Noise Suppression Products/EMI Suppression Filters > AC Line Filters > Hybrid Choke Coils

Differential Mode Insertion Loss-Frequency Characteristics

Frequency (MHz)

20

40

60

80 L

PLY10AN2121R4R2 PLY10AN2821R2R2 PLY10AN4321R0R2 PLY10AN4321R0R2 PLY10AN6220R8R2 PLY10AN8720R7R2 PLY10AN9920R6R2

PLY10AN1430R5R2

0.1

nsertion Loss (dB)

PLY10AN9012R0R2

PLY10AN1121R8R2

10AN1521R6R

10

1

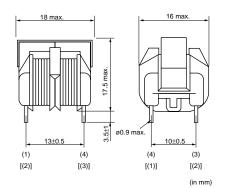
Data Sheet

# AC Line Filters Hybrid Choke Coils

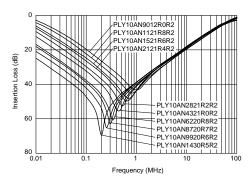
# **PLY10 Series**

# PLY10 Series Standard Winding Type

# Dimension



# Common Mode Insertion Loss-Frequency Characteristics



# ■ Rated Value (□: packaging code)

Part Number	Common Mode Inductance (min.)	Normal Mode Inductance (min.)	Rated Current	Rated Voltage
PLY10AN9012R0R2	0.9mH	65μΗ	2.0A	300Vac
PLY10AN1121R8R2	1.1mH	90µH	1.8A	300Vac
PLY10AN1521R6R2	1.5mH	110μΗ	1.6A	300Vac
PLY10AN2121R4R2	2.1mH	150µH	1.4A	300Vac
PLY10AN2821R2R2	2.8mH	190µH	1.2A	300Vac
PLY10AN4321R0R2	4.3mH	300μΗ	1.0A	300Vac
PLY10AN6220R8R2	6.2mH	400μΗ	0.8A	300Vac
PLY10AN8720R7R2	8.7mH	530µH	0.7A	300Vac

Operating Temperature Range (Ambient Temperature Range + Winding Temperature Rise): -25°C to 120°C Winding Temperature Rise (at Rated Current) (max.): 60K

> Continued on the following page.

This data sheet is applied for AC Line Filters Hybrid Choke Coils used for General Electronics equipment for your design.

#### <sup>∆</sup> Note:

1. This datasheet is downloaded from the website of Murata Manufacturing co., Itd. Therefore, it's specifications are subject to change or our products in it may be discontinued without advance notice. Please check with our sales representatives or product engineers before ordering.

2. This datasheet has only typical specifications because there is no space for detailed specifications. Therefore, please approve our product specifications or transact the approval sheet for product specifications before ordering.



Continued from the preceding p		a Sheet		
Part Number	Common Mode Inductance (min.)	Normal Mode Inductance (min.)	Rated Current	Rated Voltag
PLY10AN9920R6R2	9.9mH	690μH	0.6A	300Vac
PLY10AN1430R5R2	14.0mH	1000µH	0.5A	300Vac
Dimension				
Common Mode Insertion	n Loss-Frequency Characteristics	Differential Mode Insertion <sup>o</sup>		-
(9) 90 90 90 90 90 90 90 90 90 90	PLYIOAN70122002 PLYIOAN1121R702 PLYIOAN1421R402 PLYIOAN321R002 PLYIOAN3521R002 The second sec	20 40 PLY10AN3521R0D2 PLY10AM420R8D2 PLY10AM9720R6D2 PLY10AM9720R6D2 PLY10AM9720R6D2 PLY10AM9720R5D2 PLY10AM9720R5D2 FLY10AM9720 FLY10AM9720 FLY10AM9720 FLY10AM9720 FLY10AM9720 FLY10AM9720 FLY10AM9720 FLY10AM9720 FLY10AM9720 FLY10AM9720 FLY10AM9720 FLY10AM9720 FLY10AM9720	PLYIOANII2IR7 PLYIOANII2IR7 PLYIOANI2IR4 PLYIOANI22IR2 1 10 sequency (MHz)	D2
Part Number	Common Mode Inductance (min.)	Normal Mode Inductance (min.)	Rated Current	Rated Volta
PLY10AN7012R0D2	0.7mH	50μΗ	2.0A	300Vac
PLY10AN1121R7D2	1.1mH	65μH	1.7A	300Vac
PLY10AN1421R4D2	1.4mH	110µH	1.4A	300Vac
PLY10AN2321R2D2	2.3mH	160µH 1.2A		300Vac
PLY10AN3521R0D2	3.5mH	240μΗ	1.0A	300Vac
Operating Temperature Range (/ Winding Temperature Rise (at R	Ambient Temperature Range + Winding Tempe ated Current) (max.): 60K	∋rature Rise): -25°C to 120°C	Continued on th	ne following page.
This data shart is applied if	for AC Line Filters Hybrid Choke Coils use	14 October Electronics equipment for		

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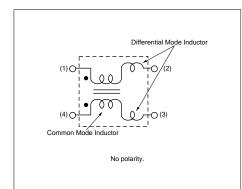
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Part Number	Common Mode Inductance (min.)	Normal Mode Inductance (min.)	Rated Current	Rated Voltage	
PLY10AN4420R8D2	4.4mH	320μΗ	0.8A	300Vac	
PLY10AN8720R7D2	8.7mH	500µH	0.7A	300Vac	
PLY10AN9720R6D2	9.7mH	670µH	0.6A	300Vac	
PLY10AN1130R5D2	11.0mH	840μΗ	0.5A	300Vac	

Data Sheet

Operating Temperature Range (Ambient Temperature Range + Winding Temperature Rise): -25°C to 120°C Winding Temperature Rise (at Rated Current) (max.): 60K

### Equivalent Circuit



# ■ ①Caution (Rating)

#### 1. Rated Current

Operating current should not exceed the rated value. Even if operating current is under the rated value, adequate ventilation is required to avoid excessive heat generated within the product (choke coil) and from surrounding heat sources. If exceeding these conditions, excessive heat may cause fumes or permanent damage to the product. Please ensure that product (choke coil) is evaluated and confirmed against the specification when it is mounted in your final assembled product. -> Winding temperature should be less than

120 dearee C.

\*As for FKOB series winding temperature should be less than 95 degree C.

Maximum allowable temperature at the surface of coil (ambient temperature + winding temperature rise) is in accordance with each safety standard applicable to final assembled product. When the temperature at winding exceeds maximum allowable temperature of safety standard, the rated current should be derated.

2. Inrush Current

Inrush current should not exceed 10 times rated current within 1/4 cycle of 50/60Hz commercial power line. Inrush current should be limited to a minimum of 10 seconds after last inrush.

If these conditions are exceeded, excessive heat may cause fumes or permanent damage to the component, or at worst cause ignition.

#### Packaging

Code	Packaging	Minimum Quantity
м	Magazine	1800
В	Box	1200

#### Notice (Soldering and Mounting)

Magnetic Flux Leakage

Choke coils generate small amounts of magnetic flux leakage that may adversely affect equipment operation according to component arrangement. Testing should be completed on final assembly to ensure equipment performance is not affected.

#### Notice (Other)

**Coil Humming Noise** 

Magnetic flux generated between coil and core or between the choke coil windings creates repulsive power between the coil windings. This repulsive power causes the coil winding to vibrate and create a humming noise. The amount of hum produced by the coil is proportionate to the amount of harmonic distortion generated by the operating current. This does not influence the electrical performance of the coils, but it should be considered and tested in actual circuit application.

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