

SOLDER SUFFIX	CUSTOMER TERMINAL	RoHS	LEAD(Pb)-FREE
LF3	Sn100%	Yes	Yes

**ELECTRICAL SPECIFICATIONS @ 25°C unless otherwise noted:**

INDUCTANCE: 350uH min., 100kHz, 100mV, 8mADC, J1-J2; J3-J6, Lp.

DIELECTRIC RATING: 1500Vrms for 1 minute between P1-J1(tie P1+P3).

TURNS RATIO/POLARITY: (P1-P2):(J1-J2) = 1:1, ±2%.  
(P3-P6):(J3-J6) = 1:1, ±2%.

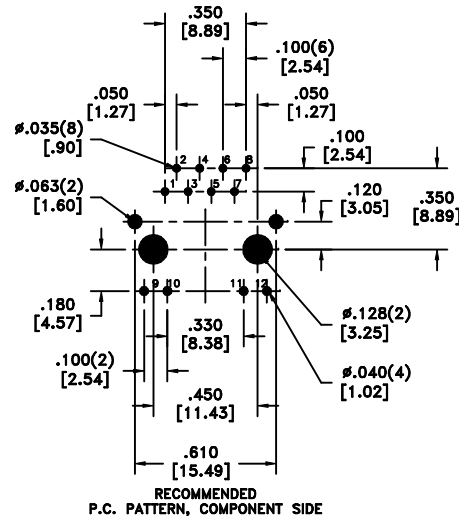
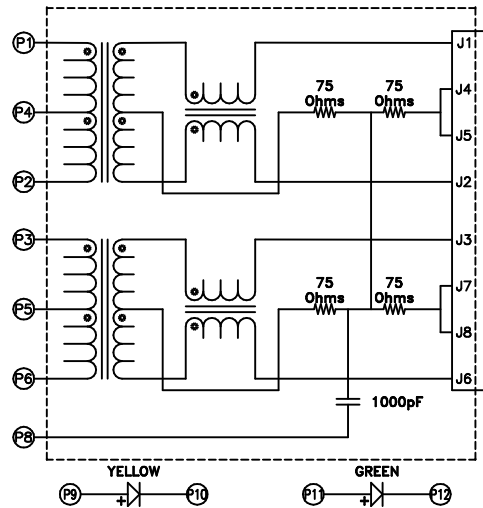
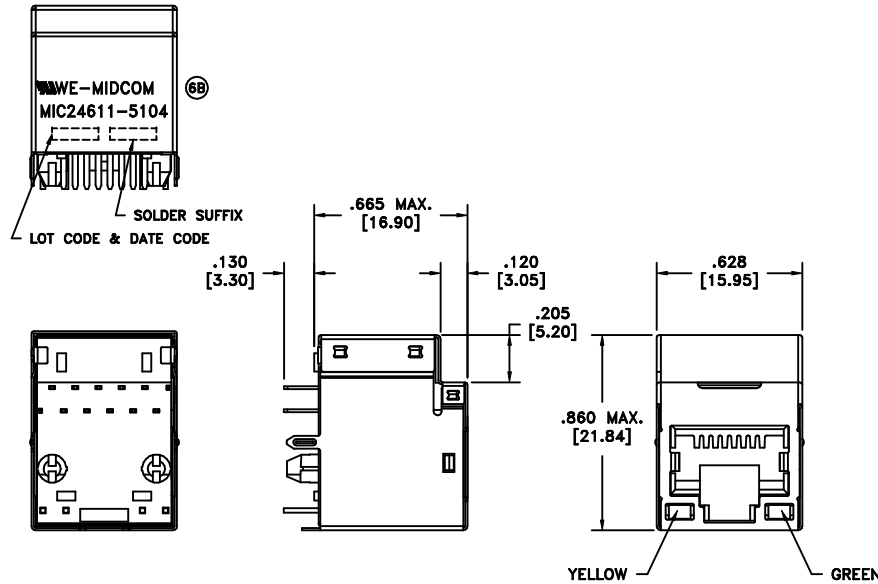
INSERTION LOSS: -1.0dB typ., 1MHz - 65MHz.

RETURN LOSS: -18dB min., 1M - 30MHz.  
-16dB min., 30M - 45MHz.  
-14dB min., 45M - 60MHz.  
-12dB min., 60M - 80MHz.

CROSSTALK: -35dB min., 1MHz - 100MHz.

COMMON MODE REJECTION: -35dB min., 1MHz - 100MHz.

OPERATING TEMPERATURE RANGE: 0°C to +70°C.



AGENCY NUMBER	
UL60950-1	E205930

Unless otherwise specified:  
Tolerances: Fractions: ±1/64  
Angles: ±1° Decimals: ±.010[.25]  
This drawing is dual dimensioned. Dimensions in brackets are in millimeters.

DRAWING TITLE  
**TRANSFORMER**  
10/100Mbs

Midcom   
www.midcom-inc.com

DRAWING NO. **MIC24611-5104T-LF3** 6B  
REVISIONS: SEE SHEET 1 SCALE --- SHEET 2 OF 6 REV. 11/06

- [Certified Quality](#)=20
- [Deutsch](#)=20
- [English](#)=20

# WE-RJ45 LAN RJ45 LAN Transformer

## Characteristics:

- RJ45 Connector with integrated transformer/ common mode choke
- Available in SMD, THT and THT with USB
- 350=C2=B5H min. OCL with 8mA bias
- Complies with IEEE 802.3
- Extended temperature range -40=C2=B0C to +85=C2=B0C available =

## Applications:

- ADSL Modems
- Embedded PC
- LAN Applications
- Hub, Router, Switches

Typical electrical values WE-LAN RJ45 10/100/1000 = Base-Tx

Inductance	350 =C2=B5H	100 kHz, 100 mV, 8 mADC
Insulation Test Voltage	1500 Vrms	1 Minute
Turns Ratio	see data sheet	see data sheet
Insertion Loss	-1.0 dB max.	1 MHz - 100 MHz
	-18 dB min.	1 MHz - 30 MHz
	-16 dB min.	30 MHz - 45 MHz
Return Loss	-14 dB min.	45 MHz - 60 MHz
	-12 dB min.	60 MHz - 80 MHz
	-10 dB min.	80 MHz - 100 MHz (1000 Base-T)
Crosstalk	-35 dB min.	1 MHz - 100 MHz
	-35 dB min.	1 MHz - 100 MHz
	-25 dB min.	100 MHz - 500 MHz (1000 Base-T)

## Electrical properties

### 10/100 Base-T=20 THT

Order Code	Design	xBase-T	Ports	Application	Operating Temperature	Tab Position	LED (Left-Right)	EMI Fingers	AutoMDIX	U <sub>T</sub> (V (AC))	Shielding	Download
7499011001A	THT	10/100 Base-T	1x1	Standard	-40=C2=B0C up to 85=C2=B0C	Down	none	Yes	Yes	T">1500	Shielded	
7499011002A	THT	10/100 Base-T	1x1	Standard	0=C2=B0C up to 70=C2=B0C	Down	none	Yes	Yes	T">1500	Shielded	

7499011121A	THT	10/100 Base-T	1x1	Standard	0=C2=B0C up to 70=C2=B0C	Down	yellow-green	Yes	Yes	T">1500	Shielded
7499011122	THT	10/100 Base-T	1x1	Standard	0=C2=B0C up to 70=C2=B0C	Down	yellow-green	Yes	No	T">1500	Shielded
7499011212A	THT	10/100 Base-T	1x1	Standard	0=C2=B0C up to 70=C2=B0C	Down	green-yellow	Yes	Yes	T">1500	Shielded
7499010211A	THT	10/100 Base-T	1x1	Standard	0=C2=B0C up to 70=C2=B0C	Down	green-yellow	No	Yes	T">1500	Shielded
7499011222A	THT	10/100 Base-T	1x1	Standard	-40=C2=B0C up to 85=C2=B0C	Down	green-green	Yes	Yes	T">1500	Shielded
7499010001A	THT	10/100 Base-T	1x1	Standard	0=C2=B0C up to 70=C2=B0C	Up	none	No	Yes	T">1500	Shielded
7499010121A	THT	10/100 Base-T	1x1	Standard	0=C2=B0C up to 70=C2=B0C	Up	yellow-green	No	Yes	T">1500	Shielded
7499012121	THT	10/100 Base-T	1x1	Standard	0=C2=B0C up to 70=C2=B0C	Up	yellow-green	No	Yes	T">1500	Unshielded
7499010122	THT	10/100 Base-T	1x1 vertical	Standard	0=C2=B0C up to 70=C2=B0C	Down	yellow-green	No	Yes	T">1500	Shielded
74990101210	THT	10/100 Base-T	1x1 vertical	Standard	-40=C2=B0C up to 85=C2=B0C	Down	yellow-green	No	Yes	T">1500	Shielded
7497010211	THT	10/100 Base-T	1x1 + 2USB	Standard USB2.0	0=C2=B0C up to 70=C2=B0C	Up	green-yellow	No	No	T">1500	Shielded
7497011120	THT	10/100 Base-T	1x1 + 2USB	Standard USB2.0	-40=C2=B0C up to 85=C2=B0C	Down	green-yellow	Yes	Yes	T">1500	Shielded
7499021121	THT	10/100 Base-T	1x2	Standard	0=C2=B0C up to 70=C2=B0C	Down	yellow-green	Yes	Yes	T">1500	Shielded
7499031211	THT	10/100 Base-T	1x4	Standard	0=C2=B0C up to 70=C2=B0C	Down	green-yellow	Yes	Yes	T">1500	Shielded
7499061000	THT	10/100 Base-T	2x2	Standard	-40=C2=B0C up to 85=C2=B0C	Up & Down	none	Yes	Yes	T">1500	Shielded

## Electrical properties

### 10/100 Base-T THT=20 PoE

Order Code	Design	xBase-T	Ports	Application	Operating Temperature	Tab Position	LED (Left-Right)	EMI Fingers	AutoMDIX	U <sub>T</sub> (V (AC))	Shielding	Download
7499211002A	THT	10/100 Base-T	1x1	PoE	0=C2=B0C up to 70=C2=B0C	Down	none	Yes	Yes	T">1500	Shielded	
7499210001A	THT	10/100 Base-T	1x1	PoE	-40=C2=B0C up to 85=C2=B0C	Up	none	No	Yes	T">1500	Shielded	
7499211122A	THT	10/100 Base-T	1x1	PoE	0=C2=B0C up to 70=C2=B0C	Down	yellow-green	Yes	Yes	T">1500	Shielded	
7499211121A	THT	10/100 Base-T	1x1	PoE	-40=C2=B0C up to 85=C2=B0C	Down	yellow-green	Yes	Yes	T">1500	Shielded	
7499210121A	THT	10/100 Base-T	1x1	PoE	-40=C2=B0C up to 85=C2=B0C	Down	yellow-green	No	Yes	T">1500	Shielded	

using 350 mA<sub>DC</sub>: IEEE 802.3af compliant

## Electrical properties

**10/100 Base-T THT=20 PoE+**

Order Code	Design	xBase-T	Ports	Application	Operating Temperature	Tab Position	LED (Left-Right)	EMI Fingers	AutoMDIX	U <sub>T</sub> (V (AC))	Shielding	Download
7499411000	THT	10/100 Base-T	1x1	PoE+	0=C2=B0C up to 70=C2=B0C	Up	none	Yes	Yes	T">1500	Shielded	
7499411121	THT	10/100 Base-T	1x1	PoE+	0=C2=B0C up to 70=C2=B0C	Up	yellow-green	Yes	Yes	T">1500	Shielded	

using 600 mA<sub>DC</sub>: IEEE 802.3af compliant

**Electrical properties****10/100/1000 Base-T=20 THT**

Order Code	Design	xBase-T	Ports	Application	Operating Temperature	Tab Position	LED (Left-Right)	EMI Fingers	AutoMDIX	U <sub>T</sub> (V (AC))	Shielding	Download
7499111213	THT	10/100/1000 Base-T	1x1	Standard	0=C2=B0C up to 70=C2=B0C	Down	green-yellow	Yes	Yes	T">1500	Shielded	
7499111121A	THT	10/100/1000 Base-T	1x1	Standard	0=C2=B0C up to 70=C2=B0C	Down	yellow-green	Yes	Yes	T">1500	Shielded	
7499111441A	THT	10/100/1000 Base-T	1x1	Standard	0=C2=B0C up to 70=C2=B0C	Down	green/yellow-green/yellow	Yes	Yes	T">1500	Shielded	
7499110210	THT	10/100/1000 Base-T	1x1	Standard	0=C2=B0C up to 70=C2=B0C	Down	green-yellow	No	Yes	T">1500	Shielded	
7499111440A	THT	10/100/1000 Base-T	1x1	Standard	-40=C2=B0C up to 85=C2=B0C	Down	green/yellow-green/yellow	Yes	Yes	T">1500	Shielded	
7499111421A	THT	10/100/1000 Base-T	1x1	Standard	0=C2=B0C up to 70=C2=B0C	Up	green/yellow-green	Yes	Yes	T">1500	Shielded	
7499111007	THT	10/100/1000 Base-T	1x1	Standard	0=C2=B0C up to 70=C2=B0C	Up	none	Yes	Yes	T">1500	Shielded	
7499111613	THT	10/100/1000 Base-T	1x1	Standard	0=C2=B0C up to 70=C2=B0C	Up	green/orange-yellow	Yes	Yes	T">1500	Shielded	
7499161005A	THT	10/100/1000 Base-T	2x2	Standard	0=C2=B0C up to 70=C2=B0C	stacked	none	Yes	Yes	T">1500	Shielded	
7499191660	THT	10/100/1000 Base-T	2x8	Standard	0=C2=B0C up to 70=C2=B0C	stacked	green/orange-green/orange	Yes	Yes	T">1500	Shielded	
7497111611A	THT	10/100/1000 Base-T	1x1 + 2xUSB	Standard USB2.0	0=C2=B0C up to 70=C2=B0C	Up	green/orange-yellow	Yes	Yes	T">1500	Shielded	
7497111120	THT	10/100/1000 Base-T	1x1 + 2xUSB	Standard USB2.0	-40=C2=B0C up to 85=C2=B0C	Up	green-yellow	Yes	Yes	T">1500	Shielded	

**Electrical properties**

**10/100/1000 Base-T THT=20 PoE**

Order Code	Design	xBase-T	Ports	Application	Operating Temperature	Tab Position	LED (Left-Right)	EMI Fingers	AutoMDIX	U <sub>T</sub> (V (AC))	Shielding	Download
7499311000	THT	10/100/1000 Base-T	1x1	PoE	0=C2=B0C up to 70=C2=B0C	Up	none	Yes	Yes	T">1500	Shielded	
7499311610	THT	10/100/1000 Base-T	1x1	PoE	0=C2=B0C up to 70=C2=B0C	Up	green/orange-yellow	Yes	Yes	T">1500	Shielded	

using 350 mA<sub>DC</sub>: IEEE 802.3af compliant

**Electrical properties****10/100/1000 Base-T THT=20 PoE+**

Order Code	Design	xBase-T	Ports	Application	Operating Temperature	Tab Position	LED (Left-Right)	EMI Fingers	AutoMDIX	U <sub>T</sub> (V (AC))	Shielding	Download
7499511000	THT	10/100/1000 Base-T	1x1	PoE+	0=C2=B0C up to 70=C2=B0C	Up	none	Yes	Yes	T">1500	Shielded	
7499511610	THT	10/100/1000 Base-T	1x1	PoE+	0=C2=B0C up to 70=C2=B0C	Up	green/orange-yellow	Yes	Yes	T">1500	Shielded	

using 600 mA<sub>DC</sub>: IEEE 802.3af compliant

**Electrical properties****10/100 Base-T=20 SMD**

Order Code	Design	xBase-T	Ports	Application	Operating Temperature	Tab Position	LED (Left-Right)	EMI Fingers	AutoMDIX	U <sub>T</sub> (V (AC))	Shielding	Download
7498011002	SMD	10/100 Base-T	1x1	Standard	0=C2=B0C up to 70=C2=B0C	Up	none	Yes	Yes	T">1500	Shielded	
7498011121	SMD	10/100 Base-T	1x1	Standard	0=C2=B0C up to 70=C2=B0C	Up	yellow-green	Yes	Yes	T">1500	Shielded	
7498011241	SMD	10/100 Base-T	1x1	Standard	-40=C2=B0C up to 85=C2=B0C	Up	green-yellow/green	Yes	Yes	T">1500	Shielded	
7498011221	SMD	10/100 Base-T	1x1	Standard	0=C2=B0C up to 70=C2=B0C	Up	green-green	Yes	Yes	T">1500	Shielded	
7498011122	SMD	10/100 Base-T	1x1 Low Profile	Standard	-40=C2=B0C up to 85=C2=B0C	Up	yellow-green	Yes	Yes	T">1500	Shielded	
7498010210A	SMD	10/100 Base-T	1x1	Standard	-40=C2=B0C up to 85=C2=B0C	Up	green-yellow	Yes	Yes	T">1500	Shielded	

**Electrical properties****10/100/1000 Base-T=20 SMD**

Order Code	Design	xBase-T	Ports	Application	Operating Temperature	Tab Position	LED (Left-Right)	EMI Fingers	AutoMDIX	U <sub>T</sub> (V (AC))	Shielding	Download
7498111121	SMD	10/100/1000 Base-T	1x1	Standard	0=C2=B0C up to 70=C2=B0C	Up	yellow-green	Yes	Yes	T">1500	Shielded	