

EMI Suppression Filters (EMIFIL[®]) for AC Power Lines



Hybrid Choke Coil

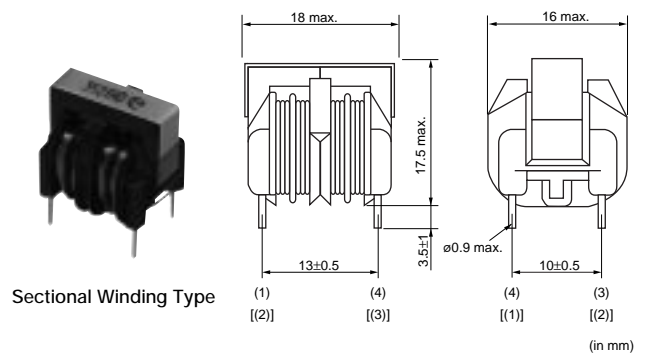
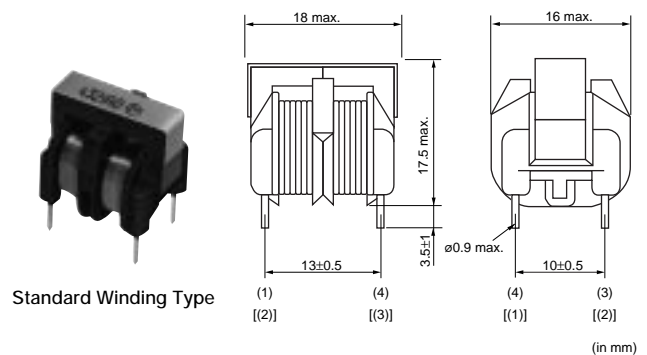
The PLY10 is a compact and high performance hybrid choke coil which can handle differential mode noise caused by the harmonics currents regulation circuit as well as common mode noise. It can handle noise problems much more compactly than a combination of a conventional common mode choke coil and a differential mode choke coil.

■ Features

1. PLY10 has both functions of a common mode choke coil and a differential mode choke coil in its compact body.
2. Low profile in vertical core layout
3. PLY10 has the same pin layout as a general type common mode choke coil which enables it to replace conventional components.

■ EMI Problem for harmonics currents regulation

There are some methods meet harmonics currents regulations (IEC1000-3, EN60555-2) such as an active filter type and one converter type. However, they cause new EMI problems of differential mode noise because they use active components. For that reason, additional filter components to meet differential mode noise must be applied.



PLY10 Series Standard Winding Type

Part Number	Common Mode Inductance (min.) (mH)	Normal Mode Inductance (min.) (μH)	Rated Current (A)	Rated Voltage (Vac)
PLY10AN9012R0R2	0.9	65	2.0	300
PLY10AN1121R8R2	1.1	90	1.8	300
PLY10AN1521R6R2	1.5	110	1.6	300
PLY10AN2121R4R2	2.1	150	1.4	300
PLY10AN2821R2R2	2.8	190	1.2	300
PLY10AN4321R0R2	4.3	300	1.0	300
PLY10AN6220R8R2	6.2	400	0.8	300
PLY10AN8720R7R2	8.7	530	0.7	300
PLY10AN9920R6R2	9.9	690	0.6	300
PLY10AN1430R5R2	14.0	1000	0.5	300

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

PLY10 Series Sectional Winding Type

Part Number	Common Mode Inductance (min.) (mH)	Normal Mode Inductance (min.) (μH)	Rated Current (A)	Rated Voltage (Vac)
PLY10AN7012R0D2	0.7	50	2.0	300
PLY10AN1121R7D2	1.1	65	1.7	300
PLY10AN1421R4D2	1.4	110	1.4	300
PLY10AN2321R2D2	2.3	160	1.2	300
PLY10AN3521R0D2	3.5	240	1.0	300

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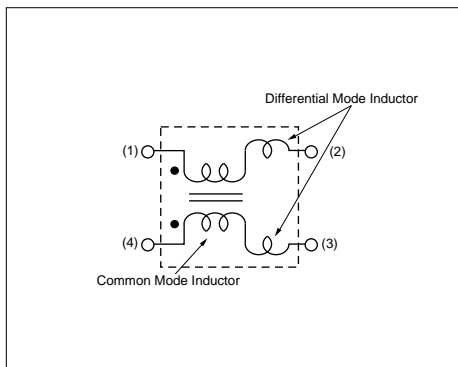
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Part Number	Common Mode Inductance (min.) (mH)	Normal Mode Inductance (min.) (μH)	Rated Current (A)	Rated Voltage (Vac)
PLY10AN4420R8D2	4.4	320	0.8	300
PLY10AN8720R7D2	8.7	500	0.7	300
PLY10AN9720R6D2	9.7	670	0.6	300
PLY10AN1130R5D2	11.0	840	0.5	300

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

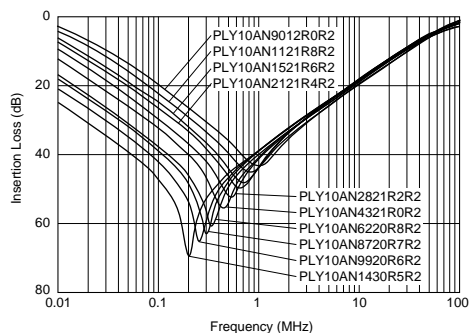
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Equivalent Circuit Diagram

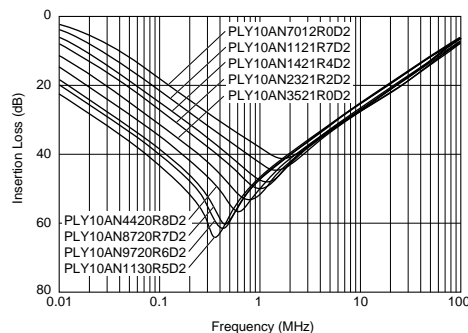


Common Mode Insertion Loss Characteristics (Typical)

Standard Winding Type

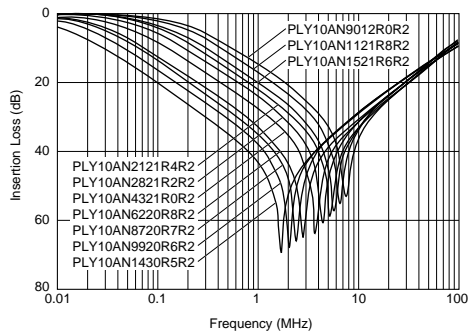


Sectional Winding Type



Differential Mode Insertion Loss Characteristics (Typical)

Standard Winding Type



Sectional Winding Type

