

## Excellent Integrated System Limited

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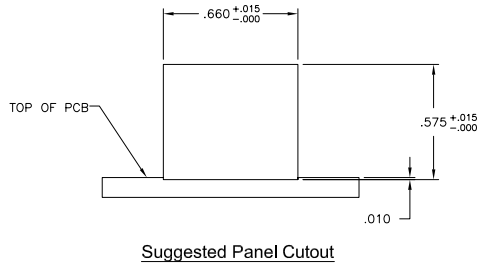
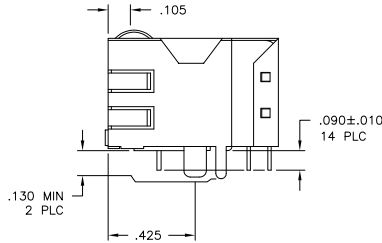
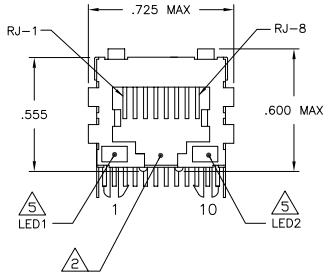
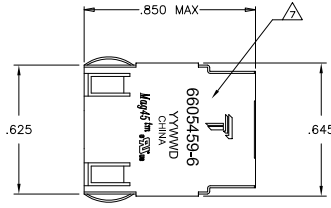
[Bel Fuse Inc.](#)  
[6605459-6](#)

For any questions, you can email us directly:  
[sales@integrated-circuit.com](mailto:sales@integrated-circuit.com)

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REVISIONS				
P	LR	DESCRIPTION	DATE	DRW / APP'D
E		LOGO CHANGE	23APR2013	KZ

**MECHANICAL:**



- ⚠️ **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. SOLDER TAILS 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.
- ⚠️ RJ45 JACK CAVITY CONFORMS TO FCC RULES AND REGULATIONS PART 68, SUB PART F.
- ⚠️ **MAGNETICS**  
-IMPEDANCE: 100 OHMS  
-TURNS RATIO (CHIP CABLE): 1:1 ALL FOUR PAIRS  
-OPEN CIRCUIT INDUCTANCE (OCL): 350pH MIN @100MHz, 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(I/F) 80dB MIN FROM 4.0MHz TO 100MHz  
  CROSSTALK ATTENUATION: 35dB MIN FROM 0.5MHz TO 40MHz  
  33-20\*LOG(I/F) 50dB MIN FROM 4.0MHz 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.
- ⚠️ **LEDS WITHOUT BUILT-IN RESISTOR**  
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
- ⚠️ INDICATED MAGNETIC CONNECTIONS ARE SYMMETRIC TO SUPPORT AUTO-MDI/MDIX.
- ⚠️ TRP CONNECTOR 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.

GREEN/YELLOW	GREEN/YELLOW	6605459-6
LED1	LED2	PART NUMBER

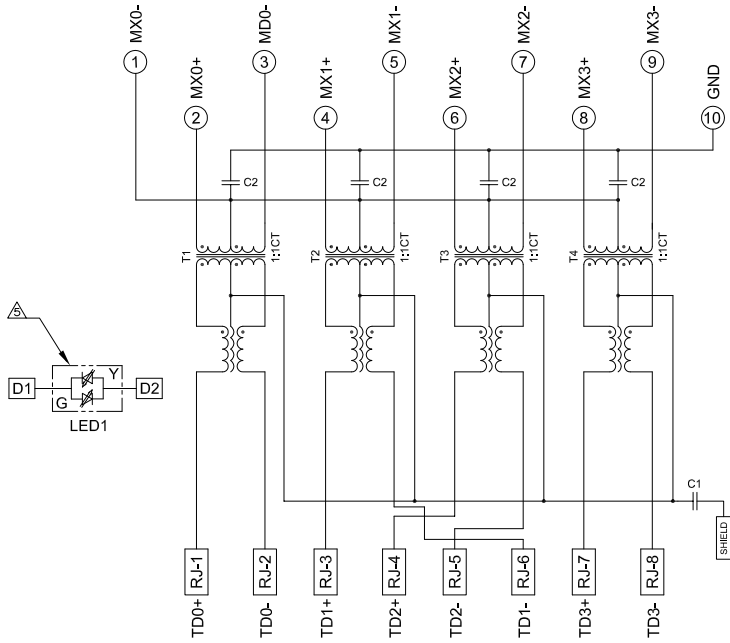
THIS DRAWING IS A CONTROLLED DOCUMENT.		DRW: VARELA	CHK: FAROLE	APP'D: FAROLE	DATE: 2100	SIZE: A2	SCALE: NTS	SHEET: 1 of 2	REV: E
DIMENSIONS: INCHES		TOLERANCES UNLESS OTHERWISE SPECIFIED:		PRODUCT SPEC: 108-2100		APPLICATION SPEC:		MATERIAL: CUSTOMER DRAWING	
0 PLC	± .005			NAME: 1X1 MAG45(TM), 4G08P1 GIGABIT ETHERNET		MAGNETIC SCHEMATIC (10 PIN HORIZ FOOTPRINT), SHIELDED, WITH BI-COLOR LEDS		RESTRICTED TO:	
1 PLC	± .010			APPLICATOR SPEC:					
2 PLC	± .015								
3 PLC	± .020								
4 PLC	± .025								
ANGLES	± .005								
MATERIAL: △		FINISH: △		WEIGHT: -		DATE CODE: 6605459			

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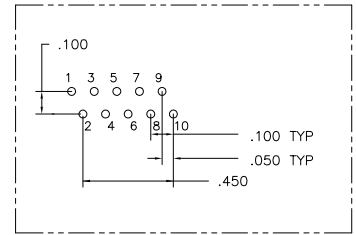
REVISIONS			
REV	LR	DESCRIPTION	DATE
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**ELECTRICAL:**

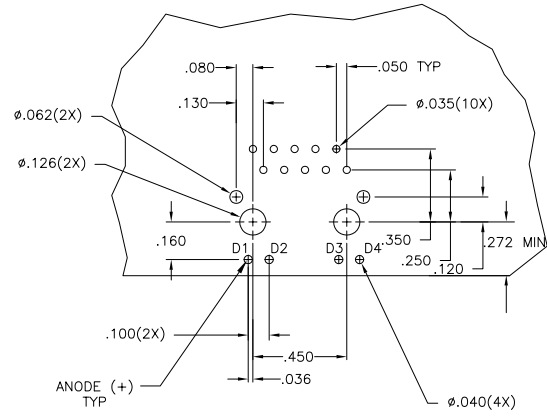
**4G08P1 GIGABIT Magnetic Circuit**



C1 = 1000 pF, 2kV CAPACITOR  
 C2-C5 = 470 pF, 50V CAPACITORS



Pin Designations



Suggested PCB Layout  
(Component Side)

THIS DRAWING IS A CONTROLLED DOCUMENT.		DATE: 08MARG2005	TRP connector Dongguan China
DRAWN BY: L. VAGELA		CHK BY: D. FAROLE	
DIMENSIONS: INCHES		PRODUCT SPEC: 108-2100	NAME: 1X1 MAG45(TM), 4G08P1 GIGABIT ETHERNET MAGNETIC SCHEMATIC (10 PIN HORIZ FOOTPRINT), SHIELDED, WITH BI-COLOR LEDS
TOLERANCES UNLESS OTHERWISE SPECIFIED:		APPLICATION SPEC: -	SIZE: A2
0 P.L.C. ± .005 1 P.L.C. ± .010 2 P.L.C. ± .015 3 P.L.C. ± .020 4 P.L.C. ± .025	MATERIAL: SEE SHEET 1 FINISH: SEE SHEET 1	WEIGHT: - ANGLE: - CUSTOMER DRAWING	CASE CODE: - DRAWING NO: 6605459 SCALE: NTS SHEET 2 OF 2 REV E