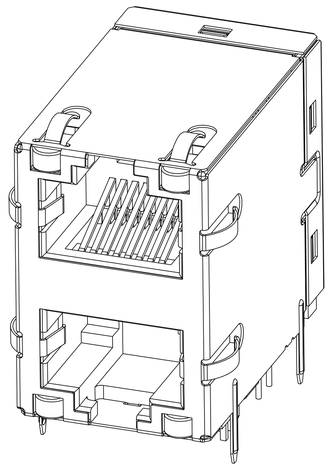
THIS DRAWING IS UNPUBLISHED. RELEASED FOR PUBLICATION 20
© COPYRIGHT 20 TE CONNECTIVITY ALL RIGHTS RESERVED.

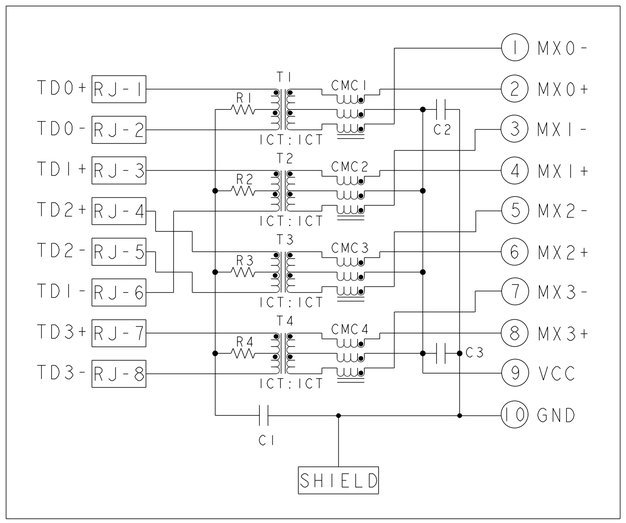
LOC	DIST
AA	00

REVISIONS

P	LTR	DESCRIPTION	DATE	DWN	APVD
	A	ECO-11-024592	20DEC2011	TR	KZ
	B	ECO-12-007986	19APR2012	TR	KZ
	C	ECO-12-013643	17JUL2012	TR	KZ
	D	ECO-12-021755	16NOV2012	GZ	KZ



S8G56 GIGABIT CIRCUIT 2 7
TOP AND BOTTOM PORTS



C1 = 1000pF, 2kV CAPACITOR
C2 - C3 = 10nF, 50V CAPACITORS
R1-R4 = 75 Ohms, 1/16 W, RESISTORS

1. MATERIALS:
PLASTIC HOUSING: BLACK, THERMOPLASTIC FLAMMABILITY RATING UL 94V-0
SHIELD: BRASS, PREPLATED WITH 0.76um MIN SEMI-BRIGHT NICKEL,
POST DIPPED WITH 2.54um MIN SAC SOLDER ON SOLDER TAILS,
CONTACTS: PHOSPHOR BRONZE, 1.27um MIN OVERALL NICKEL
UNDERPLATE WITH SELECT 1.27um MIN GOLD AT MATING INTERFACE
AND 2.54um MIN MATTE TIN ON SOLDER TAILS.
LED: DIFFUSED EPOXY LENS, CARBON STEEL LEAD FRAME TAILS OF LED
ARE PREPLATED WITH 2.03um MIN SILVER OVER 1.02um MIN NICKEL
UNDERPLATE OVER 1.02um MIN COPPER UNDERPLATE. POST-PLATED WITH
2.54um MIN MATTE TIN AND/OR SAC SOLDER DIP OR PURE TIN SOLDER DIP
ALL PC BOARDS: HIGH TEMPERATURE PCB,TG>170°C

2 MAGNETICS
APPLICATION: 10/100/1000 BASE-T
IMPEDANCE: 100 OHMS
TURNS RATIO (CHIP:CABLE): 1:1 ALL FOUR PAIRS
OPEN CIRCUIT INDUCTANCE (OCL): 350uH 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
33-20LOG(f/50)dB MIN FROM 40.1MHz 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 AND
WITH ALL PORTS CONNECTED

3 PART NUMBER, DATE CODE AND COUNTRY OF ORIGIN ARE LOCATED IN APPROXIMATE AREA SHOWN.DATE CODE: "YY" IS YEAR, "WW" IS WORK WEEK, "D" IS DAY OF WEEK, WITH SUNDAY=1

4 TE CONNECTIVITY LOGO AND AGENCY APPROVAL LOGO ARE LOCATED IN APPROXIMATE AREA SHOWN.

5. OPERATING TEMP: FROM 0°C TO +70°C.

6. RJ45 CAVITY CONFORMS TO FCC RULES AND REGULATION PART 68 SUBPART F.

7 INDICATED MAGNETIC CONNECTIONS ARE SYMMETRICAL AND SUPPORT AUTO-MDI/MDIX.

8 DATUM AND BASIC DIMENSION ESTABLISHED BY CUSTOMER.

9 BASIC DIMENSION ESTABLISHED BY CUSTOMER, BUT MAY NOT BE GREATER THAN 5.08mm.

10 LEDS ARE DRIVEN WITH CONSTANT CURRENT AT APPROX 20mA
LED COLOR: DOMINANT WAVELENGTH (λD): GREEN 568 nm TYP. @ IF=20mA
FORWARD VOLTAGE (VF): GREEN 2.2V TYP. @ IF=20mA
DOMINANT WAVELENGTH (λD): YELLOW 588 nm TYP. @ IF=20mA
FORWARD VOLTAGE (VF): YELLOW 2.1V TYP. @ IF=20mA
DOMINANT WAVELENGTH (λD): ORANGE 605 nm TYP @ IF=20 mA
FORWARD VOLTAGE (VF): ORANGE 2.1V TYP @ IF=20 mA

11. THE PARTS ARE RECOMMENDED FOR WAVE SOLDERING PROCESS,
PEAK TEMPERATURE 260°C MAX, 10 SECONDS MAX.

DIM A	BOTTOM LED 2	BOTTOM LED 1	TOP LED 2	TOP LED 1	PART NUMBER
3.56	GREEN	GREEN	GREEN	GREEN	4-1840855-1
2.21	GREEN	GREEN	GREEN	GREEN	3-1840855-1
2.08	GREEN	YELLOW	GREEN	YELLOW	2-1840855-3
2.76	GREEN	GREEN	GREEN	GREEN	1-1840855-1
4.06	GREEN/YELLOW	GREEN/YELLOW	GREEN/YELLOW	GREEN/YELLOW	1-1840855-4
3.04	GREEN/ORANGE	GREEN/ORANGE	GREEN/ORANGE	GREEN/ORANGE	1840855-7
3.04	GREEN/YELLOW	GREEN	GREEN/YELLOW	GREEN	1840855-5
3.04	GREEN/YELLOW	GREEN/YELLOW	GREEN/YELLOW	GREEN/YELLOW	1840855-4
3.04	GREEN	YELLOW	GREEN	YELLOW	1840855-3
3.04	GREEN	GREEN	GREEN	GREEN	1840855-1

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±·
1 PLC ±·
2 PLC ±0.25
3 PLC ±·
4 PLC ±·
ANGLES ±·

MATERIAL -
FINISH -

DWN 16NOV2010 JAMISON CHEN/KO LI
CHK 16NOV2010 TONY YUAN
APVD 16NOV2010 KEITH ZHU
PRODUCT SPEC 108-104004
APPLICATION SPEC -
WEIGHT -

TE Connectivity

NAME 2X1 MAG45(TM),GIGABIT S8G56 CIRCUIT GROUND SHIELD, WITH LEDS

SIZE A1 | CAGE CODE 00779 | DRAWING NO C-1840855 | RESTRICTED TO -

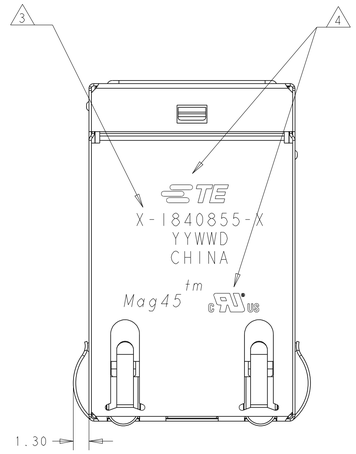
CUSTOMER DRAWING | SCALE 4 | SHEET 1 OF 4 | REV D

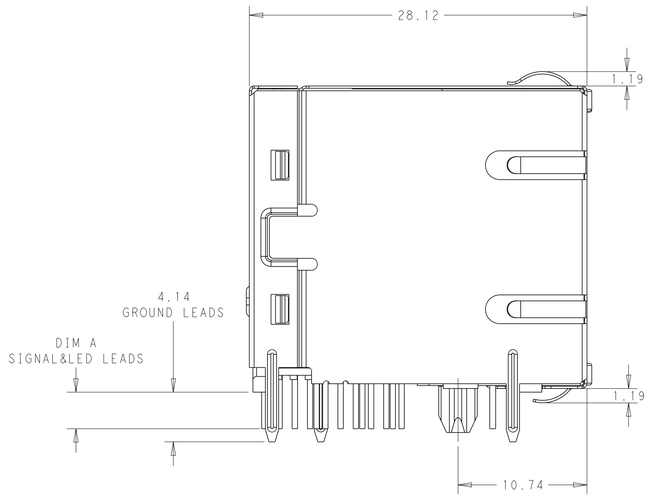
THIS DRAWING IS UNPUBLISHED. RELEASED FOR PUBLICATION 20
© COPYRIGHT 20 TE CONNECTIVITY ALL RIGHTS RESERVED.

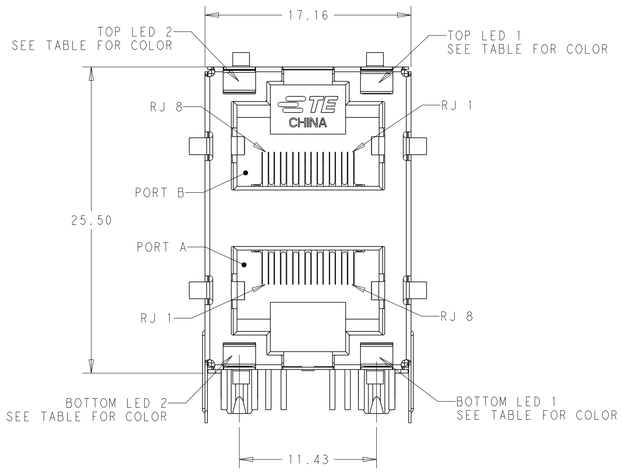
LOC	DIST
AA	00

REVISIONS

P	LTR	DESCRIPTION	DATE	DWN	APVD
	-	SEE SHEET 1	-	-	-







THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±·
1 PLC ±·
2 PLC ±0.25
3 PLC ±·
4 PLC ±·
ANGLES ±·

MATERIAL -
FINISH -

DWN 16NOV2010 JAMISON CHEN/KO LI
CHK 16NOV2010 TONY YUAN
APVD 16NOV2010 KEITH ZHU
PRODUCT SPEC 108-104004
APPLICATION SPEC -
WEIGHT -

TE Connectivity

NAME 2X1 MAG45(TM),GIGABIT S8G56 CIRCUIT GROUND SHIELD, WITH LEDS

SIZE A1 | CAGE CODE 00779 | DRAWING NO C-1840855 | RESTRICTED TO -

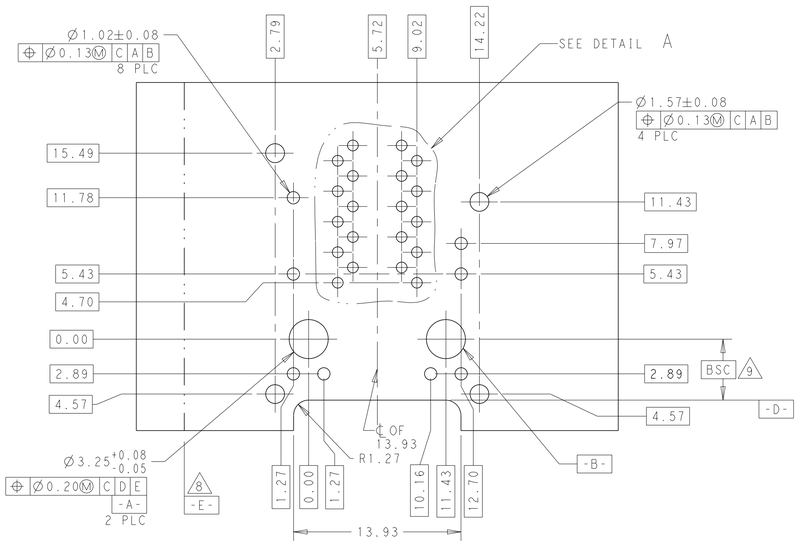
CUSTOMER DRAWING | SCALE 4 | SHEET 2 OF 4 | REV D

THIS DRAWING IS UNPUBLISHED. RELEASED FOR PUBLICATION 20
© COPYRIGHT 20 TE CONNECTIVITY ALL RIGHTS RESERVED.

LOC	DIST
AA	00

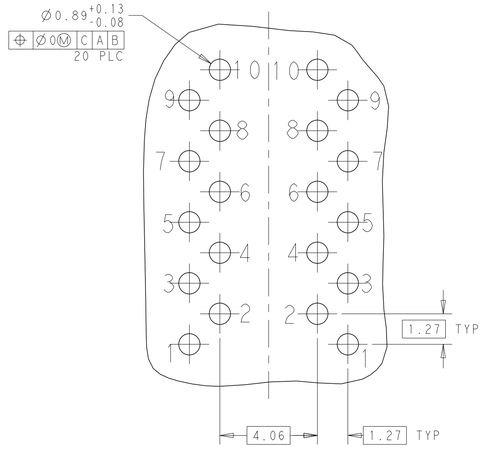
REVISIONS

P	LTR	DESCRIPTION	DATE	DWN	APVD
	-	SEE SHEET 1	-	-	-

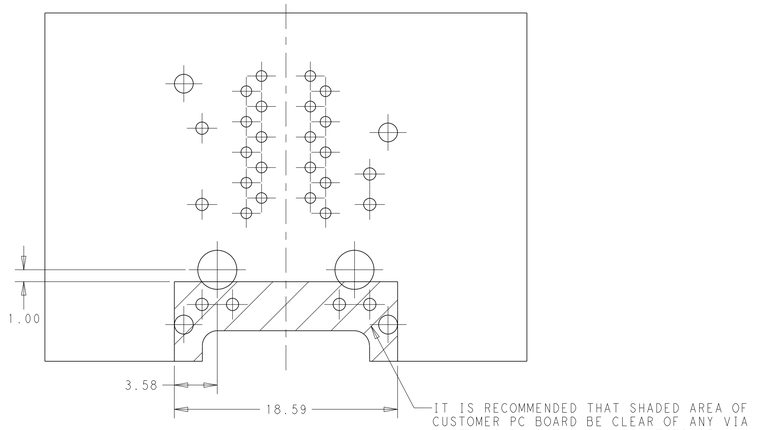


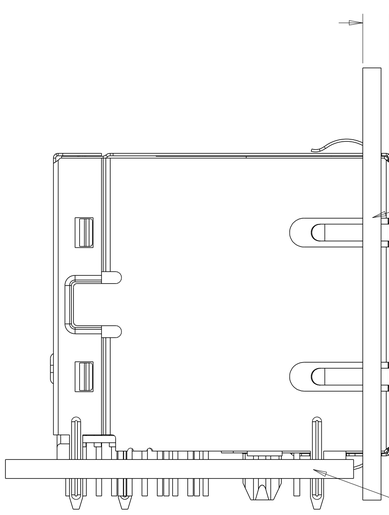
RECOMMENDED PCB LAYOUT
COMPONENT SIDE VIEW



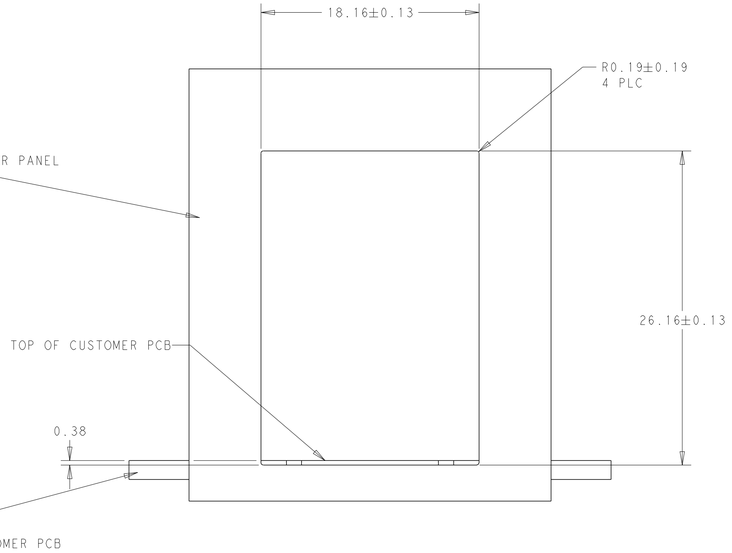


DETAIL A
SCALE 8:1





SHOWN WITH PANEL AND
CUSTOMER PCB ASSEMBLY



SUGGESTED PANEL CUTOUT DIMENSIONS

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±·
1 PLC ±·
2 PLC ±0.25
3 PLC ±·
4 PLC ±·
ANGLES ±·

MATERIAL - -
FINISH - -

DWN JAMISON CHEN/KO LI 16NOV2010
CHK TONY YUAN 16NOV2010
APVD KEITH ZHU 16NOV2010
PRODUCT SPEC 108-104004
APPLICATION SPEC -
WEIGHT -

TE Connectivity

NAME 2X1 MAG45(TM),GIGABIT S8G56 CIRCUIT GROUND SHIELD, WITH LEDS

SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A1	00779	C-1840855	-

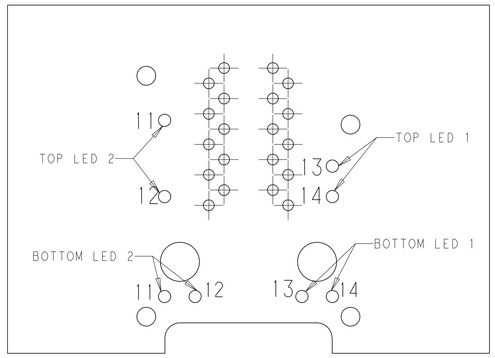
CUSTOMER DRAWING | SCALE 4 | SHEET 3 OF 4 | REV D

THIS DRAWING IS UNPUBLISHED. RELEASED FOR PUBLICATION 20
© COPYRIGHT 20 TE CONNECTIVITY ALL RIGHTS RESERVED.

LOC	DIST
AA	00

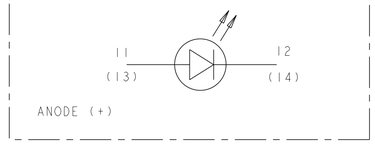
REVISIONS

P	LTR	DESCRIPTION	DATE	DWN	APVD
	-	SEE SHEET 1	-	-	-

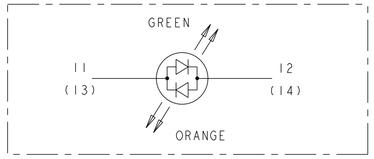


LED HOLE DESIGNATIONS
VIEWED FROM COMPONENT SIDE

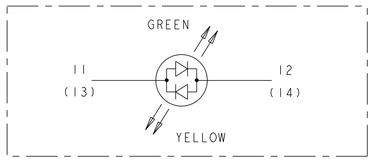
SINGLE COLOR LED

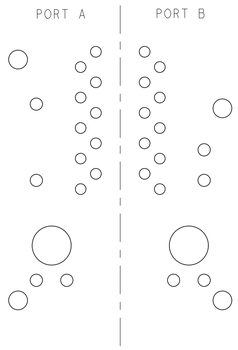


BI-COLOR LED



BI-COLOR LED





PORT ASSIGNMENT
COMPONENT SIDE VIEW

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±-
1 PLC ±-
2 PLC ±0.25
3 PLC ±-
4 PLC ±-
ANGLES ±-

MATERIAL -
-

FINISH -
-

DWN 16NOV2010 JAMISON CHEN/KO YI
CHK 16NOV2010 TONY YUAN
APVD 16NOV2010 KEITH ZHU
PRODUCT SPEC 108-104004
APPLICATION SPEC -
WEIGHT -

TE Connectivity

NAME
2X1 MAG45(TM),GIGABIT S8G56 CIRCUIT GROUND SHIELD, WITH LEDS

SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A1	00779	C-1840855	-

CUSTOMER DRAWING | SCALE 4 | SHEET 4 OF 4 | REV D