

1000 Base-T MODULES ISOLATION TRANSFORMERS WITH FILTERS

RoHS

- * Designed for long haul Gigabit Ethernet 100/1000 Base-T.
- * Provides the Cable Interface, Isolation & Common Mode Filtering.
- * Meet IEEE 802.3ab standard for 1000 Base-T
- * Supports 4 pairs of category 5 UTP cable.

ELECTRICAL SPECIFICATIONS AT 25°C - OPERATING TEMPERATURE RANGE -40°C TO +85°C

PART NUMBER	INSERTION LOSS (dB Max) 1 to 100MHz	Return Loss (dB Typ)					Differential to Common Mode Rejection (dB Min)			Crosstalk (dB Min)			HI-POT (Vrms Min)
		1-30 MHz	40 MHz	50 MHz	60-80 MHz	100 MHz	30 MHz	50 MHz	100 MHz	30 MHz	60 MHz	100 MHz	
PM-9001	-1.0	-18	-14.4	-13.1	-12	-10	-43	-37	-33	-45	-40	-35	1500
PM-9002	-1.0	-18	-14.4	-13.1	-12	-10	-43	-37	-33	-45	-40	-35	1500

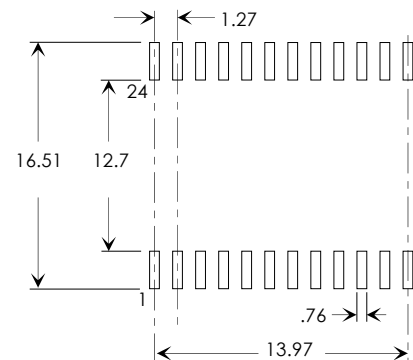
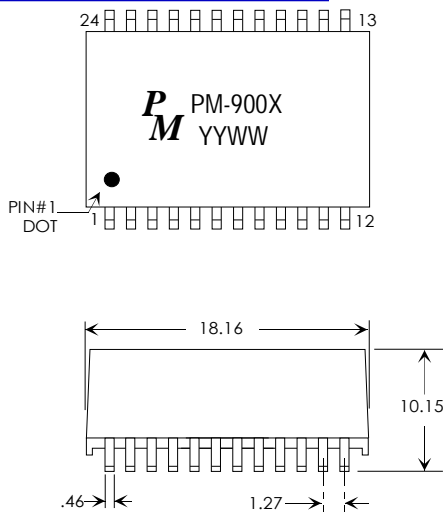
ELECTRICAL SPECIFICATIONS AT 25°C - OPERATING TEMPERATURE RANGE -40°C TO +85°C

PART NUMBER	TURNS RATIO	INDUCTANCE μ H Min @100KHz 0.100Vrms 8mADC	INSERTION LOSS (dB Max) 1 to 100MHz	Return Loss (dB Min)					DCMR (dB Min)			Crosstalk (dB Min)			HI-POT (Vrms)
				1-30 MHz	40 MHz	50 MHz	60-80 MHz	100 MHz	30 MHz	60 MHz	100 MHz	30 MHz	60 MHz	100 MHz	
PM-9051	1ct:1ct	350	-1.0	-18	-18	-16	-12	-10	-43	-37	-33	-45	-40	-35	1500

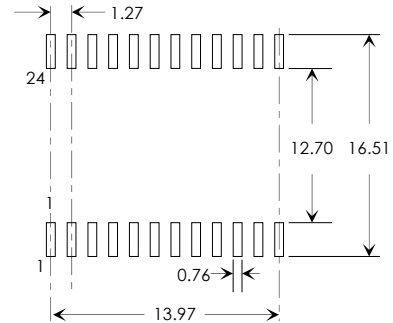
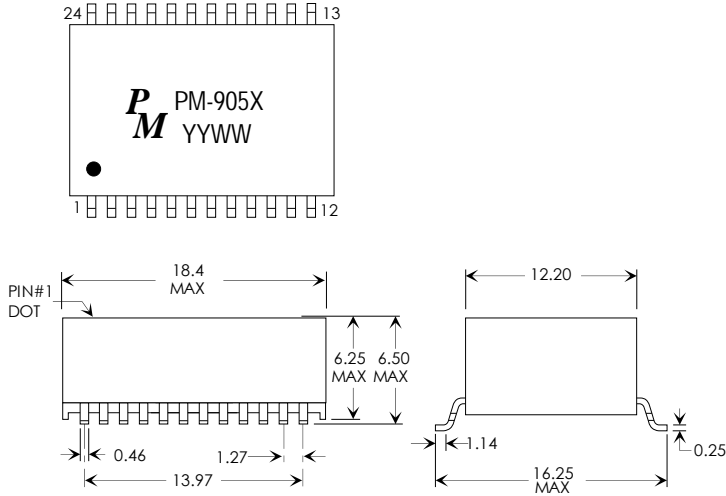
PM-900X MECHANICAL

All Dimensions in inches (mm)

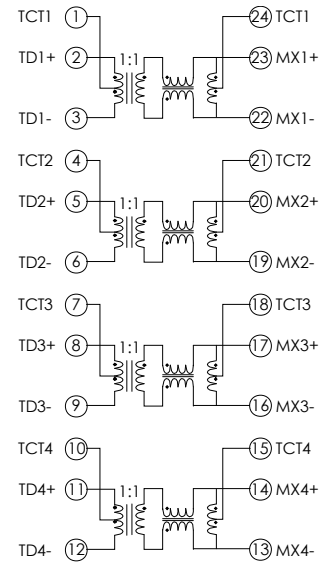
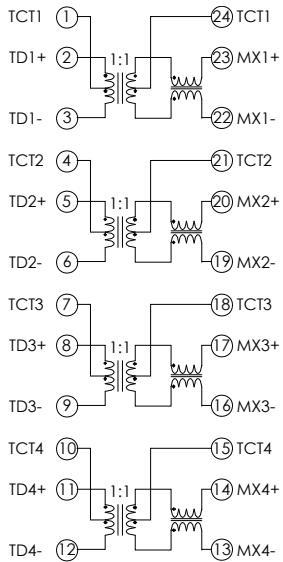
PCB LAYOUT



PM-905X MECHANICAL All Dimensions in inches (mm) **PCB LAYOUT**



PM-9001 & PM-9051 SCHEMATIC **PM-9002 SCHEMATIC**



1000 Base-T MODULES ISOLATION TRANSFORMERS WITH FILTERS

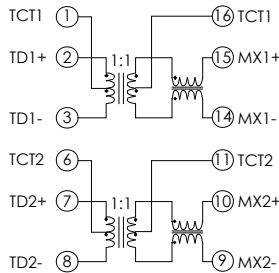
RoHS

- * Designed for long haul Gigabit Ethernet 100/1000 Base-T.
- * Provides the Cable Interface, Isolation & Common Mode Filtering.
- * Meet IEEE 802.3ab standard for 1000 Base-T
- * Supports 2 pairs of category 5 UTP cable.

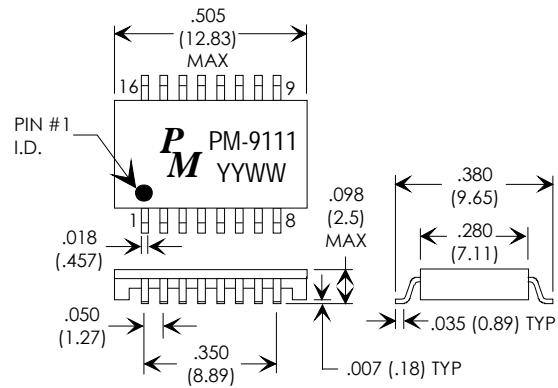
ELECTRICAL SPECIFICATIONS AT 25°C - OPERATING TEMPERATURE RANGE -40°C TO +85°C

PART NUMBER	INSERTION LOSS (dB Max) 1 to 100MHz	Return Loss (dB Typ)					Differential to Common Mode Rejection (dB Min)			Crosstalk (dB Min)			HI-POT (Vrms Min)
		1-30 MHz	40 MHz	50 MHz	60-80 MHz	100 MHz	30 MHz	50 MHz	100 MHz	30 MHz	60 MHz	100 MHz	
PM-9111	-1.0	-18	-14.4	-13.1	-12	-10	-43	-37	-33	-45	-40	-35	1500
PM-9112	-1.0	-18	-14.4	-13.1	-12	-10	-43	-37	-33	-45	-40	-35	1500

PM-9111 SCHEMATIC

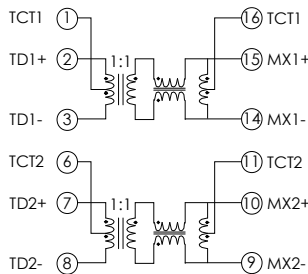


PM-9111 MECHANICAL

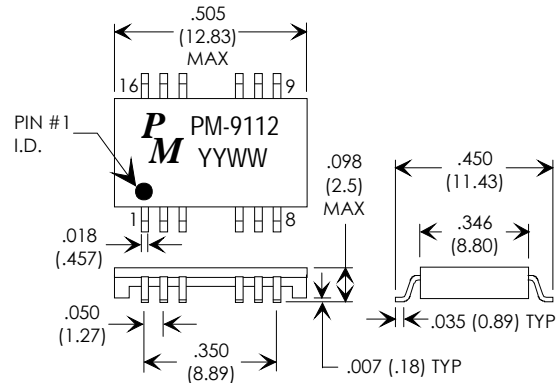


All Dimensions in inches (mm)

PM-9112 SCHEMATIC



PM-9112 MECHANICAL



All Dimensions in inches (mm)

1000 Base-T MODULES ISOLATION TRANSFORMERS WITH FILTERS

RoHS

- * Designed for Gigabit Ethernet 1000 Base-T.
- * Provides the Cable Interface, Isolation & Common Mode Filtering.
- * Meet IEEE 802.3ab standard for 1000 Base-T.
- * Comply with RoHS & Halogen Free Requirements.

ELECTRICAL SPECIFICATIONS AT 25°C - OPERATING TEMPERATURE RANGE 0°C TO +70°C

PART NUMBER	TURNS RATIO +/-5%	INDUCTANCE uH Min @100KHz 0.100Vrms 8mADC	INSERTION LOSS (dB Max) 1 to 100MHz	Return Loss (dB Min)					DCMR (dB Min)			Crosstalk (dB Min)			HI-POT (Vrms)
				1-30 MHz	40 MHz	50 MHz	60-80 MHz	100 MHz	30 MHz	50 MHz	100 MHz	30 MHz	60 MHz	100 MHz	
PM-9201	1ct:1ct	350	-1.0	-18	-14.4	-13.1	-12	-10	-40	-35	-30	-45	-40	-35	1500
PM-9202	1ct:1ct	350	-1.0	-18	-14.4	-13.1	-12	-10	-43	-37	-33	-45	-40	-35	1500

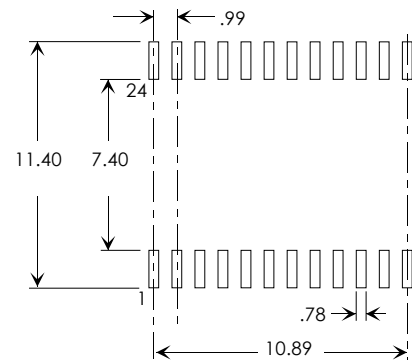
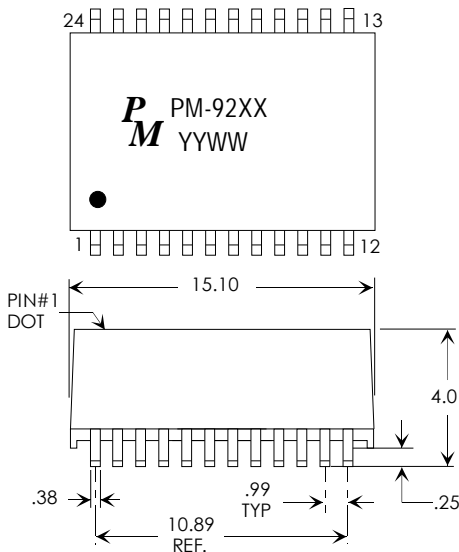
ELECTRICAL SPECIFICATIONS AT 25°C - OPERATING TEMPERATURE RANGE -40°C TO +85°C

PART NUMBER	TURNS RATIO +/-5%	INDUCTANCE uH Min @100KHz 0.100Vrms 8mADC	INSERTION LOSS (dB Max) 1 to 100MHz	Return Loss (dB Min)					DCMR (dB Min)			Crosstalk (dB Min)			HI-POT (Vrms)
				1-30 MHz	40 MHz	50 MHz	60-80 MHz	100 MHz	30 MHz	50 MHz	100 MHz	30 MHz	60 MHz	100 MHz	
PM-9210	1ct:1ct	350	-1.0	-18	-14	-13	-12	-10	-40	-35	-30	-45	-40	-35	1500

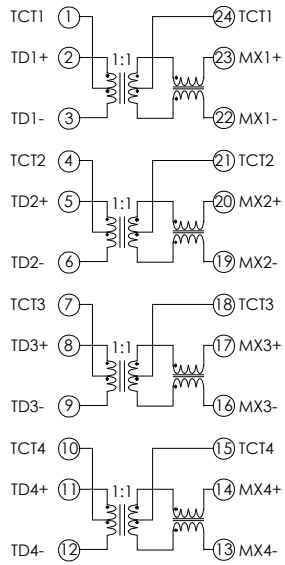
PM-920X MECHANICAL

PCB LAYOUT

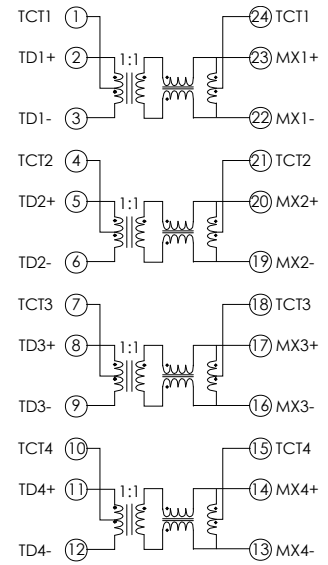
All Dimensions in mm
Tolerance +/-0.25



PM-9201 / 9210 SCHEMATIC



PM-9202 SCHEMATIC



1000 Base-T MODULES ISOLATION TRANSFORMERS WITH FILTERS

RoHS

- * Designed for Gigabit Ethernet 1000 Base-T.
- * Provides the Cable Interface, Isolation & Common Mode Filtering.
- * Meet IEEE 802.3ab standard for 1000 Base-T.
- * Comply with RoHS & Halogen Free Requirements.

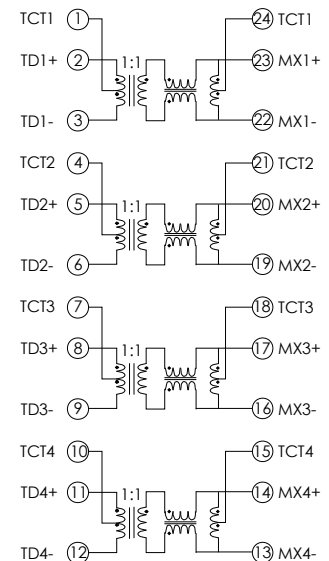
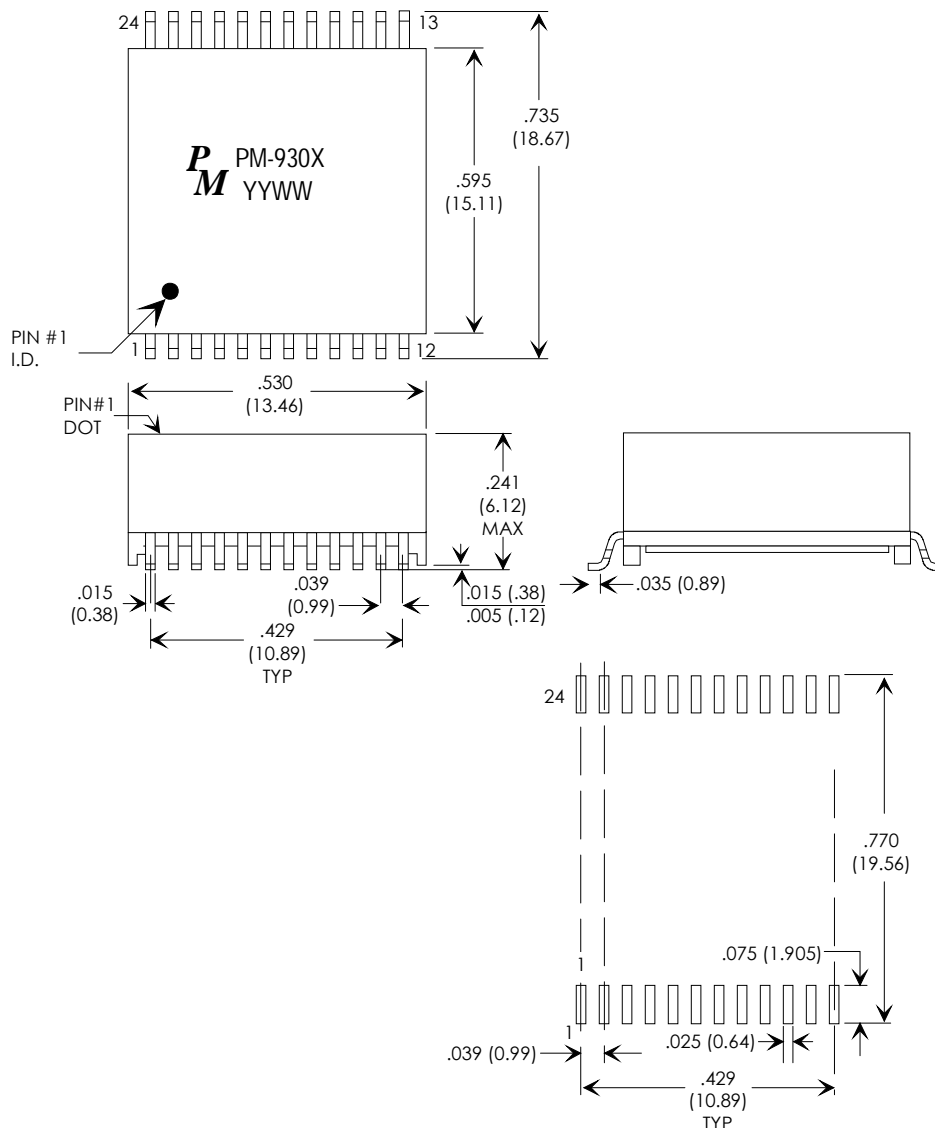
ELECTRICAL SPECIFICATIONS AT 25°C - OPERATING TEMPERATURE RANGE -45°C TO +85°C

PART NUMBER	TURNS RATIO +/-5%	INDUCTANCE uH Min @100KHz 0.100Vrms 8mADC	INSERTION LOSS (dB Max) 1 to 100MHz	Return Loss (dB Min)					DCMR (dB Min)			Crosstalk (dB Min)			HI-POT (Vrms)
				1-30 MHz	40 MHz	50 MHz	60-80 MHz	100 MHz	30 MHz	60 MHz	100 MHz	30 MHz	60 MHz	100 MHz	
PM-9301	1ct:1ct	325	-1.0	-18	-18	-16	-12	-10	-43	-37	-33	-45	-40	-35	1500

PM-930X MECHANICAL

PM-9301 SCHEMATIC

All Dimensions in mm



1000 Base-T MODULES ISOLATION TRANSFORMERS WITH FILTERS

RoHS

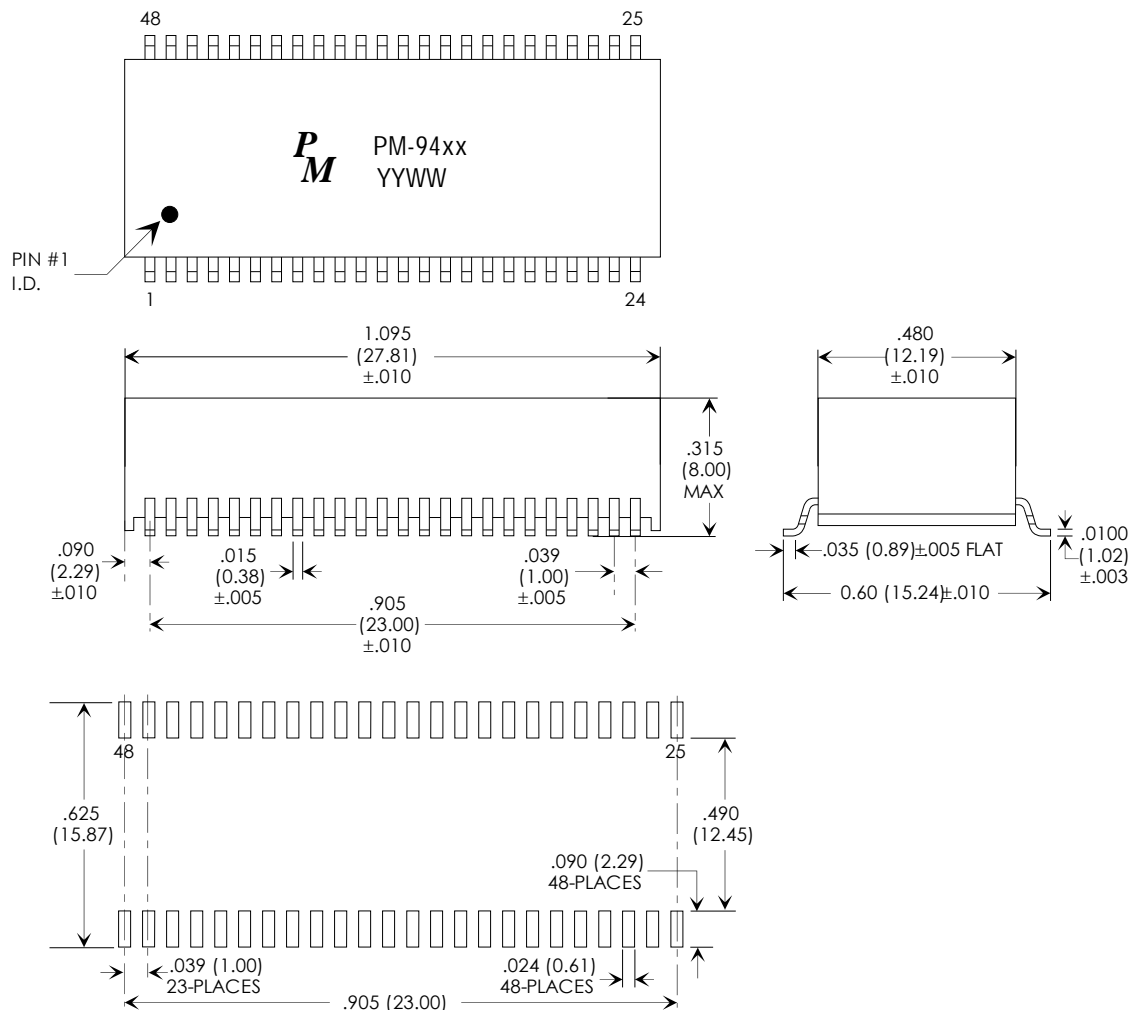
- * Designed for 100/1000 Base-T.
- * Provides the Cable Interface, Isolation & Common Mode Filtering.
- * Comply with RoHS & Halogen Free Requirements.

ELECTRICAL SPECIFICATIONS AT 25°C - OPERATING TEMPERATURE RANGE -0°C TO +70°C

PART NUMBER	TURNS RATIO +/-3%	INDUCTANCE uH Min @100KHz 0.100Vrms 8mADC	Insertion Loss (dB Min)				Return Loss (dB Min)		Crosstalk (dB Min)	CMR (dB Min)	HI-POT (Vrms)
			1 MHz	65 MHz	100 MHz	125 MHz	0.5-40 MHz	40-100 MHz	1-100 MHz	1-100 MHz	
PM-9401	1ct:1ct	350	-1.1	-0.5	-0.9	-1.5	-18	-12+20LOG(F/80)	-33+20LOG(F/100)	-30	1500
PM-9402	1ct:1ct	350	-1.1	-0.5	-0.8	-1.2	-18	-12+20LOG(F/80)	-33+20LOG(F/100)	-30	1500

PM-940X MECHANICAL

All Dimensions in mm



Specifications subject to change without notice.

02/2021

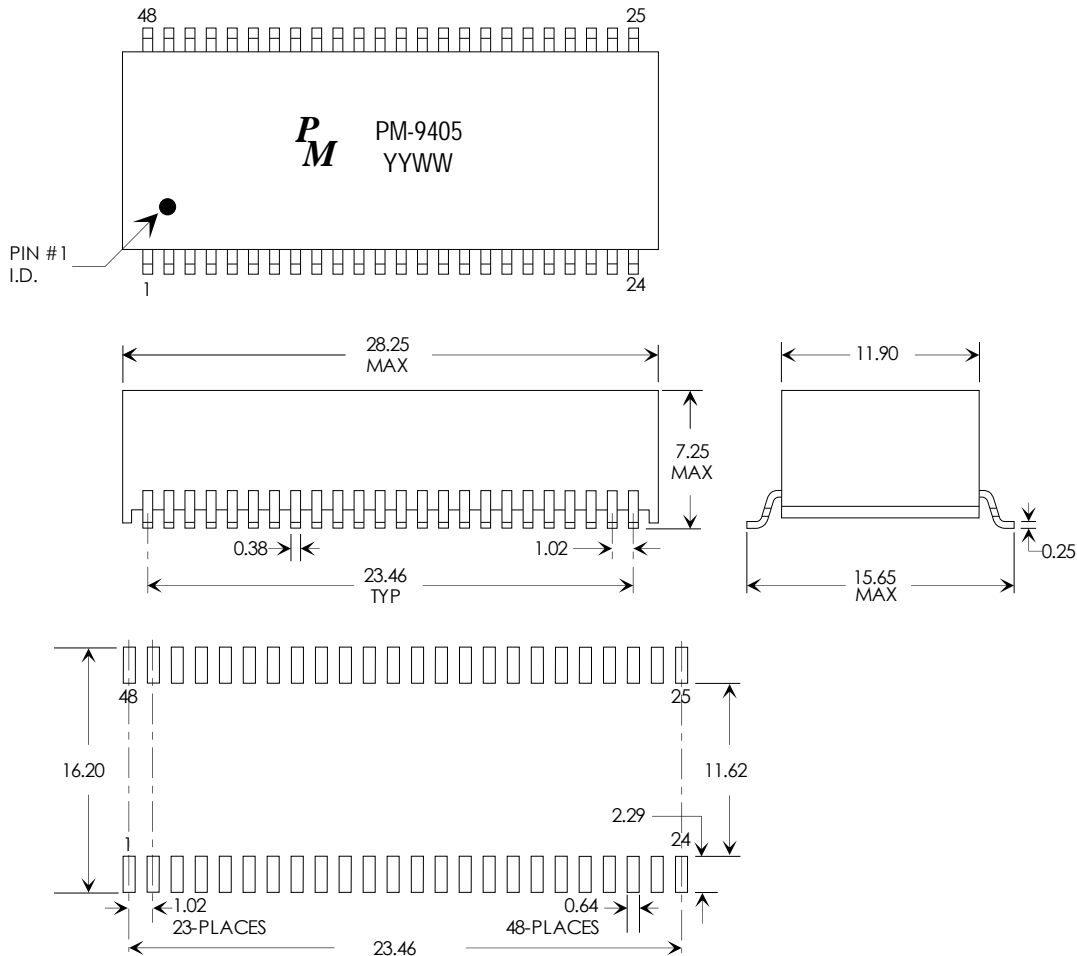
- * Designed for 100/1000 Base-T.
- * Provides the Cable Interface, Isolation & Common Mode Filtering.
- * Comply with RoHS & Halogen Free Requirements.
- * Support 8 pairs of category 5 UTP cable.

ELECTRICAL SPECIFICATIONS AT 25°C - OPERATING TEMPERATURE RANGE -40°C TO +85°C

PART NUMBER	TURNS RATIO ±5%		INDUCTANCE μH Min @100KHz 0.100Vrms 8mADC	Insertion Loss (dB Max)	Return Loss (dB Min)					Crosstalk (dB Min)			DCMR (dB Min)			HI-POT (Vrms)
	TX	RX			1-100 MHz	1-30 MHz	40 MHz	50 MHz	60-80 MHz	100 MHz	30 MHz	60 MHz	100 MHz	30 MHz	60 MHz	
PM-9405	1CT:1CT	1CT:1CT	350	-1.4	-16	-14.4	-13.1	-12	-10	-43.5	-37.5	-33	-45	-40	-35	1500

PM-9405 MECHANICAL

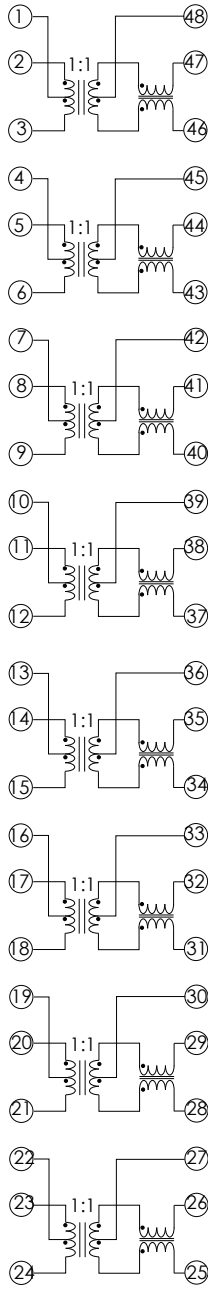
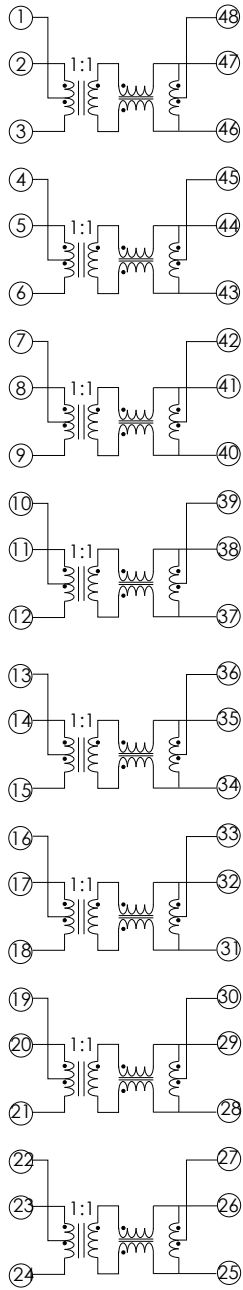
All Dimensions in mm



PM-940X SCHEMATIC

9401

9402, 9405



100/1000 Base-TX VoIP ISOLATION TRANSFORMERS WITH FILTERS

RoHS

- * Meet IEEE 802.3af standard.
- * Comply with RoHS & Halogen Free Requirements.
- * Power Over Ethernet Applications Currents: 750mA MAX, 36 watts maximum.
- * Inductance 350uH minimum at 8mADC.
- * DCR = 1 Ohm maximum.

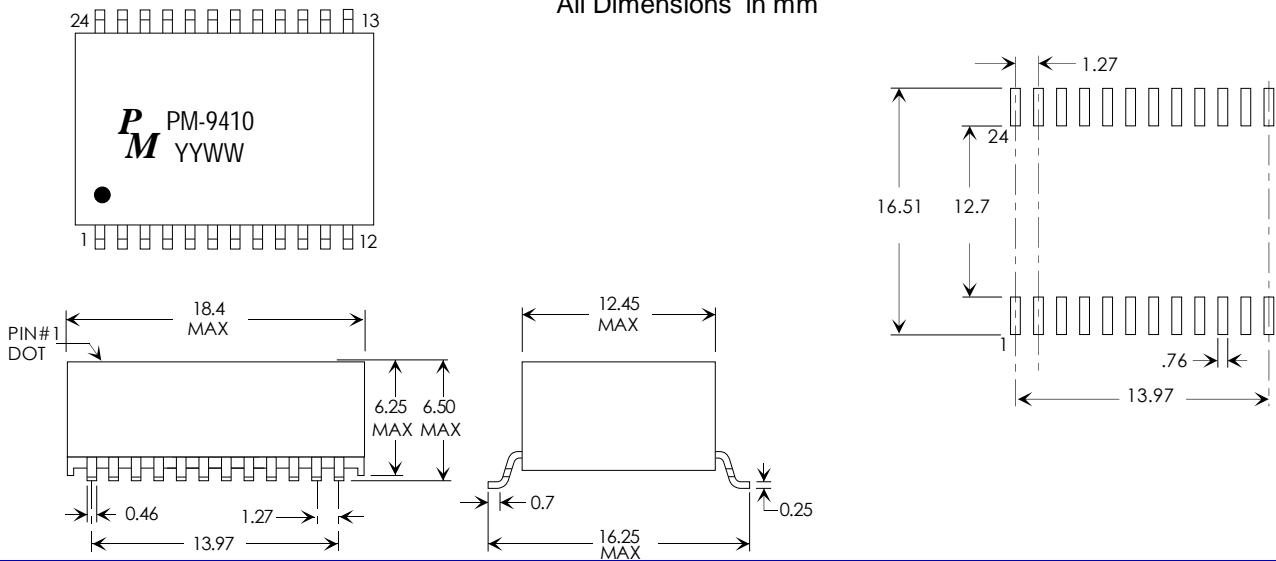
ELECTRICAL SPECIFICATIONS AT 25°C - OPERATING TEMPERATURE RANGE -40°C TO +85°C

PART NUMBER	TURNS RATIO		NUMBER OF PORTS	INSERTION LOSS(dB Max)			RETURN LOSS(dB Min)				CROSSTALK (dB Typ)			HIPOT (Vrms MIN)
	TX	RX		0.1 MHz	100 MHz	125 MHz	30 MHz	60 MHz	80 MHz	100 MHz	30 MHz	60 MHz	100 MHz	
PM-9410	1:1	1:1	1	-1.1	-1.0	-2.0	-18	-14.4	-12	-10	-41	-37	-33	1500

PM-9410 MECHANICAL

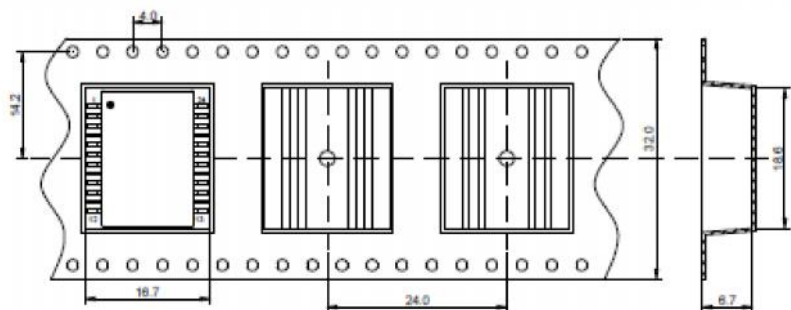
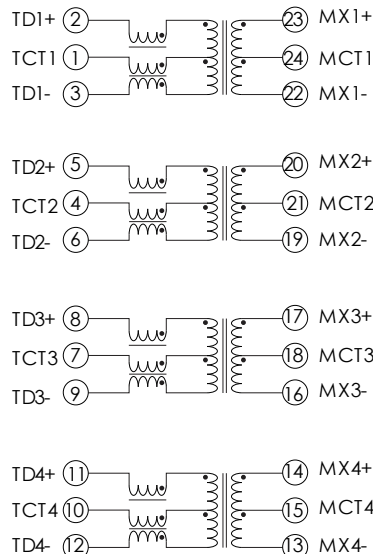
PCB LAYOUT

All Dimensions in mm



PM-9410 SCHEMATIC

Tape & Reel = 400 pcs



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02/2021

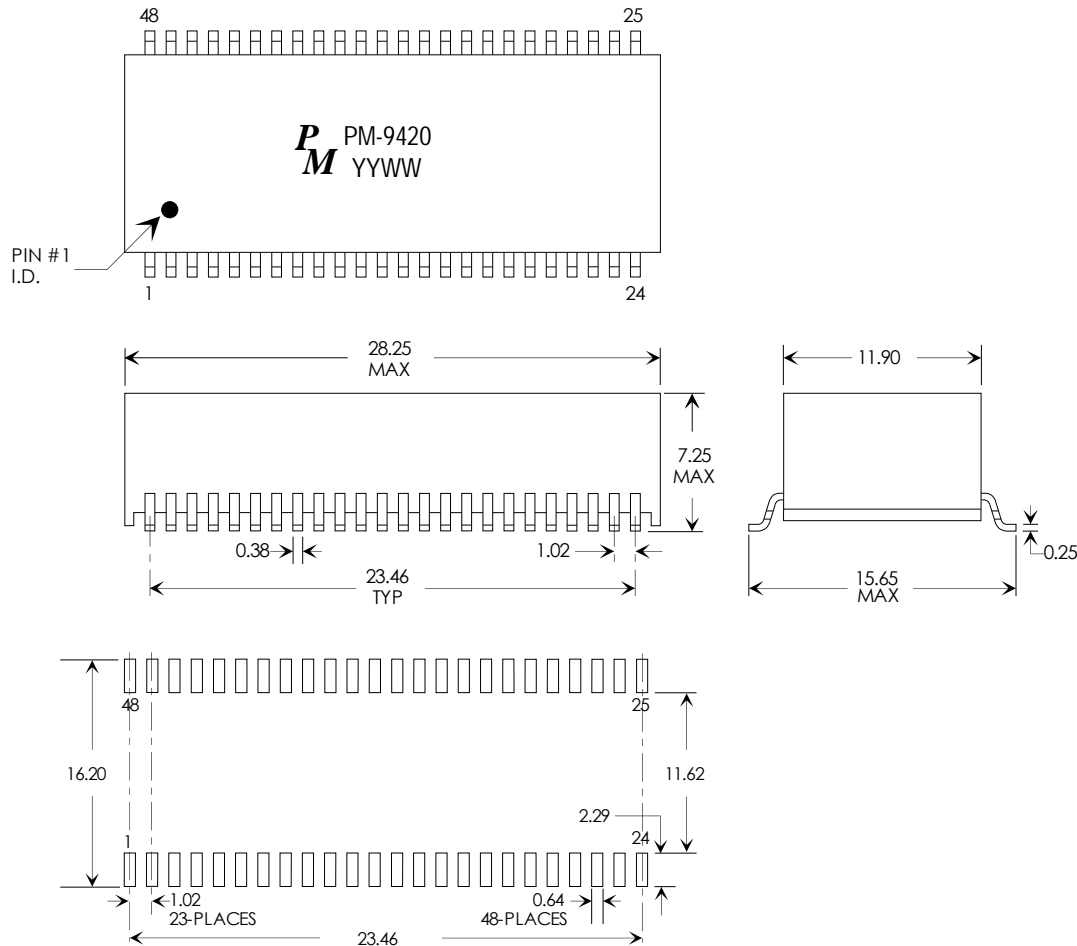
- * Designed to support application, such as SOHO(ADSL modems), LAN-on-Motherboard (LOM), hub, and Switches
- * 10/100/1000 Base-T Dual Port Surface Mount Magnetics
- * Comply with RoHS & Halogen Free Requirements.
- * Power over Ethernet (POE) Magnetics
- * 350mA current capability per POE port / two-pair

ELECTRICAL SPECIFICATIONS AT 25°C - OPERATING TEMPERATURE RANGE 0°C TO +70°C

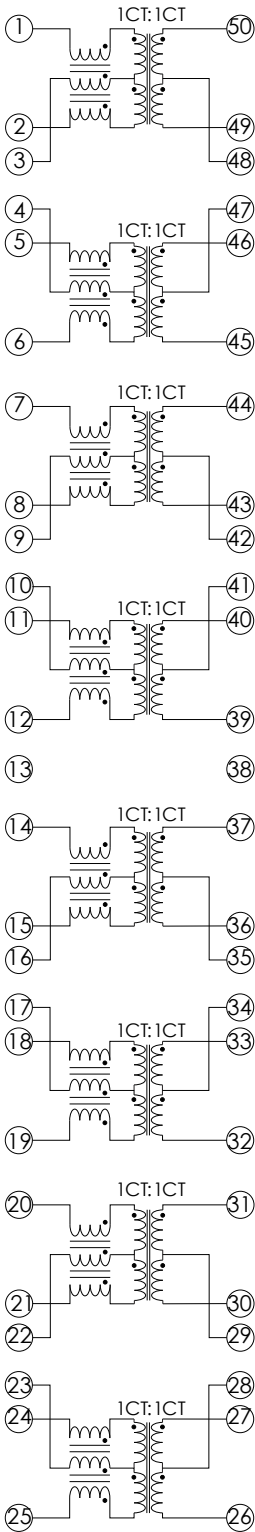
PART NUMBER	TURNS RATIO ±2% PRI:SEC	INDUCTANCE μH Min @100KHz 0.100Vrms 8mADC	Insertion Loss (dB Max)	Return Loss (dB Min)					Crosstalk (dB Typ)			CMR (dB Min)	HI-POT (Vrms)
				1-100 MHz	1-40 MHz	60 MHz	80 MHz	100 MHz	1-30 MHz	60 MHz	100 MHz		
PM-9420	1CT:1CT	350	-1.1	-18	-14	-12	-10	-50	-45	-40	-40	1500	

PM-9420 MECHANICAL

All Dimensions in mm



PM-9420 SCHEMATIC



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- * Meet IEEE 802.3ab standard for 1000 Base-T.
- * Comply with RoHS & Halogen Free Requirements.
- * PowerOver Ethernet

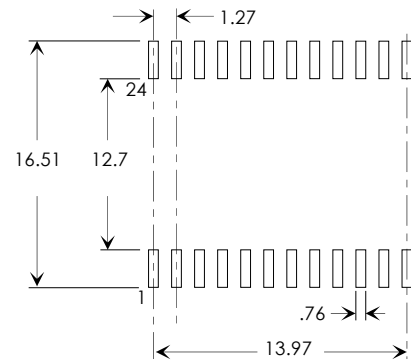
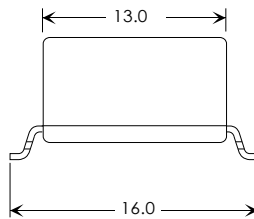
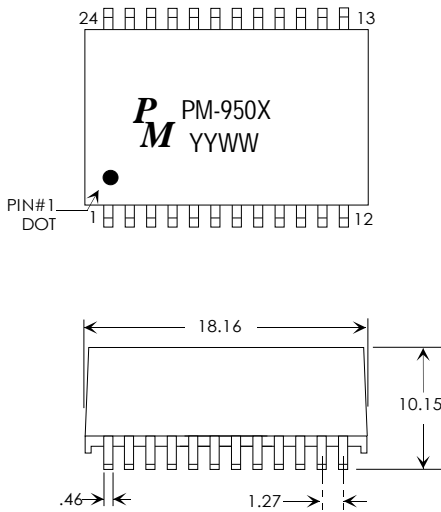
ELECTRICAL SPECIFICATIONS AT 25°C - OPERATING TEMPERATURE RANGE 0°C TO +70°C

PART NUMBER	TURNS RATIO		NUMBER OF PORTS	INSERTION LOSS(dB Max)			RETURN LOSS(dB Min)				CROSSTALK (dB Typ)			HIPOT (Vrms MIN)
	TX	RX		0.1 MHz	100 MHz	125 MHz	30 MHz	60 MHz	80 MHz	100 MHz	30 MHz	60 MHz	100 MHz	
PM-9501	1:1	1:1	1	-1.1	-1.0	-2.0	-18	-14.4	-12	-10	-41	-37	-33	1500

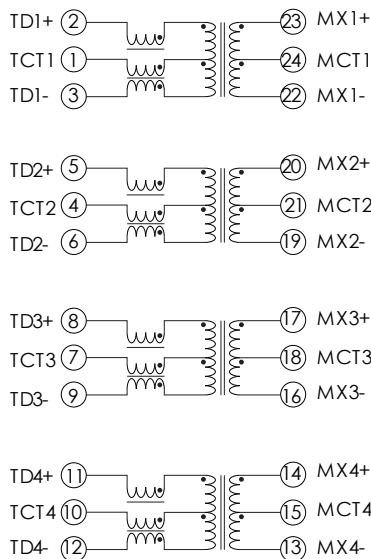
PM-950X MECHANICAL

PCB LAYOUT

All Dimensions in mm



PM-9501 SCHEMATIC



Specifications subject to change without notice.

02/2021

1000 Base-T MODULES ISOLATION TRANSFORMERS WITH FILTERS

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- * Meet IEEE 802.3ab standard for 1000 Base-T.
- * Comply with RoHS & Halogen Free Requirements.

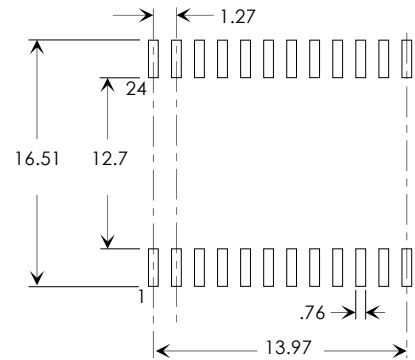
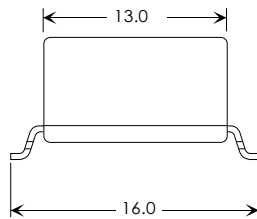
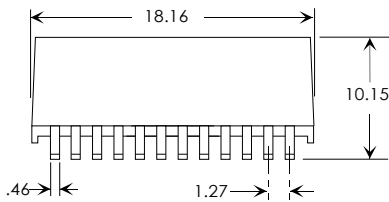
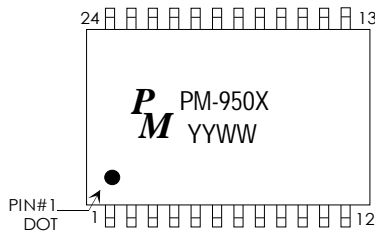
ELECTRICAL SPECIFICATIONS AT 25°C - OPERATING TEMPERATURE RANGE 0°C TO +85°C

PART NUMBER	TURNS RATIO +/-2%	INDUCTANCE (uH MIN) @100KHz 0.100Vrms 24mADC	LL (uH TYP)	Cw/w (pF TYP)	INSERTION LOSS (dB MAX)		RETURN LOSS (dB MIN)		CROSSTALK (dB TYP)		CMR (dB TYP)		HI-POT (Vrms)
					0.3 MHz	1-125 MHz	1-40 MHz	40-100 MHz	1 MHz	10-100 MHz	2 MHz	30-200 MHz	
PM-9502	1ct:1ct	350	0.25	20	-1.2	-0.2-0.002f ^{1.4}	-16	-10+20log(f/80)	-50	-55+22log(f/10)	-50	-15+20log(f/200)	1500

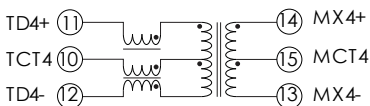
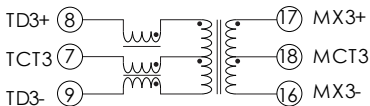
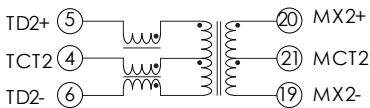
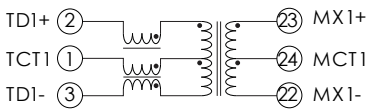
PM-950X MECHANICAL

PCBLAYOUT

All Dimensions in mm



PM-9502 SCHEMATIC



1000 Base-T MODULES ISOLATION TRANSFORMERS WITH FILTERS

RoHS

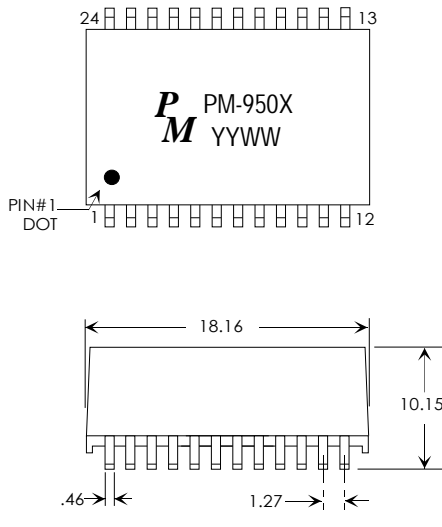
- * Designed for Gigabit Ethernet 1000 Base-T.
- * Provides the Cable Interface, Isolation & Common Mode Filtering.
- * Meet IEEE 802.3ab standard for 1000 Base-T.
- * Comply with RoHS & Halogen Free Requirements.

ELECTRICAL SPECIFICATIONS AT 25°C - OPERATING TEMPERATURE RANGE 0°C TO +85°C

PART NUMBER	TURNS RATIO ±5%	INDUCTANCE (µH MIN) @100KHz 0.1Vrms 15mADC	INSERTION LOSS (dB MAX)	RETURNLOSS (dB MIN)			CROSSTALK (dB TYP)	CMR (dB TYP)	HI-POT (Vrms)
				1-100 MHz	1-40 MHz	40-60 MHz			
PM-9503	1CT:1CT	350	-1.0	-14	-12	-10	-30	-30	1500

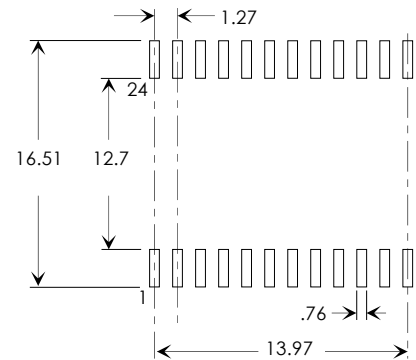
* POE APPLICATIONS CURRENT CAPABILITY: 1.15A

PM-950X MECHANICAL

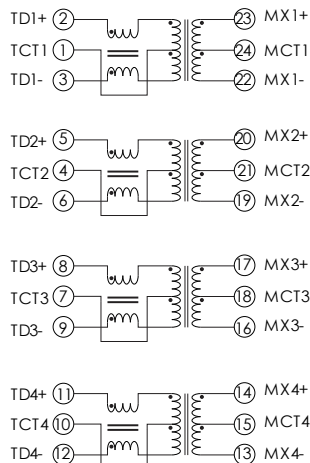


All Dimensions in mm

PCBLAYOUT



PM-9502 SCHEMATIC



Specifications subject to change without notice.

02/2021

1000 Base-T MODULES ISOLATION TRANSFORMERS WITH FILTERS

RoHS

- * Designed for long haul Gigabit Ethernet 100/1000 Base-T.
- * Provides the Cable Interface, Isolation & Common Mode Filtering.
- * Comply with RoHS & Halogen Free Requirements.

ELECTRICAL SPECIFICATIONS AT 25°C - OPERATING TEMPERATURE RANGE -40°C TO +85°C

PART NUMBER	TURNS RATIO ±2%	INDUCTANCE (uH MIN) @100KHz 0.1Vrms 28mADC	LL (uH TYP) 100kHz 0.1Vrms	Cw/w (pF TYP) 100kHz 0.1Vrms	INSERTION LOSS (dB MAX)			RETURNLOSS (dB MIN)		CROSSTALK (dB MIN)		CMR (dB MIN)		DCR (Ω TYP)	Idc (A)	HI-POT (Vrms)
					0.3 MHz	1-100 MHz	125 MHz	1-40 MHz	40-100 MHz	1 MHz	10-100 MHz	2 MHz	30-200 MHz			
PM-9601	1ct:1ct	120	0.25	20	-1.2	-1.0	-2.0	-16	-10+20log(f/80)	-50	-55+22log(f/10)	-50	-15+20log(f/200)	0.6	1.37	1500

- * Designed for long haul Gigabit Ethernet 100/1000 Base-T.
- * Provides the Cable Interface, Isolation & Common Mode Filtering.
- * Comply with RoHS & Halogen Free Requirements.
- * Meets IEEE 802.3 Standard.
- * Supports up to 60 Watts.

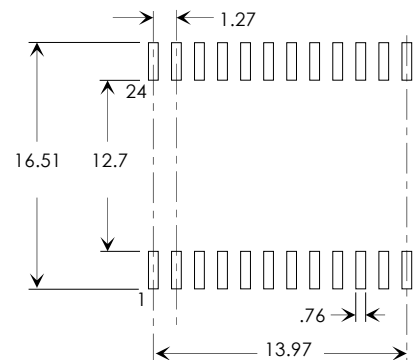
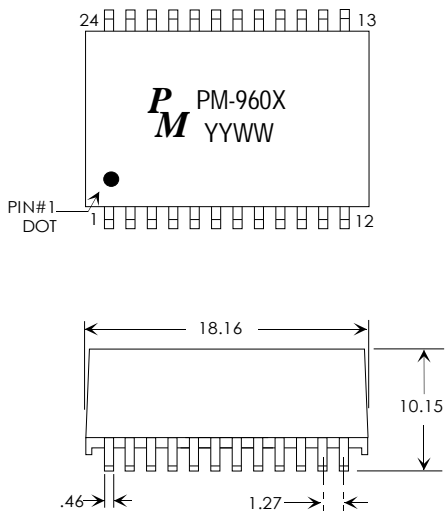
ELECTRICAL SPECIFICATIONS AT 25°C - OPERATING TEMPERATURE RANGE -40°C TO +85°C

PART NUMBER	TURNS RATIO ±5%	INDUCTANCE (uH MIN) @100KHz 0.1Vrms	INSERTION LOSS (dB MAX)		RETURNLOSS (dB MIN)		CROSSTALK (dB MIN)			CMR (dB MIN)		Idc (A) MAX	HI-POT (Vrms)
			1.0 MHz	1-125 MHz	1-40 MHz	40-100 MHz	30 MHz	60 MHz	100 MHz	30 MHz	200 MHz		
PM-9610	1ct:1ct	350 @ 20mA / 120 @ 30mA	-1.2	-2.0	-16	-10	-40	-35	-30	-30	-15	1.0	1500

PM-960X MECHANICAL

PCB LAYOUT

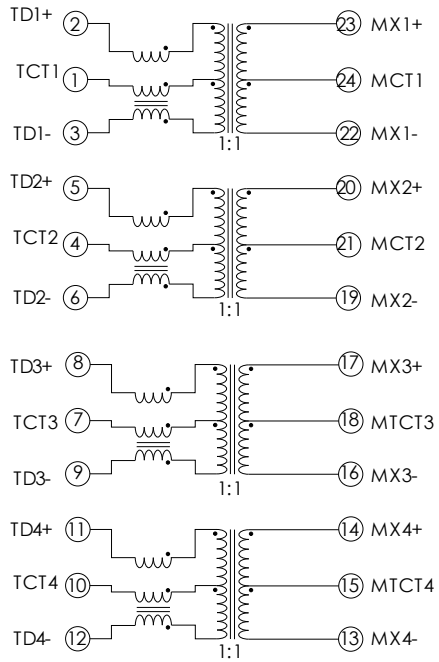
All Dimensions in mm



Specifications subject to change without notice.

02/2021

PM-9601 & PM-9610 SCHEMATIC

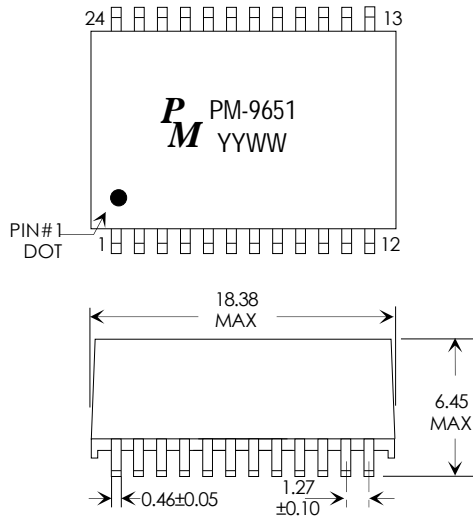


ELECTRICAL SPECIFICATIONS AT 25°C - OPERATING TEMPERATURE RANGE -40°C TO +85°C

PART NUMBER	TURNS RATIO ±5%	INDUCTANCE μH Min @100KHz 0.100Vrms 8mADC	INSERTION LOSS (dB Typ) 1 to 100MHz	Return Loss (dB Typ)					DCMR (dB Typ)			Crosstalk (dB Typ)			HI-POT (Vrms) 0.5mA 2sec
				1-30 MHz	40 MHz	50 MHz	60-80 MHz	100 MHz	30 MHz	60 MHz	100 MHz	30 MHz	60 MHz	100 MHz	
PM-9651	1ct:1ct	350 ⁽¹⁾	-1.0	-18	-14.4	-13.1	-12	-10	-43	-37	-33	-45	-40	-35	4000

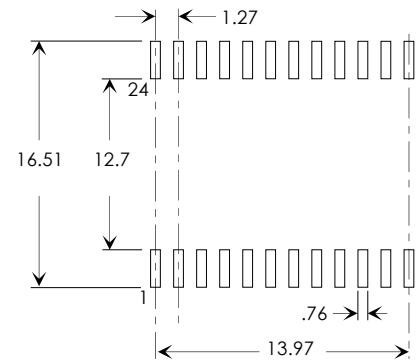
⁽¹⁾ 0°C to +70°C

PM-9651 MECHANICAL



All Dimensions in mm
(All tolerances are ±0.25 unless otherwise specified)

PCB LAYOUT



PM-9651 SCHEMATIC

