



## TMQ Series • 10Base-T Quad SMD Transformer Modules

### Features

- Low profile (5.8mm) and light weight (4.0 g) 10Base T Quad modules facilitate pick and place compatibility and speed of placement
- Four port modules meet requirements of IEEE 802.3
- Consistent and reliable coplanarity
- Manufactured in an ISO-9001:2000, TS-16949:2002 and ISO-14001:2004 certified Talema facility
- Fully RoHS compliant and meets lead free reflow level J-STD-020C



### Electrical Specifications

Ratings @ 25°C ambient

Minimum isolation voltage: 1500 Vrms

Operating Temperature Range: -40°C to +85°C

Storage Temperature: -40°C to +125°C

Insulation Resistance: 10,000 MOhm minimum

Test Frequency: Inductance, Interwinding Capacitance and

Leakage Inductance measured @ 100kHz/20mVrms

Quad Choke: 36µH; Turns Ratio: 1:1:1:1

Standard packing in 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 10BaseT Quad transformer modules contain transmit and receive isolation transformers to maintain consistent 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.

## TMQ Series • SMD 10Base-T Quad Isolation Transformer Module

Part Number			Turns ratio ±2%		Pri. OCL (µHMin.)	L <sub>L</sub> (µH Max)	C <sub>WW</sub> (pF Max.)	DCR (Ohms Max)	V <sub>P</sub> (Vrms)
Optional Common Mode Choke			Tx	Rx	Tx/Rx	Tx/Rx	Pri/Sec	Tx / Rx	
Tx & Rx	Tx Only	None							
TMQ-100-A1-J	G1	B1	1ct:1ct	1:1	100/100	0.30 / 0.30	12	0.30 / 0.30	1500
TMQ-100-E1-J	J1	F1	1ct:1ct	1:1	100/100	0.30 / 0.30	12	0.30 / 0.30	1500
TMQ-100-K1-J	M1	L1	1ct:1ct	1:1	100/100	0.30 / 0.30	12	0.30 / 0.30	1500
TMQ-100-N1-J	P1	O1	1ct:1ct	1:1	100/100	0.30 / 0.30	12	0.30 / 0.30	1500
TMQ-140-A1-J	G1	B1	1ct:1ct	1:1	140/140	0.40 / 0.40	12	0.40 / 0.40	1500
TMQ-140-C1-J	H1	D1	1ct:1ct	1:1	140/140	0.40 / 0.40	12	0.40 / 0.40	1500
TMQ-140-A2-J	G2	B2	1ct:1.414ct	1:1	140/140	0.40 / 0.40	12	0.40 / 0.40	1500
TMQ-140-C2-J	H2	D2	1ct:1.414ct	1:1	140/140	0.40 / 0.40	12	0.40 / 0.40	1500
TMQ-140-E2-J	J2	F2	1ct:1.414ct	1:1	140/140	0.40 / 0.40	12	0.40 / 0.40	1500
TMQ-140-K2-J	M2		1ct:1.414ct	1:1	140/140	0.40 / 0.40	12	0.40 / 0.40	1500
TMQ-150-A6-J	--	B6	2ct:1ct	1:1	150/150	0.90 / 0.30	10	0.35 / 0.35	1500
TMQ-150-E6-J	--	F6	2ct:1ct	1:1	150/150	0.90 / 0.30	10	0.35 / 0.35	1500
TMQ-150-K6-J	--	L6	2ct:1ct	1:1	150/150	0.90 / 0.30	10	0.35 / 0.35	1500
TMQ-200-A3-J	G3	B3	1ct:2ct	1:1	50/200	0.30 / 0.30	12	0.35 / 0.50	1500
TMQ-200-E3-J	J3	F3	1ct:2ct	1:1	50/200	0.30 / 0.30	12	0.35 / 0.50	1500
TMQ-200-K3-J	M3	L3	1ct:2ct	1:1	50/200	0.30 / 0.30	12	0.35 / 0.50	1500
TMQ-200-K4-J	--	--	1ct:2.5ct	1:1	35/200	0.10 / 0.40	15	0.30 / 0.50	1500

### Ordering Information:

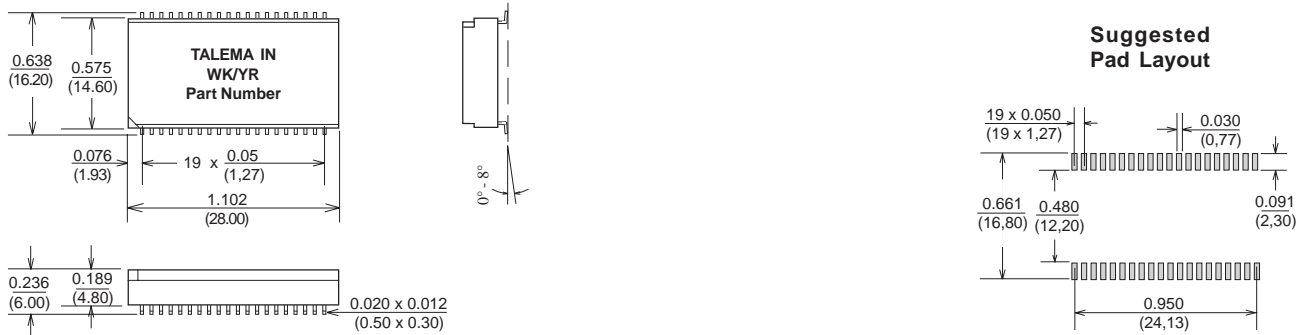
#### TMQ-XXX- \* X

\* Specify common mode noise suppression choke preference - the schematic letter designation should be inserted from columns 1, 2 or 3

1. The first column - common mode choke on both the Tx and Rx transformers
2. The second column - common mode choke only on the Tx transformer
3. The third column - common mode choke not included in module

# Dimensions & Schematics • TMQ Series 10Base-T Quad Port Transformer Modules

## Dimensions

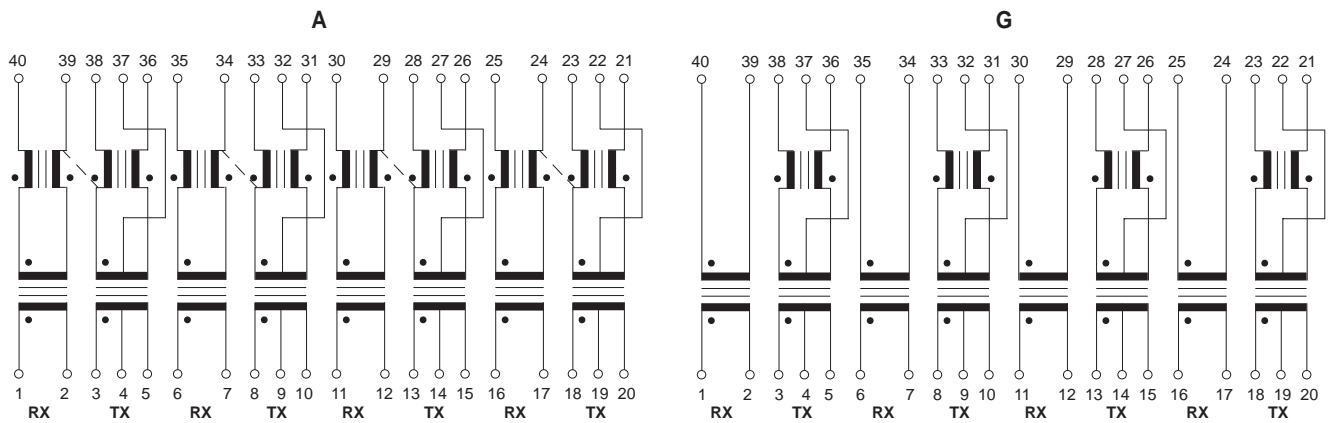


Surface coplanarity will be <math><0.004 (0.10)</math>

Dimensions: Inches (Millimeters)

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

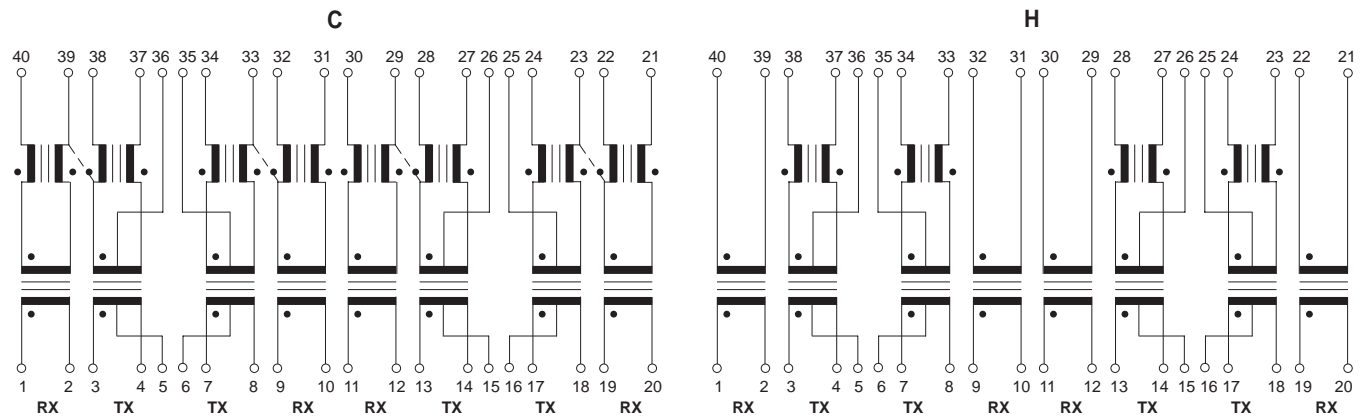
## Schematics



A = CM Choke on Tx & Rx

G = CM Choke on Tx only

B = Schematic as above but without CM Choke



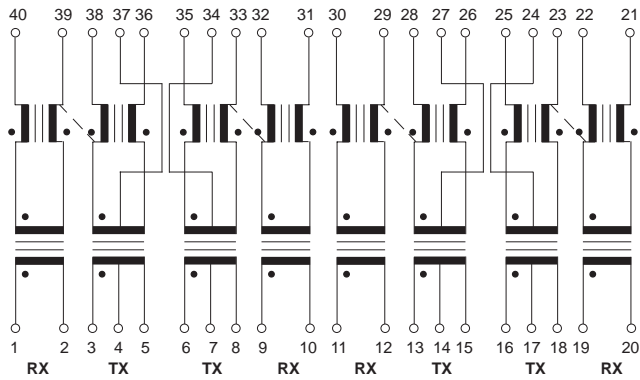
C = CM Choke on Tx & Rx

H = CM Choke on Tx only

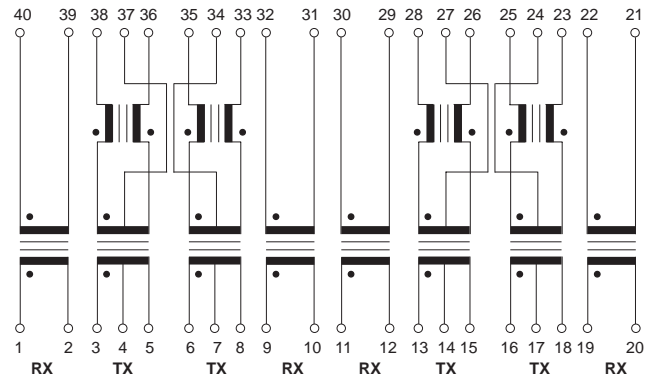
D = Schematic as above but without CM Choke

# Schematics • TMQ Series 10Base-T SMD Quad Port Transformer Modules

**E**

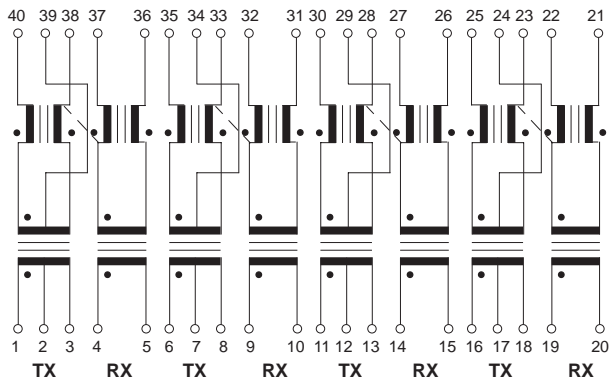


**J**

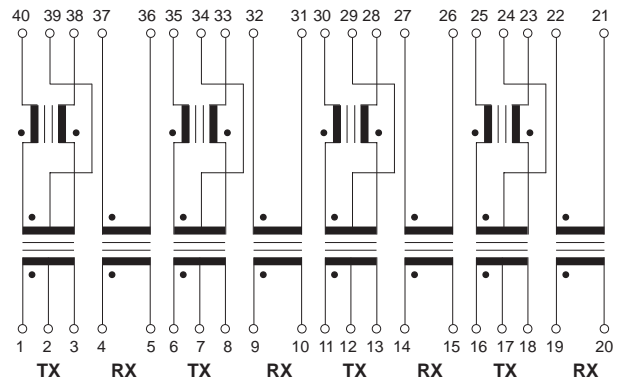


- E = CM Choke on Tx & Rx
- J = CM Choke on Tx only
- F = Schematic as above but without CM Choke

**K**

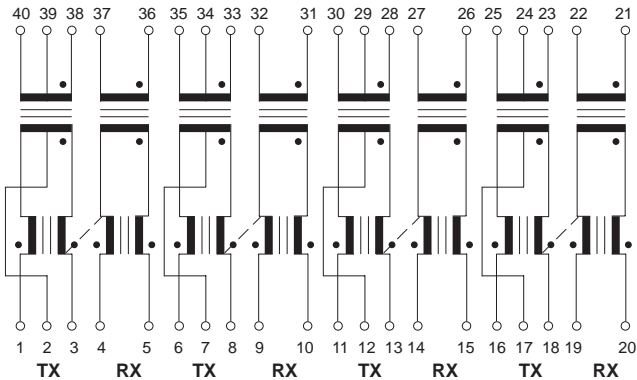


**M**

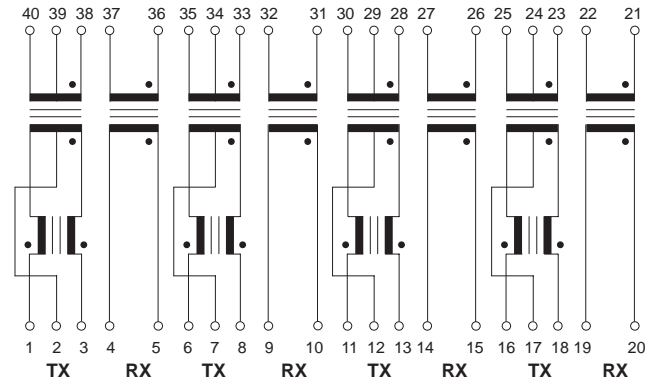


- K = CM Choke on Tx & Rx
- M = CM Choke on Tx only
- L = Schematic as above but without CM Choke

**N**



**P**



- N = CM Choke on Tx & Rx
- P = CM Choke on Tx only
- O = Schematic as above but without CM Choke