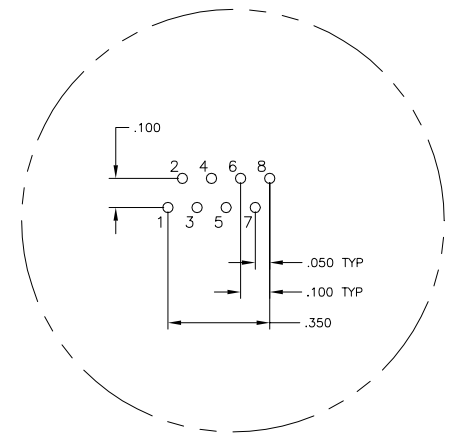
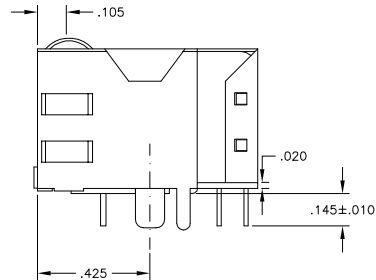
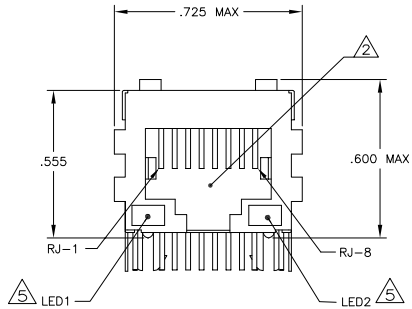
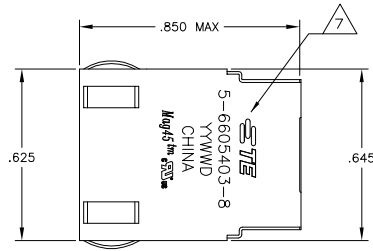
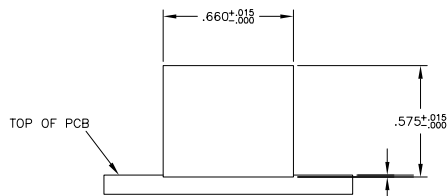


MECHANICAL:

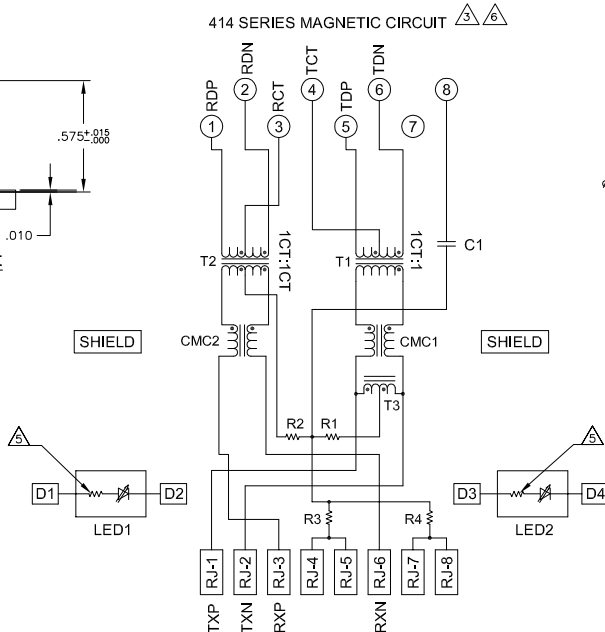


Pin Designations

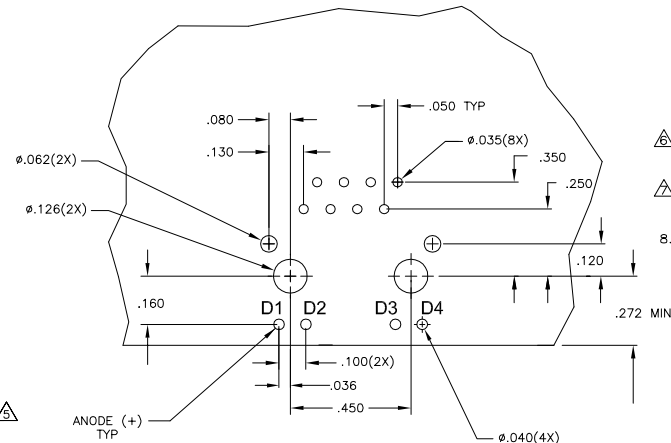


Suggested Panel Cutout

414 SERIES MAGNETIC CIRCUIT



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



Suggested PCB Layout (Component Side)

**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.

**MAGNETICS**  
-IMPEDANCE: 100 OHMS  
-TURNS RATIO (CHIP-CABLE): TX = 1:1, RX = 1:1  
-OPEN CIRCUIT INDUCTANCE (OCL): 350nH MIN @100kHz, 0.1VRMS, 8mADC BIAS FROM 0°C TO 70°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  
33-20LOG(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 0°C TO +70°C.

THE 250 OHM LED RESISTORS ARE OPTIONAL, PLEASE SEE CHART FOR PRESENCE OR ABSENCE OF LED RESISTORS. IF THE LED WITHOUT 250 OHM RESISTORS, LED IS DRIVEN WITH CONSTANT CURRENT AT APPROX 20mA.  
LED COLOR : DOMINANT WAVELENGTH (AD): GREEN 568 nm TYP @ IF=20mA  
FORWARD VOLTAGE (VF): GREEN 2.2V TYP @ IF=20mA  
DOMINANT WAVELENGTH (AD): YELLOW 588 nm TYP @ IF=20mA  
FORWARD VOLTAGE (VF): YELLOW 2.1V TYP @ IF=20mA.  
IF THE LED WITH 250 OHM RESISTORS, LED IS DRIVEN WITH 5V VOLTAGE AND THE MAX OPERATING CURRENT IS 20mA.  
LED COLOR : DOMINANT WAVELENGTH (AD): GREEN 568 nm TYP @ VF=5V  
FORWARD CURRENT (IF): GREEN 12 mA TYP @ VF=5V  
DOMINANT WAVELENGTH (AD): YELLOW 588 nm TYP @ VF=5V  
FORWARD CURRENT (IF): YELLOW 13 mA TYP @ VF=5V

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

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

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

YES	GREEN	YES	GREEN	YES	6-6605403-1
YES	GREEN	NO	YELLOW	NO	5-6605403-8
NO	GREEN	YES	GREEN	YES	1-6605403-1
2KV DECOUPLING CAPACITOR	LED1	250 OHMS RESISTOR	LED2	250 OHMS RESISTOR	PART NUMBER

THIS DRAWING IS A CONTROLLED DOCUMENT.		REV. # ATTADIA - 07/20/2003		REV. # 07/20/2003	
DIMENSIONS: INCHES		REV. # ATTADIA - 07/20/2003		REV. # 07/20/2003	
0 P.C. ± .010		1 P.C. ± .010		2 P.C. ± .010	
3 P.C. ± .010		4 P.C. ± .010		5 P.C. ± .010	
MATERIAL		FINISH		WEIGHT	
SCALE		CUSTOMER DRAWING		RESTRICTED TO	

DATE	REV	BY	APPR
25MAR11	RK	HMR	
30MAY2011	EL	LR	

REV. #	DATE	DESCRIPTION
E1		REVISED PER ECO-11-005140
F		ECO-11-015766

REV. #	DATE	DESCRIPTION
1		1X1 MGA4S(TM), MODULAR JACK, 4N2 SCHEMATIC, 414 SERIES CIRCUIT, SHIELDED, OPTIONAL DECOUPLING CAPACITOR, WITH LEADS
108-2100		APPLICATION SPEC
SIZE	DATE CODE	DRAWING NO
A1	00779	C=6605403
SCALE	NTS	SHEET 1 OF 1