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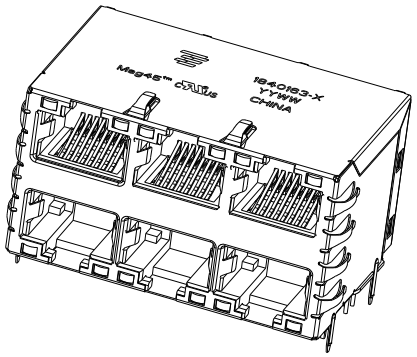
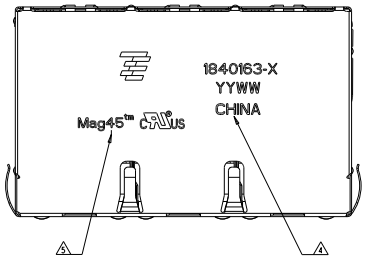
LOC	REV
AA	00

REVISIONS

P	LTR	DESCRIPTION	DATE	DWN	APVD
	4	PER ECO-09-011719	11NOV2009	LH	RZ
	5	ECO-11-025390	20FEB2012	TB	RZ





⚠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
LEADS 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
INTERNAL MAGNETICS PC BOARDS: HIGH TEM. 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 SECS WITH RISE TIME OF 500V/SEC AND WITH ALL PORTS CONNECTED

⚠3 THE MAGNETICS ARE SYMMETRICAL AND SUPPORT AUTO-MDI/MDIX.

⚠4 PART NUMBER, DATE CODE AND COUNTRY OF ORIGIN LOCATED IN THE APPROXIMATE AREA SHOWN

⚠5 AGENCY APPROVAL LOGO AND TYCO ELECTRONICS LOGO TO BE LOCATED IN THE APPROXIMATE AREA SHOWN.

6. 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=20mA
FORWARD VOLTAGE (VF): ORANGE 2.1V TYP. @ IF=20mA

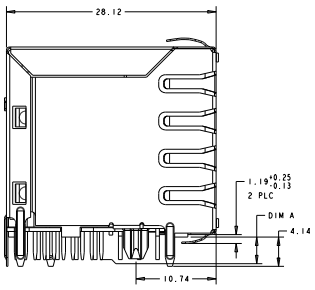
⚠7 DATUM AND BASIC DIMENSION ESTABLISHED BY CUSTOMER.

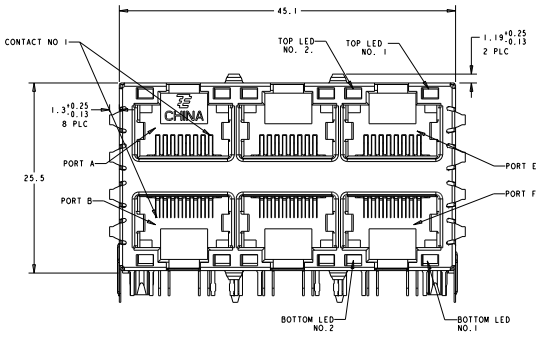
⚠8 BASIC DIMENSION ESTABILISHED BY CUSTOMER, BUT NOT TO BE GREATER THAN 5.08.

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

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

11. THESE PARTS ARE RECOMMENDED FOR WAVE SOLDERING PROCESS, PREHEAT TEMPERATURE IS 120°C TO 160°C, 120 SECONDS TO 180 SECONDS, PEAK SOLDERING TEMPERATURE IS 260°C MAX, 10 SECONDS MAX





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3.04	GRN/ORA	GRN/ORA	GRN/ORA	GRN/ORA	1840163-7
3.04	GREEN	GRN/ORA	GREEN	GRN/ORA	1840163-6
3.04	GRN/YEL	GREEN	GRN/YEL	GREEN	1840163-5
3.04	GRN/YEL	GRN/YEL	GRN/YEL	GRN/YEL	1840163-4
3.04	GREEN	YELLOW	GREEN	YELLOW	1840163-3
3.04	YELLOW	GREEN	GREEN	YELLOW	1840163-2
3.04	GREEN	GREEN	GREEN	GREEN	1840163-1
DIM A	BOTTOM LED NO.2	BOTTOM LED NO.1	TOP LED NO. 2	TOP LED NO.1	PART NO.

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DRN	TOMMY REN	28MAY2007
CHK	KEITH ZHU	28MAY2007
APVD	TEDDY XIONG	28MAY2007
PRODUCT SPEC		
APPLICATION SPEC		
SIZE	CAGE CODE	DRAWING NO
A1	00779	1840163
WEIGHT		
SCALE	2:1	SHEET 1 OF 3

TE Connectivity

2X3 MAG45(TM) MODULAR JACK,58G56 GIGABIT CIRCUIT,WITH BOTTOM GROUND PLANE,WITH LED,CONTACT PIN2

RESTRICTED TO: -

CUSTOMER DRAWING

REV 5

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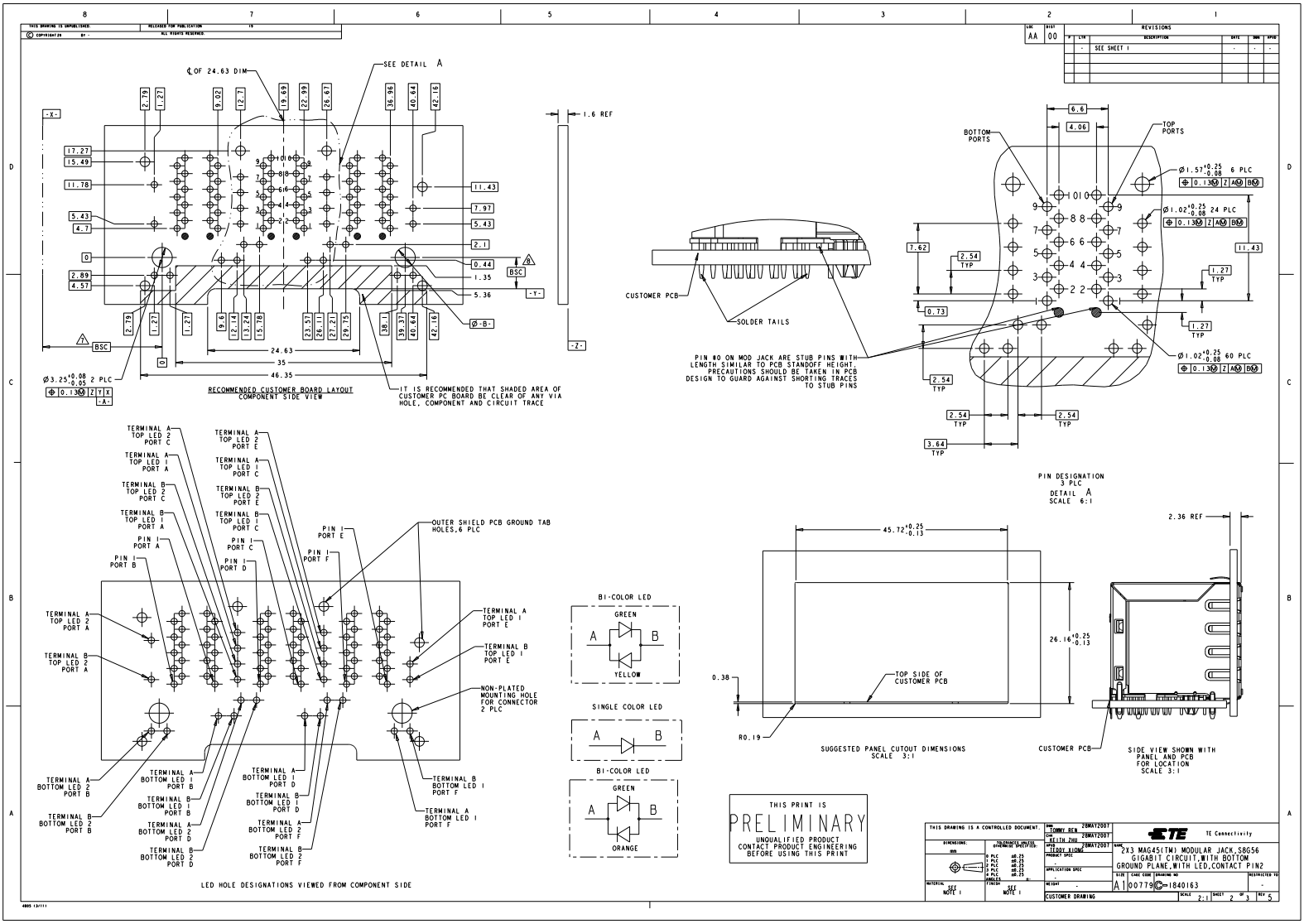

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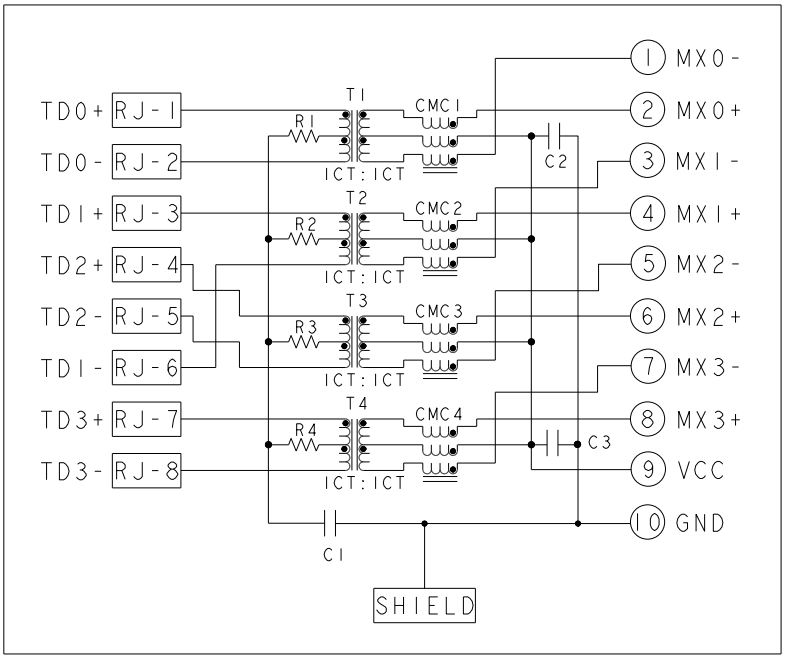
REVISIONS				
P	LTR	DESCRIPTION	DATE	DWN	APVD
	-	SEE SHEET 1	-	-	-

S8G56 GIGABIT CIRCUIT 2 3

TOP AND BOTTOM PORTS

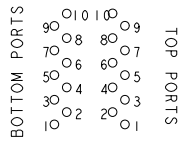


C1 = 1000pF, 2kV, X7R DECOUPLING CAP
C2 - C3 = 10nF, 50V, CAPACITORS
R1-R4 = 75 Ohms, 1/16 W, RESISTORS

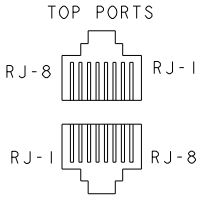
PIN DESIGNATION

(REPEAT FOR EACH VERTICAL PAIR OF PORTS)

PCB PINS
(TOP VIEW,
COMP. SIDE)



RJ CABLE
CONTACTS



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DIMENSIONS: mm

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±0.25
1 PLC ±0.13
2 PLC ±0.05
3 PLC ±0.025
ANGLES ±0.25

MATERIAL SEE NOTE 1

FINISH SEE NOTE 1

DWN	TOMMY REN	28MAY2007
CHK	KEITH ZHU	28MAY2007
APVD	TEDDY XIONG	28MAY2007
PRODUCT SPEC		
APPLICATION SPEC		
WEIGHT	-	

TE Connectivity

2X3 MAG45(TM) MODULAR JACK,S8G56 GIGABIT CIRCUIT,WITH BOTTOM GROUND PLANE,WITH LED,CONTACT PIN2

SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A1	00779	C-1840163	-

CUSTOMER DRAWING | SCALE 2:1 | SHEET 3 OF 3 | REV 5

4005 13111

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