

8

7

6

5

4

3

2

1

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RELEASED FOR PUBLICATION

LOC AA

DST 22

REV PER ECO-09-004705

DATE 18FEB2009

DM VL

APR LR

MECHANICAL:

6610005-2

YYWW

CHINA

Mag45™

TOP OF PCB

1.265^{+0.015}_{-0.000}

.575^{+0.015}_{-0.000}

.010

1X2 SUGGESTED PANEL CUTOUT

1.33 MAX

1.23

.60

.110

.550

RJ8

1

10

RJ1

.850 MAX

.141

.050

.425

A

BOTTOM TABS
2 PLC

.05
2 PLC

.13
2 PLC

MATERIALS:

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

MAGNETICS:

-APPLICATION: 10/100/1000 BASE-T

-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 4.0MHz

12-20LOG(f/80)dB MIN FROM 4.01MHz TO 100MHz

CROSSTALK ATTENUATION: 35dB MIN FROM 0.5MHz TO 4.0MHz

33-20LOG(f/50)dB MIN FROM 4.01MHz TO 100MHz

COMMON MODE REJECTION RATIO(CMRR): 30dBMIN FROM 0.5MHz TO 100MHz

-ISOLATION VOLTAGE: THE CONNECTOR SHALL PROVIDE DC ISOLATION USING 2250VDC (MAX) FOR 60 SECONDS WITH A RISE TIME OF 500 V/SEC AND WITH ALL PORTS CONNECTED.

ALL DIMENSIONS NOMINAL UNLESS OTHERWISE NOTED.

THE 250 OHM RESISTOR IS OPTIONAL, PLEASE SEE CHART FOR PRESENCE OR ABSENCE OF LED RESISTORS.

IF LEDS WITHOUT 250 OHM RESISTOR, LEDS ARE DRIVEN WITH CONSTANT CURRENT AT APPROX 20 mA

LED COLOR: DOMINANT WAVELENGTH (λ D): GREEN 568 nm TYP @ IF=20 mA

FORWARD VOLTAGE (VF): GREEN 2.2V TYP @ IF=20 mA

DOMINANT WAVELENGTH (λ D): YELLOW 588 nm TYP @ IF=20 mA

FORWARD VOLTAGE (VF): YELLOW 2.1V TYP @ IF=20 mA

IF LEDS WITH BUILT-IN RESISTOR, LEDS ARE DRIVEN WITH 5V VOLTAGE AND THE MAX OPERATING CURRENT IS 20mA.

LED COLOR: DOMINANT WAVELENGTH (λ D): GREEN 568 nm TYP @ VF=5V

FORWARD CURRENT (IF): GREEN 12mA TYP @ VF=5V

DOMINANT WAVELENGTH (λ D): YELLOW 588 nm TYP @ VF=5V

FORWARD CURRENT (IF): YELLOW 13mA TYP @ VF=5V

INDICATED MAGNETIC CONNECTIONS ARE SYMMETRICAL TO ACCOMODATE CONNECTIONS FOR EITHER NIC OR HUB CONFIGURATION, OR SUPPORT AUTO-MDI/MDIX.

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

THESE PARTS ARE 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.

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

.145±.010	YES	GREEN/YELLOW	NO	GREEN/YELLOW	NO	5-6610005-6
.125±.010	NO	GREEN/YELLOW	NO	GREEN	NO	2-6610005-5
.125±.010	NO	GREEN/YELLOW	NO	GREEN	YES	2-6610005-4
.145±.010	YES	YELLOW	YES	GREEN	YES	2-6610005-2
.145±.010	NO	GREEN	YES	GREEN/YELLOW	NO	1-6610005-5
.145±.010	NO	GREEN	YES	GREEN	YES	1-6610005-1
.145±.010	NO	GREEN/YELLOW	NO	GREEN/YELLOW	NO	6610005-6
.145±.010	NO	GREEN/YELLOW	NO	GREEN	YES	6610005-4
.145±.010	NO	YELLOW	YES	GREEN	YES	6610005-2

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DIM A

0 PLC ± -

1 PLC ± -

2 PLC ± .010

3 PLC ± .005

4 PLC ± -

ANGLES ± -

FINISH

DRN R.GRZYBOWSKI 13JAN05

CHK D.FAROLE 13JAN05

NAME D.FAROLE 13JAN05

PRODUCT SPEC 108-2100

APPLICATION SPEC

SIZE A1

DATE CODE 00779

DRAWING NO C=6610005

RESTRICTED TO

CUSTOMER DRAWING

SCALE 4:1

SHEET 1 OF 2

REV G

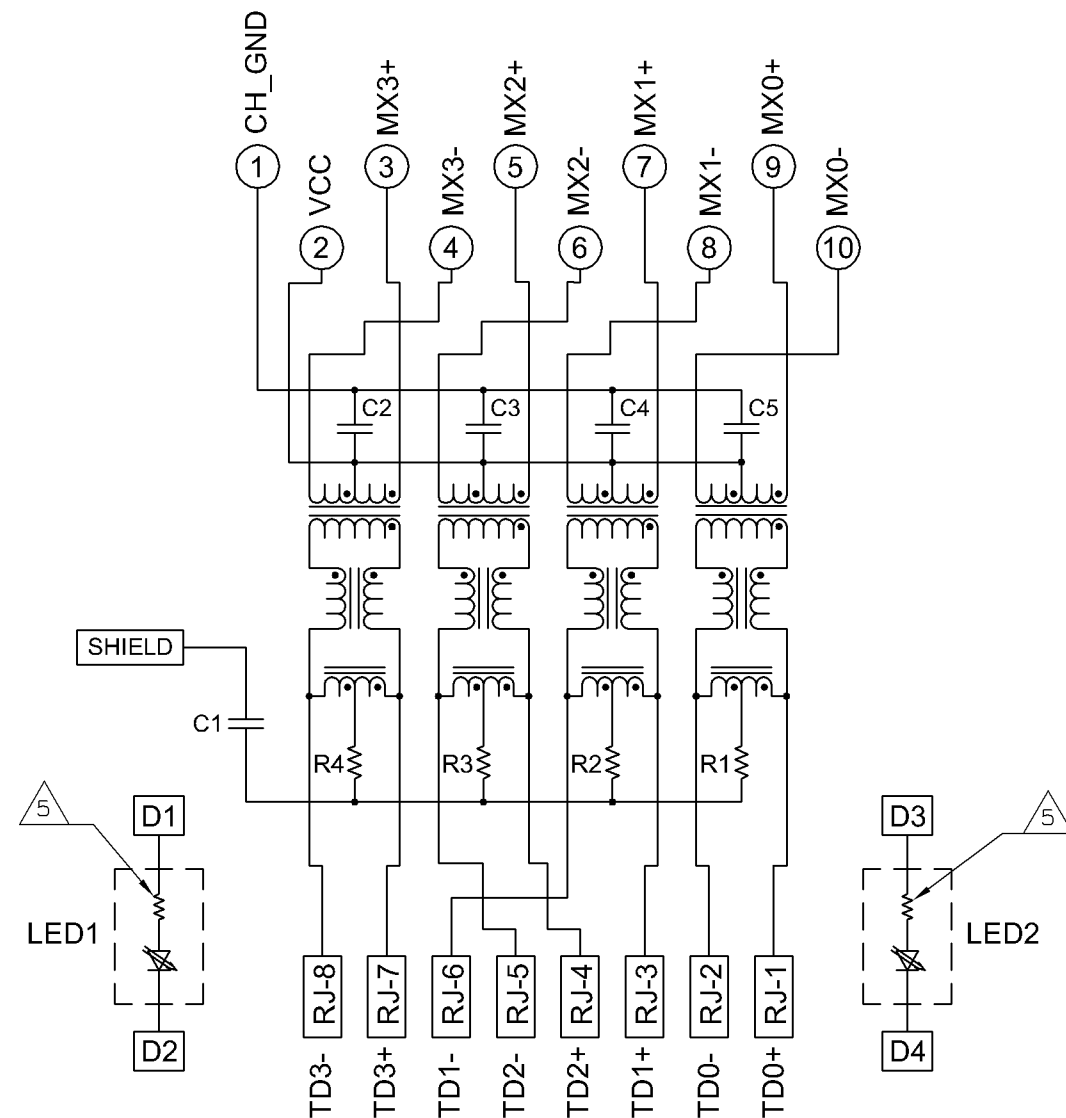
TYCO ELECTRONICS CORPORATION

ChangPing, China

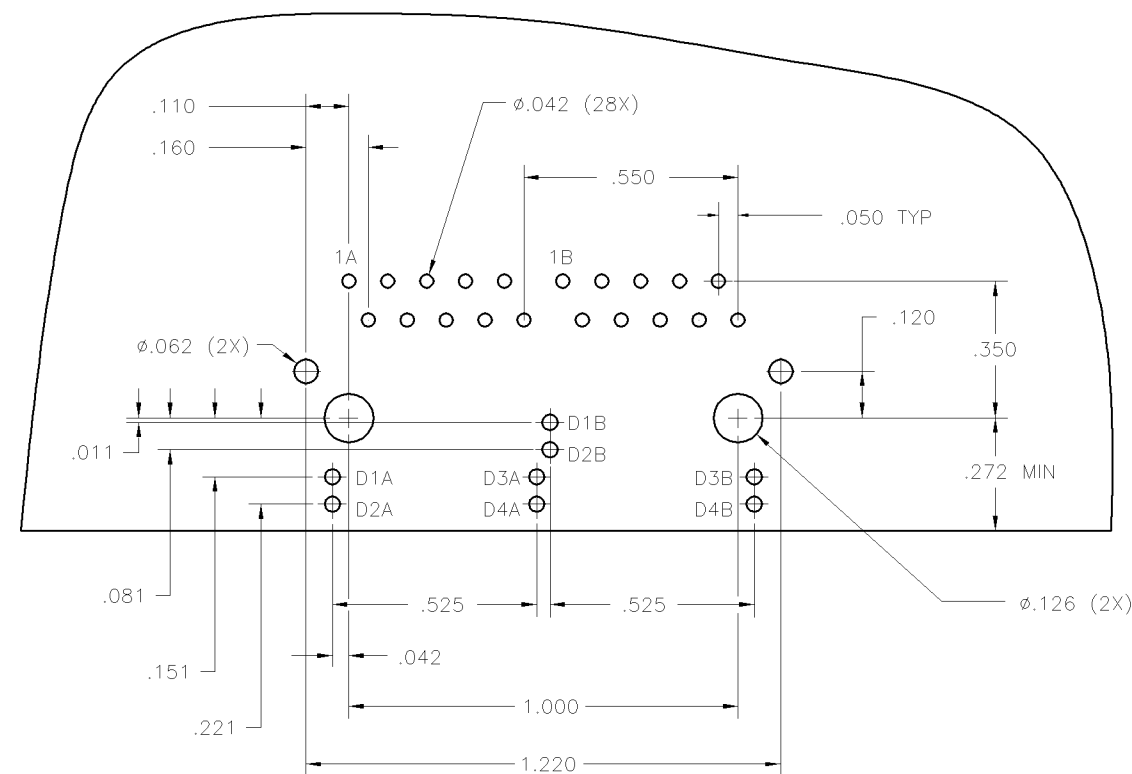
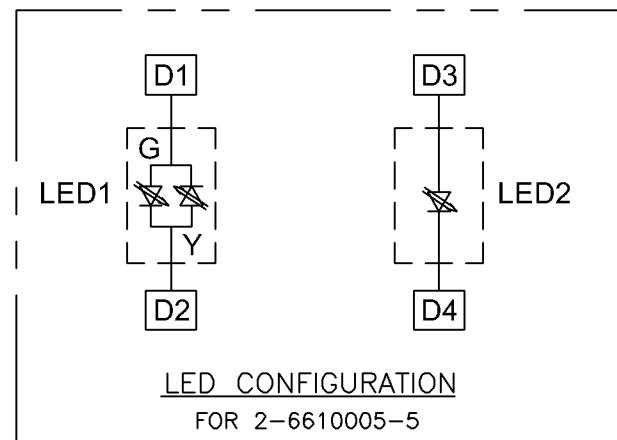
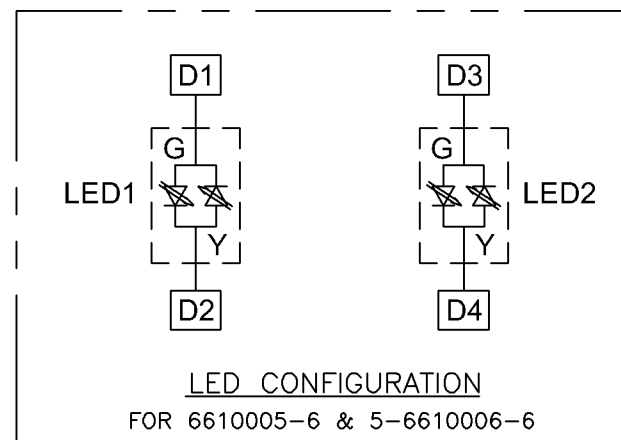
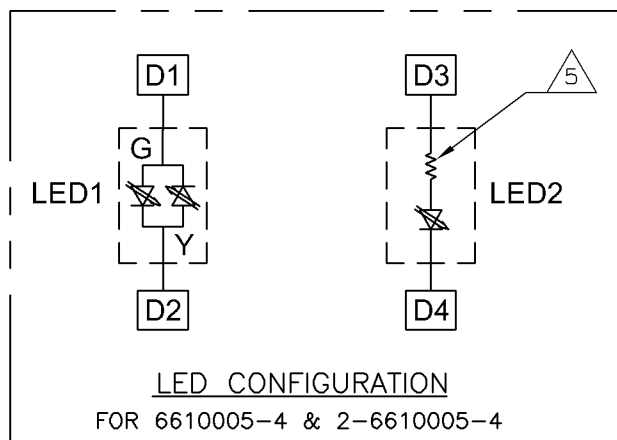
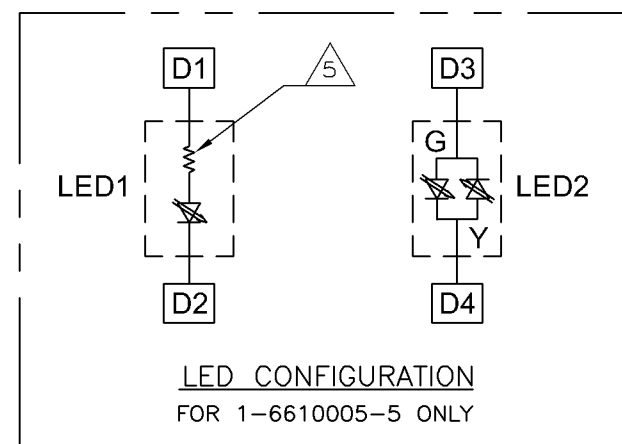
1X2 MAG45(TM) MODULAR JACK, 7G4 SCHEMATIC (10 PIN HORIZONTAL), 05 SERIES GIGABIT CIRCUIT, SHIELDED, WITH LEDS

AMP 4805 REV 31MAR2000

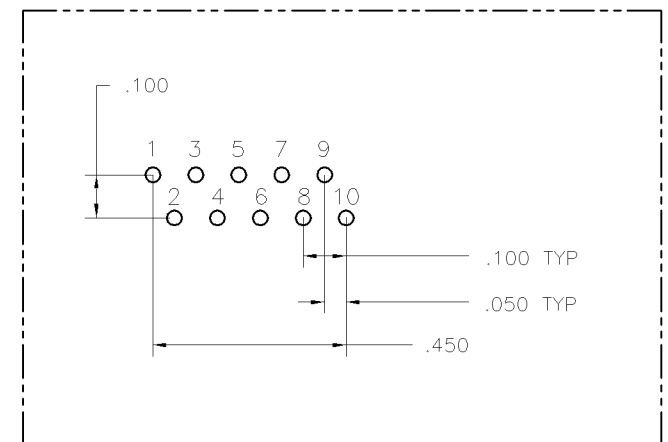
7G05 GIGABIT SCHEMATIC 3 6



C1 = 1000 pF, 2kV DECOUPLING CAPACITOR
R1-R4 = 75 OHMS, 1/16 W, 5% RESISTORS
C2-C5 = 0.1uF, 10%, 50V, X7R CAPACITORS



SUGGESTED PCB LAYOUT
(Component Side)



PIN DESIGNATIONS
(APPLIES TO ALL PORTS)

THIS DRAWING IS A CONTROLLED DOCUMENT.		DRN R.GRZYBOWSKI 13JAN05	Tyco Electronics Corporation ChangPing, China	
DIMENSIONS: INCHES		CHK D.FAROLE 13JAN05	NAME D.FAROLE 13JAN05	
TOLERANCES UNLESS OTHERWISE SPECIFIED: 0 PLD ± - 1 PLD ± - 2 PLD ± .010 3 PLD ± .005 4 PLD ± - ANGLES ± - FINISH		PRODUCT SPEC 108-2100 APPLICATION SPEC - WEIGHT - MATERIAL -		
		SIZE A1		DATE CODE 00779
		DRAWING NO C=6610005		RESTRICTED TO G
		CUSTOMER DRAWING		SCALE 4:1
		SHEET 2		REV 2