

Features

- Fully encapsulated
- Low profile
- High dielectric strength
- Ten models available
- Ex stock
- Competitively priced
- **RoHS** compliant*

Applications

- Line matching
- Fax modem

LM-NP/-LP 1000 Series - Line Matching Transformers

Product Dimensions



*:pitch = 1/10 " = 2.54 (.100) (for number of pins see pin assignment)

Matching Transformers meet the return loss specifications of BS 6305.

Note

It is important, however, to use the circuit recommended by BS 6305 for

The LM-NP/-LP-1000 Series Line

The LM-NP-1000 Series are EN 41003 approved.

How To Order



L = Tin only (RoHS Compliant)

return loss measurements.



Pin Assignment and Winding Configurations (Bottom View)





LM-NP-1002L LM-LP-1002L



one-winding center-tapped*





both windings center-tapped LM-NP-1005L LM-LP-1005L



both windings split

* Due to the unique design and the most advanced manufacturing techniques the 2 coils are fully identical, meaning there is no real primary nor secondary winding. Depending on the application, the transformers can be used either way.

split*

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LM-LP-1003L

LM-NP/-LP 1000 Series - Line Matching Transformers **BOURNS**[®]

Part Numbers And Specifications

Parameters		Unit	LM-NP 1001-B1L	LM-NP 1002L	LM-NP 1003L	LM-NP 1004L	LM-NP 1005L	LM-LP 1001L	LM-LP 1002L	LM-LP 1003L	LM-LP 1004L	LM-LP 1005L
Ref. Temperature Data		°C	25	25	25	25	25	25	25	25	25	25
Impedance (min./at 1.0 kHz)	Primary	Ω	600	600	600	600 (150, 150)	600 (150+150)	600	600	600	600 (150, 150)	600 (150+150)
	Secondary	Ω	600	600 (150,150)	600 (150+150)	600 (150,150)	600 (150+150)	600	600 (150,150)	600 (150+150)	600 (150,150)	600 (150+150)
Inductance (min./at 0.2 kHz)	Primary	н	2.8	2.8	2.8	2.8 (0.7, 0.7)	2.8 (0.7+0.7)	2.8	2.8	2.8	2.8 (0.7, 0.7)	2.8 (0.7+0.7)
	Secondary	н	2.8	2.8 (0.7, 0.7)	2.8 (0.7+0.7)	2.8 (0.7, 0.7)	2.8 (0.7+0.7)	2.8	2.8 (0.7, 0.7)	2.8 (0.7+0.7)	2.8 (0.7, 0.7)	2.8 (0.7+0.7)
DC-Resistance (typical/±10 %)	Primary	Ω	66	66	66	66 (33,33)	66 (33+33)	90	90	90	90 (45,45)	90 (45+45)
	Secondary	Ω	66	66 (33,33)	66 (33+33)	66 (33,33)	66 (33+33)	90	90 (45,45)	90 (45+45)	90 (45,45)	90 (45+45)
Turns Ratio (≤ ±2 %)		_	1:1	1:1	1:1	1:1	1:1	1:1	1:1	1:1	1:1	1:1
Winding Configurations		-	_	one winding center tapped	one winding split	both windings center tapped	both windings split	_	one winding center tapped	one winding split	both windings center tapped	both windings split
Insertion Loss (at 2.0 kHz)		dB	≤ 1.5					≤ 2.0				
Return Loss	Transformer (0.2 - 4.0 kHz) In Networks	dB	dB ≥ 10.0 ≥ 21.0					≥ 8.0 ≥ 20.0				
Shunt Loss (typical)		kΩ	9.0					9.0				
Frequency Response (typ./0.2 - 3.5 kHz)		dB	- 0.3					- 0.5				
Wide Band Response (0.2 - 10.0 kHz)		dB	-2.5					-4.5				
Power Level		dBm	- 45.0 to + 3.0					- 43.0 to + 3.0				
Longitudinal Balance (0.3 - 4.0 kHz)		dB	-80.0					- 70.0				
Distortion (0 dB/at 1.0 kHz)		%	≤ 0.1					≤ 0.25				
Leakage Induction (typical)		mH	14.0					14.0				
Dielectric Strength (P/S)		kVDC	6.5					6.5				
Temperature Range	Operation	°C	-10 to +60					-10 to +60				
	Storage	°C	-20 to +70					-20 to +70				
Specifications Met		BS 6204: Construction and flammability (UL 94V0) BS 6301: Isolation BS 6305: Return loss (1982/paragraph 4.3.2.2/b) CCITT: Rec. T/CD 1-1 (Sept. 1982)										