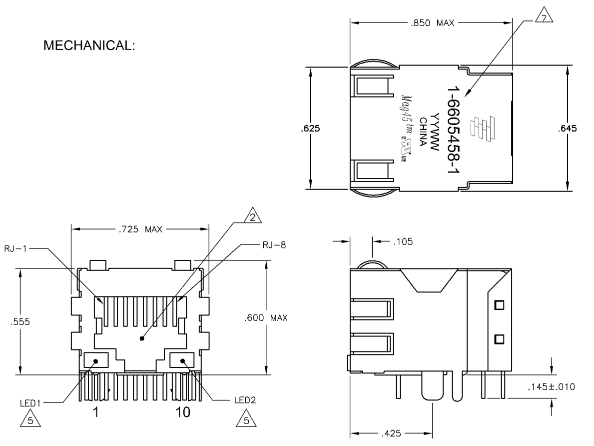
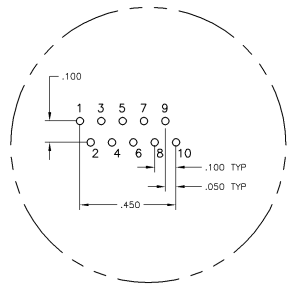
LOC	DIST
AA	22

REVISIONS

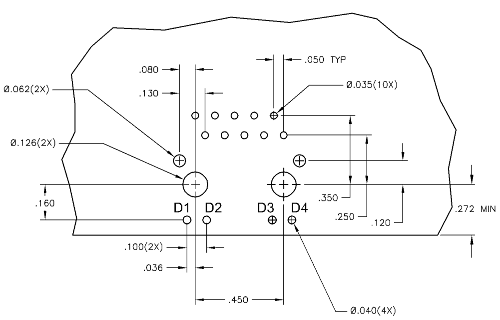
P	LTR	DESCRIPTION	DATE	DWN	APVD
	B	REV PER ECO-09-000305	10DEC2008	VL	LR

MECHANICAL:



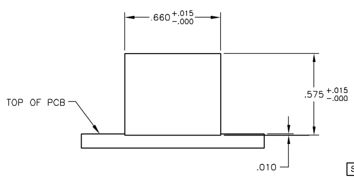


Pin Designations



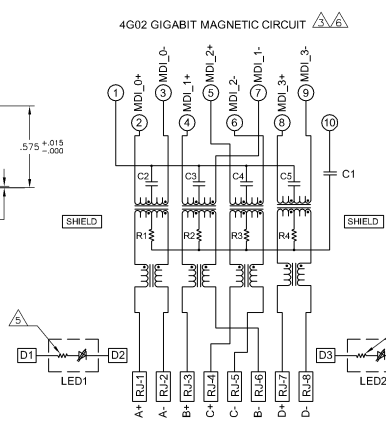
Suggested PCB Layout

(Component Side)



Suggested Panel Cutout

4G02 GIGABIT MAGNETIC CIRCUIT



C1 =1000 pF, 2kV CAPACITOR

R1-R4 = 75 OHMS, 1/16 W RESISTORS

C2-C5 = 0.1 uF, 50V CAPACITORS

1 MATERIALS:
HOUSING - THERMOPLASTIC PET POLYESTER FLAMMABILITY RATING UL 94V-0.
SHIELD - .010" THICK, C26800 BRASS PREPLATED WITH 30μINCH MIN 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): 1:1 ALL FOUR PAIRS
-OPEN CIRCUIT INDUCTANCE (OCL): 350μH MIN @100kHz, 0.1VRMS, 8mADC BIAS FROM 0°C TO 70°C, ALL FOUR PAIRS
-ALL FOUR PAIRS BI-DIRECTIONAL
-PERFORMANCE @ 25°C:
INSERTION LOSS (IL): 1.1dB MAX FROM 0.5MHz TO 100MHz
RETURN LOSS (RL): 18dB MIN FROM 0.5MHZ TO 40MHz
12-20LOG(f/80)dB MIN FROM 40.1MHz TO 100MHz
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: COMPLIES WITH IEEE802.3 2002, PARA 40.6.1.1, ITEM b.

4 OPERATING TEMPERATURE: FROM 0°C - +70°C.

5 LEDS WITH BUILT-IN RESISTOR
LEDS ARE DRIVEN WITH 5V VOLTAGE AND THE MAX OPERATING CURRENT IS 20mA.
LED COLOR: DOMINANT WAVELENGTH (λD): GREEN 568 nm TYP @ VF=5V
FORWARD CURRENT (IF): GREEN 12mA TYP @ VF=5V

6 THE MAGNETICS ARE SYMMETRICAL, AND SUPPORT AUTO-MDI/MDIX.

7 TYCO ELECTRONICS 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 5	LED2 5	PART NUMBER
GREEN	GREEN	1-6605458-1

DIMENSIONS: INCHES

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

MATERIAL 1 | FINISH 1

DWN L. VARELA - DOCK5 09MAR2005
CHK D. FAROLE 09MAR2005
APVD D. FAROLE 09MAR2005
PRODUCT SPEC 108-2100
APPLICATION SPEC -
WEIGHT -

Tyco Electronics | Tyco Electronics Corporation ChangPing,China

NAME: 1X1 MAG45(TM), MODULAR JACK (10 PIN HORIZ), 4G2 SCHEMATIC, 4G02 GIGABIT CIRCUIT, SHIELDED, DECOUPLING CAPACITOR, WITH RESISTOR LEDS

SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A1	00779	C-6605458	-

CUSTOMER DRAWING | SCALE NTS | SHEET 1 OF 1 | REV B

AMP 4805 REV 31MAR2000