TC3092H & TC3092HN

ETHERNET COAXIAL FILTER MODULE

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Ethernet Coaxial Filter Module

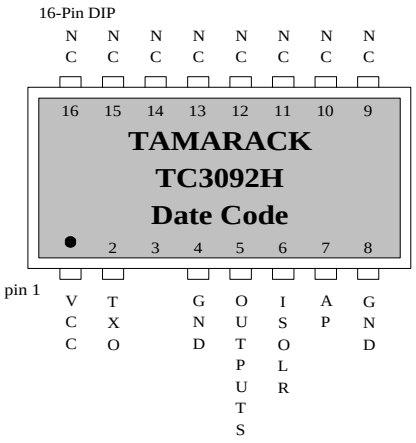
1. Features

Ethernet isolator and driver between coaxial cable and CTI (Coaxial Transceiver Interface)

- To go with Tamarack TC3096 or TC3196 (see application diagram)
- Single + 5V power supply
- Connecting directly to Coaxial cable
- 16 pin DIP module
- Circuit protection when cable shorted
- Comply with IEEE 802.3 standard 500V AC between cable and rest of pins

2. TC3092H Connection Diagram

TC3092H Connection Diagram



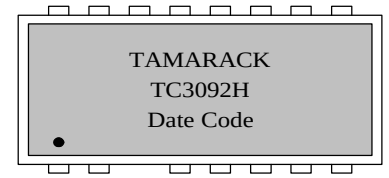
* NC: Internal use
Do not connect to anything

3. Pin Description

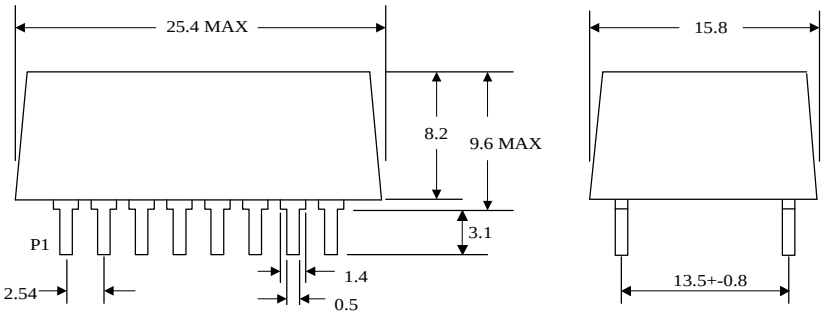
Pin No. DIP	Pin Name	I/O	Description
1	VCC		Positive 5V supply. A 0.1 uF decoupling capacitor is recommended to connect across GND and VCC as close as possible.
6	ISOLR	I	Receiving data input and Transmitting output. Must have minimum capacitive loading, shortest trace (Inner conductor).
5	OUTPUTS	O	Coaxial cable shield (outer conductor).
	OUTPUTC	O	Internal use test pin.
7	AP	O	Sending data signal to receiving compactor.
2	TXO	I	Receiving data signal for transmitting.
4,8	GND		Ground.

4. TC3092H Physical Dimension (DIP)

TC3092H PHYSICAL DIMENSION (DIP)



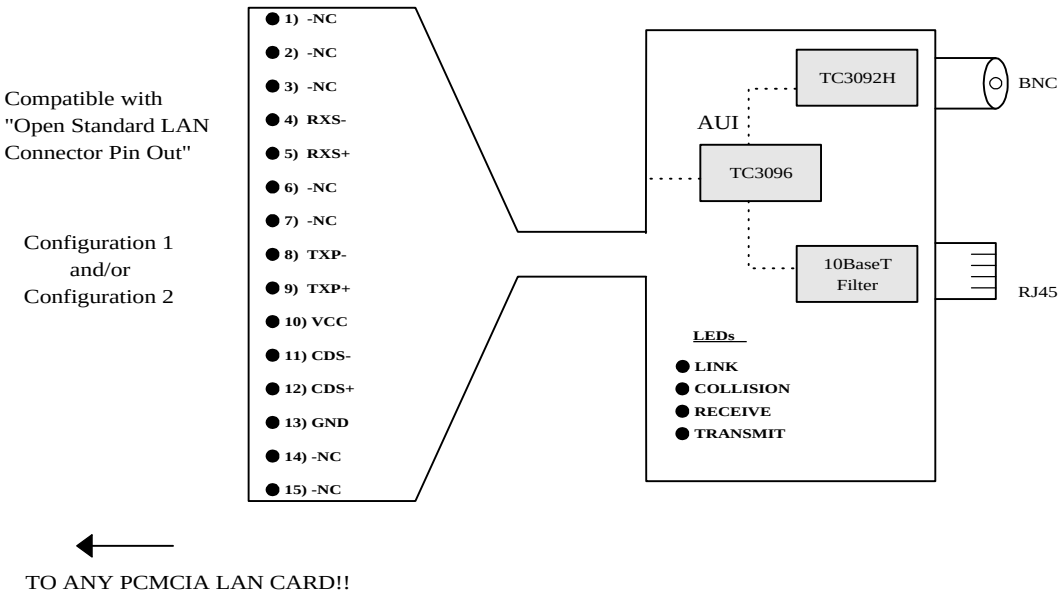
Pin No.	Description
1	VCC
2	TXO
3	NC (Internal use)
4	NC (Internal use)
5	OUTPUTS
6	ISOLR
7	AP
8	GND
9	NC (Internal use)
10	NC (Internal use)
11	NC (Internal use)
12	NC (Internal use)
13	NC (Internal use)
14	NC (Internal use)
15	NC (Internal use)
16	NC (Internal use)



5. Combo Mam For Pcmcia Lan Adapter

Combo MAM for PCMCIA LAN Adapter

(Option 1)



6. AC DC Characteristics

ABSOLUTE MAXIMUM RATINGS

SUPPLY VOLTAGE	: 7V
SUPPLY CURRENT	: 65mA
INPUT VOLTAGE	: 5.25V
POWER DISSIPATION	: 455mW
OUTPUT SHORT (OUTPUTS-ISOLR)	: CONTINUOS

ELECTRICAL CHARACTERISTICS

OPERATING CONDITION : VCC=5V+/-5%, TA=25℃

Symbol	Parameter	Min	Typ	Max	Unit
VCC	Supply Voltage	4.75	5	5.25	V
ITDC	Transmit Output DC Current Level	37	41	45	mA
ITAC	Transmit Output AC Current Level		+/-28		mA
VCD	Collision Threshold	-1.51		-1.60	V
VIH	TXO Input High voltage	2.0			V
VIL	TXO Input Low voltage			0.8	V
ICC	Power supply Current (transmitting)		30	65	mA
ICC2	Power supply Current (idle)		8	10	mA

SWITCHING CHARACTERISTICS

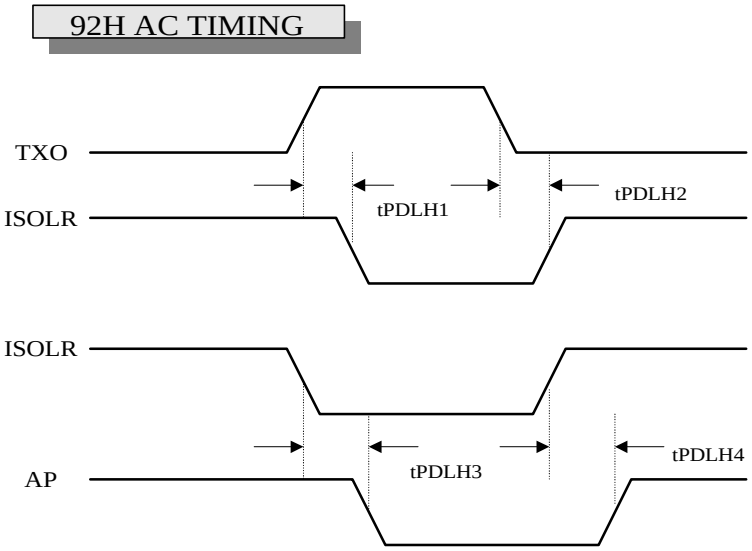
OPERATING CONDITION : VCC=5V+/-5%, TA=25℃

TRANSMIT SPECIFICATION

Symbol	Parameter	Min	Typ	Max	Unit
tPDHL1	Transmit Propagation Delay (TXO-ISOLR H->L)		35	40	nS
tPDLH2	Transmit Propagation Delay (TXO-ISOLR L->H)		35	40	nS

RECEIVE SPECIFICATION

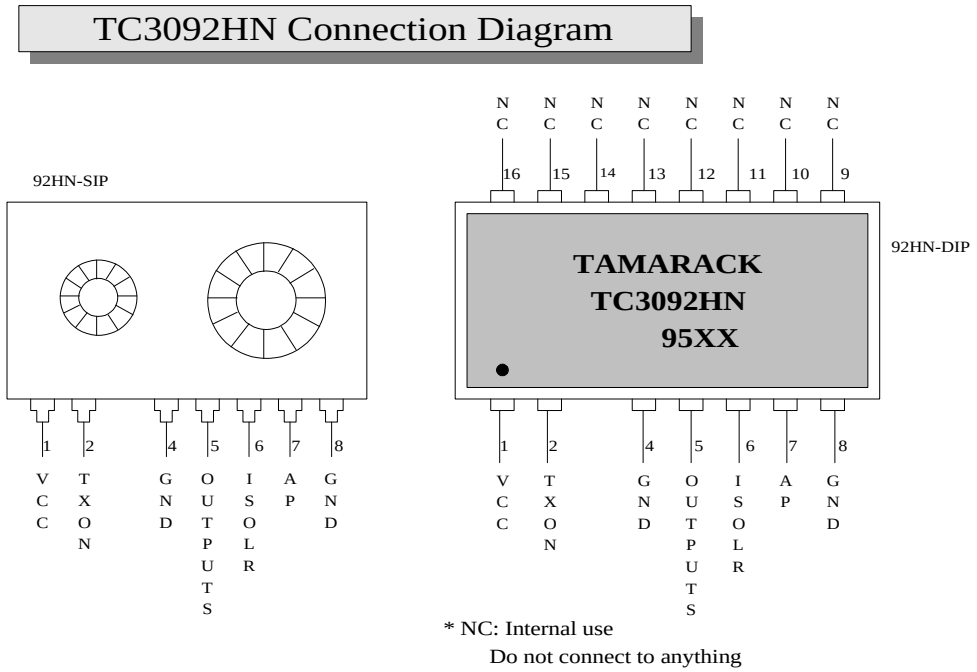
Symbol	Parameter	Min	Typ	Max	Unit
tPDHL3	Transmit Propagation Delay (ISOLR-AP H->L)		10	13	nS
tPDLH4	Transmit Propagation Delay (ISOLR-AP L->H)		15	18	nS



7. Features

- Ethernet isolator and driver between coaxial cable and CTI (Coaxial Transceiver Interface)
- To go with Tamarack TC3096N, TC3196N or TC3296N (see application diagram)
- Single + 5V power supply
- Connecting directly to Coaxial cable
- 16 pin DIP or 8 pin SIP module
- Circuit protection when cable shorted
- Comply with IEEE 802.3 standard 500V AC between cable and rest of pins

8. TC3092HN Connection Diagram



* NC: Internal use
Do not connect to anything

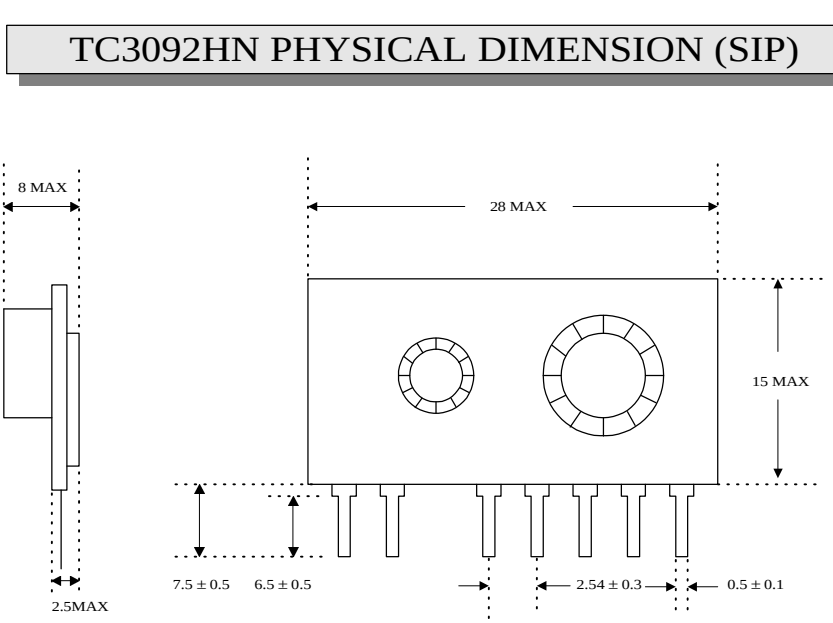
9. Pin Description

PIN NO		PIN NAME	I/O	DESCRIPTION
SIP	DIP			
1	1	VCC		Positive 5V supply. A 0.1 uF decoupling capacitor is recommended to connect across GND and VCC as close as possible.
6	6	ISOLR	I	Receiving data input and Transmitting output. Must have minimum capacitive loading, shortest trace (Inner conductor).
5	5	OUTPUTS	O	Coaxial cable shield (outer conductor).
7	7	AP	O	Sending data signal to receiving compactor.
2	2	TXON	I	Receiving data signal for transmitting.
4,8	4,8	GND		Ground.
	9-16	NC		Internal use.

10. Absolute Maximum Ratings

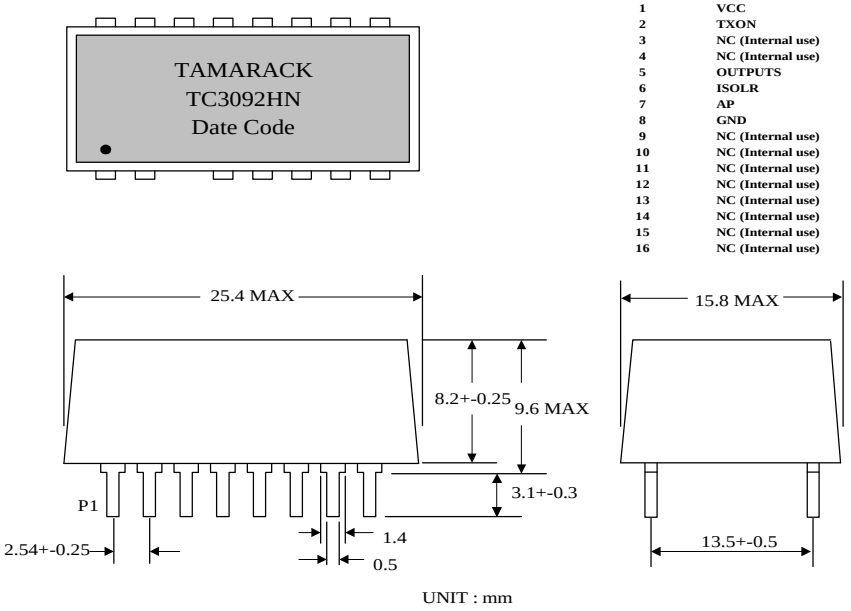
Power Supply Voltage	-0.5V	to	7V
Input Voltage	0V	to	7V
Storage Temperature	-40℃	to	125℃
Operating Temperature	0℃	to	70℃

11. TC3092HN Physical Dimension (SIP)



12. TC3092HN Physical Dimension (DIP)

TC3092HN PHYSICAL DIMENSION (DIP)



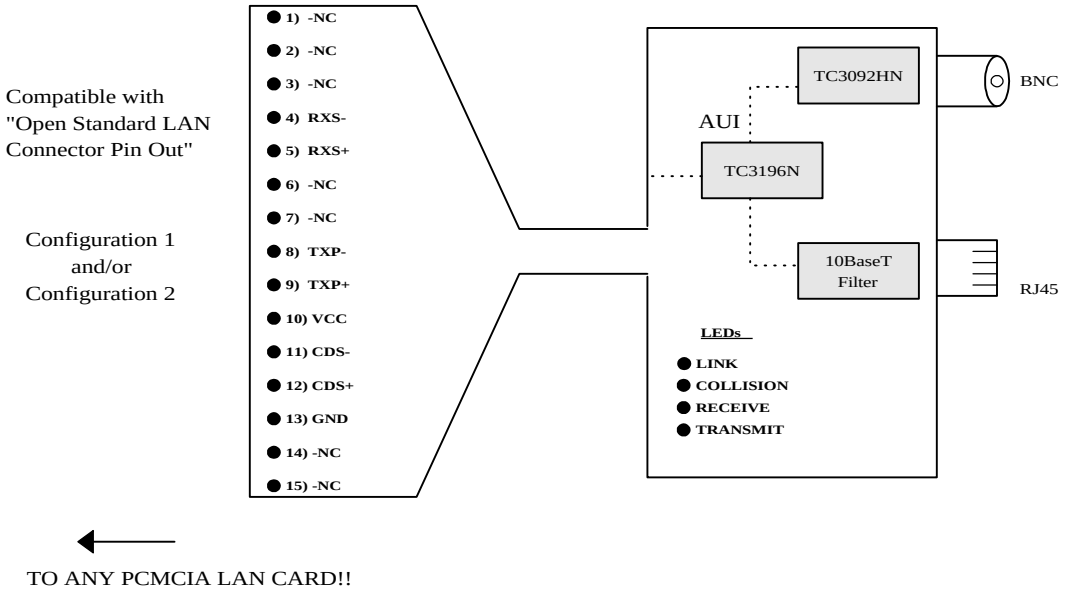
Pin No.	Description
1	VCC
2	TXON
3	NC (Internal use)
4	NC (Internal use)
5	OUTPUTS
6	ISOLR
7	AP
8	GND
9	NC (Internal use)
10	NC (Internal use)
11	NC (Internal use)
12	NC (Internal use)
13	NC (Internal use)
14	NC (Internal use)
15	NC (Internal use)
16	NC (Internal use)

UNIT : mm

13. Combo Mam For PCMCIA Lan Adapter

Combo MAM for PCMCIA LAN Adapter

(Option 1)



14. AC DC Characteristics

OUTPUT SHORT ABSOLUTE MAXIMUM RATINGS

SUPPLY VOLTAGE	: 7V
SUPPLY CURRENT	: 50mA
INPUT VOLTAGE	: 5.25V
POWER DISSIPATION	: 350mW
OUTPUT SHORT (OUTPUTS-ISOLR)	: CONTINUOS

ELECTRICAL CHARACTERISTICS

OPERATING CONDITION : VCC=5V+/-5%, TA=25℃

Symbol	Parameter	Min	Typ	Max	Unit
VCC	Supply Voltage	4.75	5	5.25	V
ITDC	Transmit Output DC Current Level	37	41	45	mA
ITAC	Transmit Output AC Current Level		+/-28		mA
VCD	Collision Threshold	-1.51		-1.60	V
VIH	TXON Input High voltage	2.8	3.5		V
VIL	TXON Input Low voltage		0.4	0.6	V
ICC	Power supply Current (transmitting)		20	45	mA
ICC2	Power supply Current (idle)		0		mA

SWITCHING CHARACTERISTICS

OPERATING CONDITION : VCC=5V+/-5%, TA=25℃

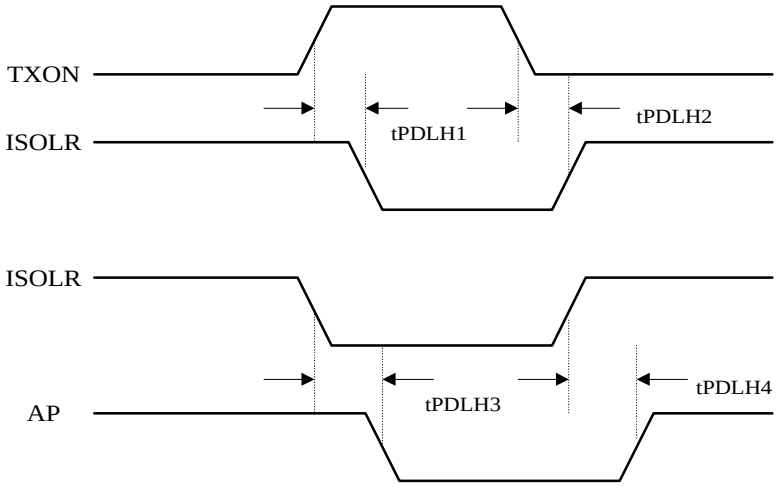
TRANSMIT SPECIFICATION

Symbol	Parameter	Min	Typ	Max	Unit
tPDHL1	Transmit Propagation Delay (TXON-ISOLR H->L)		10	15	nS
tPDLH2	Transmit Propagation Delay (TXON-ISOLR L->H)		15	18	nS

RECEIVE SPECIFICATION

Symbol	Parameter	Min	Typ	Max	Unit
tPDHL3	Transmit Propagation Delay (ISOLR-AP H->L)		15	18	nS
tPDLH4	Transmit Propagation Delay (ISOLR-AP L->H)		5	10	nS

92HN AC TIMING



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