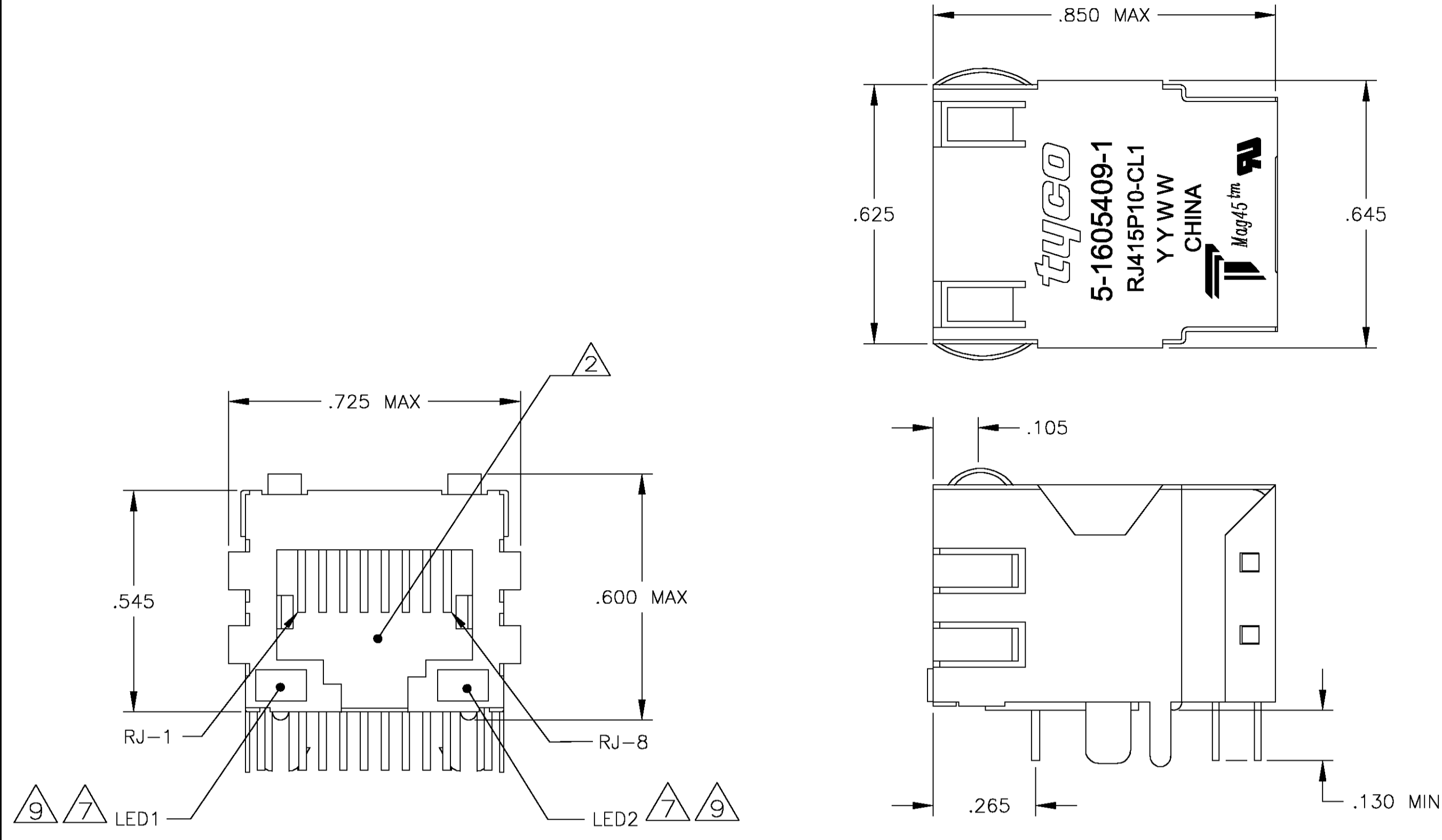


MECHANICAL:



Pin Designations

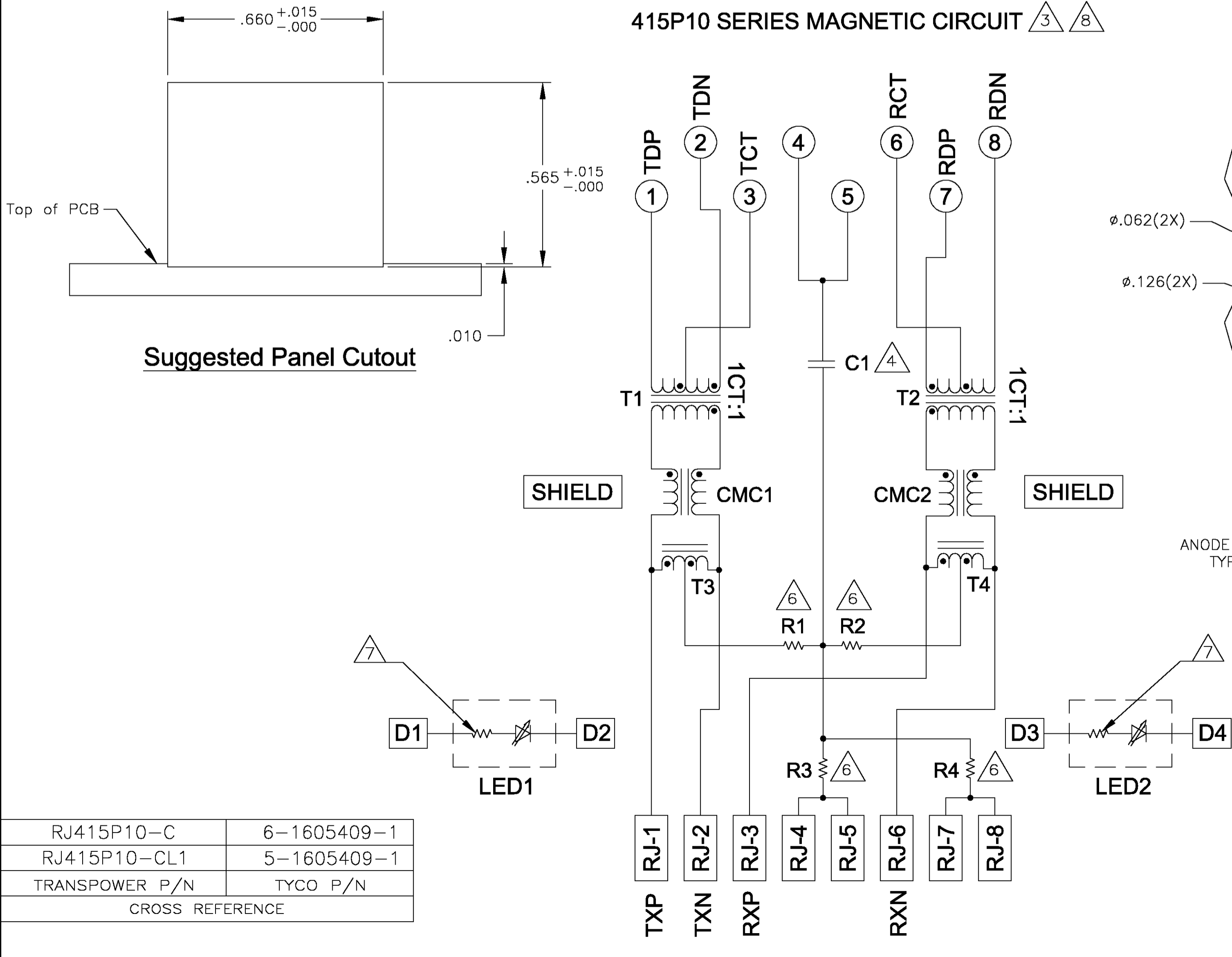
- MATERIALS:**
 HOUSING - THERMOPLASTIC PET POLYESTER FLAMMABILITY RATING UL 94V-0.
 SHIELD - .010" THICK, C26800 BRASS PREPLATED WITH 80-150μinch SEMI-BRIGHT NICKEL; POST-DIPPED WITH 100μinch MIN TIN-LEAD.
 MOD JACK CONTACTS - .0157" x .018" THICK, PHOSPHOR BRONZE, 50μinch MIN OVERALL NICKEL UNDERPLATE, WITH SELECT 50μinch MIN HARD GOLD FINISH PLATE. SOLDER TAILS WITH 50μinch MIN TIN-LEAD FINISH PLATE.
 LIGHT EMITTING DIODE(LED) - DIFFUSED EPOXY LENS, .020" x .020" CARBON STEEL WIREFRAME LEADS PREPLATED WITH 90μinch SILVER OVER 40μinch NICKEL UNDERPLATE OVER 80μinch COPPER UNDERPLATE; POST-PLATED WITH 300μinch THICK TIN-LEAD.
- RJ45 JACK CAVITY CONFORMS TO FCC RULES AND REGULATIONS PART 68, SUB PART F.**
- MAGNETICS:**
 -IMPEDANCE: 100 OHMS
 -TRANSMIT OPEN CIRCUIT INDUCTANCE (OCL): 350μH (MIN) @100KHZ, 0.1VRMS WITH 8 mA DC BIAS FOR EACH TRANSFORMER OVER T = 0°C TO 70°C.
 -RISE TIME: 2.5 NANO-SECONDS FROM 10 TO 90 PERCENT.
 -TURNS RATIO (CHIP: CABLE): TX: 1:1, RX: 1:1
- PERFORMANCE:**
 -TRANSMIT RJ-1 & 2.
 -RECEIVE RJ-3 & 6.

FREQUENCY	*INSERTION LOSS	RETURN LOSS	CROSSTALK ATTENUATION	COMMON MODE REJECTION RATIO	
				TX	RX
.100 MHZ-.999 MHZ	1.0 dB(MAX)	18.0 dB(MIN)	43.0 dB(MIN)	46.0 dB(MIN)	35.0 dB(MIN)
1.0 MHZ-15.0 MHZ	0.3 dB(MAX)	18.0 dB(MIN)	43.0 dB(MIN)	46.0 dB(MIN)	35.0 dB(MIN)
15.1 MHZ-60.0 MHZ	0.6 dB(MAX)	18.0 dB(MIN)	43.0 dB(MIN)	46.0 dB(MIN)	35.0 dB(MIN)
60.1 MHZ-80.0 MHZ	1.1 dB(MAX)	15.0 dB(MIN)	38.0 dB(MIN)	42.0 dB(MIN)	33.0 dB(MIN)
80.1 MHZ-100.0 MHZ	1.1 dB(MAX)	12.0 dB(MIN)	38.0 dB(MIN)	42.0 dB(MIN)	33.0 dB(MIN)

ALL MAGNETIC ELECTRICAL CHARACTERISTICS RATED @ T=25° C
 *INDICATED INSERTION LOSS REFERS TO MAGNETIC CIRCUITRY ONLY

HIPOT (ISOLATION VOLTAGE):
 -2250 VDC (1 mA CUTOFF CURRENT) FOR 60 SECONDS DURATION.
 -ALL BRIDGED ON EITHER SIDE OF MAGNETICS PACKAGE FOR RJ-45 CONTACTS.
 OPERATING TEMPERATURE: FROM 0°C TO +70°C.

ELECTRICAL:
415P10 SERIES MAGNETIC CIRCUIT



Suggested PCB Layout (Component Side)

- C1 IS A 1000 pF, 2KV DECOUPLING CAPACITOR.**
- ALL DIMENSIONS NOMINAL UNLESS OTHERWISE NOTED.**
- R1-R4 = 75 OHMS, 1/16 W, 5% RESISTORS.**
- LED COMPLIANT WITH IEC60825-1 SAFETY OF LASER PRODUCTS. WHEN OPERATED UP TO 20 mA. THE 250 OHM RESISTOR IS INCLUDED IN THE LEADS.**
- INDICATED CONNECTIONS ARE FOR NIC CONFIGURATION. THE MAGNETICS ARE SYMMETRICAL, AND THEREFORE DOES SUPPORT AUTO-MDI/MDIX.**
- LED PEAK WAVELENGTH: GREEN(λ) = 565nm
 YELLOW(λ) = 585nm**

RJ415P10-C	6-1605409-1
RJ415P10-CL1	5-1605409-1
TRANSPOWER P/N	TYCO P/N
CROSS REFERENCE	

GREEN	GREEN	6-1605409-1
GREEN	YELLOW	5-1605409-1
LED1	LED2	PART NUMBER

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: INCHES	TOLERANCES UNLESS OTHERWISE SPECIFIED:	APVD: J. YOUNG	DATE: 25JUL2002	Tyco Electronics Corporation Harrisburg, PA 17105-3608
0 PL ± .010	1 PL ± .010	2 PL ± .010	3 PL ± .010	
4 PL ± .010	5 PL ± .010	6 PL ± .010	7 PL ± .010	NAME: 1X1 MAG45(TM), MODULAR JACK, SHIELDED, 4N2P10 SCHEMATIC, 415P10 MAGNETIC CIRCUIT, DECOUPLING CAPACITOR, WITH RESISTOR LEADS APPLICATION SPEC: 108-2100
MATERIAL: -	FINISH: -	WEIGHT: -	SCALE: A1	SIZE: 00779 CAGE CODE: 1605409 CUSTOMER DRAWING

SCALE: NTS SHEET 1 OF 1 REV 0