERIES

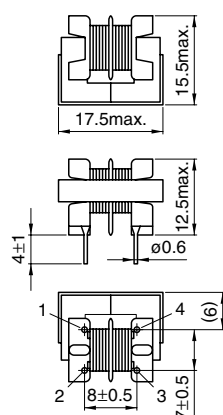
FEATURES

- This series is compact in size due to its use of high permeability ferrite core.

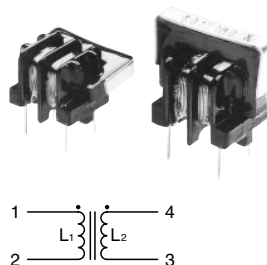
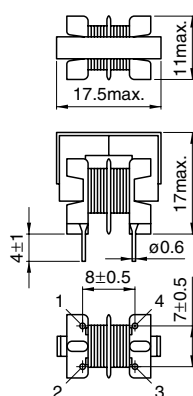
UF1717V/UF1717H (2 SEPARABLE BOBBIN) TYPES

SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM

UF1717H



UF1717V

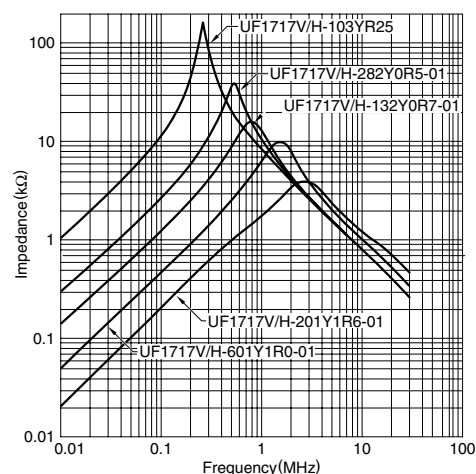


Weight: 3.5g typ.
Recommended hole diameter: $\phi 0.9$ to 1
Dimensions in mm

TYPICAL ELECTRICAL CHARACTERISTICS

IMPEDANCE vs. FREQUENCY

CHARACTERISTICS



ELECTRICAL CHARACTERISTICS

Part No.	Inductance (mH)min.	L1-L2 inductance difference (μ H)max.	DC resistance (Ω)max.	Rated current Iac (A)max.
UF1717H-103YR25-01	10	200	3.5	0.25
UF1717H-282Y0R5-01	2.8	50	1	0.5
UF1717H-132Y0R7-01	1.3	50	0.5	0.7
UF1717H-601Y1R0-01	0.6	25	0.2	1
UF1717H-201Y1R6-01	0.2	25	0.1	1.6
UF1717V-103YR25-02	10	100	3.5	0.25
UF1717V-282Y0R5-01	2.8	50	1	0.5
UF1717V-132Y0R7-01	1.3	50	0.5	0.7
UF1717V-601Y1R0-01	0.6	25	0.2	1
UF1717V-201Y1R6-01	0.2	25	0.1	1.6

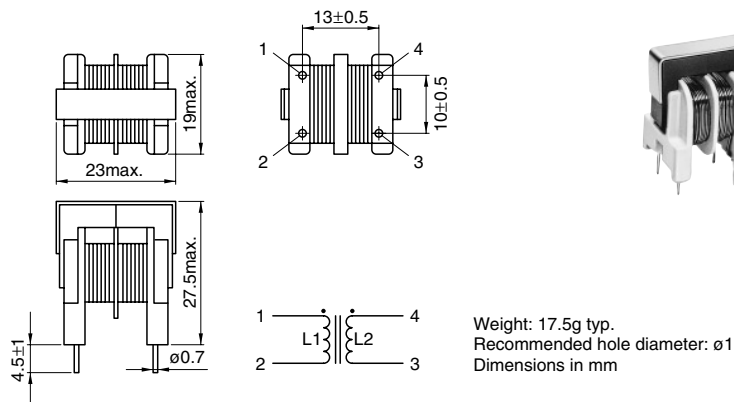
EMC Components

UF Series

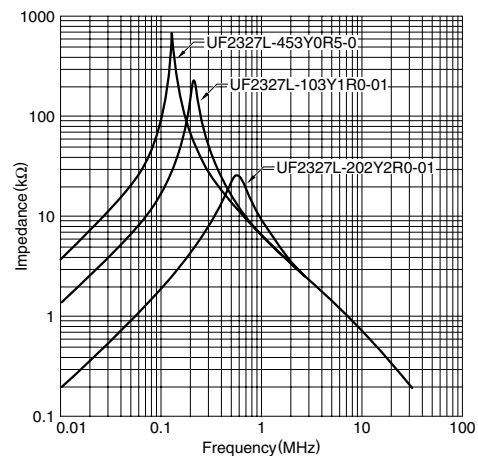
Common Mode Choke Coils (Line Filters) for AC Power Supply
Compact and Separable Bobbin Type

UF2327L (2 SEPARABLE BOBBIN) TYPE

SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



TYPICAL ELECTRICAL CHARACTERISTICS IMPEDANCE vs. FREQUENCY CHARACTERISTICS



ELECTRICAL CHARACTERISTICS

Part No.	Inductance (mH) min.	L1-L2 inductance difference (μ H) max.	DC resistance (Ω) max.	Rated current Iac (A) max.
UF2327L-453Y0R5-01	45	900	2.3	0.5
UF2327L-253Y0R7-01	25	500	1.3	0.7
UF2327L-103Y1R0-01	10	200	0.5	1
UF2327L-402Y1R5-01	4	80	0.3	1.5
UF2327L-202Y2R0-01	2	50	0.15	2

EMC Components

UF Series

Common Mode Choke Coils(Line Filters) for AC Power Supply Compact and Separable Bobbin Type

TWO SECTIONS BOBBIN TYPE (FOR HIGH FREQUENCY)

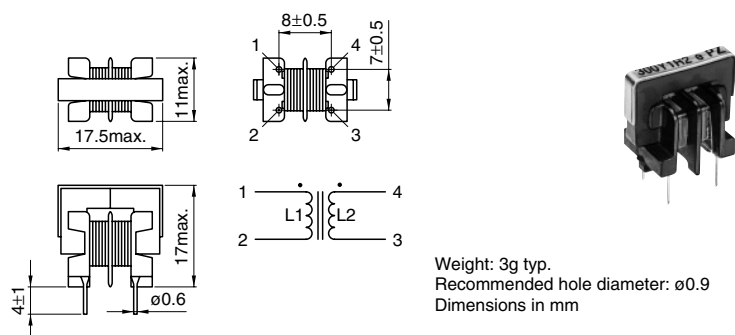
UF SERIES

FEATURES

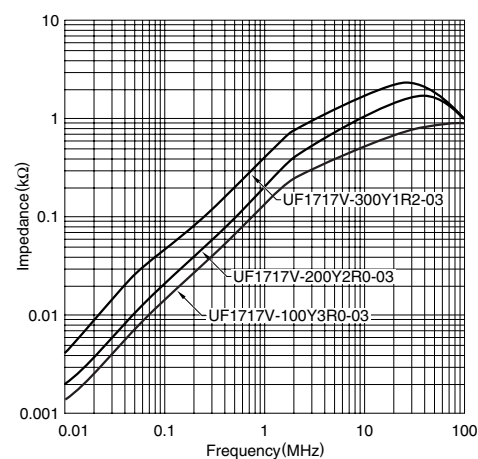
- This series is designed to reduce stray capacity between windings by using a single-layer coil construction on Ni-Zn ferrite cores, which offer excellent high frequency characteristics.
- This series provides excellent noise suppression for high frequency ranges including the FM band.
- Since the windings are divided into two sections, this filter can also be used as a signal line with excellent withstand voltage.

UF1717V(2 SEPARABLE BOBBIN FOR HIGH FREQUENCY) TYPE

SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



TYPICAL ELECTRICAL CHARACTERISTICS IMPEDANCE vs. FREQUENCY CHARACTERISTICS



ELECTRICAL CHARACTERISTICS

Part No.	Inductance (μH)min.	L ₁ -L ₂ inductance difference (μH)max.	DC resistance ($\text{m}\Omega$)max.	Rated current Iac (A)max.
UF1717V-300Y1R2-03	30	10	150	1.2
UF1717V-200Y2R0-03	20	10	100	2
UF1717V-100Y3R0-03	10	10	50	3

EMC Components

UF Series

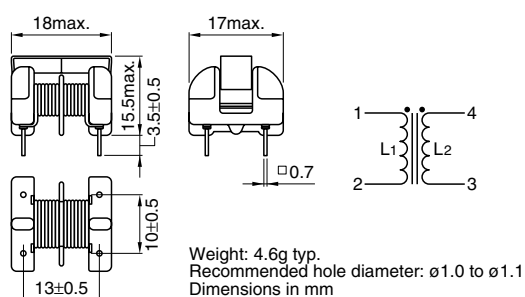
Common Mode Choke Coils (Line Filters) for AC Power Supply Compact and Separable Bobbin Type

UF1815SG(2 SEPARABLE BOBBIN FOR HIGH FREQUENCY) TYPE

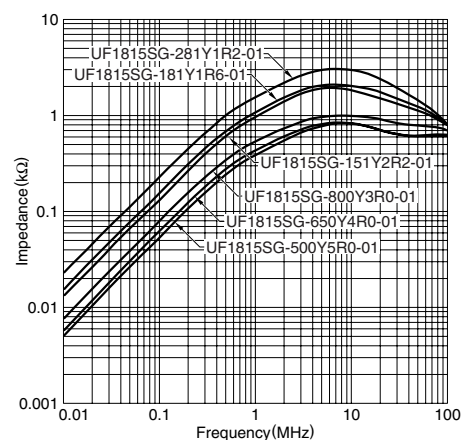
FEATURES

- This series uses a Mn-Zn ferrite core and yet it offers excellent noise suppression into the high frequencies due to its low distributed inductance construction based on a single layer winding.
- This compact filter's inductance has been improved by as much as 50% compared to existing products of comparable sizes while its height profile has been reduced by approximately 30%.

SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



TYPICAL ELECTRICAL CHARACTERISTICS IMPEDANCE vs. FREQUENCY CHARACTERISTICS



ELECTRICAL CHARACTERISTICS

Part No.	Inductance (μH)min.	L1-L2 inductance difference (μH)max.	DC resistance ($\text{m}\Omega$)max.	Rated current Iac (A)max.
UF1815SG-281Y1R2-01	280	50	250	1.2
UF1815SG-181Y1R6-01	180	30	130	1.6
UF1815SG-151Y2R2-01	150	20	100	2.2
UF1815SG-800Y3R0-01	80	10	50	3
UF1815SG-650Y4R0-01	65	10	30	4
UF1815SG-500Y5R0-01	50	10	25	5

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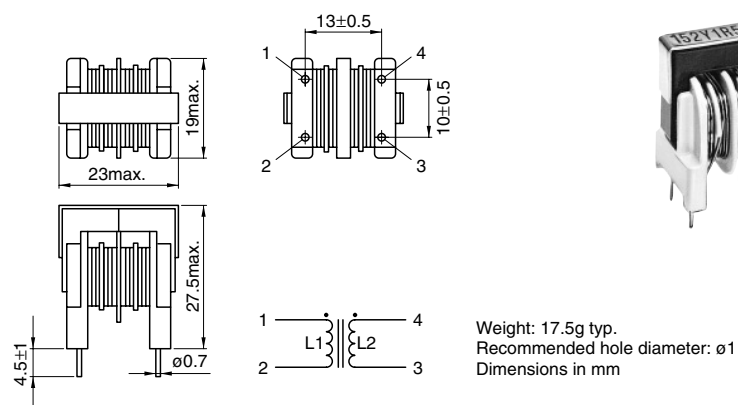
FOUR SECTIONS BOBBIN TYPE

UF SERIES

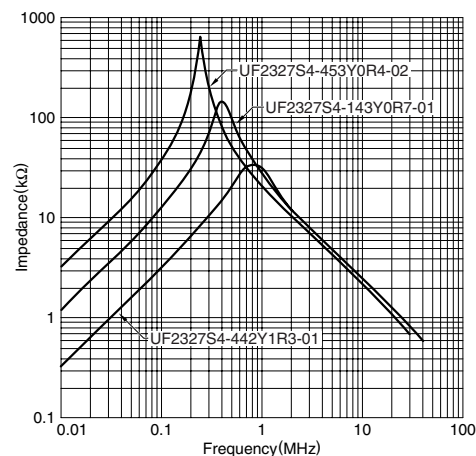
FEATURES

- By using two sections bobbin for each line, this filter provides large inductance, small stray capacity and impedance required for suppressing noise in high frequency ranges.

UF2327S4 (FOUR SECTIONS BOBBIN FOR HIGH FREQUENCY) TYPE SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



TYPICAL ELECTRICAL CHARACTERISTICS IMPEDANCE vs. FREQUENCY CHARACTERISTICS



ELECTRICAL CHARACTERISTICS

Part No.	Inductance (mH)min.	L1-L2 inductance difference (μ H)max.	DC resistance (Ω)max.	Rated current Iac (A)max.
UF2327S4-453Y0R4-02	45	300	3	0.4
UF2327S4-143Y0R7-01	14	300	1	0.7
UF2327S4-752Y1R0-01	7.5	150	0.55	1
UF2327S4-442Y1R3-01	4.4	100	0.3	1.3
UF2327S4-272Y1R6-01	2.7	60	0.2	1.6