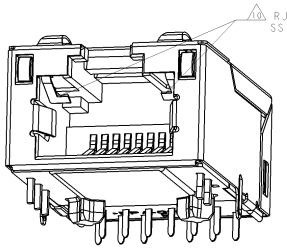
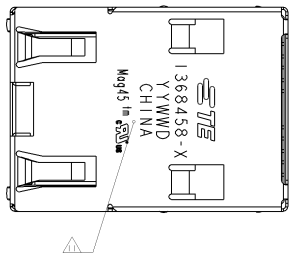
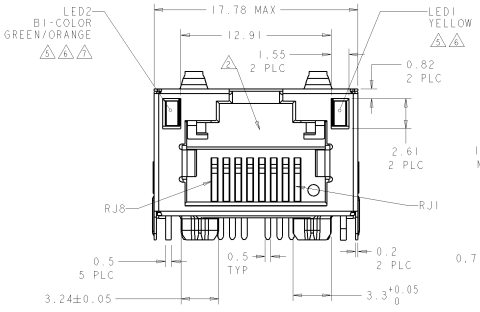
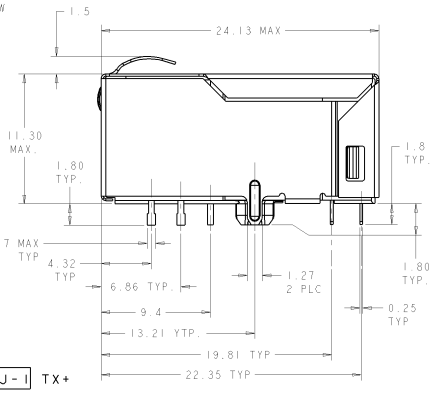
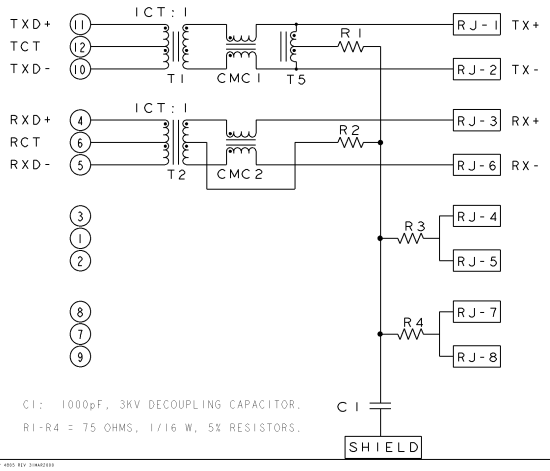


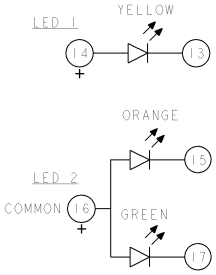






114 10/100 BASE-T CIRCUIT





1 MATERIALS:
-HOUSING: HIGH TEMPERATURE NYLON, BLACK, UL 94V-0
-SHIELD: 0.20mm THICK, BRASS PREPLATED WITH 1.27µm MIN SEMI-BRIGHT NICKEL; POST-DIPPED WITH 2µm MIN SAC 305 ALLOY LEAD FREE SOLDER (TIN PRIMARY, 3% SILVER, 0.5% COPPER)
-CONTACT TAILS: 0.25mm THICK, PHOSPHOR BRONZE, 1.27 µm MIN OVERALL NICKEL UNDERPLATE, 3µm MIN TIN PLATE
-MOD JACK CONTACTS: 0.25mm THICK, PHOSPHOR BRONZE, 1.27 µm MIN OVERALL NICKEL UNDERPLATE, WITH 0.76µm MIN LOCALIZED GOLD PLATE AT PLUG INTERFACE
-LIGHT EMITTING DIODE (LED): DIFFUSED EPOXY LENS, 0.5mm X 0.5mm CARBON STEEL WIREFRAME LEADS PREPLATED WITH 2.03µm MIN. SILVER PLATE OVER 1.02µm MIN. NICKEL OVER 1.02µm MIN. COPPER UNDERPLATE; LEADS POST-PLATED WITH 3.05µm MIN. MATTE TIN.
-LIGHT PIPE: POLYCARBONATE

2 RJ45 JACK CAVITY CONFORMS TO FCC RULES AND REGULATIONS PART 68, SUB-PART F.

3 MAGNETICS:
-IMPEDANCE: 100 OHMS
-TRANSMIT OPEN CIRCUIT INDUCTANCE (OCL): 350µH (MIN) @100KHz, 0.1 VRMS WITH 8 mA DC BIAS.
-TURNS RATIO (CHIP:CABLE): TX 1:1, RX: 1:1
PERFORMANCE:

FREQUENCY	INSERTION LOSS (dB MAX)	RETURN LOSS (dB MIN) CIRCUIT IMPEDANCE = 100 OHMS ±15%	COMMON MODE REJECTION RATIO (dB MIN)	CROSSTALK ATTENUATION (dB MIN)
0.5 MHz-30 MHz	1.3	18	33	43
30.1 MHz-60 MHz		18-20 log(f/30) f IS FREQUENCY IN MHz		
60.1 MHz-80 MHz		12		38
ALL MAGNETIC ELECTRICAL CHARACTERISTICS RATED @ 25°C				

DIELECTRIC (ISOLATION VOLTAGE):
-2250 VDC (1 mA CUTOFF CURRENT) FOR 60 SECONDS DURATION BETWEEN CABLE CONTACTS AND PCB CONTACTS (INCLUDING SHIELD).
-1500 VRMS (10mA CUTOFF CURRENT) FOR 60 SECONDS DURATION BETWEEN CABLE CONTACTS AND PCB CONTACTS (INCLUDING SHIELD).
-ALL BRIDGED ON EITHER SIDE OF MAGNETICS PACKAGE FOR RJ-45 CONTACTS.
OPERATING TEMPERATURE: FROM 0° TO +70°C.

4 THE MAGNETICS ARE ASYMMETRICAL, AND THEREFORE ARE NOT AUTO-MDI/MDIX CAPABLE.

5 LED COMPLIANT WITH IEC60825-1 SAFETY OF LASER PRODUCTS. WHEN OPERATED UP TO 20mA.

6 LED PEAK WAVELENGTH: GREEN = 565±5nm
YELLOW = 591±5nm
ORANGE = 607±5nm

7 LED 2 WILL EMULATE "YELLOW" LIGHT WHEN BOTH GREEN AND ORANGE DIODES ARE DRIVEN AT CONSTANT CURRENT (20mA RECOMMENDED) TO INDICATE THE THIRD COLOR STATES.

8 ALL DIMENSIONS NOMINAL UNLESS OTHERWISE NOTED.

9. 1368458-1 SHOWN UNLESS OTHERWISE NOTED.

10 RJ45 MOD PLUG SELECTIVE - THIS CONNECTOR UTILIZES STAINLESS STEEL SPRING MEMBER WHICH PREVENTS THE INSERTION OF A RJ11 (6 POSITION) PLUG INTO THE JACK PORT, WHILE ALLOWING A RJ45 (8 POSITION) PLUG TO MATE FREELY.

WARNING: THIS FEATURE WAS DEVELOPED FOR TYPICAL PLUG INSERTION FORCES. EXCESSIVE INSERTION FORCE MAY OVERCOME THE SELECTIVE FEATURES AND DAMAGE THE CONNECTOR.

11 TE CONNECTIVITY LOGO, PART NUMBER, DATE CODE, COUNTRY OF ORIGIN, AGENCY APPROVAL MARKING LOGO LOCATED IN THE APPROXIMATE AREA SHOWN. DATE CODE YY IS YEAR, WW IS WORK WEEK, D IS DAY OF WEEK, WITH SUNDAY=1

12 APPLIES ONLY TO 1368458-2.

TOP AND SIDES	1368458-2
TOP ONLY	1368458-1
GROUND TABS	PART NO.

REVISIONS

LTR	DESCRIPTION	DATE	DWN	APVD
E	ECO-11-014530	01JUL2011	PP	LJ

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: MM
TOLERANCES UNLESS OTHERWISE SPECIFIED: 1 PLC ±0.25, 2 PLC ±0.25, 3 PLC ±0°, 4 PLC ±0°
MATERIAL: SEE 11
FINISH: SEE 11

DWN TESEP2003
CHK TESEP2003
APVD RANDY SIMMONS 07FEB2004
PRODUCT SPEC K. BEESER
108-2207
APPLICATION SPEC
114-
WEIGHT -
CUSTOMER DRAWING

TE Connectivity

IXI MAG45(TM), MODULAR JACK, 114 SERIES 10/100 CIRCUIT, SHIELDED, LEDS, SELECTIVE CAPABILITY

SIZE A | CAGE CODE 00779 | DRAWING NO C-1368458 | RESTRICTED TO -
SCALE NTS | SHEET 1 OF 2 | REV E

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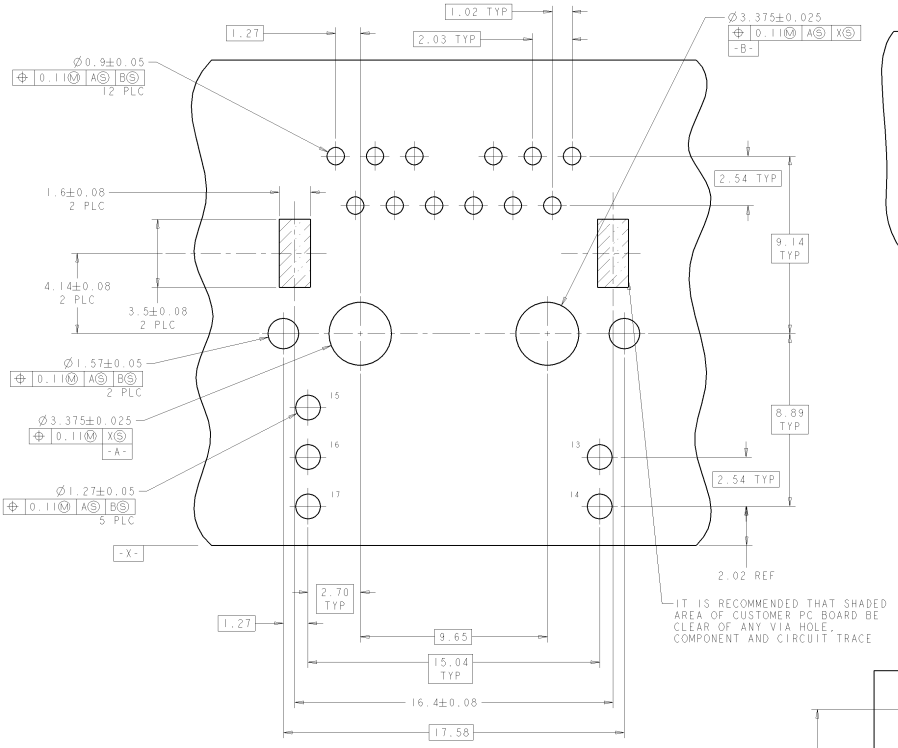
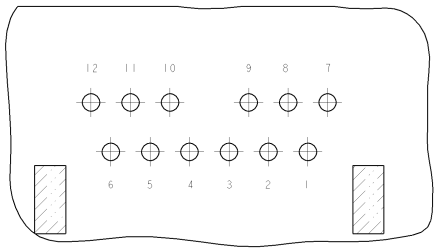
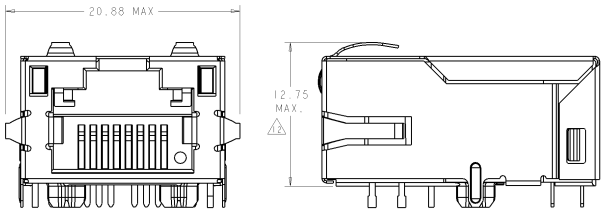


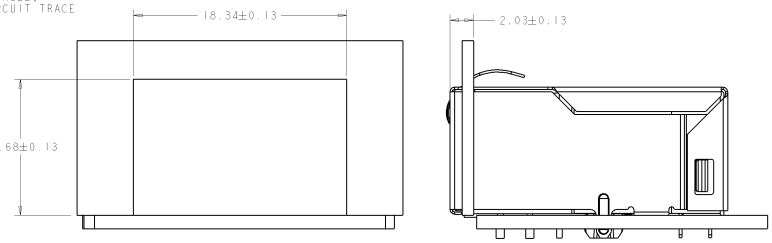
SUGGESTED PCB LAYOUT
(COMPONENT SIDE)



PIN DESIGNATIONS



1368458-2



SUGGESTED PANEL OPENING

THIS DRAWING IS A CONTROLLED DOCUMENT.	DWN: YSEY2003	TE Connectivity	
DIMENSIONS: MM	CHK: RANDY SIMMONS YSEY2003		
TOLERANCES UNLESS OTHERWISE SPECIFIED: 1 PLC ±- ; 2 PLC ±0.25 ; 3 PLC ±0.25 ; 5 PLC ±- ; 12 PLC ±-	APVD: K. BEEGER 4FEB2004	NAME: 1X1 MAG45(TM), MODULAR JACK, 114 SERIES (D/100 CIRCUIT, SHIELDED, LEDS, SELECTIVE CAPABILITY	
MATERIAL: -	PRODUCT SPEC: -	SIZE: A	CAGE CODE: 00779
FINISH: -	APPLICATION SPEC: -	DRAWING NO: C-1368458	RESTRICTED TO: -
	WEIGHT: -	SCALE: NTS	SHEET: 2 OF 2
	CUSTOMER DRAWING		REV: E

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