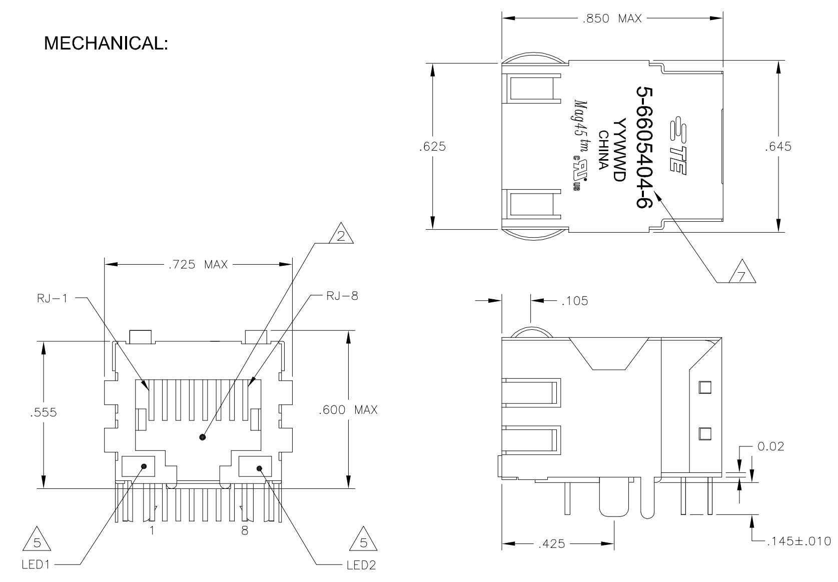
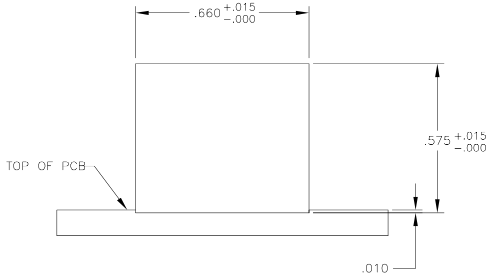
LOC	DIST
AA	22

REVISIONS

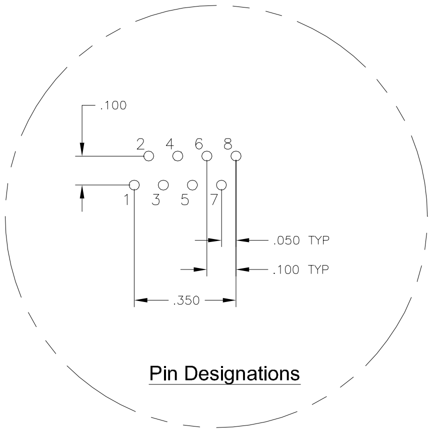
P	LTR	DESCRIPTION	DATE	DWN	APVD
	B	ECO-08-022357	01DEC2008	QL	TX
	C	ECO-11-015766	30MAY2011	EL	LR

MECHANICAL:

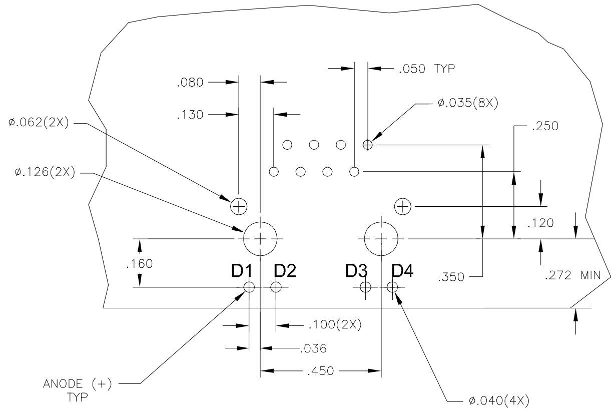




Suggested Panel Cutout



Pin Designations

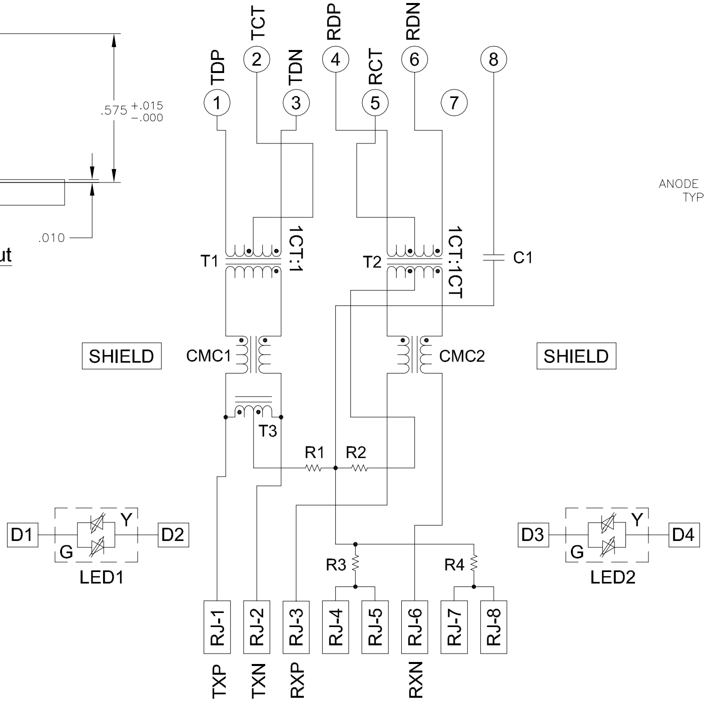


Suggested PCB Layout

(Component Side)

ELECTRICAL:

414ETP1 SERIES MAGNETIC CIRCUIT 3 6



C1 = 1000 pF, 2kV DECOUPLING CAPACITOR
R1-R4 = 75 OHMS, 1/16 W, 5% RESISTORS

1. MATERIALS:
HOUSING - THERMOPLASTIC PET POLYESTER FLAMMABILITY RATING UL 94V-0.
SHIELD - .010" THICK, C26800 BRASS PREPLATED WITH 30µINCH SEMI-BRIGHT NICKEL. SOLDER TABS POST DIPPED WITH 100µINCH MIN SAC SOLDER.
MOD JACK CONTACTS - 0.0157 X 0.018" PHOSPHOR BRONZE, 50µINCH MIN OVERALL NICKEL UNDERPLATE, WITH SELECT 50µINCH MIN HARD GOLD FINISH PLATE SOLDERTAILS WITH 100µINCH MIN MATTE TIN AND/OR SAC SOLDER DIP.
LIGHT EMITTING DIODE(LED) - DIFFUSED EPOXY LENS, .020" x .020" CARBON STEEL WIREFRAME LEADS PRE-PLATED WITH 80µINCH SILVER OVER 40µINCH NICKEL UNDERPLATE OVER 40µINCH COPPER UNDERPLATE. POST-PLATED WITH 100µINCH MIN MATTE TIN AND/OR SAC SOLDER DIP OR PURE TIN SOLDER DIP.

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

3. MAGNETICS
-IMPEDANCE: 100 OHMS
-TURNS RATIO (CHIP:CABLE): TX = 1:1, RX = 1:1
-OPEN CIRCUIT INDUCTANCE (OCL): 350µH MIN @100kHz, 0.1VRMS,
  8mADC BIAS FROM -40°C TO +85°C, TX AND RX
-PERFORMANCE @ 25°C:
  INSERTION LOSS (IL): 1.1dB MAX FROM 0.5MHz TO 100MHz
  RETURN LOSS (RL): 18dB MIN FROM 0.5MHZ TO 30MHz
    18-20LOG(f/30)dB MIN FROM 30.1MHz TO 60MHz
    12dB MIN FROM 60.1MHz TO 80MHz
  CROSSTALK ATTENUATION: 35dB MIN FROM 0.5MHz TO 40MHz
    33-20*LOG(f/50)dB MIN FROM 40.1MHz TO 100MHz
  COMMON MODE REJECTION RATIO (CMRR): 30dB MIN FROM 0.5MHz TO 100MHz
-ISOLATION VOLTAGE:2250VDC (MAX) FOR 60 SECONDS WITH A RISE TIME OF 500V/SEC.

4. OPERATING TEMPERATURE: FROM -40°C TO +85°C INDUSTRIAL TEMPERATURE RATED.

5. LEDS ARE DRIVEN WITH CONSTANT CURRENT AT APPROX 20 mA
LED COLOR: DOMINANT WAVELENGTH (λD): GREEN 568 nm TYP @ IF=20 mA
FORWARD VOLTAGE (VF): GREEN 2.2V TYP @ IF=20 mA
DOMINANT WAVELENGTH (λD): YELLOW 588 nm TYP @ IF=20 mA
FORWARD VOLTAGE (VF): YELLOW 2.1V TYP @ IF=20 mA

6. INDICATED CONNECTIONS ARE FOR NIC CONFIGURATION. THE MAGNETICS ARE ASYMMETRIC, AND THEREFORE DO NOT SUPPORT AUTO-MDI/MDIX.

7. TE CONNECTIVITY LOGO, PART NUMBER, DATE CODE, COUNTRY OF ORIGIN AND AGENCY APPROVAL MARKING IN APPROXIMATE LOCATION SHOWN.

8. THE PART IS RECOMMENDED FOR WAVE SOLDERING PROCESS, PREHEAT TEMPERATURE IS 120°C TO 160°C, 120 SECONDS TO 180 SECONDS, PEAK WAVE SOLDERING TEMPERATURE IS 260°C MAX, 10 SECONDS MAX.

LED1	LED2	PART NUMBER
GREEN/YELLOW	GREEN/YELLOW	5-6605404-6

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: INCHES

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ± -
1 PLC ± -
2 PLC ± .010
3 PLC ± .005
4 PLC ± -
ANGLES ± -

MATERIAL 1
FINISH 1

DWN G. ATTADIA - DOCK5 07MAR2005
CHK D. FAROLE 07MAR2005
APVD D. FAROLE 07MAR2005
PRODUCT SPEC 108-2100
APPLICATION SPEC -
WEIGHT -

TE Connectivity

NAME
1X1 MAG45(TM), MODULAR JACK, 4N2ETP1
INDUSTRIAL TEMP SCHEMATIC, 414ETP1 MAGNETIC
CIRCUIT, SHIELDED, WITH BICOLOR LEDS

SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A1	00779	C-6605404	-

CUSTOMER DRAWING
SCALE NTS
SHEET 1 OF 1
REV C