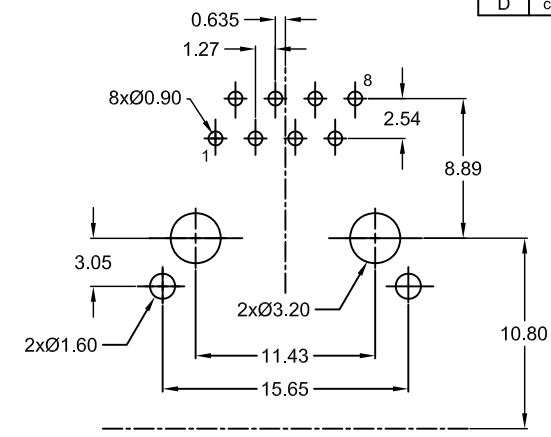
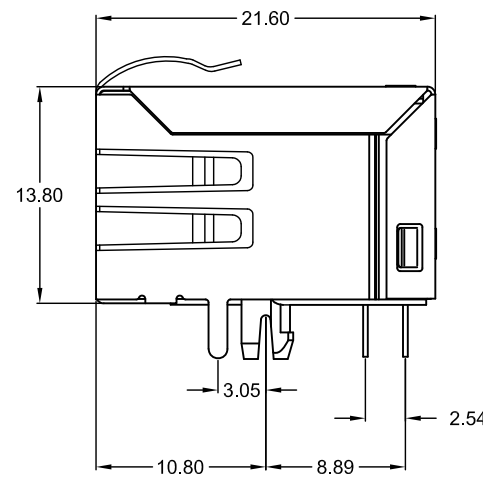
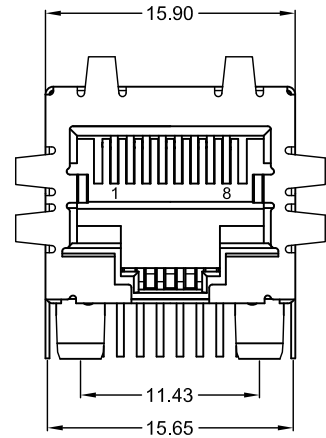
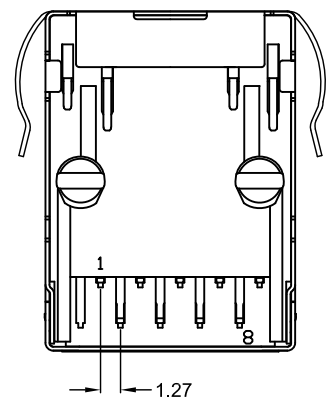


REV.	DESCRIPTION	DATE	DRAWN
A	Release	13.05.2009	Eric
B	correct schematic type 4 --> 2 correct PN -N0L4- --> -N0L2-	06.04.2011	Hogi
C	New DWG. No.	01.02.2012	Ronny
D	correct Ø1.60 -> Ø3.20 & Schematic	11.10.2013	Ronny

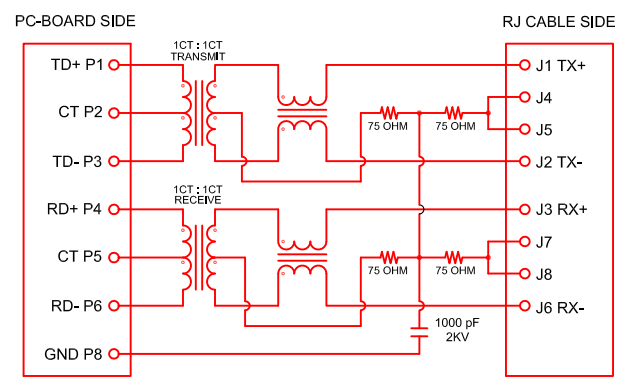


Recommended PCB Hole Layout  
Top View  
(PCB TOLERANCE ±0.05)



PART NUMBER	GOLD PLATING CONTACT AREA
MJS-188-N0L2-95/OCA	3µ"
MJS-188-N0L2-96/OCA	6µ"
MJS-188-N0L2-97/OCA	15µ"
MJS-188-N0L2-98/OCA	30µ"
MJS-188-N0L2-9H/OCA	50µ"

Schematic: "2" Type



- ELECTRICAL CHARACTERISTICS**  
Test Notes: (25°C ±5°C)
- TR: (100KHz 0.1V):  
Pins: (P1-P3);(J1-J2)=1:1±3%  
Pins: (P4-P6);(J3-J6)=1:1±3%
  - LX: (100KHz 100mV 8mA DC Bias)  
Pins: (P1-P3);(P4-P6)=350µH min.
  - DCR:  
Pins: (J1-J2);(J3-J6)=1.2Ω max.
  - HIPOT:  
Pins: (P1,P2,P3)to(J1,J2)=1500V AC for 60 Sec.  
Pins: (P4,P5,P6)to(J3,J6)=1500V AC for 60 Sec.
  - INSERTION LOSS:  
-1dB max. at 0.3MHz to 100MHz
  - RETURN LOSS:  
-20dB min. at 1MHz to 30MHz  
-15dB min. at 30MHz to 60MHz  
-10dB min. at 60MHz to 80MHz
  - CROSS TALK:  
-30dB min. at 1MHz to 100MHz
  - COMMON TO COMMON MODE REJECTION:  
-30dB min. at 1MHz to 100MHz

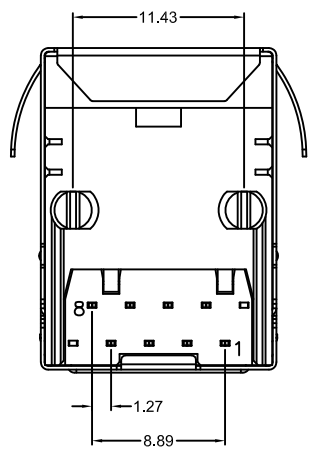
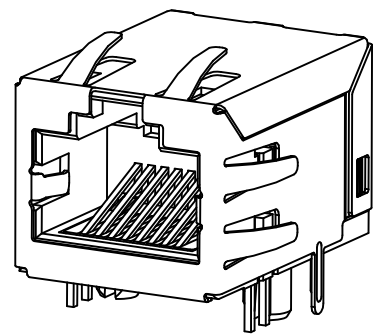
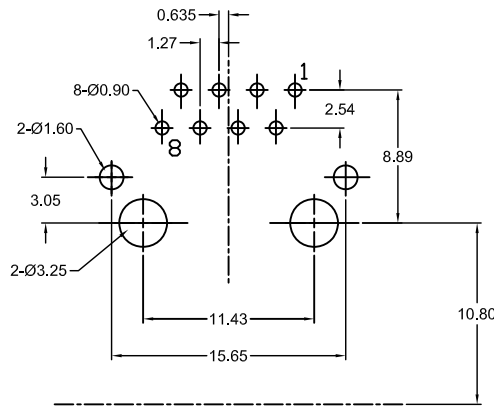
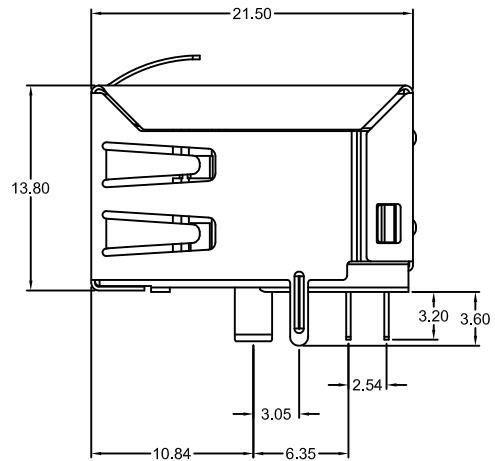
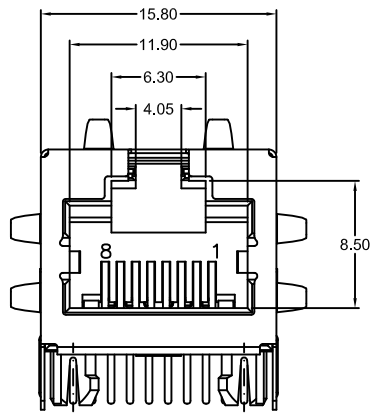
- SPECIFICATION**
- MATERIAL:**  
Housing - PBT UL 94V-0 (black)  
Contact - 0.35mm PhBz; Au/Sn plated  
Shield - Brass; Ni plated
  - OPERATING LIFE:** 750 Cycles min.
  - TEMPERATURE RANGE:**  
Storage - -40°C to +85°C  
Operating - 0°C to 70°C
  - Cavity conform to FCC Rules and Registration PAR68, Subparts F



UNIT mm	GENERAL TOLERANCE	DRAWN Eric	DATE 13.05.2009	DWG. NO. 1332502	SHEET 1/1
SCALE Free	X.° ± 3° .X° ±	CHECK Ronny	DATE 11.10.2013	Series NO.	REV. D
	XX. ± .XX ± 0.15	APPROVE Hogi	DATE 11.10.2013	MJS-188-N0L2-9x/OCX	
	XXX. ± .XXX ±				

RJ 45 PCB JACK <8P8C>  
SIDE ENTRY-LONG PROFILE TYPE **without** LED  
FULLY SHIELDED w GRD. LATCHES AROUND  
**2 Type** 10/100 Mbps, 4 core TX Filtered

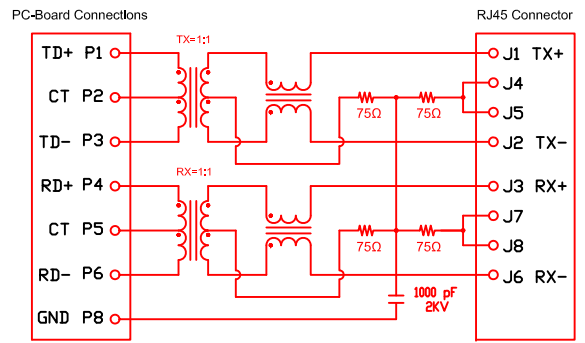
REV.	DESCRIPTION	DATE	DRAWN
A	Release	29.11.2010	Eric
B	correct schematic type 4 -> 2 correct PN -NTOL-4- -> -NTOL-2-	06.04.2011	Hogi
C	New DWG. No.	01.02.2012	Ronny



Recommended PCB Hole Layout  
Top View  
(PCB TOLERANCE ±0.05)



Schematic: "2" Type



ELECTRICAL CHARACTERISTICS

- Test Notes: (25°C ±5°C)
- TR: (100KHz 0.1V):  
Pins: (P1-P3);(J1-J2)=1:1±3%  
Pins: (P4-P6);(J3-J6)=1:1±3%
  - LX: (100KHz 100mV 8mA DC Bias)  
Pins: (P1-P3);(P4-P6)=350µH min.
  - DCR:  
Pins: (J1-J2);(J3-J6)=1.2Ω max.
  - HIPOT:  
Pins: (P1,P2,P3)to(J1,J2)=1500V AC for 60 Sec.  
Pins: (P4,P5,P6)to(J3,J6)=1500V AC for 60 Sec.
  - INSERTION LOSS:  
-1dB max. at 0.3MHz to 100MHz
  - RETURN LOSS:  
-20dB min. at 1MHz to 30MHz  
-15dB min. at 30MHz to 60MHz  
-10dB min. at 60MHz to 80MHz
  - CROSS TALK:  
-30dB min. at 1MHz to 100MHz
  - COMMON TO COMMON MODE REJECTION:  
-30dB min. at 1MHz to 100MHz

SPECIFICATION

- MATERIAL:  
Housing - PBT UL 94V-0 (black)  
Contact - 0.35mm PhBz; Au/Sn plated  
Shield - Brass; Ni plated
- OPERATING LIFE: 750 Cycles min.
- TEMPERATURE RANGE:  
Storage - -40°C to +85°C  
Operating - 0°C to 70°C
- Cavity conform to FCC Rules and Registration PAR68, Subparts F

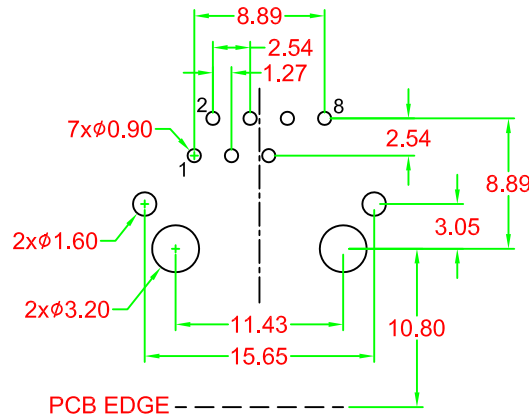
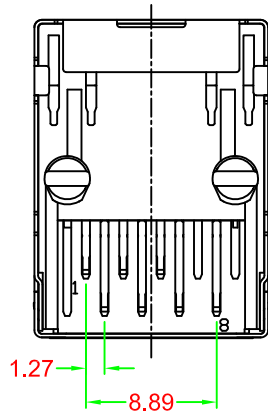
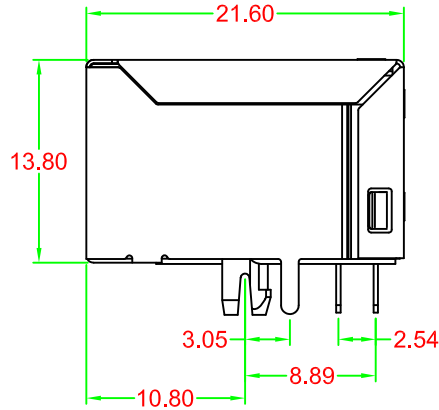
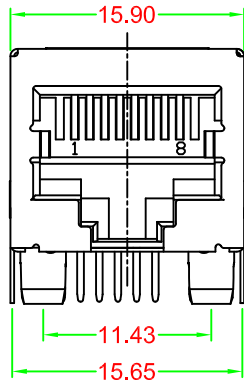
PART NUMBER	GOLD PLATING CONTACT AREA
MJS-188-NTOL2-95/7CA	3µ"
MJS-188-NTOL2-96/7CA	6µ"
MJS-188-NTOL2-97/7CA	15µ"
MJS-188-NTOL2-98/7CA	30µ"
MJS-188-NTOL2-9H/7CA	50µ"



UNIT mm	GENERAL TOLERANCE	DRAWN Sword	DATE 29.11.2010	DWG. NO. 1332505	SHEET 1/1
SCALE Free	X.° ± 3° .X° ±	CHECK Ronny	DATE 01.02.2012	Series NO.	REV. C
	XX. ± .XX ± 0.15	APPROVE Hogi	DATE 01.02.2012	MJS-188-NTOL2-9x/7CX	
	XXX. ± .XXX ±				

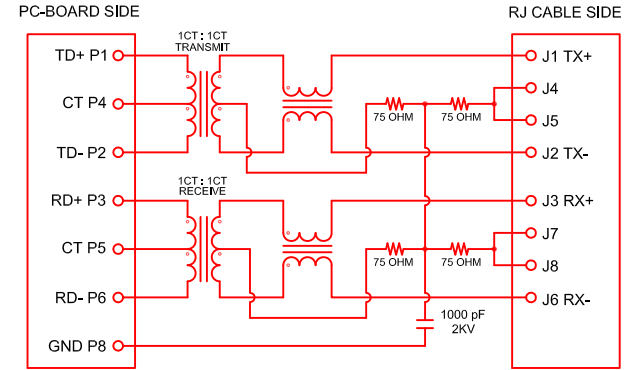
RJ 45 PCB JACK <8PC> SIDE ENTRY  
LONG PROFILE TYPE **without LED**  
FULLY SHIELDED w GRD. LATCHES AROUND  
**Type 2** 10/100 Mbps, 4 core TX Filtered

REV.	DESCRIPTION	DRAWN	DATE
A	Release	Ryan Chou	2012/07/17



Recommended PCB Hole Layout  
(Top View)

### Schematic: "E" Type



### ELECTRICAL CHARACTERISTICS

Test Notes: (25°C ±5°C)

- TR: (100KHz 0.1V):  
Pins: (P1-P2):(J1-J2)=1:1±3%  
Pins: (P3-P6):(J3-J6)=1:1±3%
- LX: (100KHz 100mV 8mA DC Bias)  
Pins: (P1-P2):(P3-P6)=350μH min.
- DCR:  
Pins: (J1-J2):(J3-J6)=1.2Ω max.
- HIPOT:  
Pins: (P1,P4,P2)to(J1,J2)=1500V AC for 60 Sec.  
Pins: (P3,P5,P6)to(J3,J6)=1500V AC for 60 Sec.
- INSERTION LOSS:  
-1dB max. at 1MHz to 30MHz
- RETURN LOSS:  
-20dB min. at 1MHz to 30MHz  
-15dB min. at 30MHz to 60MHz  
-10dB min. at 60MHz to 80MHz
- CROSS TALK:  
-30dB min. at 1MHz to 100MHz
- COMMON TO COMMON MODE REJECTION:  
-30dB min. at 1MHz to 100MHz

PART NUMBER	GOLD PLATING CONTACT AREA
MJS-187-N0LE-95/7CS	3μ"
MJS-187-N0LE-96/7CS	6μ"
MJS-187-N0LE-97/7CS	15μ"
MJS-187-N0LE-98/7CS	30μ"
MJS-187-N0LE-9H/7CS	50μ"



### SPECIFICATION

### MATERIALS

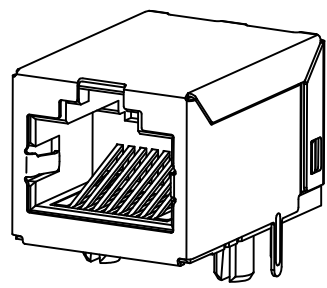
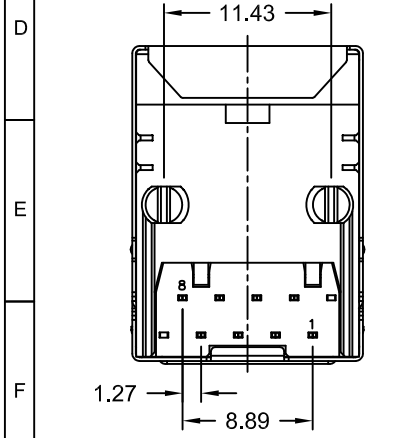
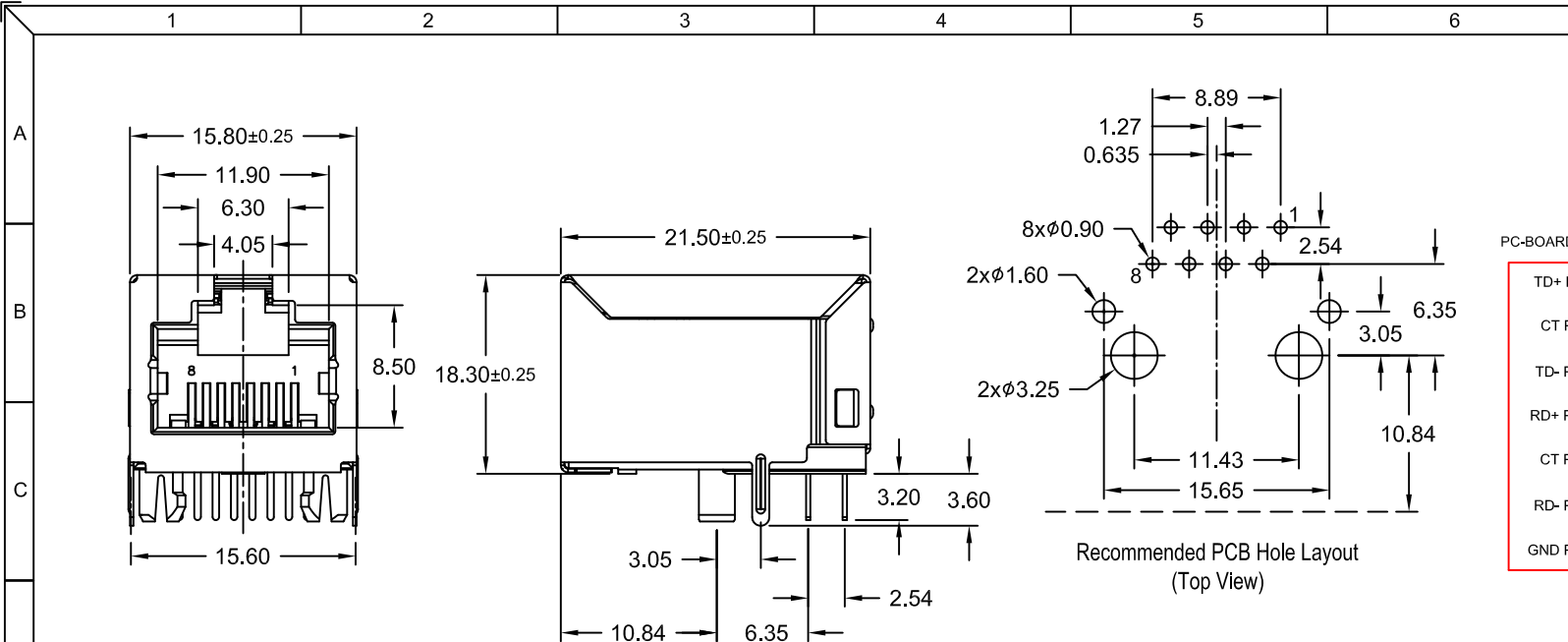
Insulator: PBT UL 94V-0  
Contact: 0.35mm Copper Alloy  
plated with Gold, and Tin in solder area  
Shield: Copper Alloy, Nickel plated  
Operating Temperature: 0°C to ~ +70°C



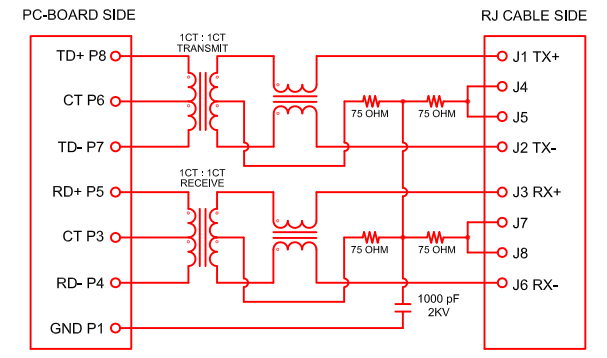
UNIT	mm	GENERAL TOLERANCE	DRAWN	DATE	DWG. NO.	SHEET 1/1
SCALE	Free	X.° ± 3° .X° ±	Ryan Chou	17.07.2012	1332509	
		X. ± .X ± 0.38	CHECK	DATE	Series NO.	REV. A
		XX. ± .XX ± 0.25	Lyndon Lin	17.07.2012	MJS-187-N0LE-9x/7CS	
		XXX. ± .XXX ±	APPROVE	DATE		
			Hogi	17.07.2012		

**RJ45 PCB JACK <8P/7C>**  
side entry, long profile Type  
without LED fully shielded  
**E Type** 10/100 Mbps, TX Filtered

REV.	DESCRIPTION	DATE	DRAWN
A	NEW	14.01.2013	Ryan Chou



**Schematic: "8" Type**



PART NUMBER	GOLD PLATING
MJS-188-NT0L8-95/7CS	3µ"
MJS-188-NT0L8-96/7CS	6µ"
MJS-188-NT0L8-97/7CS	15µ"
MJS-188-NT0L8-98/7CS	30µ"
MJS-188-NT0L8-9H/7CS	50µ"

**SPECIFICATION**

**MATERIALS**  
 Contact: Phosphor Bronze t=0.35mm plated with Gold, and Tin in solder area  
 Insulator: PBT UL 94V-0  
 Shield: Stainless Steel

Operating Temperature: 0°C to +70°C  
 Storage Temperature: -40°C to +85°C

**ELECTRICAL CHARACTERISTICS**

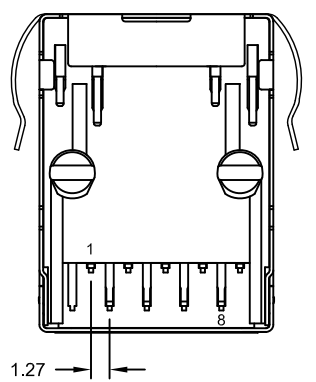
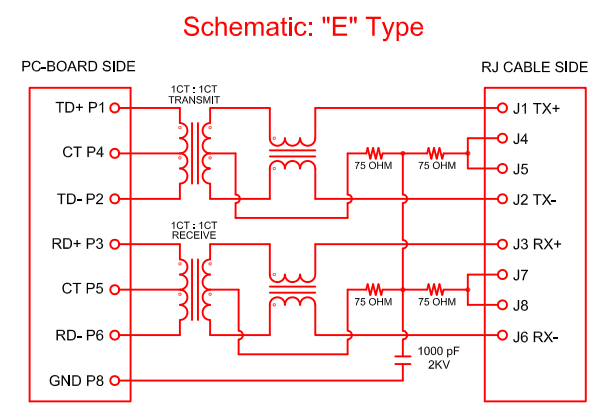
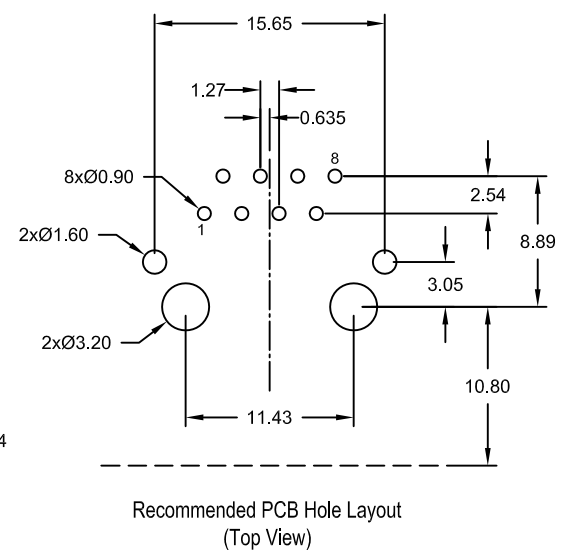
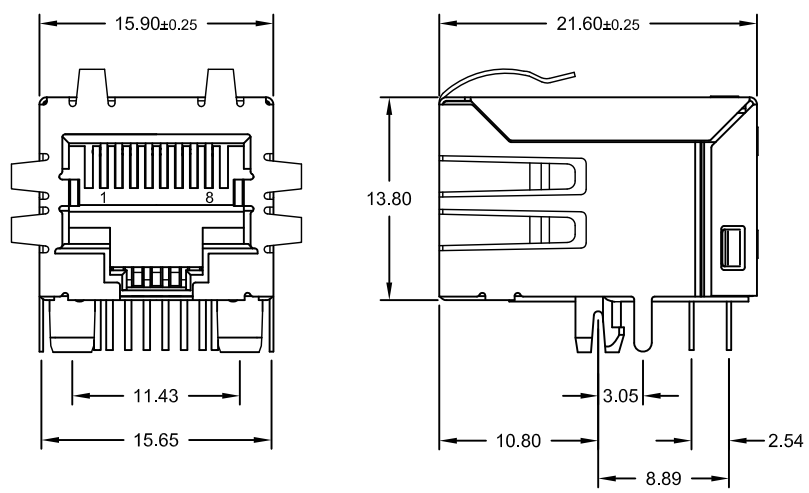
- Test Notes: (25°C ±5°C)
- TR: (100KHz 0.1V):  
 Pins: (P8-P7):(J1-J2)=1:1±3%  
 Pins: (P5-P4):(J3-J6)=1:1±3%
  - LX: (100KHz 100mV 8mA DC Bias)  
 Pins: (P8-P7),(P5-P4)=350µH min.
  - DCR:  
 Pins: (J1-J2),(J3-J6)= 1.2Ω max.
  - HIPOT:  
 Pins: (P8,P7)to(J1,J2)= 1500V AC for 60 sec. or 2250V DC 60 sec.  
 Pins: (P5,P4)to(J3,J6)=1500V AC for 60 sec. or 2250V DC 60 sec.
  - INSERTION LOSS:  
 -1dB max. at 1MHz to 100MHz
  - RETURN LOSS:  
 -18dB min. at 1MHz to 30MHz Load 100Ω  
 -16dB min. at 30MHz to 60MHz Load 100Ω  
 -12dB min. at 60MHz to 80MHz Load 100Ω
  - CROSS TALK:  
 -30dB min. at 1MHz to 100MHz
  - COMMON TO COMMON MODE REJECTION:  
 -30dB min. at 1MHz to 100MHz



UNIT	SCALE	GENERAL TOLERANCE	DRAWN	DATE	DWG. NO.	SHEET 1/1
mm	Free	X.° ± X. ±	Ryan Chou	14.01.2013	1332510	REV. A
		.X° ± .XX ± 0.15	Ronny	14.01.2013	SERIES NO.	
		.XXX° ± .XXX ± 0.075	Hogi	14.01.2013	MJS-188-NT0L8-9x/7CS	

**Single Port RJ45 <8P8C> "TAB UP"**  
 side entry long profile Type without LED  
 fully shielded with Grd. Latches around  
**"8" Type** 10/100 Base 4 core TX Filtered

REV.	DESCRIPTION	DATE	DRAWN
A	NEW	27.10.2009	Nick
B	PN-NOL1- -> -NOLE-; add DWG. No.	07.03.2013	Ryan Chou



### ELECTRICAL CHARACTERISTICS

- Test Notes: (25°C ±5°C)
- TR: (100KHz 0.1V):  
Pins: (P1-P2):(J1-J2)=1:1±3%  
Pins: (P3-P6):(J3-J6)=1:1±3%
  - LX: (100KHz 100mV 8mA DC Bias)  
Pins: (P1-P2):(P3-P6)=350µH min.
  - DCR:  
Pins: (J1-J2):(J3-J6)=1.2Ω max.
  - HIPOT:  
Pins: (P1,P4,P2)to(J1,J2)=1500V AC for 60 Sec.  
Pins: (P3,P5,P6)to(J3,J6)=1500V AC for 60 Sec.
  - INSERTION LOSS:  
-1,0dB max. at 0,3MHz to 100MHz
  - RETURN LOSS:  
-20dB min. at 1MHz to 30MHz  
-15dB min. at 30MHz to 60MHz  
-10dB min. at 60MHz to 80MHz
  - CROSS TALK:  
-30dB min. at 1MHz to 100MHz
  - COMMON TO COMMON MODE REJECTION:  
-30dB min. at 1MHz to 100MHz

### SPECIFICATION

**MATERIALS**  
 Insulator: PBT UL 94V-0  
 Contact: Phosphor Bronze t=0.35mm plated with Gold, and Tin in solder area  
 Shield: Stainless Steel

Operating Temperature: -40°C to +85°C  
 Storage Temperature: -40°C to +85°C

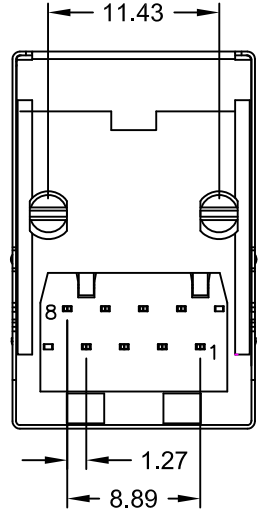
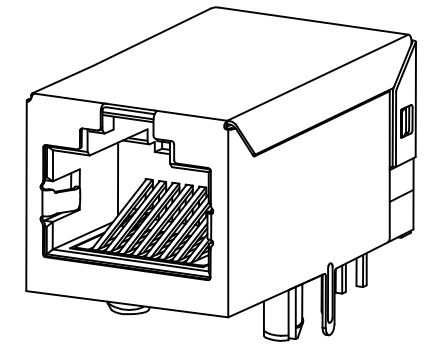
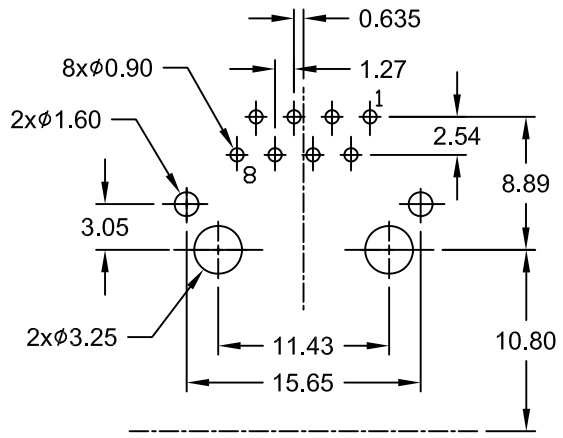
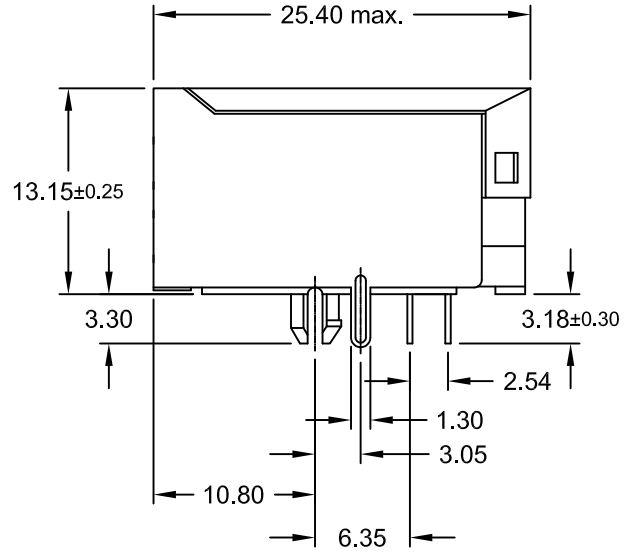
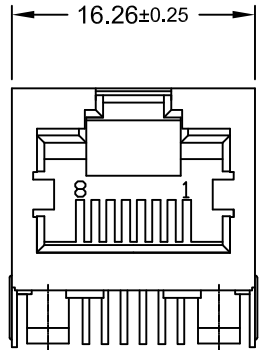
PART NUMBER	GOLD PLATING CONTACT AREA
MJS-188-NOLE-95/7CA	3µ"
MJS-188-NOLE-96/7CA	6µ"
MJS-188-NOLE-97/7CA	15µ"
MJS-188-NOLE-98/7CA	30µ"
MJS-188-NOLE-9H/7CA	50µ"



UNIT	GENERAL TOLERANCE		DRAWN	DATE	DWG. NO.	SHEET 1/1
mm	X.° ±	X. ±	Nick	27.10.2009	1332511	REV. B
SCALE	.X° ±	.X ± 0.25	CHECK	07.03.2013	SERIES NO.	
	.XX° ±	.XX ± 0.15	APPROVE	07.03.2013	MJS-188-NOLE-9x7CA	
	.XXX° ±	.XXX ± 0.075				

**Single Port RJ45 <8P8C> "TAB down"**  
 side entry long profile Type **without LED**  
 fully shielded with Grd. Latches around  
**"E" Type** 10/100 Base 4 core TX Filtered

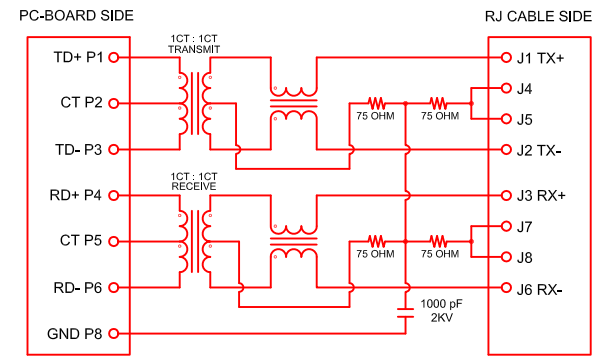
REV.	DESCRIPTION	DATE	DRAWN
A	New	30.11.2011	Ryan



Recommended PCB Hole Layout  
Top View  
(PCB TOLERANCE ±0.08)



Schematic: "2" Type



ELECTRICAL CHARACTERISTICS

- Test Notes: (25°C ±5°C)
- TR: (100KHz 0.1V):  
Pins: (P1-P3):(J1-J2)=1:1±3%  
Pins: (P4-P6):(J3-J6)=1:1±3%
  - LX: (100KHz 100mV 8mA DC Bias)  
Pins: (P1-P3):(P4-P6)=350µH min.
  - DCR:  
Pins: (J1-J2):(J3-J6)=1.2Ω max.
  - HIPOT:  
Pins: (P1,P2,P3)to(J1,J2)=1500V AC for 60 Sec.  
Pins: (P4,P5,P6)to(J3,J6)=1500V AC for 60 Sec.
  - INSERTION LOSS:  
-1dB max. at 0.3MHz to 100MHz
  - RETURN LOSS:  
-20dB min. at 1MHz to 30MHz  
-15dB min. at 30MHz to 60MHz  
-10dB min. at 60MHz to 80MHz
  - CROSS TALK:  
Operating - 0°C to 70°C  
-30dB min. at 1MHz to 100MHz
  - COMMON TO COMMON MODE REJECTION:  
-30dB min. at 1MHz to 100MHz

SPECIFICATION

- MATERIAL:  
Housing - PBT UL 94V-0 (black)  
Contact - t=0.35mm PhBz; Au plated  
Shield - Brass t=0.20mm; Ni plated
- OPERATING LIFE: 750 Cycles min.
- TEMPERATURE RANGE:  
Storage - -40°C to +85°C  
Operating - 0°C to 70°C
- Cavity conform to FCC Rules and Registration PAR68, Subparts F

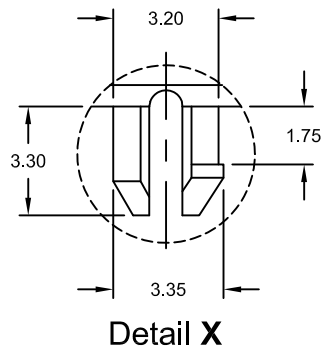
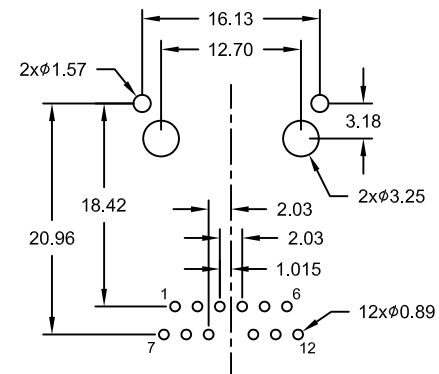
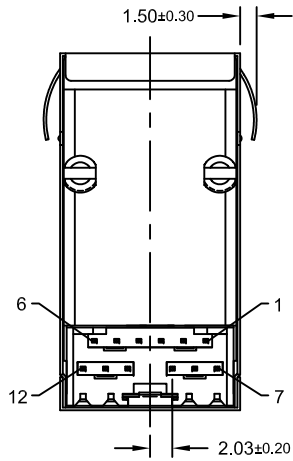
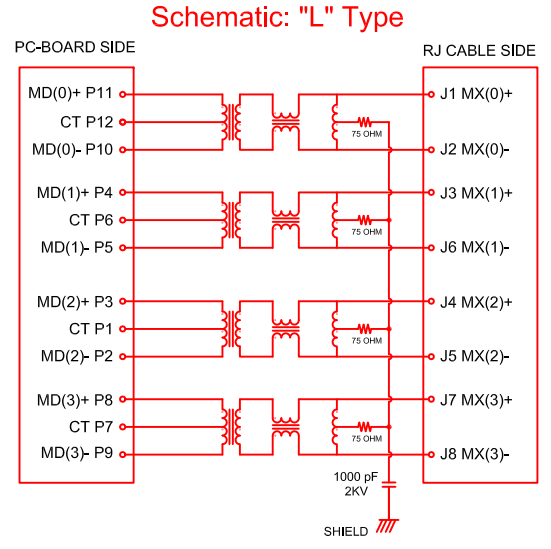
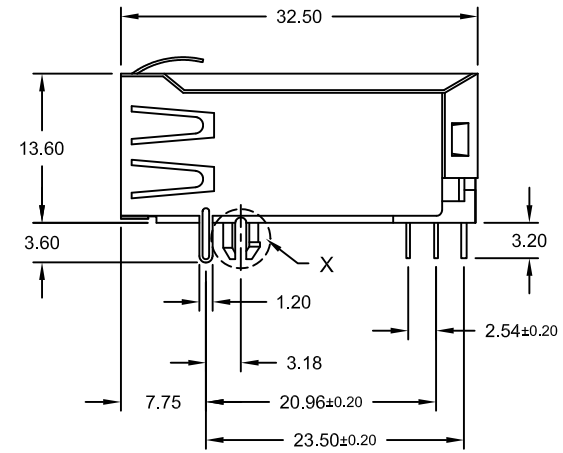
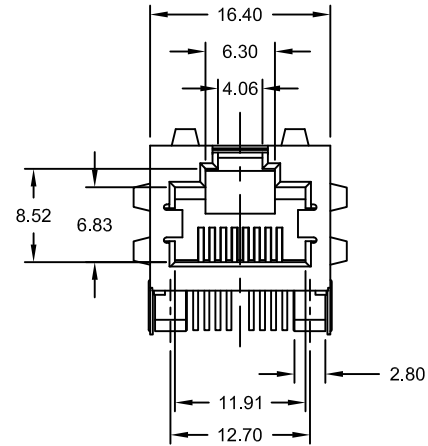
PART NUMBER	GOLD PLATING CONTACT AREA
MJS-188-NT3L2-55/7CS	3µ"
MJS-188-NT3L2-56/7CS	6µ"
MJS-188-NT3L2-57/7CS	15µ"
MJS-188-NT3L2-58/7CS	30µ"
MJS-188-NT3L2-5H/7CS	50µ"



UNIT mm	GENERAL TOLERANCE	DRAWN Ryan	DATE 29.08.2013	DWG. NO. 1332512	SHEET 1/1
SCALE Free	X.° ± 3° .X° ±	CHECK Ronny	DATE 29.08.2013	Series NO.	REV. A
	XX. ± .XX ± 0.20	APPROVE Hogi	DATE 29.08.2013	MJS-188-NT3L2-5x/7CS	
	XXX. ± .XXX ±				

RJ 45 PCB JACK <8P8C> SIDE ENTRY  
"TAB UP" LONG PROFILE TYPE **without** LED  
FULLY SHIELDED w/o GRD. LATCHES  
**Type 2** 10/100 Mbps, 4 core TX Filtered

REV.	DESCRIPTION	DATE	DRAWN
A	NEW	07.08.2014	Ryan
B	correct DWG NO 1333501 → 1332515	07.08.2014	Ryan



PART NUMBER	GOLD PLATING CONTACT AREA
MJS-188-NT3LL-55/SCA	3μ"
MJS-188-NT3LL-56/SCA	6μ"
MJS-188-NT3LL-57/SCA	15μ"
MJS-188-NT3LL-58/SCA	30μ"
MJS-188-NT3LL-5H/SCA	50μ"

Recommended PCB Hole Layout Top View  
(Tolerance: ±0.05)

### SPECIFICATION

#### MATERIALS

Insulator: PBT UL 94V-0  
 Contact: Phosphor Bronze t=0.35mm  
 plated with Gold, and Gold in solder area  
 Shield: Brass, Nickel plated

Operating Temperature: -40°C to ~ +85°C

### ELECTRICAL CHARACTERISTICS

Transmitter filter & Receiver filter  
 Type : Balance low pass 100Ω impedance  
 Insertion loss : 1~100 MHz -1.0dB max.  
 Return loss : 1~30 MHz -18 dB min.  
 30~60 MHz -14 dB min.  
 60~80 MHz -12 dB min.

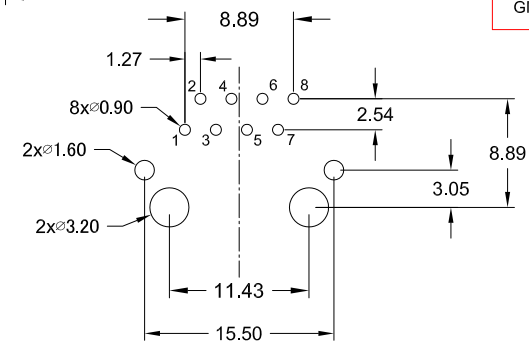
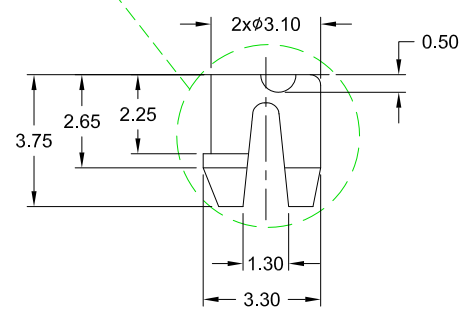
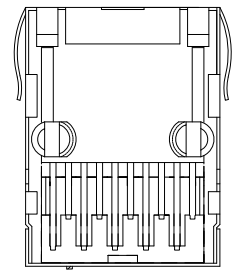
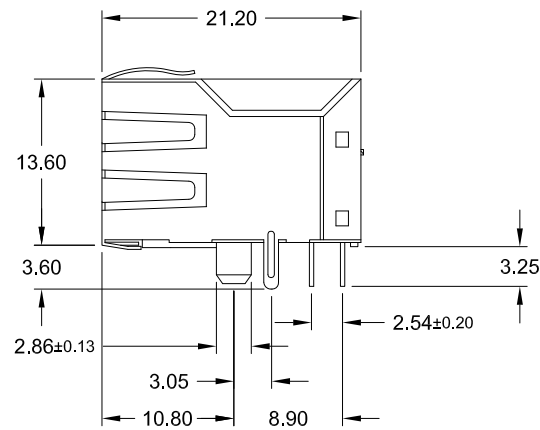
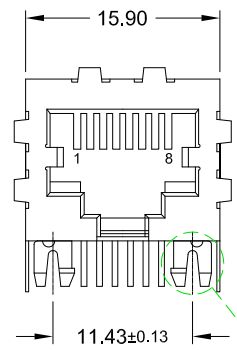
Common Mode Rejection  
 @ 1~100 MHz -30 dB min.  
 Cross Talk  
 @ 1~100 MHz -30 dB min.



UNIT	SCALE	GENERAL TOLERANCE	DRAWN	DATE	DWG. NO.	SHEET 1/1
mm	Free	X.° ± X. ±	Ryan	07.08.2014	1332515	
		.X° ± .X ±	CHECK	Hogi	11.09.2014	REV. B
		.XX° ± .XX ± 0.25	APPROVE	Hogi	11.09.2014	
		.XXX° ± .XXX ±				
					SERIES NO.	
					MJS-188-NT3LL-xx/SCA	

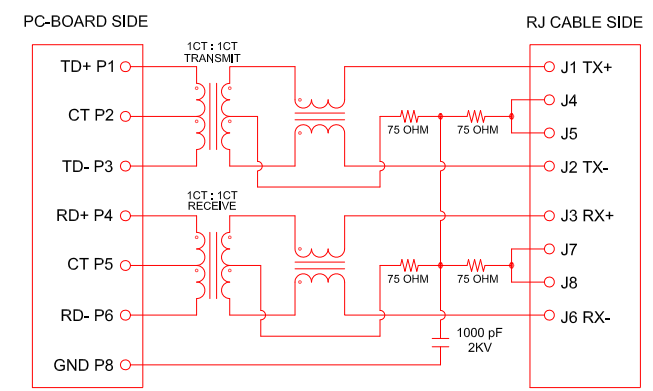
**RJ45 PCB JACK <8P/8C> Tab up**  
 side entry, long profile Type without LED  
 fully shielded with GROUNDING TABS  
**"L" Type** 10/100/1000 Mbps, 12 core TX Filtered

REV.	DESCRIPTION	DATE	DRAWN
A	New	30.03.2016	Cherry



Recommended PCB Layout Top View  
(Tolerance ±0.05)

### Schematic: "2" Type



### Electrical Characteristics

- Test Notes: (25°C ±5°C)
- TR: (100KHz 0.1V):  
Pins: (P1-P3):(J1-J2)=1:1±3%  
Pins: (P4-P6):(J3-J6)=1:1±3%
  - LX: (100KHz 100mV 8mA DC Bias)  
Pins: (P1-P3):(P4-P6)=350µH min.
  - DCR:  
Pins: (J1-J2):(J3-J6)=1.2Ω max.
  - HIPOT:  
Pins: (P1,P2,P3)to(J1,J2)=1500V AC for 60 Sec.  
Pins: (P4,P5,P6)to(J3,J6)=1500V AC for 60 Sec.
  - INSERTION LOSS:  
-1dB max. at 1MHz to 100MHz
  - RETURN LOSS:  
-20dB min. at 1MHz to 30MHz  
-15dB min. at 30MHz to 60MHz  
-11dB min. at 60MHz to 80MHz
  - CROSS TALK:  
-35dB min. at 1MHz to 100MHz
  - COMMON MODE REJECTION:  
-30dB min. at 1MHz to 100MHz

### SPECIFICATION

**Materials**  
 Insulator: PBT UL 94V-0 (black)  
 Contact: Phosphor Bronze t=0.35mm  
 Plating: Au on solder area;  
 Au on contact area;  
 entire contact Ni underplated  
 Shield: Copper Alloy t=0.20; Ni plated

Operating Life: 750 Cycles min.  
 Temperature range: -40°C to +85°C

Cavity conform to FCC rules and Regulations Part 68, Subpart F



PART NUMBER	GOLD PLATING CONTACT AREA
MJS-188-N3L2-56/7CA	6µ"
MJS-188-N3L2-57/7CA	15µ"
MJS-188-N3L2-58/7CA	30µ"
MJS-188-N3L2-5H/7CA	50µ"

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UNIT	mm	GENERAL TOLERANCE		DRAWN	Cherry	DATE	30.03.2016	DWG. NO.	1332516	SHEET 1/1
SCALE	Free	X.° ±	X. ±	CHECK	Ronny	DATE	30.03.2016	SERIES NO.	MJS-188-N3L2-xx/7CA	REV. A
		.XX° ±	.XX ± 0.25	APPROVE	Hogi	DATE	30.03.2016			
		.XXX° ±	.XXX ±							

**RJ45 PCB JACK <8P/8C> "Tab down"**  
 side entry, long profile Type w/o LED  
 fully shielded, with gnd. Latches around  
**"2" Type** 10/100 Mbps 4 core TX Filtered