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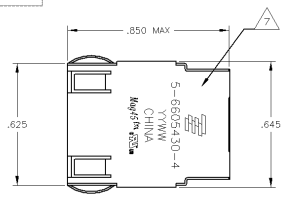
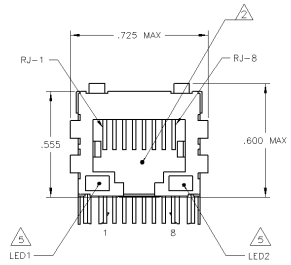
LOC	DIST
AA	22

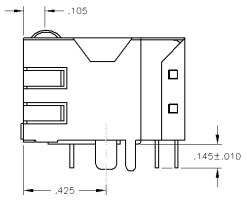
REVISIONS

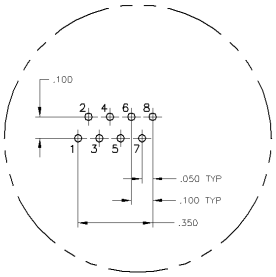
#	LTR	DESCRIPTION	DATE	DWN	APVD
	C	REV PER ECO-08-036655	04SEP2008	RQ	TX

MECHANICAL:









Pin Designations

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): TX = 1:1, RX = 1:1
-OPEN CIRCUIT INDUCTANCE (OCL): 350µH 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
33-20*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 23.5.1.1, ITEM b.

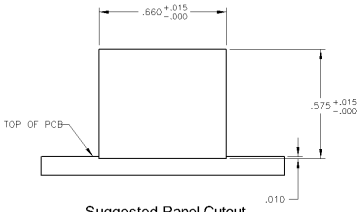
4. OPERATING TEMPERATURE: FROM 0°C TO +70°C.

5. LED WITH 250 OHM RESISTORS,LED IS 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 12 mA TYP @ VF=5V
DOMINANT WAVELENGTH (λD): YELLOW 588 nm TYP @ VF=5V
FORWARD CURRENT (IF): YELLOW 13 mA TYP @ VF=5V

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

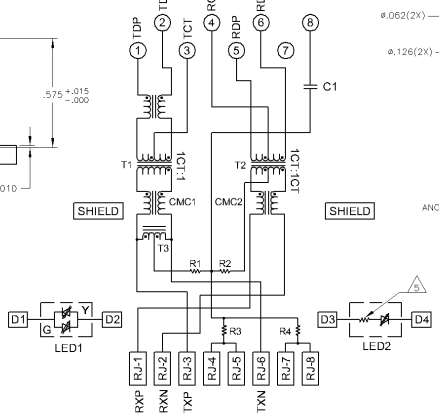
7. TYCO ELECTRONICS LOGO, PART NUMBER, DATE CODE, COUNTRY OF ORIGIN AND AGENCY APPROVAL MARKING IN APPROXIMATE LOCATION SHOWN.

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



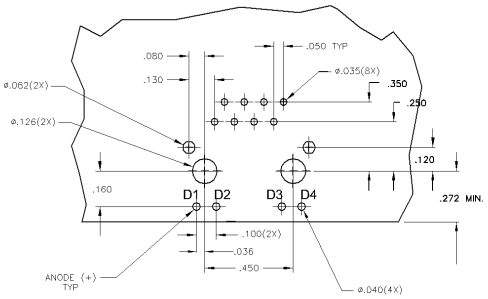
Suggested Panel Cutout

ELECTRICAL:
457 SERIES MAGNETIC CIRCUIT



C1 = 1000 pF, 3kV DECOUPLING CAPACITOR

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



Suggested PCB Layout
(Component Side)

GREEN/YELLOW	GREEN	5-6605430-4
LED1	LED2	PART NUMBER

THIS DRAWING IS A CONTROLLED DOCUMENT.

DRN: G. ATTADIA - 20OCT03
CHK: D. FAROLE 08MAR2005
APVD: D. FAROLE 08MAR2005
PRODUCT SPEC: 108-2100
APPLICATION SPEC: –
WEIGHT: –
CUSTOMER DRAWING

Tyco Electronics Corporation
ChangPing, China

1X1 MAG45(TM), MODULAR JACK, 4H2 SCHEMATIC, 457 MAGNETIC CIRCUIT, SHIELDED, DECOUPLING CAPACITOR, WITH LEDS

SIZE: A1 | CAGE CODE: 00779 | DRAWING NO: 6605430 | RESTRICTED TO: –

SCALE: NTS | SHEET 1 OF 1 | REV C

MAP 4805 REV 21MAR2000