

POWERLINE SIGNAL COUPLER

0557-7700-42 for 500Mbps Modules



Bel 0557-7700-42 is a member of the coupling signal transformers family developed for a wide range of applications based on the QCA HomePlug AV powerline chipsets and is compatible with the Bel 500Mbps modules. The transformer provide a low cost and high quality solution to simplify the implementation HomePlug AV products.

This signal transformer provides complete isolation, coupling solution and is designed to complement Bel's 0804-5000A50, 0804-5000E50, 0804-5000A51, 0804-5000E51 and 0804-5000V51 HomePlug AV Powerline modules.

Key Features & Benefits

- Designed for use with the Bel HPAV modules range
- Provides reinforced isolation for worldwide application
- Minimum footprint design
- Wide operating temperature range -40°C – +85°C

Model

Part Number	Temp Range	Description	Package
0557-7700-42	-40°C – +85°C	Signal coupler for powerline 500Mbps modules	Boxed

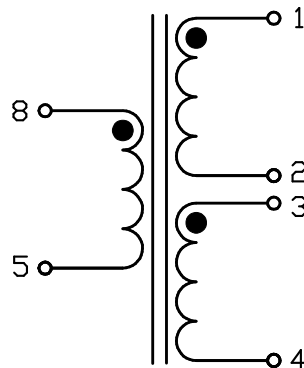
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Electrical Specifications @ 25° C

Part Number	Parameter	Pin Number	Value
0557-7700-42	Inductance @ 500KHz, 0.1V	1 - 2	7.7uH min
	Turns Ratio	1 - 2 : 3 - 4	1 : 1
	Turns Ratio	1 - 2 : 5 - 8	1 : 1
	DCR	1 - 2, 3 - 4, 5 - 8	40mΩ max
	Hi-Pot @ 3mA	1 + 3 : 5	4KVDC for 60 sec

Schematics



0557-7700-42

Application Notes

The following schematic show typical application for the Bel HomePlug AV Powerline modules, with the appropriate couples and associated circuitry. The following notes should be observed.

[1] Inductors L1, L2 and L3, L4 provide high frequency isolation which is particularly important with switching power supplies where a capacitor is present across the input terminals. The inductors should have a good performance in the Powerline band between 2 and 68 MHz

[2] DC blocking capacitor C1 should be an X2 class device (AC Mains applications).

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