

### Features

- Low profile and light weight 10 Base-T modules facilitate pick and place compatibility and speed of placement
- Meets requirements of IEEE 802.3
- 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  
 Minimum isolation voltage: 1500 Vrms  
 Operating Temperature Range: -40°C to +85°C  
 Storage Temperature: -40°C to +125°C  
 Test Frequency: Inductance, Interwinding Capacitance and Leakage Inductance measured @ 100kHz/20mVrms

Standard packing in tape and reel

Quality and consistency are 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 10Base-T 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.

## TM Series • 10 Base-T Single Port SMD Transformer Modules

Part Number	Turns Ratio ±5%		Pri. OCL (µH Min)	L <sub>L</sub> (µH Max) Pri / Sec	C <sub>WW</sub> (pF Max) Pri / Sec	DCR (Ohms Max.)				V <sub>P</sub> (Vrms)	Schematic
	1-3:16-14	6-8:11-9				1-3	16-14	6-8	11-9		
TM__-100A1-J	1ct:1ct	1ct:1ct	100	0.25	9	0.30	0.30	0.30	0.30	1500	A
TM__-100A6-J	2ct:1ct	1ct:1ct	100	0.25	12	0.60	0.30	0.30	0.30	1500	A
TM__-112A3-J	1ct:1ct	1ct:2ct	112	0.30	8	0.30	0.30	0.30	0.60	1500	A
TM__-140A2-J	1ct:1ct	1ct:1.414ct	140	0.20	12	0.30	0.30	0.30	0.45	1500	A
TM__-140A3-J	1ct:1ct	1ct:2ct	140/25	0.30	12	0.30	0.30	0.30	0.45	1500	A
TM__-150A6-J	2ct:1ct	1ct:1ct	150	0.20	12	0.60	0.30	0.30	0.30	1500	A
TM__-200A1-J	1ct:1ct	1ct:1ct	200	0.20	10	0.30	0.30	0.30	0.30	1500	A
TM__-200A2-J	1ct:1ct	1ct:1.414ct	200	0.50	15	0.30	0.30	0.30	0.45	1500	A
TM__-200A4-J	1ct:1ct	1ct:2.5ct	200/35	0.40	15	0.30	0.30	0.30	0.80	1500	A
TM__-200A5-J	1ct:2ct	1ct:1ct	50/200	0.20	12	0.30	0.60	0.30	0.30	1500	A
	Pri. Winding:Sec. Winding					Pri. Windings		Sec. Windings			
TM__-140B1-J	1:1 (4x)		140	0.20	12	0.30		0.30		1500	B
TM__-140B2-J	1:1.41(4x)		140	0.20	12	0.30		0.45		1500	B

### Ordering Information:

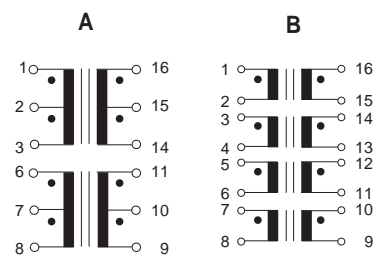
TM\*-XXX-X-X-J \* Specify desired Package Style "S" or "M".  
 "S" = Chip style surface mount, 0.100" (2,54mm) terminal spacing.  
 "M" = Chip style miniature surface mount, 0.050" (2,54mm) terminal spacing.

Example: Without choke, "S" style package and schematic "A" - TMS-100 A1  
 Without choke, "M" style package and schematic "B" - TMM-140 B2.

With choke, "S" style package, Schematic "B" - TMCS-110 B2  
 With choke, "M" style package, Schematic "A" - TMCM-100 A1

See next page for electrical specifications for modules with common mode chokes for EMI noise suppression and for packaging styles, dimensions and schematics.

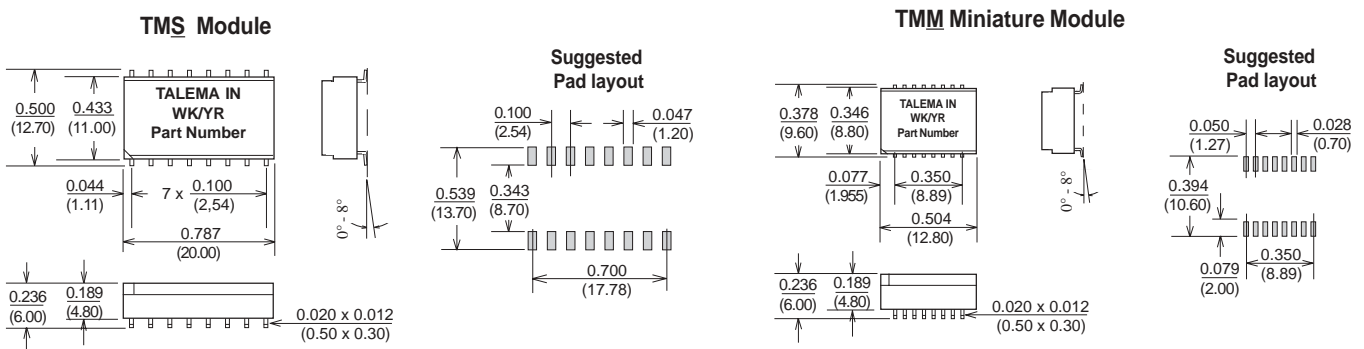
### Schematics without Choke



## TM Series • 10 Base-T Transformers with Common Mode Choke for EMI Suppression

Part Number	Turns Ratio ±5%		Pri. OCL ( $\mu\text{H}$ Min)	$L_L$ ( $\mu\text{H}$ Max) Pri / Sec	$C_{WW}$ (pF Max) Pri / Sec	DCR (Ohms Max.)				$V_P$ (Vrms)	Schematic
	1-3:16-14	6-8:11-9				1-3	16-14	6-8	11-9		
TMC_-100A1-J	1ct:1ct	1ct:1ct	100	0.30	8	0.30	0.30	0.30	0.30	1500	A
TMC_-110B2-J	1ct:1ct	1ct:1.414ct	110	0.40	15	0.30	0.30	0.30	0.90	1500	B
TMC_-112B3-J	1ct:1ct	1ct:2ct	112	0.30	8	0.30	0.30	0.30	0.90	1500	B
TMC_-120A3-J	1ct:1ct	1ct:2ct	120/20	0.40	9	0.90	0.90	0.90	0.90	1500	A
TMC_-140A2-J	1ct:1ct	1ct:1.414ct	140	0.40	20	0.40	0.40	0.40	0.40	1500	A
TMC_-140A3-J	1ct:1ct	1ct:2ct	140	0.2	12	0.30	0.30	0.30	0.90	1500	A
TMC_-140A6-J	2ct:1ct	1ct:1ct	140	0.3	12	0.60	0.30	0.30	0.30	1500	A
TMC_-150A6-J	2ct:1ct	1ct:1ct	150	0.90	10	0.70	0.35	0.35	0.35	1500	A
TMC_-200A1-J	1ct:1ct	1ct:1ct	200	0.25	10	0.30	0.30	0.30	0.30	1500	A
TMC_-200A2-J	1ct:1ct	1ct:1.414ct	200	0.5	12	0.30	0.30	0.30	0.75	1500	A
TMC_-200A4-J	1ct:1ct	1ct:1.25ct	200	0.5	15	0.30	0.30	0.30	1.05	1500	A
TMC_-200A5-J	1ct:2ct	1ct:1ct	200	0.3	8	0.30	0.90	0.30	0.30	1500	A
TMC_-350A4-J	1ct:1ct	1ct:2.5ct	350	0.8	30	0.30	0.30	0.30	1.05	1500	A

### Dimensions



Dimensions: Inches (Millimeters)  
Tolerance:  $\pm 0.010$  (0.25) unless specified otherwise  
Surface coplanarity will be 0.004 (0.01) maximum

### Schematics with Choke



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