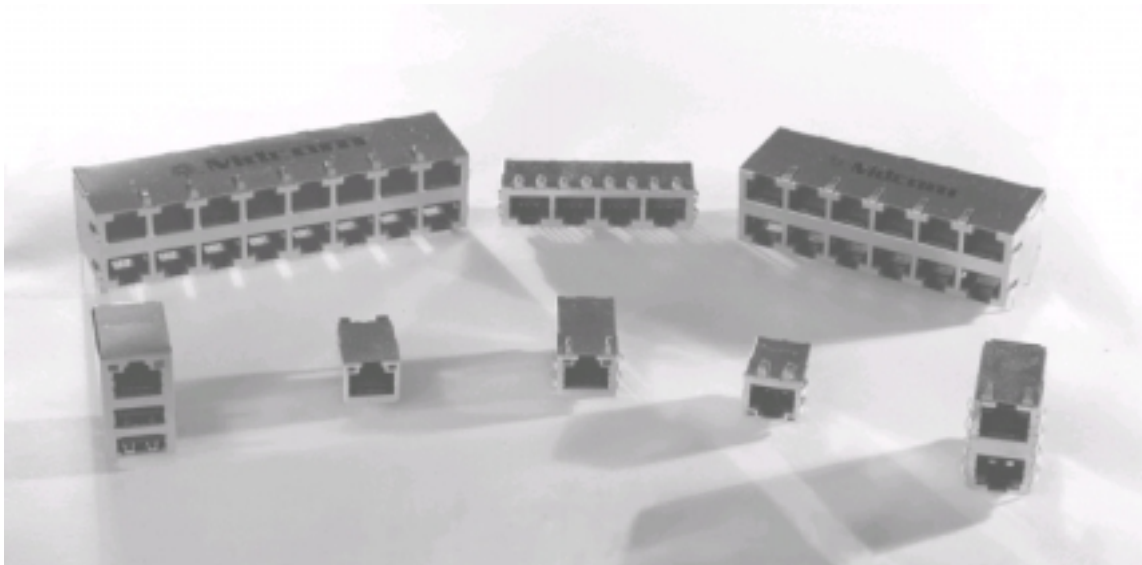


mod² RJ45tm

²dual modular technology



10/100BaseT	
1x1.....	2-7
1x4.....	8-9
10BaseT	
1x1.....	10-11
Dual USB	
8 PINS 10/100BaseT.....	12-13

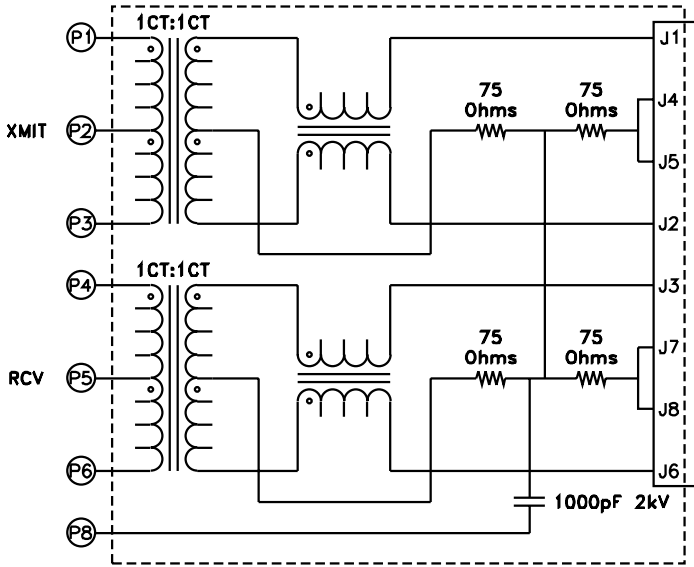
January 2004



10/100 BaseT Integrated RJ45

Features

- 2nd dual modular technology
- AutoMDIX compatible
- Meets IEEE 802.3
- Unmatched reliability
- Hand soldering and loose coils eliminated
- Industry standard connector footprint
- Optimum performance
- Cost effective



mod₂ technology 0101

Part Number	Mechanical Drawing Page #	TH/SMD	LED	Tab Up/Tab Down	L 0.1 Vrms 100KHz 8mA DC uH min	Isolation Vrms min (1 Min)	Turns Ratio	Insertion Loss (dB MAX) 1MHz to 100MHz	Return Loss				Crosstalk (dB min) 1MHz-100MHz	CMRR (dB min) 1 MHz-100MHz
									1MHz-30MHz	30MHz-45MHz	45MHz-60MHz	60MHz-80MHz		
JFM24110-0101	4	TH	None	Tab-Up	350	1500	1:1	1.0	18dB min	16dB	14dB	12dB	35	35
JFM24111-0101	4	TH	Yellow-Green	Tab-Up	350	1500	1:1	1.0	18dB min	16dB	14dB	12dB	35	35
JFM24010-0101	6	TH	None	Tab-Down	350	1500	1:1	1.0	18dB min	16dB	14dB	12dB	35	35
JFM24011-0101	6	TH	Yellow-Green	Tab-Down	350	1500	1:1	1.0	18dB min	16dB	14dB	12dB	35	35
JFM24320-0101	5	SMD	None	Tab-Up	350	1500	1:1	1.0	18dB min	16dB	14dB	12dB	35	35
JFM24321-0101	5	SMD	Yellow-Green	Tab-Up	350	1500	1:1	1.0	18dB min	16dB	14dB	12dB	35	35
JFM24020-0101	7	SMD	None	Tab-Down	350	1500	1:1	1.0	18dB min	16dB	14dB	12dB	35	35
JFM24410-0101	6	TH	None	Tab-Down	350	1500	1:1	1.0	18dB min	16dB	14dB	12dB	35	35
JFM24411-0101	6	TH	Yellow-Green	Tab-Down	350	1500	1:1	1.0	18dB min	16dB	14dB	12dB	35	35

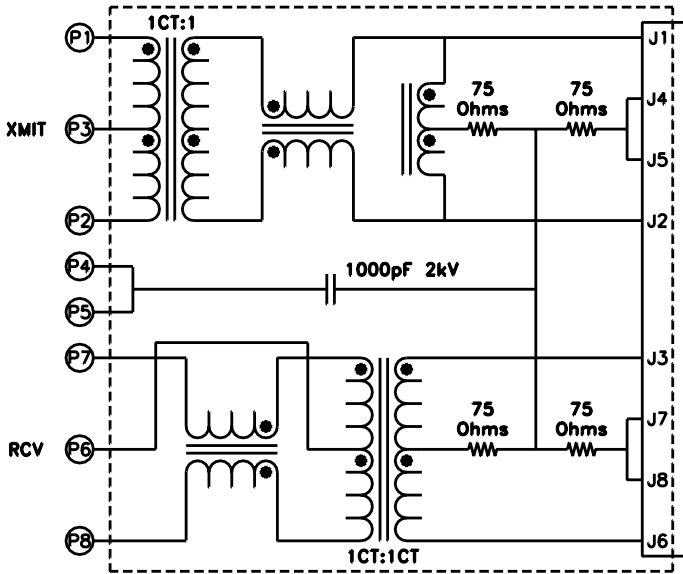
mod₂ technology 0101 Cross Reference

IC Cross Reference		TH/SMD	Tab Up/Tab Down	LED	FM#
Broadcom	BCM5221 AC101	TH	Tab-Up	None	JFM24110-0101
	ICS			ICS1893	Yellow-Green
Intel/Level One	LXT970A LXT972		Tab Down	None	JFM24010-0101
	LXT9761 LXT9762			LXT971 LXT973	LXT9781 LXT9782
SMC	LAN83C180 LAN83C183 LAN83C190	SMD	Tab-Up	None	JFM24320-0101
	Realtek			RTL8139 RTL8129C	Yellow-Green
			Tab Down	None	JFM24020-0101

For More Information Contact: Midcom, Inc

121 Airport Drive
PO Box 1330
Watertown, SD 57201-6330 USA
www.midcom-inc.com
e-mail: sales@midcom-inc.com
Toll Free (US & Canada)
800.643.2661
Phone: 605.886.4385
Fax: 605.886.4486
Midcom, Inc.
10/F Spectrum Tower
53 Hung To Road
Kwun Tong, Kowloon, HK
Phone: 852.2320.4221
Fax: 1.605.882.8642

Rev.011204



Features

- ²dual modular technology
- Meets IEEE 802.3
- Unmatched reliability
- Hand soldering and loose coils eliminated
- Industry standard connector footprint
- Optimum performance
- Cost effective

mod² technology 0510

Part Number	Mechanical Drawing Page #	TH/SMD	LED	Tab Up/ Tab Down	L 100kHz 0.1 Vrms 8mA DC uH min	Isolation Vrms min (1 Min)	Turns Ratio	Insertion Loss (dB MAX) 1MHz to 100MHz	Return Loss				Crosstalk (dB min) 1MHz-100-MHz	CMRR (dB min) 1 MHz- 100MHz
									1MHz- 30MHz	30 MHz- 45 MHz	45 MHz- 60 MHz	60 MHz- 80 MHz		
JFM25110-0510	4	TH	None	Tab-Up	350	1500	1:1	1.0	18dB min	16dB min	14dB min	12dB min	35	35
JFM25111-0510	4	TH	Yellow-Green	Tab-Up	350	1500	1:1	1.0	18dB min	16dB min	14dB min	12dB min	35	35
JFM25010-0510	6	TH	None	Tab Down	350	1500	1:1	1.0	18dB min	16dB min	14dB min	12dB min	35	35
JFM25011-0510	6	TH	Yellow-Green	Tab Down	350	1500	1:1	1.0	18dB min	16dB min	14dB min	12dB min	35	35
JFM25020-0510	7	SMD	None	Tab Down	350	1500	1:1	1.0	18dB min	16dB min	14dB min	12dB min	35	35

IC Cross Reference					TH/SMD	Tab Up/Tab Down	LED	FM#
AMD	AM79C873				TH	Tab-Up	None	JFM25110-0510
	AM79C874							
Broadcom	BCM5201							
Cirrus Logic	CS8952							
ICS	ICS1893					Yellow-Green	JFM25111-0510	
Intel	S82555	S82559			Tab Down	None	JFM25010-0510	
	S82558	S82562						
Kendin	KS8723	KS8761	KS8735	KS8998				
	KS8728	KS8990	KS8737					
LSI Logic	L80223	L80225	L80227			Yellow-Green	JFM25011-0510	
National Semi	DP83843							
	DP83815							
TDK	TSD78Q2120							
Texas Inst	TNETE2101				SMD	Tab Down	None	JFM25020-0510
	TNETE2104							

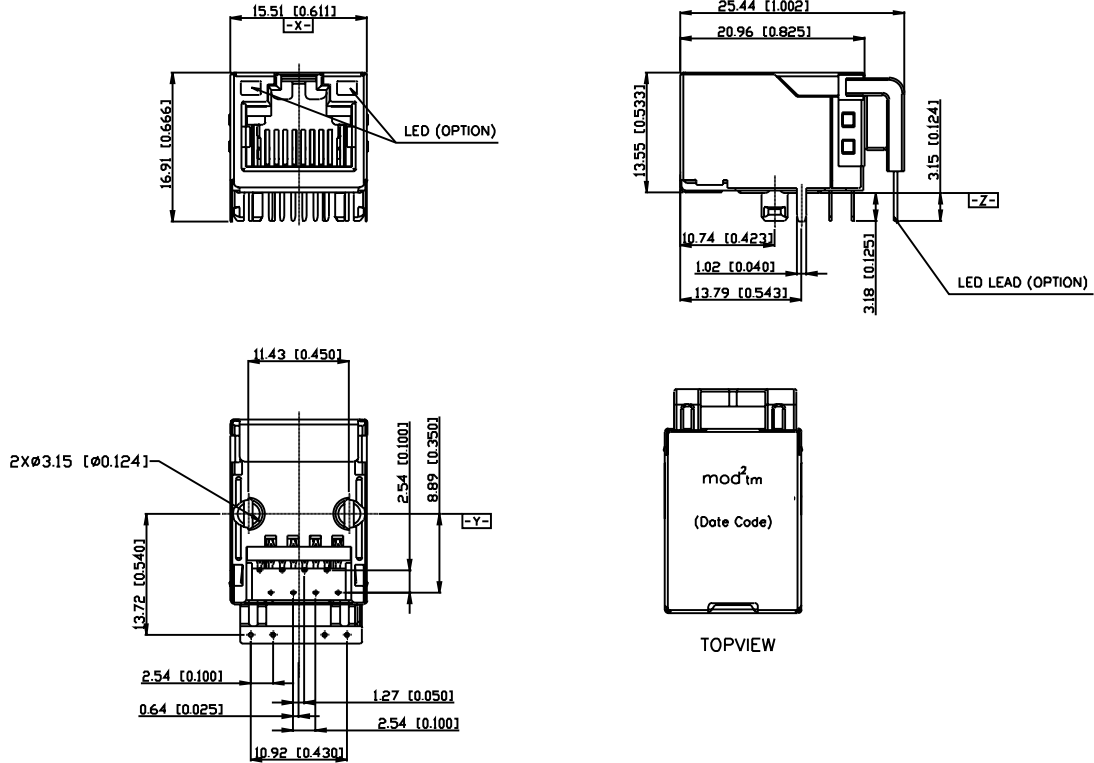
**For More Information Contact:
Midcom, Inc**

121 Airport Drive
PO Box 1330
Watertown, SD 57201-6330 USA
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e-mail: sales@midcom-inc.com
Toll Free (US & Canada)
800.643.2661
Phone: 605.886.4385
Fax: 605.886.4486
Midcom, Inc.
10/F Spectrum Tower
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Rev. 011204

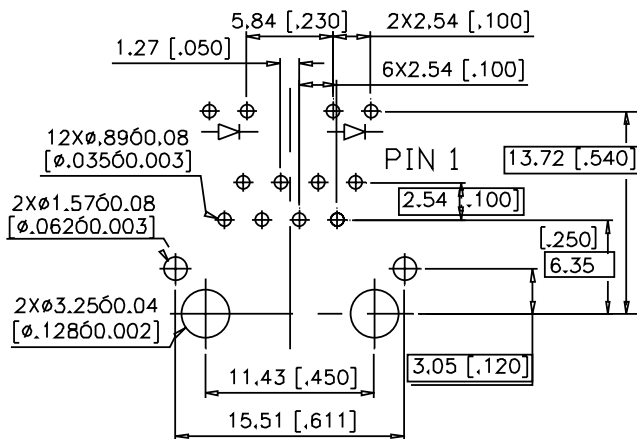
Mechanical Drawings

Thru Hole/Tab Up

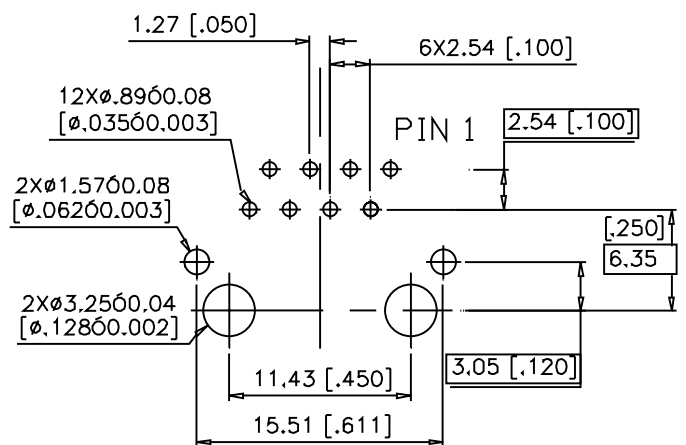


Recommended PCB Layout

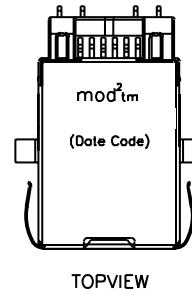
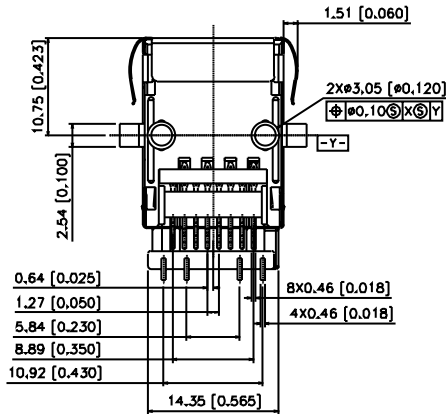
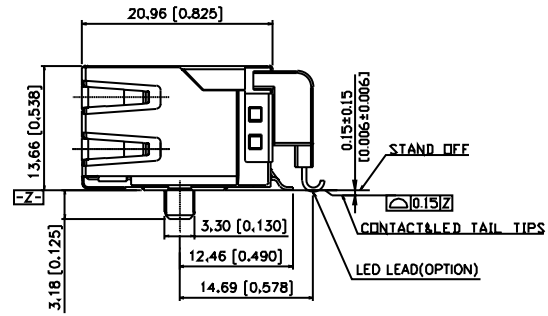
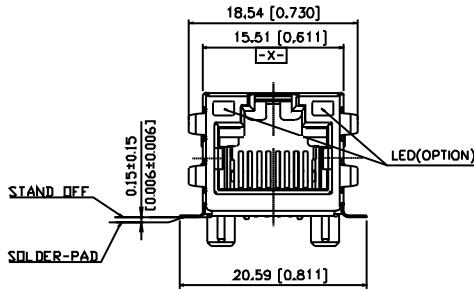
With LED's From Component Side



Without LED's From Component Side

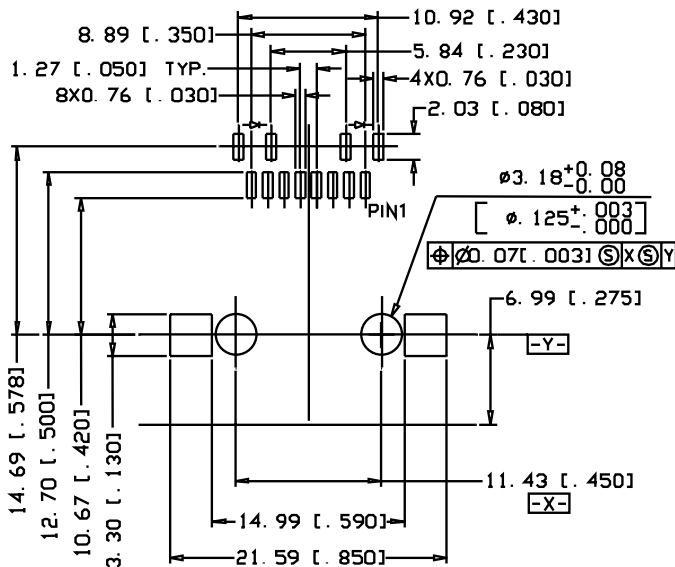


See Page 7 for Suggested Panel Cutout and Jack Location

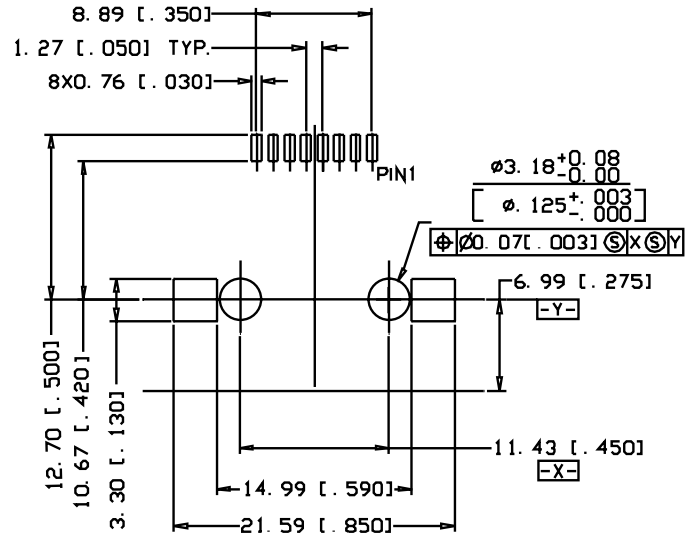


Recommended PCB Layout

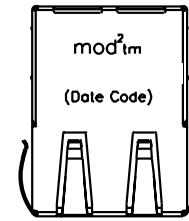
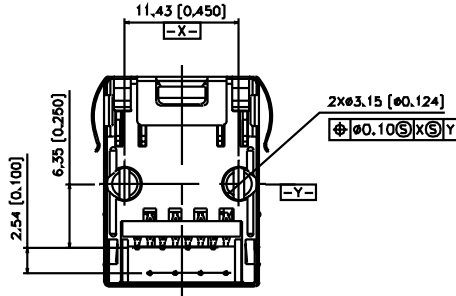
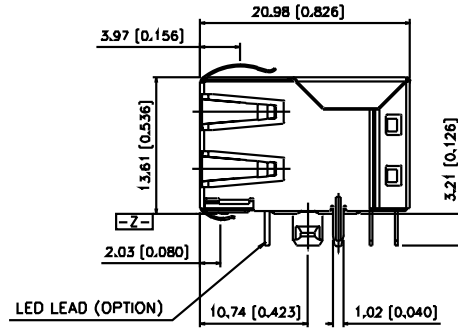
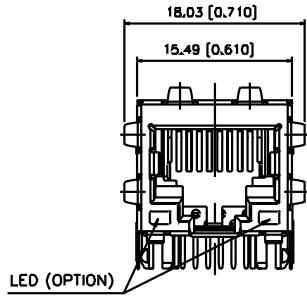
With LED's From Component Side



Without LED's From Component Side



See Page 7 for Suggested Panel Cutout and Jack Location

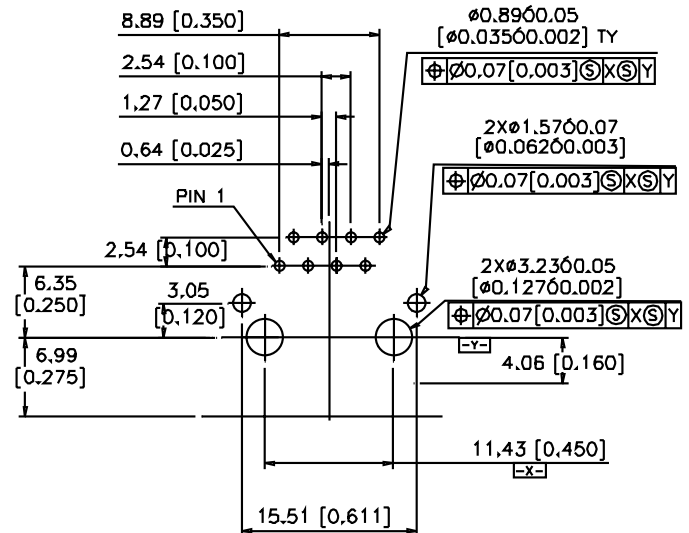
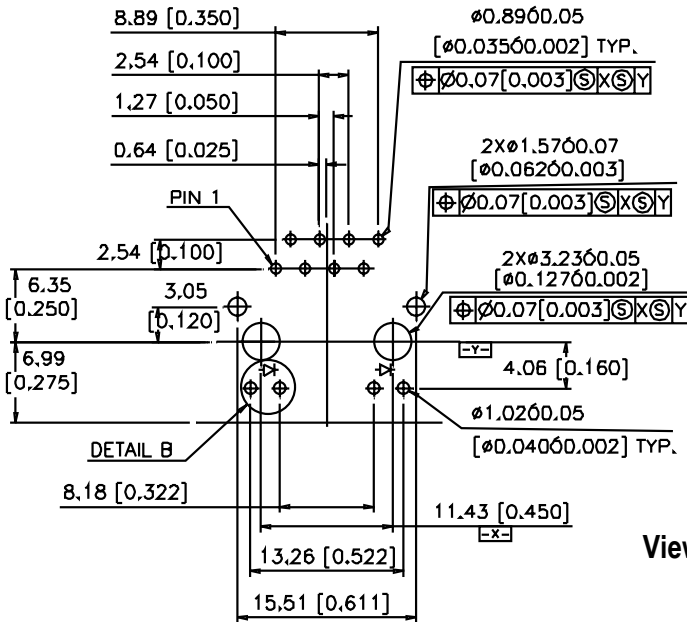


TOPVIEW

Recommended PCB Layout

With LED's From Component Side

Without LED's From Component Side

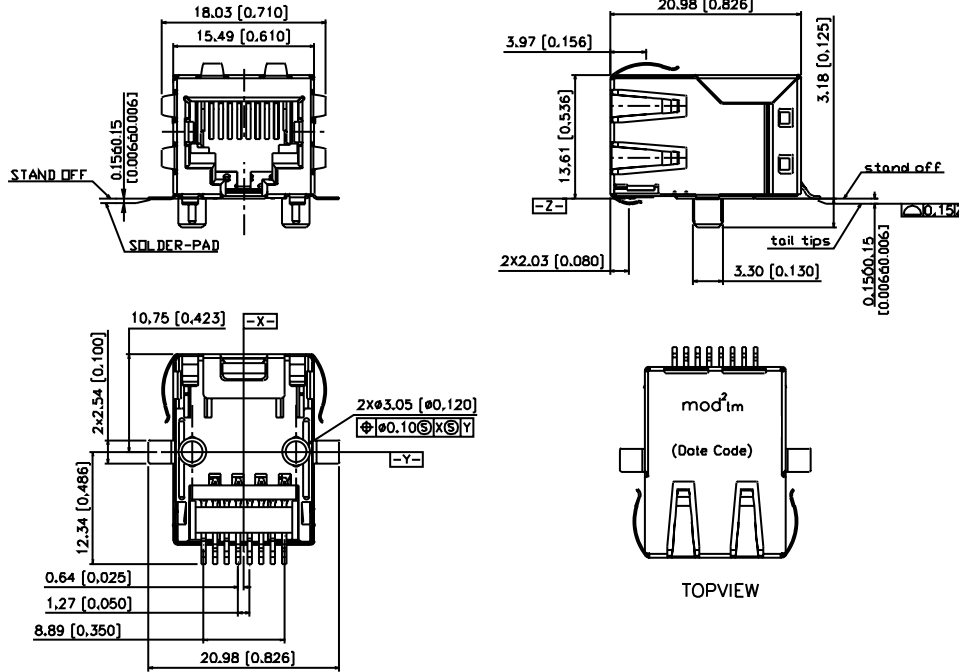


View of LED Polarity



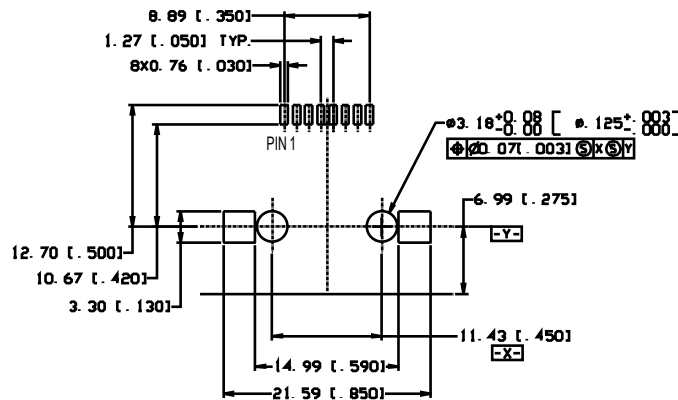
Detail B

See Page 7 for Suggested Panel Cutout and Jack Location

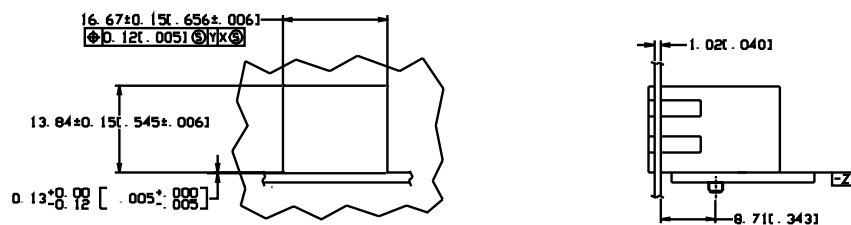


Recommended PCB Layout

From Component Side

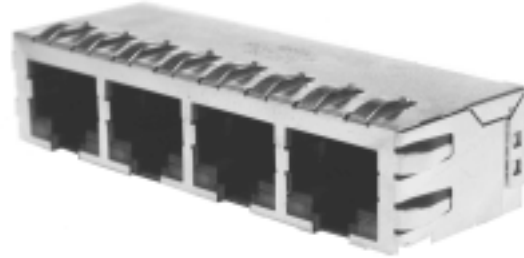


Suggested Panel Cutout and Jack Location



Features

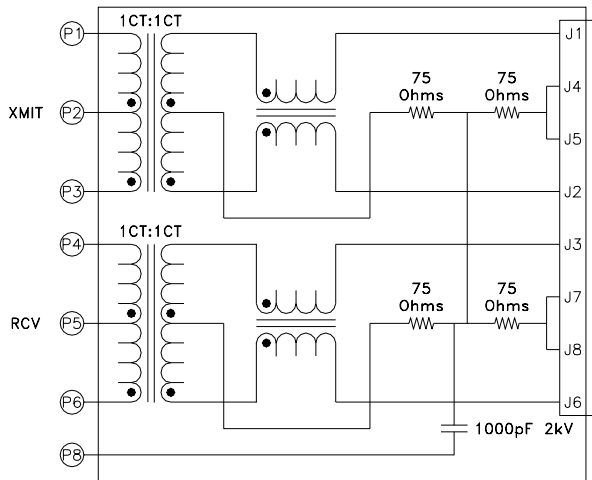
- mod² design saves board space and reduces component placements
- Meets IEEE 802.3 requirements
- 50u" of gold on contact array for added durability per FCC requirements
- Applications include: Hubs, xDSL modems and LAN on motherboard
- Auto-MDIX compatible
- Hand soldering eliminated



Part Number	TH/SMD	LED*	Tab Up/Tab Down	L 0.1 Vrms 100KHz 8mA DC uH min	Isolation Vrms min (1 Min)	Turns Ratio	Insertion Loss (dB MAX) 1MHz to 100MHz	Return Loss (db min)				Crosstalk (dB min) 1MHz-100MHz	CMRR (dB min) 1 MHz- 100MHz
								1MHz- 30MHz	30MHz- 45MHz	45MHz- 60MHz	60MHz- 80MHz		
JFM 2441*-0101W	TH	Y/G	TD	350	1500	1:1	-1.0dB	-18	-16	-14	-12	-35	-35

* = 0 (non-LED)

* = 1 (LED)



For More Information Contact:

Midcom, Inc

121 Airport Drive
 PO Box 1330
 Watertown, SD 57201-6330 USA
 www.midcom-inc.com
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 Fax: 605.886.4486

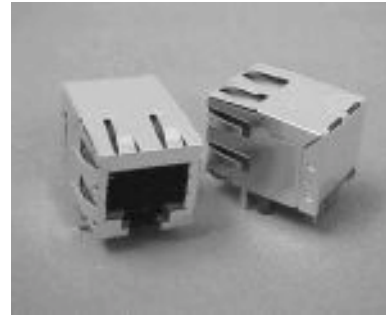
Midcom - Hong Kong, Ltd.

10/F Spectrum Tower
 53 Hung To Road
 Kwun Tong, Kowloon, HK
 Phone: 852.2320.4221
 Fax: 1.605.882.8642

Electrical Specification

Features

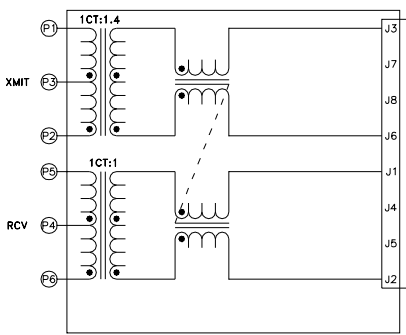
- Modular Design using ²dual modular technology
- Meets IEEE 802.3 and ANSI x3.263 requirements
- 50u” of gold on contact array for added durability per FCC requirements
- Hand soldering eliminated
- Industry standard footprint



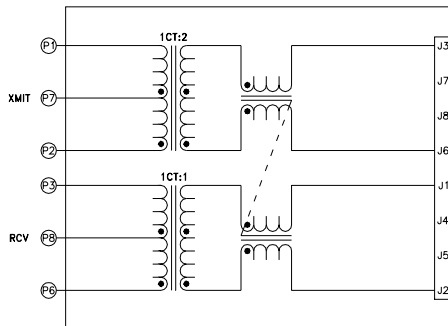
Part Number	Termination	LED*		Release-Tab Orientation		Turns-Ratio	Inductance, L		Leakage Inductance, L _L	Inter-winding Capacitance, C _{ww}	Winding Resistance, DCR	Isolation Voltage
		Left	Right				(uH min)	(uH max)	(pF max)	(Ohm max)	(Vrms min)	
							100 KHz, 0.020 Vrms	100 KHz, 0.020 Vrms	100 KHz, 0.020 Vrms	@ 25 °C	@ 60Hz, 1 min	
JFM1301*-1003	TH	Yellow	Green	Tab Down	Tx	1:1.414	200	0.55	20	0.9	1500	
						Rx	1:1	200	0.40	20	0.9	1500
JFM1301*-1103	TH	Yellow	Green	Tab Down	Tx	1:2	20	0.20	8	0.6	1500	
						Rx	1:1	200	0.40	11	0.6	1500
JFM1301*-1203	TH	Yellow	Green	Tab Down	Tx	1:2.5	200	0.50	20	0.9	1500	
						Rx	1:1	200	0.50	20	0.9	1500

* = 0 (non-LED)

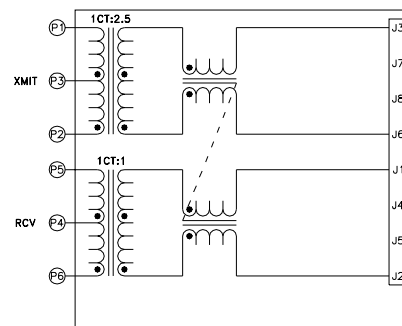
* = 1 (LED)



JFM1301*-1003

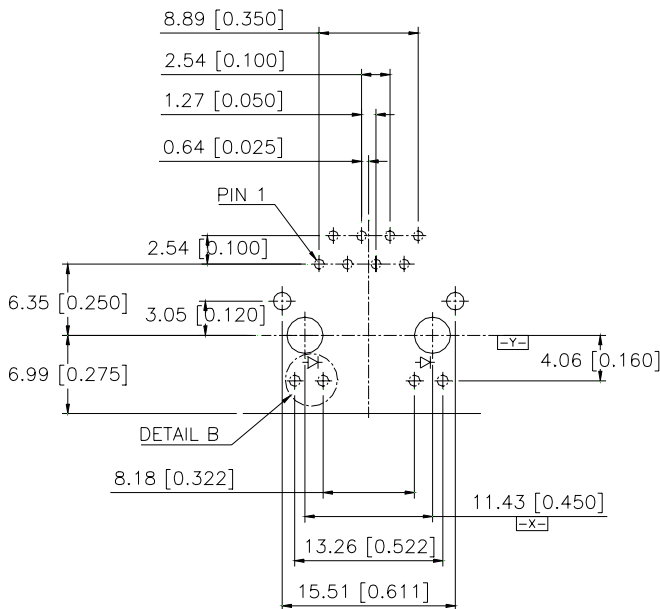
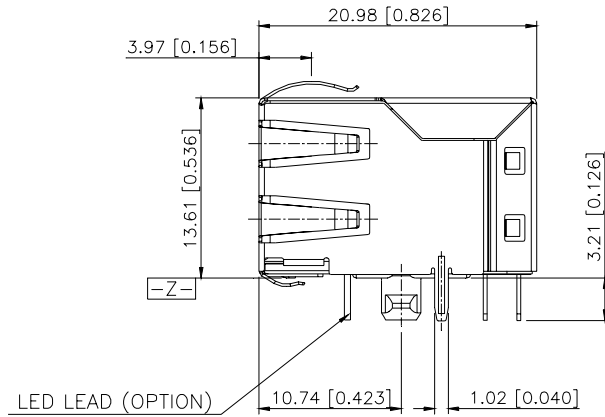
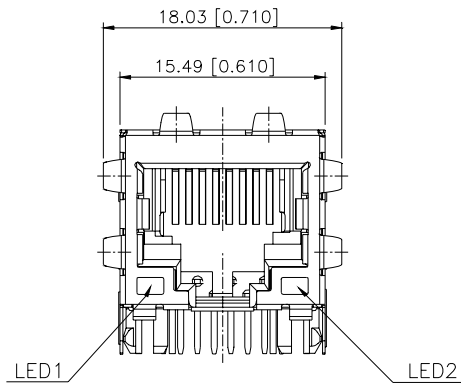


JFM1301*-1103



JFM1301*-1203

Electrical Specification



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 Midcom, Inc**

121 Airport Drive
 PO Box 1330
 Watertown, SD 57201-6330 USA
 www.midcom-inc.com
 e-mail: sales@midcom-inc.com
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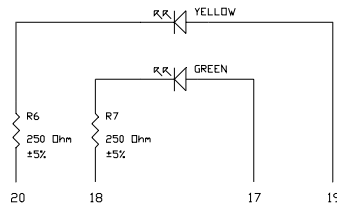
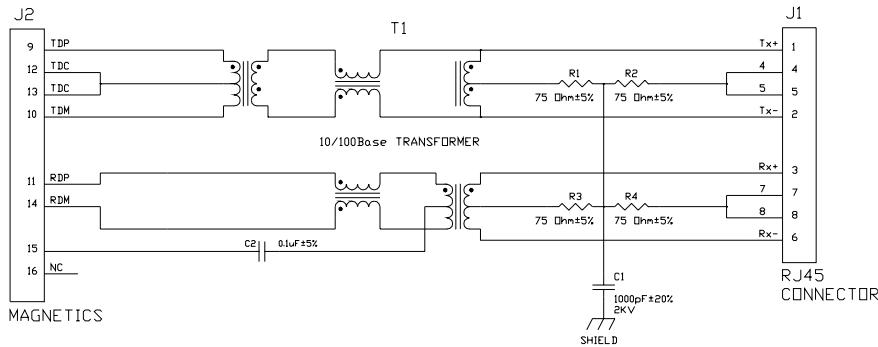
Mechanical Specification

Features

- Optimal for LAN on motherboard applications
- Meets IEEE 802.3 and ANSI x3.263 requirements
- 50u” of gold on contact array for added durability per FCC requirements
- Meets USB 2.0 standard



Part Number	TH/SMD	LED	Tab Up/ Tab Down	L 0.1 Vrms 100KHz 8mA DC uH min	Isolation Vrms min (1 Min)	Turns Ratio	Insertion Loss (dB MAX) 1MHz to 65MHz	Return Loss (dB min)			Crosstalk (dB min) 1MHz-65MHz	CMRR (dB min) 30MHz-100MHz
								1MHz- 30MHz	30MHz- 60MHz	60MHz- 80MHz		
UB11123-L48	TH	G/Y	Tab Up	350	1500	1:1	-1.0	-20	-14	-12	-35	-30



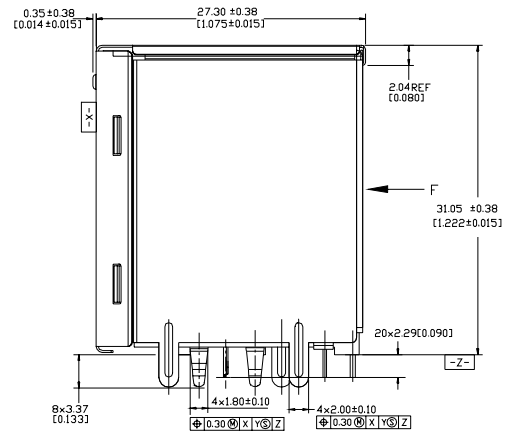
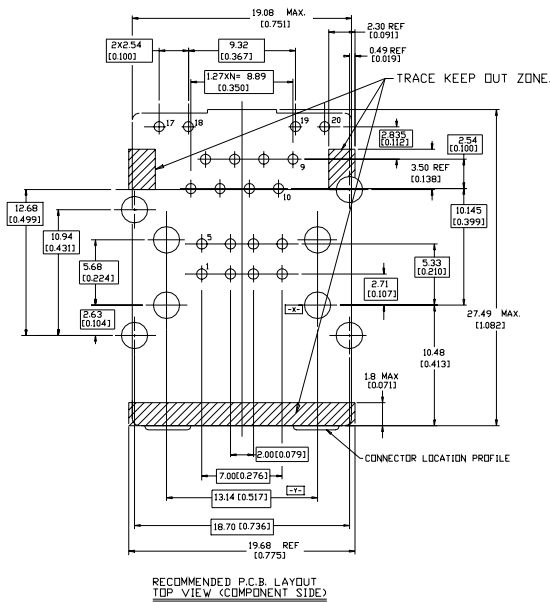
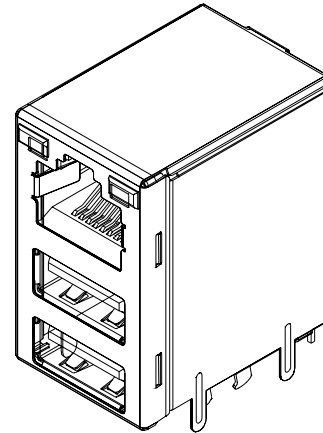
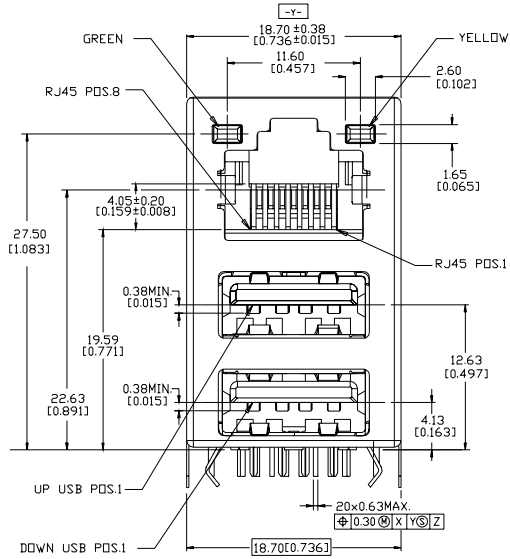
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Electrical Specification



Mechanical Specification