



Quad Port SMD 10/100Base-T Isolation Transformer Modules

Features

- Low profile (5.8mm) and light weight (4.0 g) 10/100Base-T Quad Port isolation transformer modules designed to support four single or double stacked RJ-45 connectors
- SMD packages facilitate pick and place compatibility and speed of placement
- Modules meet requirements of IEEE 802.3u and ANSI X3.263
- Consistent and reliable coplanarity
- Excellent quality at extremely competitive price due to high volume production
- Manufactured in ISO-9001 approved Talema facility



Electrical Specifications

Ratings @ 25°C ambient

Inductance: 350µH minimum @ 100kHz, 100mV, 8mA

Leakage Inductance: 0.4µH @ 1MHz

Minimum Isolation Voltage: 1500 Vrms

Operating Temperature: 0° to +70°C

Storage Temperature: -25°C to +105°C

Standard packing: Tape and reel

Quality and consistency is guaranteed through 100% testing of the specified parameters for primary inductance, leakage inductance, turns ratio, DC resistance and interwinding capacitance. This ensures that the return loss and pulse wave shape requirements can be fully maintained. Additionally, all parts are tested for 1500V minimum isolation.

Applications

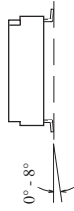
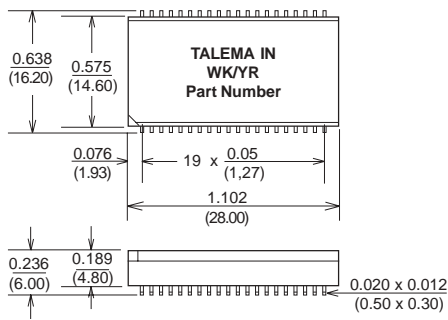
Talema 10/100BaseT Quad transformer modules contain transmit and receive isolation transformers to maintain constant wave shape and suppression of common mode noise while providing equipment isolation per IEEE 802.3. High impedance common mode quad chokes for additional EMI suppression have been added on some models as required for FCC and CISPR 22 Class B certification.

TEQ Series - SMD Quad Port 10/100Base T Isolation Transformer Modules

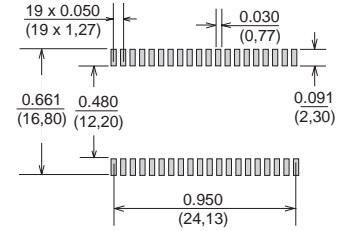
| Part Number | Turns Ratio ±2% | | Insertion Loss (dB Typ) | Return Loss (dB Min) | | | | Crosstalk (dB Typ) | | | | Common to Common Rejection Ratio 0.1-60MHz (dB Typ) | | Differential to Common Mode Rejection (dB Typ) | | Schematic |
|-------------|-----------------|-------|-------------------------|----------------------|----------|--------|--------|--------------------|-------|--------|--------|-----------------------------------------------------|----------|------------------------------------------------|----------|-----------|
| | Tx | Rx | | 0.1 - 100 MHz | 2-30 MHz | 40 MHz | 50 MHz | 60-80 MHz | 1 MHz | 30 MHz | 60 MHz | 100 MHz | Transmit | Receive | 1-60 MHz | |
| TEQ-200A-J | 1ct:1ct | 1 : 1 | -0.5 | -21 | -17 | -14.5 | -12 | -65 | -55 | -45 | -35 | -30 | -30 | -40 | -30 | A |
| TEQ-202A-J | 1.25ct:1ct | 1 : 1 | -0.5 | -18 | -18 | -14 | -12 | -60 | -50 | -40 | -35 | -30 | -30 | -39 | -33 | A |
| TEQ-204A-J | 2ct:1ct | 1 : 1 | -0.5 | -18 | -18 | -14 | -12 | -60 | -50 | -40 | -35 | -30 | -30 | -39 | -33 | A |
| TEQ-200B-J | 1ct:1ct | 1 : 1 | -0.5 | -21 | -17 | -14.5 | -12 | -65 | -55 | -45 | -35 | -30 | -30 | -40 | -30 | B |
| TEQ-202B-J | 1.25ct:1ct | 1 : 1 | -0.5 | -18 | -18 | -14 | -12 | -60 | -50 | -40 | -35 | -30 | -30 | -39 | -33 | B |
| TEQ-204B-J | 2ct:1ct | 1 : 1 | -0.5 | -21 | -17 | -14.5 | -12 | -60 | -50 | -40 | -35 | -30 | -30 | -40 | -30 | B |
| TEQ-200C-J | 1ct:1ct | 1 : 1 | -0.5 | -21 | -17 | -14.5 | -12 | -65 | -55 | -45 | -35 | -30 | -30 | -40 | -40 | C |
| TEQ-204C-J | 2ct:1ct | 1 : 1 | -0.5 | -21 | -17 | -14.5 | -12 | -60 | -50 | -40 | -35 | -30 | -30 | -40 | -40 | C |
| TEQ-205C-J | 1.89ct:1ct | 1 : 1 | -1.1 | -18 | -16 | -14 | -12 | -60 | -50 | -40 | -35 | -30 | -25 | -40 | -40 | C |
| TEQ-200D-J | 1ct:1ct | 1 : 1 | -0.5 | -21 | -17 | -14.5 | -12 | -65 | -55 | -45 | -35 | -30 | -30 | -40 | -30 | D |
| TEQ-204D-J | 2ct:1ct | 1 : 1 | -0.5 | -21 | -17 | -14.5 | -12 | -60 | -50 | -40 | -35 | -30 | -30 | -40 | -40 | D |
| TEQ-204E-J | 2ct:1ct | 1 : 1 | -0.5 | -21 | -17 | -14.5 | -12 | -60 | -50 | -40 | -35 | -30 | -30 | -40 | -30 | E |
| TEQ-204F-J | 2ct:1ct | 1 : 1 | -0.5 | -21 | -17 | -14.5 | -12 | -60 | -50 | -40 | -35 | -30 | -30 | -40 | -30 | F |
| TEQ-200G-J | 1ct:1ct | 1 : 1 | -0.5 | -21 | -17 | -14.5 | -12 | -65 | -50 | -40 | -30 | -30 | -30 | -40 | -30 | G |
| TEQ-200H-J | 1ct:1ct | 1 : 1 | -0.5 | -21 | -17 | -14.5 | -12 | -65 | -55 | -45 | -35 | -30 | -30 | -40 | -30 | H |
| TEQ-200J-J | 1ct:1ct | 1 : 1 | -0.5 | -21 | -17 | -14.5 | -12 | -65 | -50 | -40 | -30 | -30 | -30 | -40 | -30 | J |
| TEQ-203K-J | 1.41ct:1ct | 1 : 1 | -0.5 | -18 | -16 | -14 | -12 | -60 | -50 | -40 | -35 | -35 | -35 | -40 | -30 | K |



Dimensions



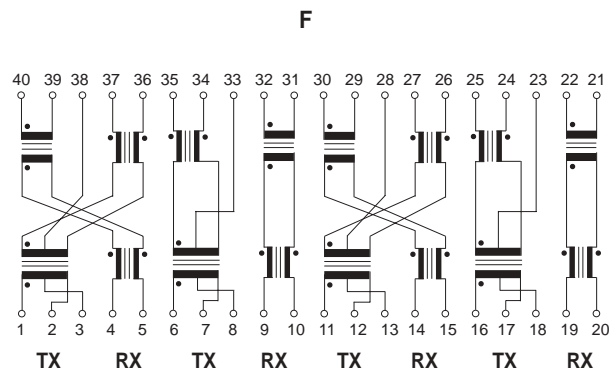
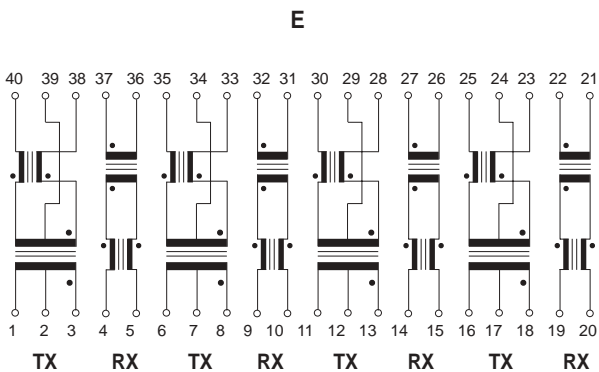
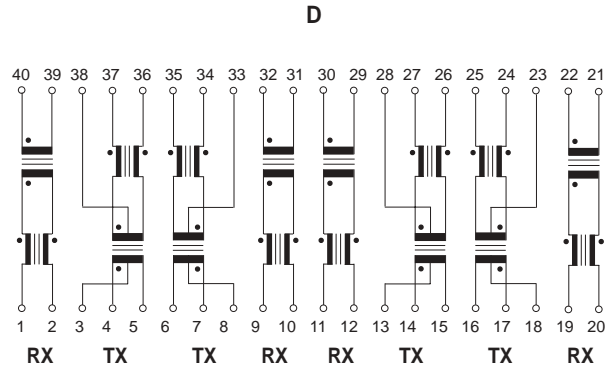
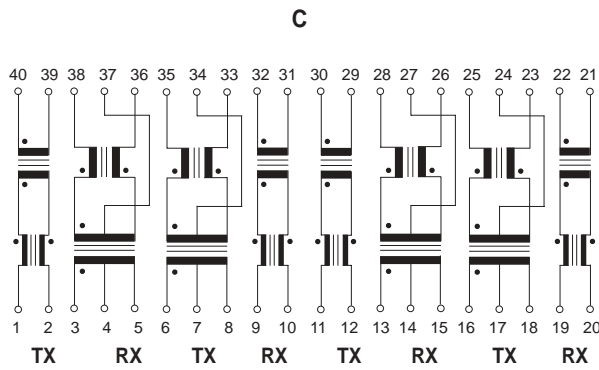
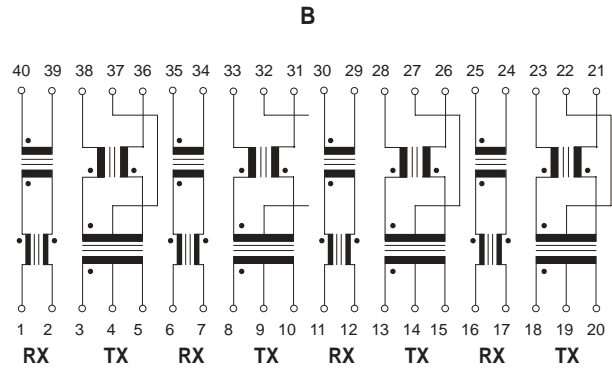
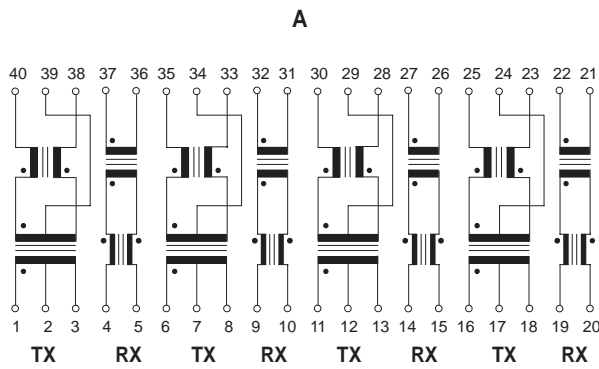
Suggested Pad Layout



Surface coplanarity will be <math><0.004 (0.10)</math>

Dimensions: Inches (Millimeters)
 Tolerance: $\pm 0.010 (0.25)$ unless specified otherwise

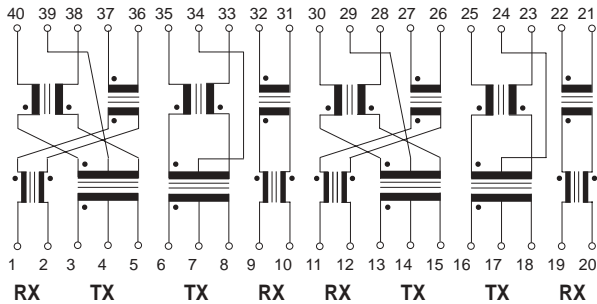
Schematics



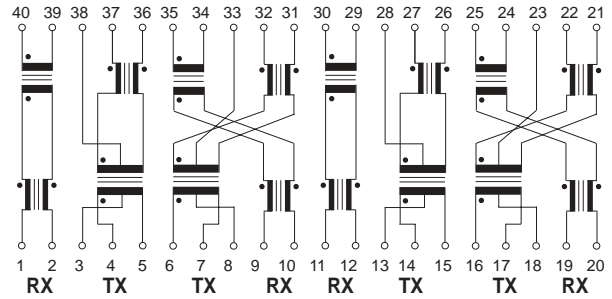
Schematics • SMD Quad Port 10/100Base-T Isolation Transformer Modules

Schematics

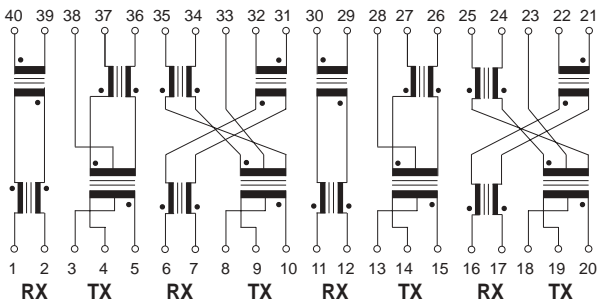
G



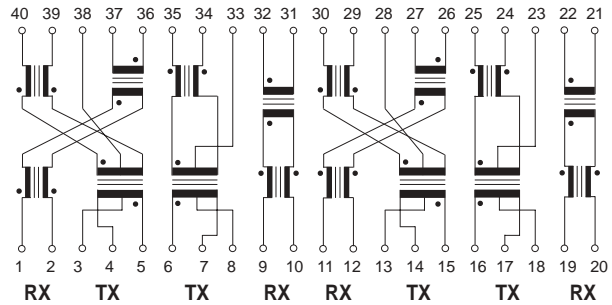
H



J



K



Sales & Marketing, Design and Manufacturing Facilities

<http://www.talema-nuvotem.com>

Eastern Europe & Czech Republic

NT MAGNETICS s.r.o.
Chebská 27
322 00 Plzeň
Tel: Int. + 420 37 - 744 9303
Fax: Int. + 420 37 - 744 3697
Email: talema@talema.cz

Germany

TALEMA ELEKTRONIK GMBH
Sembdnerstr. 5, Postfach 2523
82110 Germering
Tel: Int. + 49 89 - 841 00 - 0
Fax: Int. + 49 89 - 841 00 25
Email: info@talema.de

Ireland

NUVOTEM TEO.
Crolly
Co. Donegal
Tel: Int. + 353 74 - 954 8666
Fax: Int. + 353 74 - 954 8139
Email: info@nuvotem.com

India

TALEMA ELECTRONIC PVT. LTD.
Opposite the SIDCO Industrial Estate
Gins Towers
4/5S.H/1, Omalur Main Road
Salem - 636 004, Tamil Nadu
Tel: Int. + 91 427 - 244 1325
Fax: Int. + 91 427 - 243 0034
E-mail: talema@talemaindia.com