

THE INFORMATION CONTAINED HEREIN IS CONSIDERED PROPRIETARY TO BEL FUSE INC. AND SHALL NOT BE REPRODUCED, REPRODUCED OR DISCLOSED WITHOUT THE WRITTEN APPROVAL OF BEL FUSE INC.

LED1 POLARITY			LED2 POLARITY		
PIN 13	PIN 14	COLOR	PIN 15	PIN 16	COLOR
-	+	YELLOW	+	-	ORANGE
			-	+	GREEN



ELECTRICAL CHARACTERISTICS @ 25°C

URNS RATIO

TP1	1CT : 1CT ±2%
TP2	1CT : 1CT ±2%
TP3	1CT : 1CT ±2%
TP4	1CT : 1CT ±2%

□CL @ 100kHz/100mVRMS

8mA DC BIAS	350μH MIN.
INS. LOSS	
0.1MHz TO 1MHz	-1.1 dB MAX
1MHz TO 65MHz	-0.5 dB MAX
65MHz TO 100MHz	-0.8 dB MAX
100MHz TO 125MHz	-1.2 dB MAX

RET. LOSS (MIN)

0.5MHz-40MHz	-18 dB
40MHz-100MHz	-12+20LOG(f/80MHz) dB

CM TO CM REJ

100kHz - 100MHz	-30 dB MIN
CM TO DM REJ	
100kHz - 100MHz	-35 dB MIN

HIPOT (Isolation Voltage): 1500 Vrms
 100% OF PRODUCTION TESTED TO COMPLY WITH
 IEEE 802.3 ISOLATION REQUIREMENTS.

OPERATING TEMPERATURE: -40°C TO +85°C

LED 1

V _F (FORWARD VOLTAGE)	IF=20mA	YELLOW	2.1V TYP.
λ _D (DOMINANT WAVELENGTH)	IF=20mA	YELLOW	590nm TYP.

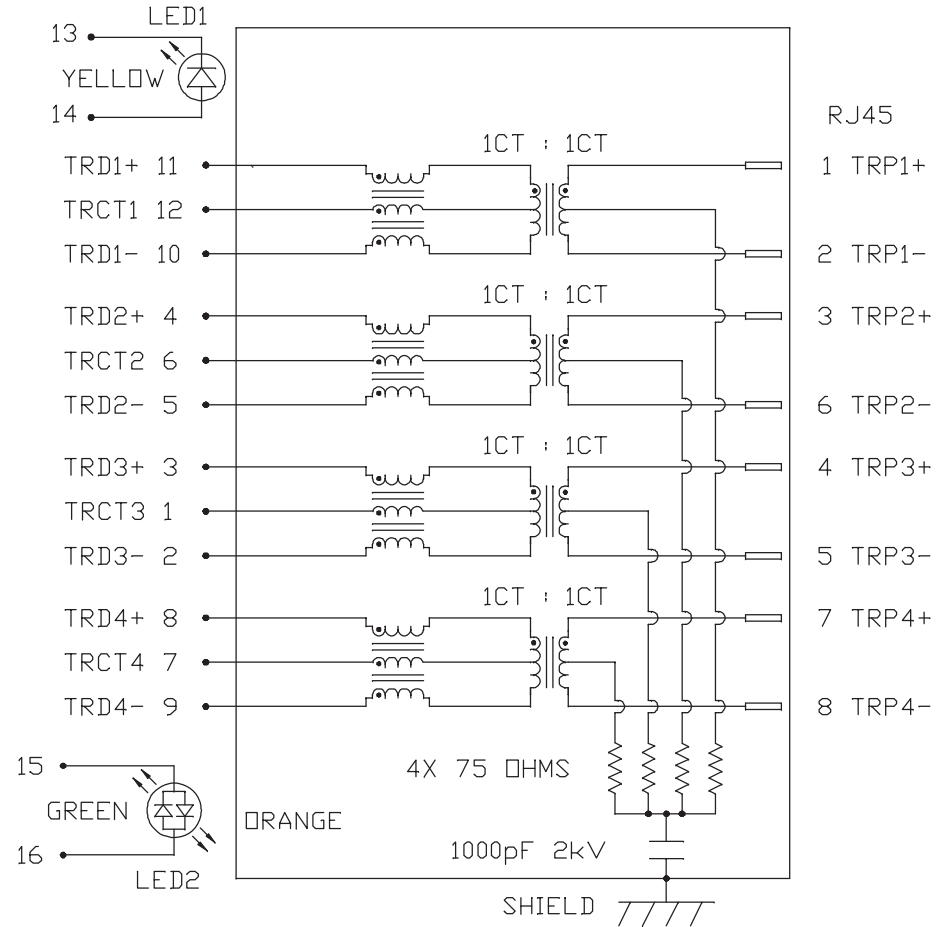
LED 2

V _F (FORWARD VOLTAGE)	IF=20mA	GREEN	2.2V TYP.
λ _D (DOMINANT WAVELENGTH)	IF=20mA	ORANGE	2.0V TYP.
		GREEN	570nm TYP.
		ORANGE	605nm TYP.

USB ELECTRICAL:

INSULATION RESISTANCE:	1000 MEGA (MIN)
CONTACT RESISTANCE:	25 MILLI Ω (MAX)
DIELECTRIC WITHSTANDING:	750 VAC

SCHEMATIC



ORIGINATED BY HOW WANCHUNG ATE 2015-10-13	TITLE gigabit MagJack® Combo (Single USB) Extended temperature 0821-1X1T-32-F PATENTED
RAWN BY URPHY LEE ATE 2015-10-13	
02(2)120214	

PART NO. / DRAWING NO. 08211X1T32-F	STANDARD DIM. TOL. IN INCH	[] METRIC DIM. AS REF.
FILE NAME 08211X1T32-F_C.DWG	.X	UNIT : INCH [mm]
	.XX	SCALE : N/A
	.XXX	SIZE : A4

REV. : C	PAGE : 2

This document is electronically generated. This is a controlled copy if used internally

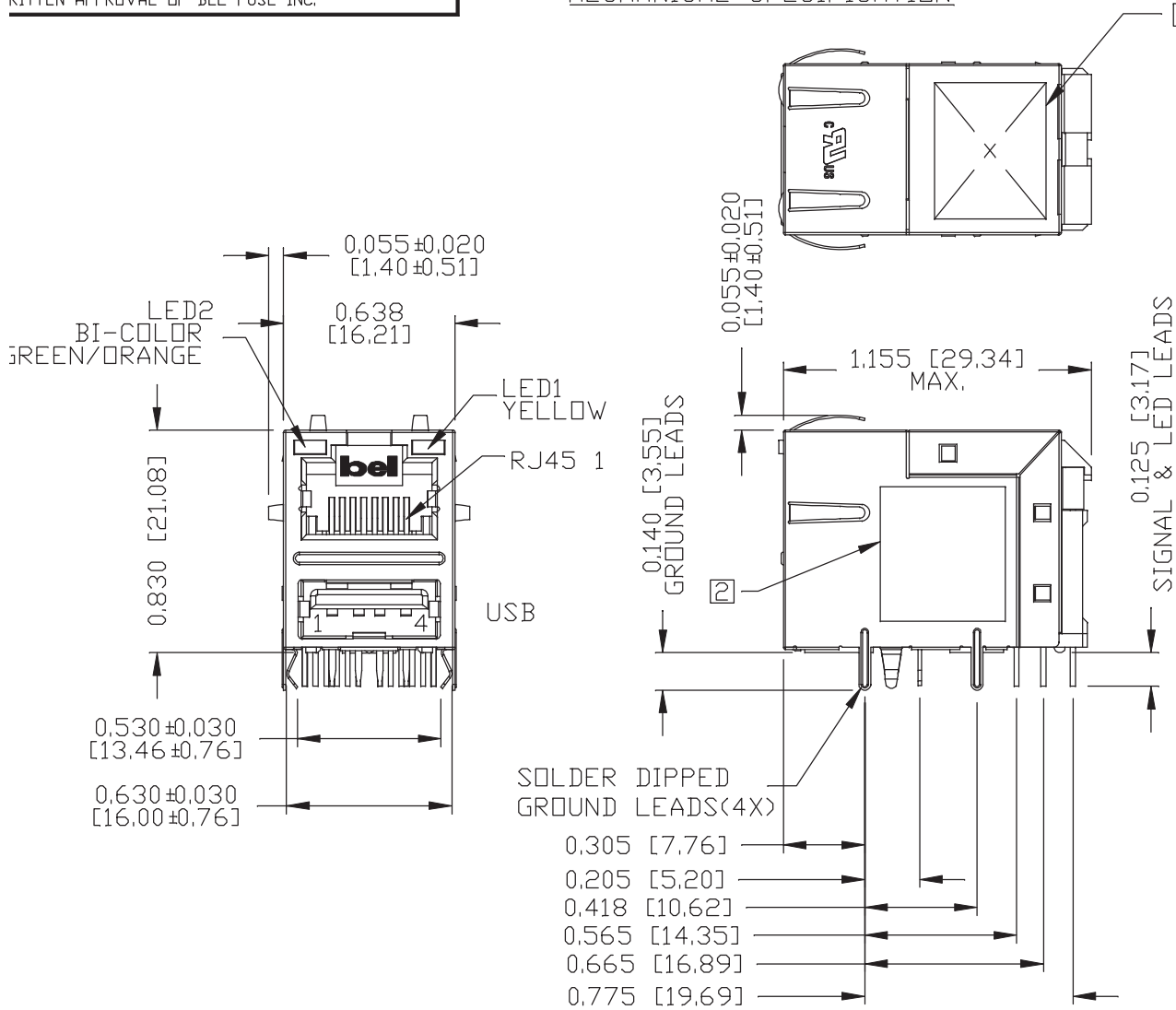
Please read our datasheet & drawing disclaimer [here](#).

THE INFORMATION CONTAINED HEREIN IS CONSIDERED PROPRIETARY TO BEL FUSE INC. AND SHALL NOT BE REPRODUCED OR DISCLOSED WITHOUT THE WRITTEN APPROVAL OF BEL FUSE INC.

RoHS



MECHANICAL SPECIFICATION



RJ45 MECHANICAL:

PLASTIC HOUSING: THERMOPLASTIC PBT
 FLAMMABILITY RATING UL 94V-0
 CONTACT PLATING: 30 MICRO-INCH HARD GOLD PLATING OR EQUIVALENT,
 PINS: TIN-COATED COPPER WIRE, DIA 0.018 INCH.
 METAL SHIELD: NICKEL PLATED ON COPPER ALLOY, (ALL GROUND LEADS ARE SOLDER DIPPED)

USB MECHANICAL:

MATING FORCE: 35 NEWTONS MAXIMUM
 UNMATING FORCE: 10 NEWTONS MINIMUM
 CONTACT: PROSPHER BRONZE
 30 MICRO-INCH MIN GOLD PLATING ON CONTACT AREA AND TIN ON SOLDER TAIL.

- 1. MARK PART WITH MFG. LOGO, MFG. NAME, PART NUMBER AND DATE CODE.
- 2. MARKING "PATENTED".
- 3. THE PRODUCT IS RoHS COMPLIANT.
- 4. THE PRODUCT IS PATENTED, THE PATENT NUMBER IS U.S. PAT. 7,123,117.

DESIGNED BY
ANTON LIAO
DATE 2015-10-13

DRAWN BY
JESSE LI
DATE 2015-10-13

TITLE
gigabit MagJack® Combo (Single USB)
Extended temperature
0821-1X1T-32-F
PATENTED

PART NO. / DRAWING NO.
08211X1T32-F

FILE NAME
08211X1T32-F_C.DWG

STANDARD DIM. TOL. IN INCH		[] METRIC DIM. AS REF.	
.X		UNIT : INCH [mm]	
.XX		SCALE : N/A	
.XXX	±0.010	SIZE : A4	

REV. : C PAGE : 3



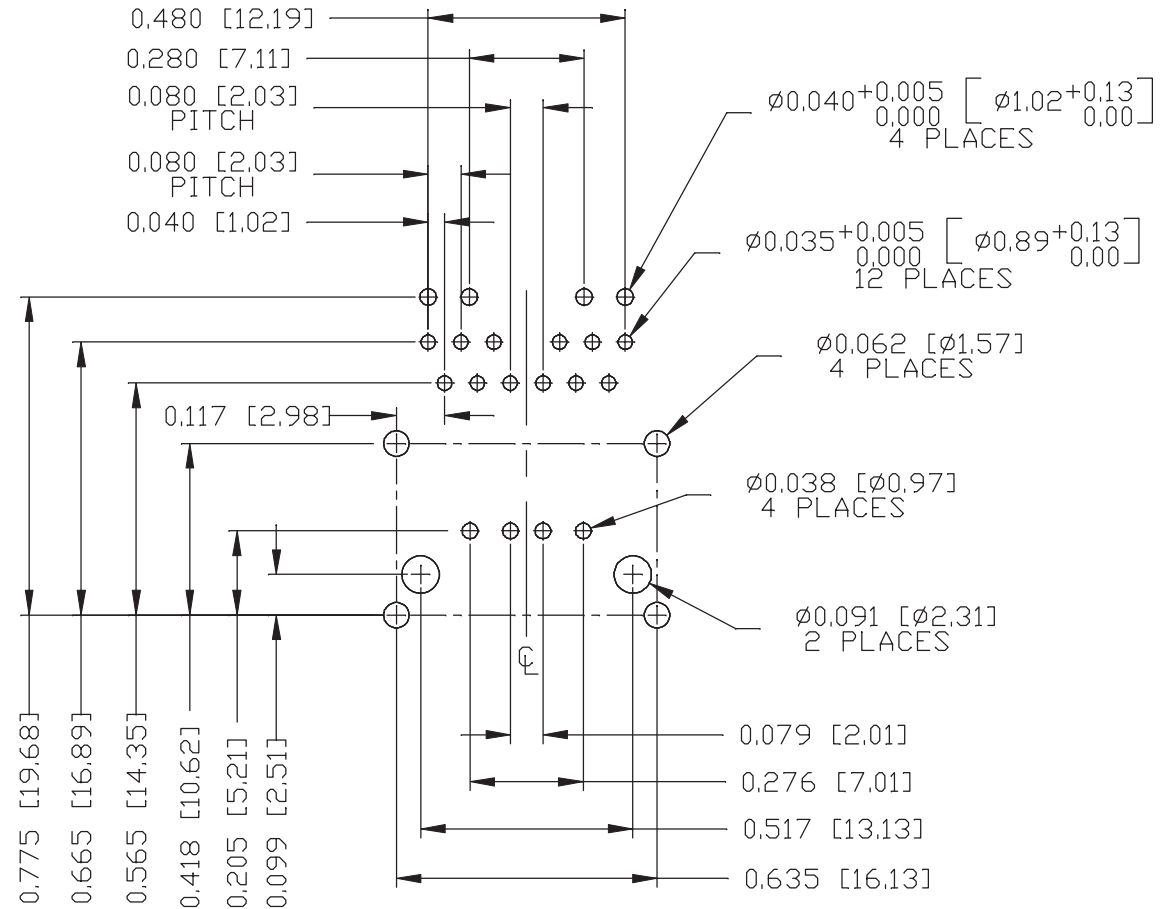
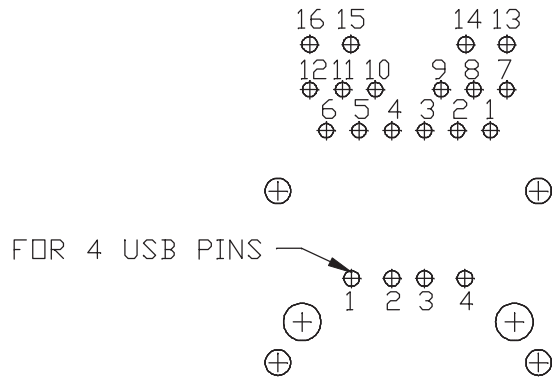
This document is electronically generated. This is a controlled copy if used internally.

Please read our datasheet & drawing disclaimer [here](#).

THE INFORMATION CONTAINED HEREIN IS CONSIDERED PROPRIETARY TO BEL FUSE INC. AND SHALL NOT BE REPRODUCED, REPRODUCED OR DISCLOSED WITHOUT THE WRITTEN APPROVAL OF BEL FUSE INC.

RECOMMENDED PCB FOOTPRINT
COMPONENT SIDE VIEW

RoHS



ORIGINATED BY
NTON LIAO
DATE 2015-10-13
DRAWN BY
ESSE LI
DATE 2015-10-13

TITLE
gigabit MagJack® Combo
(Single USB)
Extended temperature
0821-1X1T-32-F
PATENTED

PART NO. / DRAWING NO.
08211X1T32-F
FILE NAME
08211X1T32-F_C.DWG

STANDARD DIM. TOL. IN INCH	[] METRIC DIM. AS REF.
.X	UNIT : INCH [mm]
.XX	SCALE : N/A
.XXX	SIZE : A4

REV. :	C	PAGE :	4
			

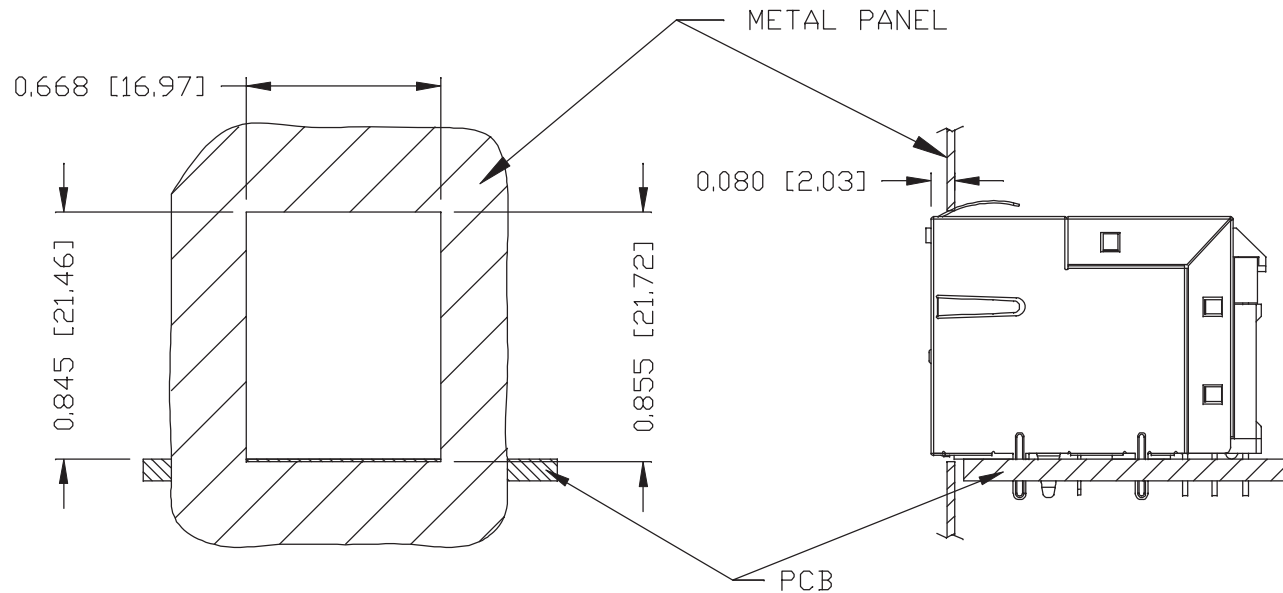
This document is electronically generated. This is a controlled copy if used internally.

Please read our datasheet & drawing disclaimer [here](#).

THE INFORMATION CONTAINED HEREIN IS CONSIDERED PROPRIETARY TO BEL FUSE INC. AND SHALL NOT BE COPIED, REPRODUCED OR DISCLOSED WITHOUT THE WRITTEN APPROVAL OF BEL FUSE INC.



SUGGESTED PANEL OPENING



NOTES:



THE DISTANCE OF PANEL INSIDE SURFACE RELATIVE TO FRONT SURFACE OF PART IS ONLY A SUGGESTION. IN CASE THIS DISTANCE IS DIFFERENT, THE REQUIRED PANEL OPENING DIMENSIONS CHANGE ACCORDINGLY.

PACKING INFORMATION

PACKING TRAY : 0200-0148-48 (TOP)
0200-0148-49 (BOTTOM)

PACKING QUANTITY : 60 PCS FINISHED GOODS PER TRAY
8 TRAYS (480 PCS FINISHED GOODS) PER CARTON BOX

NOTE : CARDBOARDS ARE PLACED BETWEEN LAYERS OF PACKING TRAY INSIDE CARTON BOX
(INCLUDE THE UPPERMOST AND LOWERMOST TRAY)

ORIGINATED BY ANTON LIAO DATE 2015-10-13		TITLE gigabit MagJack® Combo (Single USB) Extended temperature 0821-1X1T-32-F PATENTED		PART NO. / DRAWING NO. 08211X1T32-F		STANDARD DIM. TOL. IN INCH		[] METRIC DIM. AS REF.		REV. : C	PAGE : 5
DRAWN BY ESSE LI DATE 2015-10-13				FILE NAME 08211X1T32-F_C.DWG		.X		UNIT : INCH [mm]			
						.XX		SCALE : N/A			
						.XXX ±0.004		 SIZE : A4			

This document is electronically generated. This is a controlled copy if used internally. Please read our datasheet & drawing disclaimer [here](#).