

INTRODUCTION:

Adam Tech MTJ series Modular Jacks are a complete line of PCB and wire leaded jacks which are UL and CSA approved and meet all required FCC rules and regulations. Adam Tech offers a multitude of sizes (4P2C thru 10P10C) with styles including single, ganged and stacked versions with options of ferrite or magnetic filtering and or metal shielding. Jacks with integral LED's and combination hybrids such as MTJ/USB jacks are also available. These jacks are available in thru-hole or SMT mounting.

FEATURES:

- UL 1863 recognized versions
- FCC compliant to No. 47 CFR part 68
- Magnetic and Ferrite filtered types
- 4,6,8 and 10 positions available
- Single, stacked or ganged
- Hi-Temp and LED options
- Unshielded or Metal Shielded
- Thru-Hole or SMT mounting
- Cat. 5 & 5e ANSI/TIA/EIA 568.2

MATING PLUGS:

Adam Tech modular plugs and all industry standard telephone plugs.

SPECIFICATIONS:

Material:

Standard Insulator: PBT, or ABS, rated UL94V-0
 Optional Hi-Temp Insulator: Nylon 6T rated UL94V-0
 Insulator Colors: Black or medium gray
 Contacts: Phosphor Bronze
 Shield: Phosphor Bronze, Nickel plated

Contact Plating:

Flat contacts: Gold over Nickel underplate on contact area, Tin over Copper underplate on solder tails.
 Round contacts: Gold over Nickel underplate overall

Electrical:

Operating voltage: 150V AC max.
 Current rating: 1.5 Amps max.
 Contact resistance: 20 mΩ max. initial
 Insulation resistance: 500 MΩ min.
 Dielectric withstanding voltage: 1000V AC for 1 minute

Mechanical:

Insertion force: 4 contacts: 17.6N
 6 contacts: 20.6N
 8 contacts: 22.5N
 10 contacts: 24.5N

Durability: 500 Cycles

Temperature Rating:

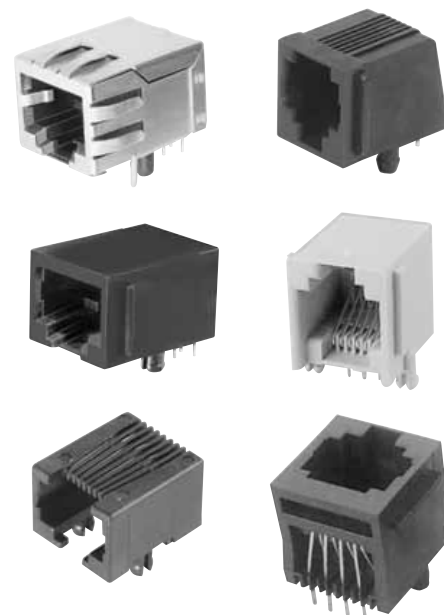
Operating temperature: -40°C to +85°C
 Soldering process temperature:
 Standard insulator: 235°C
 Hi-Temp insulator: 260C

PACKAGING:

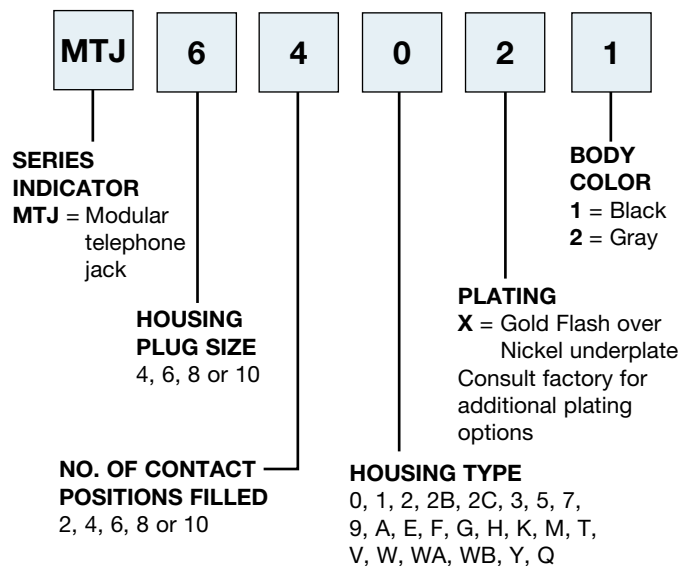
Anti-ESD plastic trays

SAFETY AGENCY APPROVALS:

UL Recognized & CSA Certified,
 File no. E224049



ORDERING INFORMATION



OPTIONS:

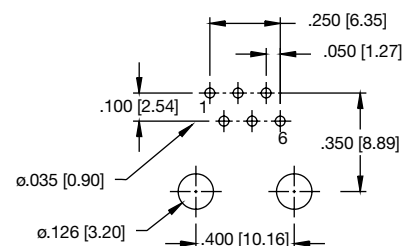
Add designator(s) to end of part number

- S** = Face shielded jack (Body type 0 only)
- FSX** = Full metal shield (Use FSA, FSB, FSD, FSE)
- SMT** = Surface mount tails, housings 0, 5, 9, G & W with Hi-Temp insulator
- N** = No panel stops (Types: 1, 0, 2, 3, D)
- K** = Keyed telephone jack
- HT** = Hi-Temp insulator for Hi-Temp soldering processes up to 260C (Add this option for thru-hole products only. All SMT products are manufactured with Hi-Temp insulators)
- PG** = Panel ground tabs
- KT** = Kapton Tape pickup when applicable

6P4C



Ordering Information pg. 9

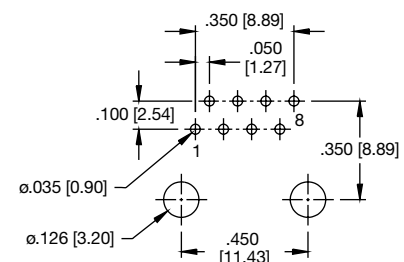


Recommended PCB Layout

8P8C



Ordering Information pg. 9

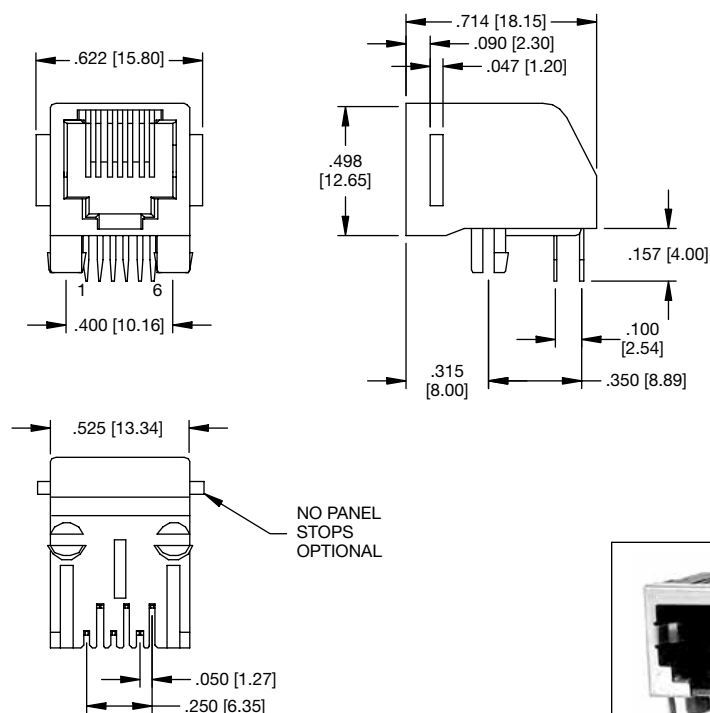


Recommended PCB Layout

TYPE 0

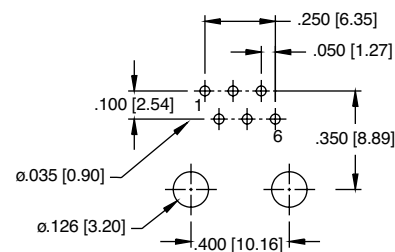
6P6C

6P4C



MTJ-660X1

Ordering Information pg. 9



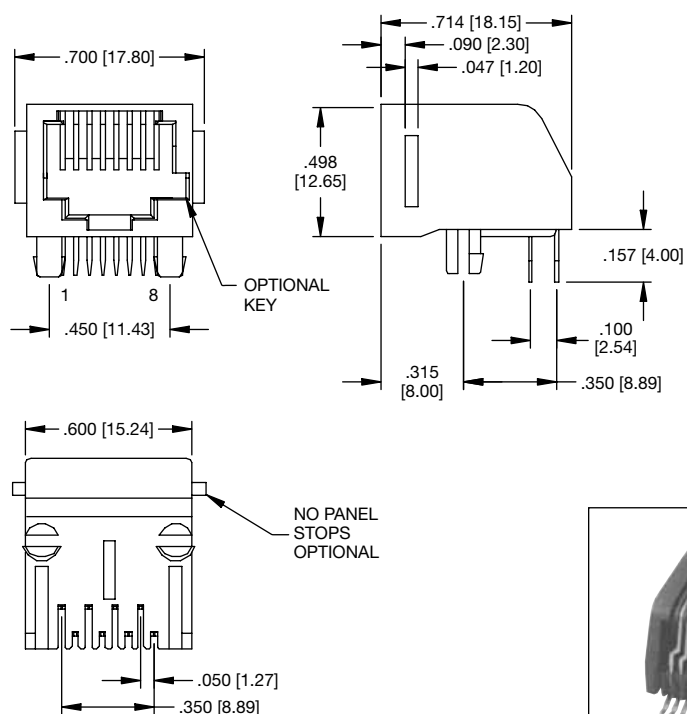
Recommended PCB Layout



Face Shield Option

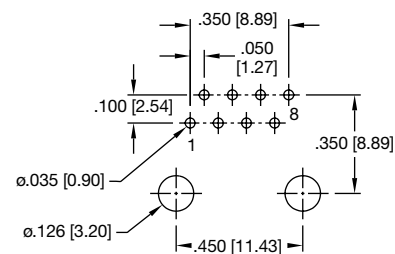
TYPE 0

8P8C

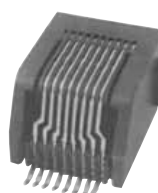


MTJ-880X1

Ordering Information pg. 9



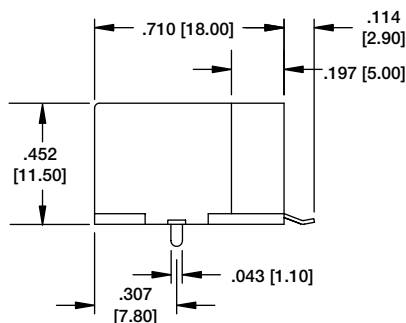
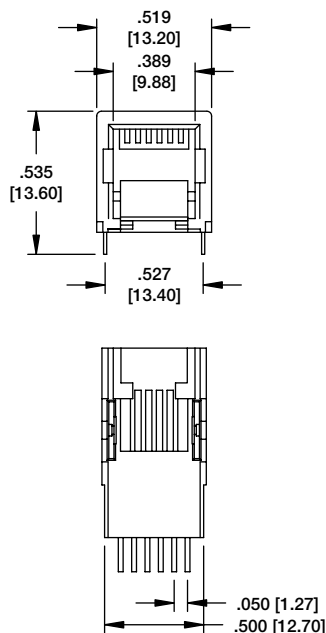
Recommended PCB Layout



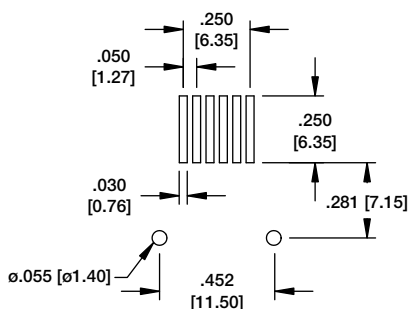
SMT Option

Ordering Information pg. 9

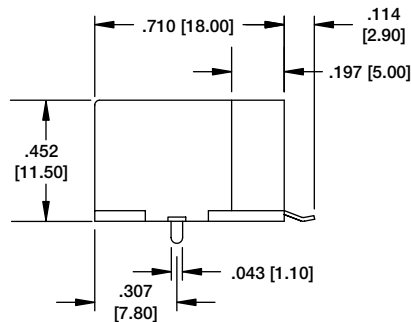
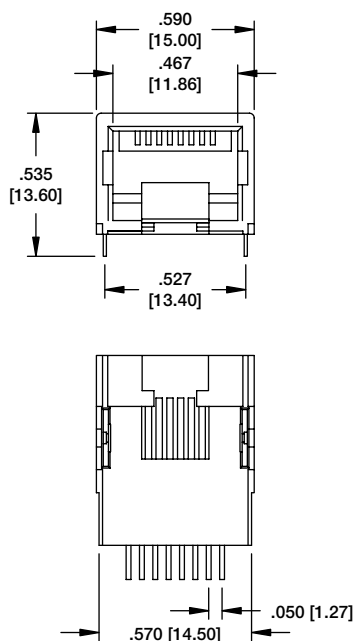
TYPE Y
6P6C
6P4C



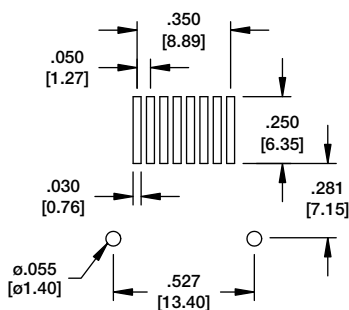
MTJ-66YX1



Recommended PCB Layout

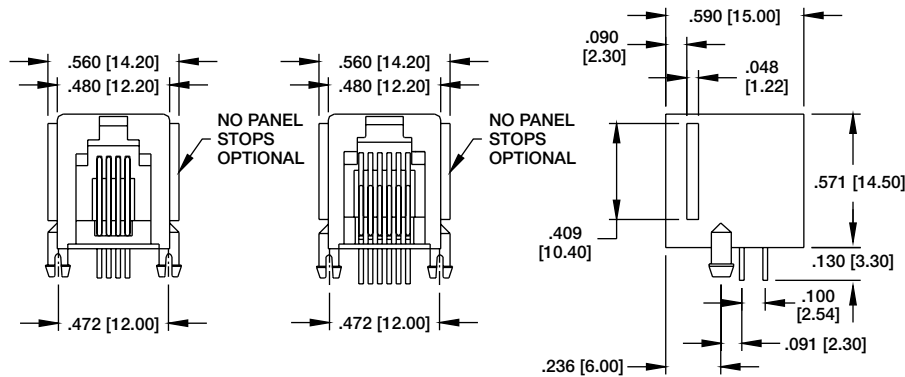


MTJ-88YX1



Recommended PCB Layout

Ordering Information pg. 9

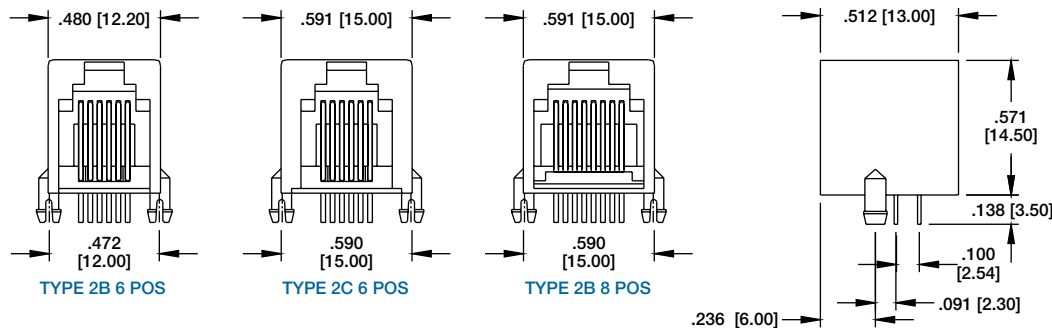
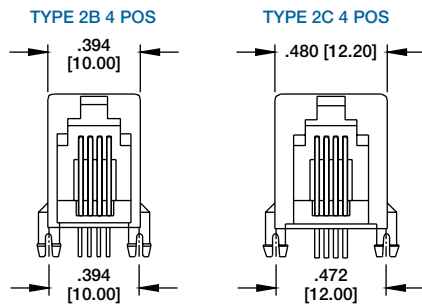


MTJ-662X2



MTJ-442X2

TYPE 2
4P4C
6P6C
6P4C



MTJ-442BX2



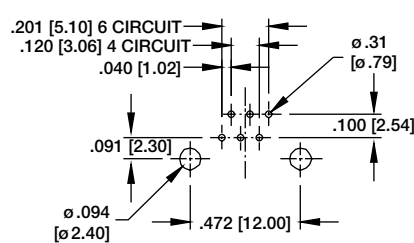
MTJ-642BX2



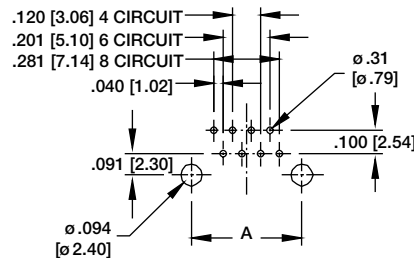
MTJ-882BX1

TYPE 2B & 2C
4P4C
6P6C
6P4C
8P8C

TYPE 2



TYPE 2B & 2C

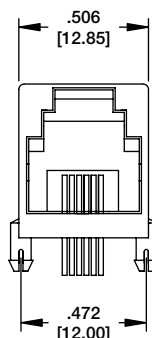


Recommended PCB Layout

DIM. "A"	
TYPE 2B 4P4C	.394 [10.00]
TYPE 2C 4P4C	.472 [12.00]
TYPE 2B 6P6C	.472 [12.00]
TYPE 2C 6P6C	.591 [15.00]
TYPE 2B 8P8C	.590 [15.00]

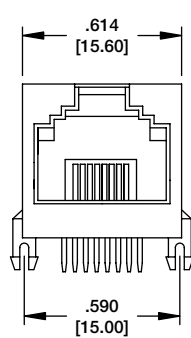
Ordering Information pg. 9

MTJ-662BX1-FS

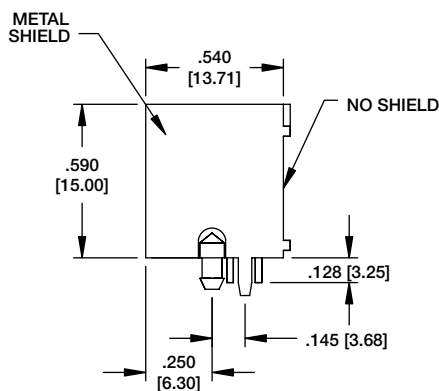


**6 POS
2B SHIELDED**

MTJ-882BX1-FS



**8 POS
2B SHIELDED**



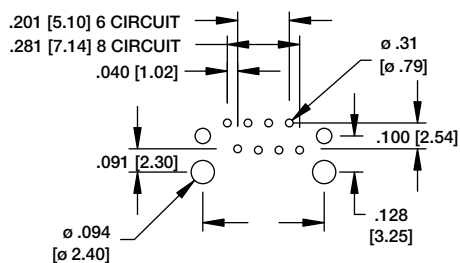
**TYPE 2B
SHIELDED**
6P6C
6P4C
8P8C



MTJ-662BX1-FS

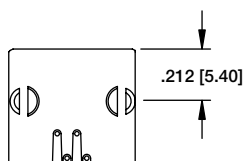
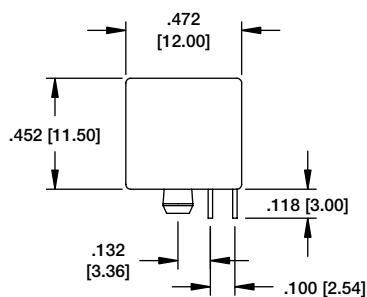
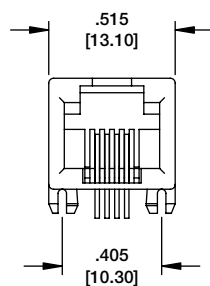


MTJ-882BX1-FS



Recommended PCB Layout

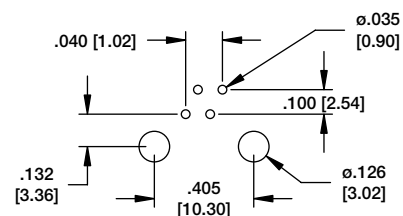
DIM. "A"	
TYPE 2B 6P6C	.472 [12.00]
TYPE 2B 8P8C	.590 [15.00]



**TYPE Q
COMPACT JACK
4P4C**



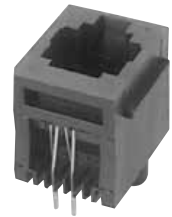
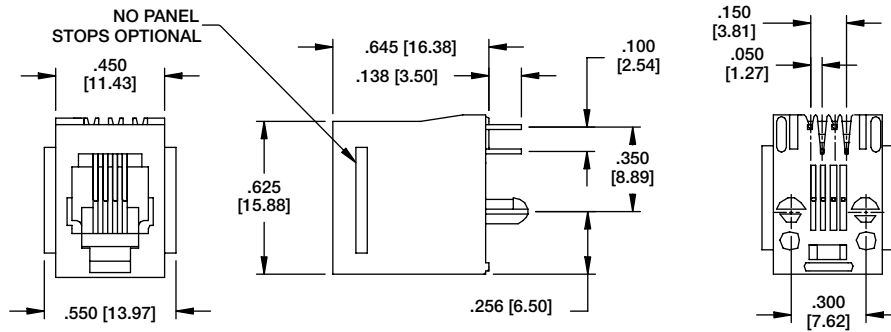
MTJ-44QX1



Recommended PCB Layout

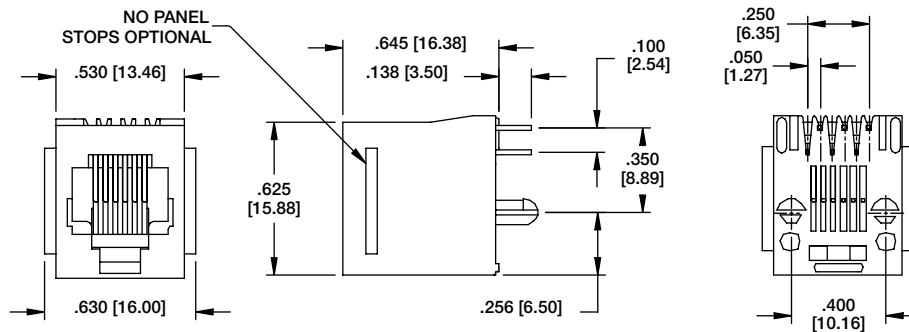
Ordering Information pg. 9

TYPE 3
4P4C



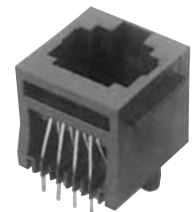
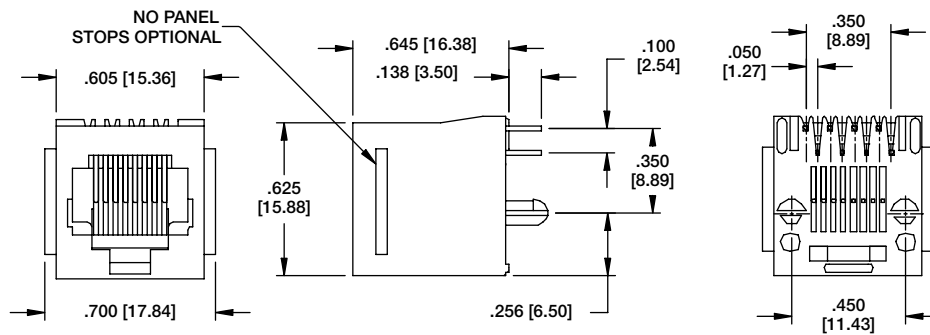
MTJ-443X1

TYPE 3
6P4C



MTJ-663X1

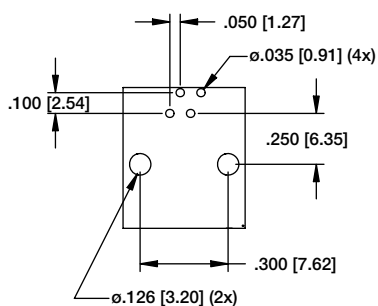
TYPE 3
8P8C



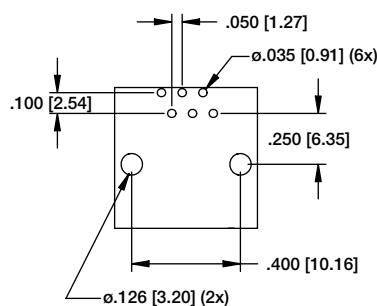
MTJ-883X1

Recommended PCB Layout

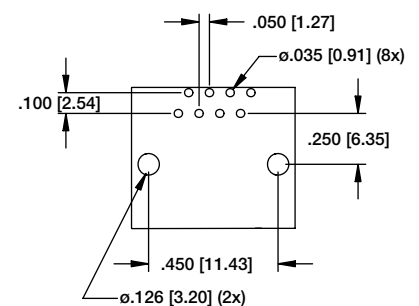
4p4c



6p4c
6p6c

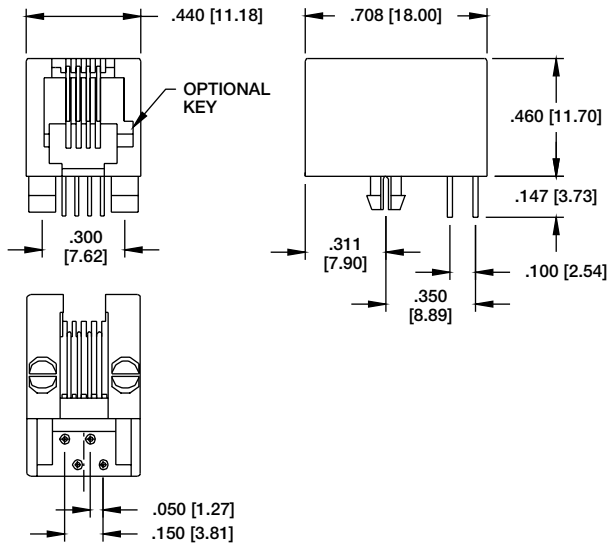


8p8c



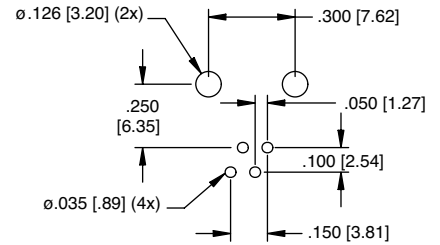
Ordering Information pg. 9

TYPE 5
4P4C

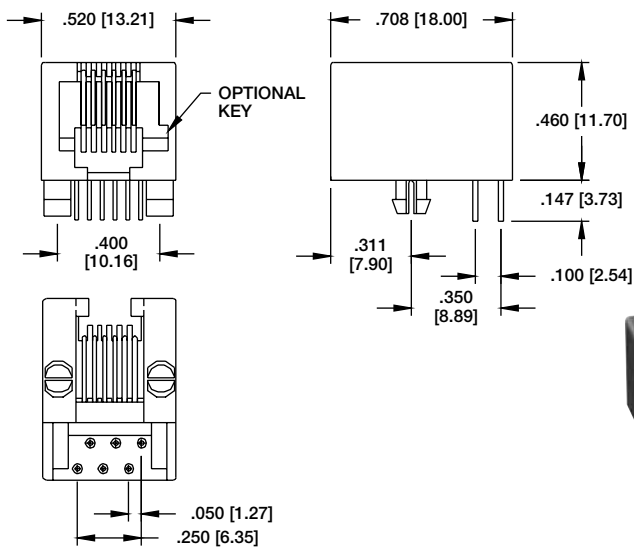


MTJ-445X1

Recommended PCB Layout

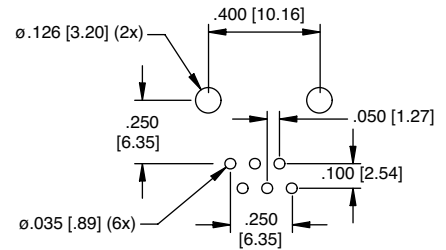


TYPE 5
6P4C
6P6C



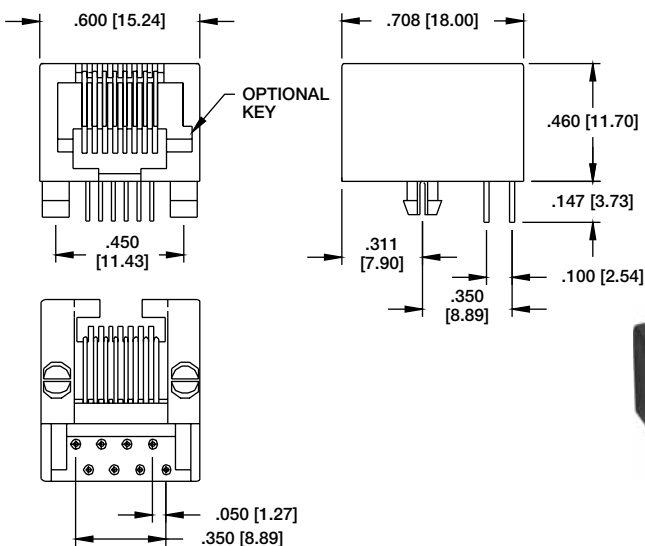
MTJ-665X1

Recommended PCB Layout



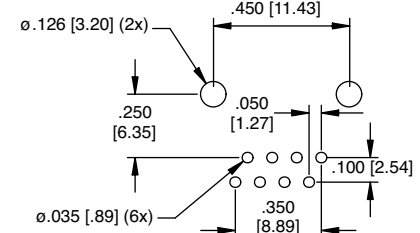
TYPE 5
8P8C

MT Option

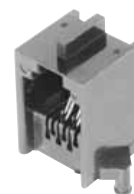
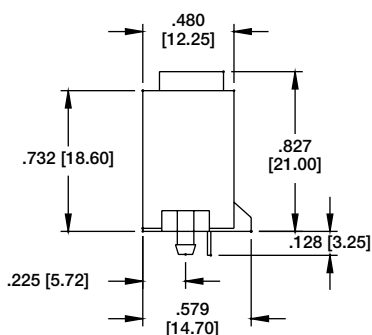
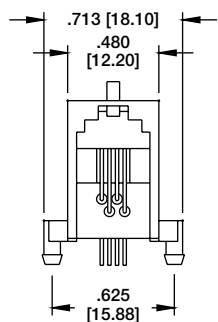


MTJ-885X1

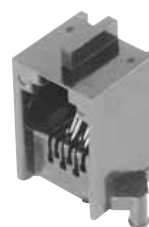
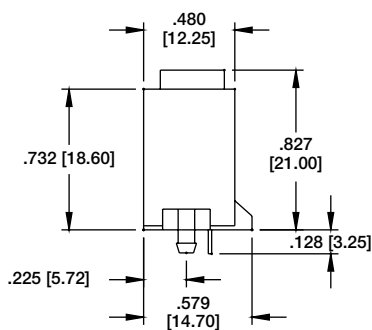
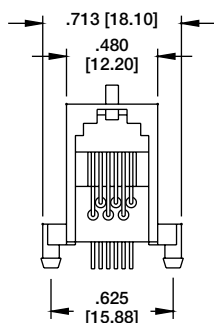
Recommended PCB Layout



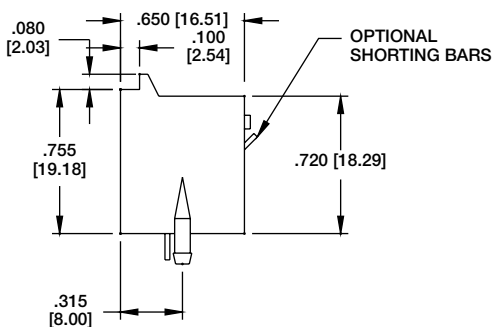
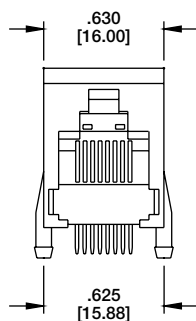
Ordering Information pg. 9

**MTJ-447X1**

TYPE 7
4P4C

**MTJ-647X1**

TYPE 7
6P4C
6P6C

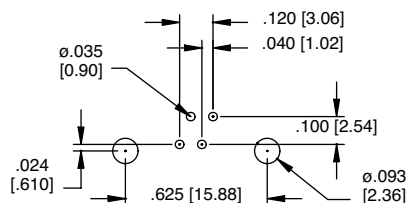


MTJ-887X1

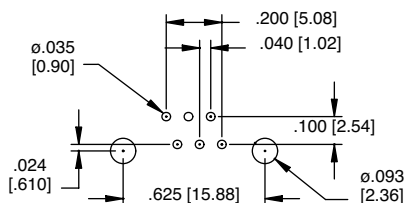
TYPE 7
8P8C

Recommended PCB Layout

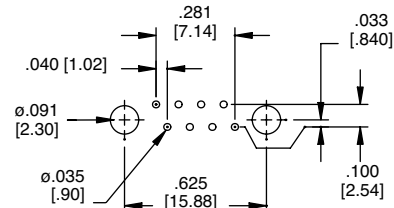
4p4c



6p4c
6p6c

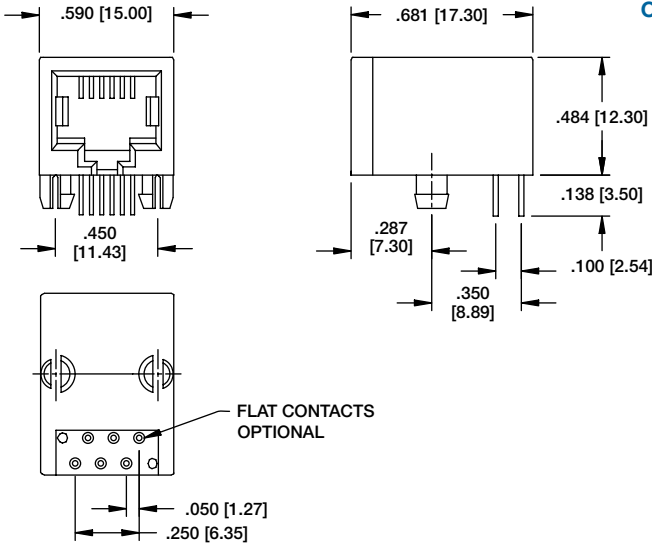


8p8c

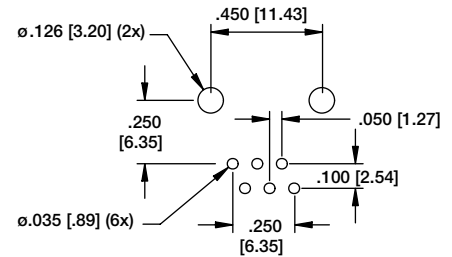


Ordering Information pg. 9

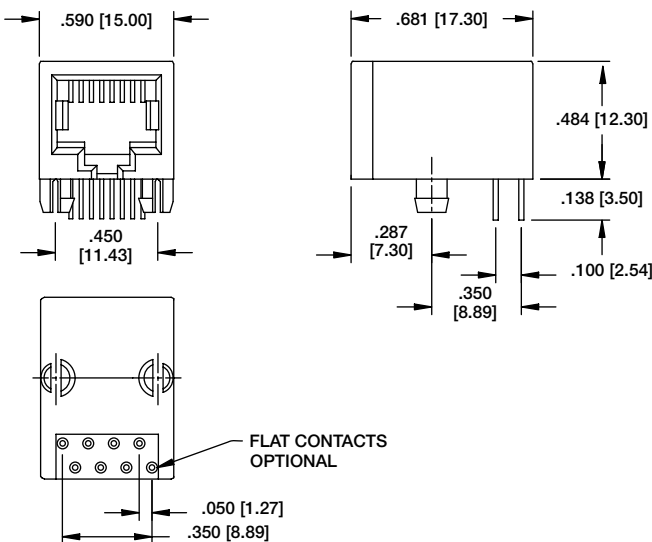
TYPE 9
6P4C
6P6C



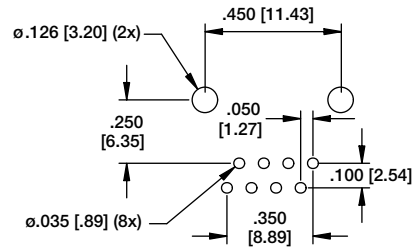
MTJ-669X1



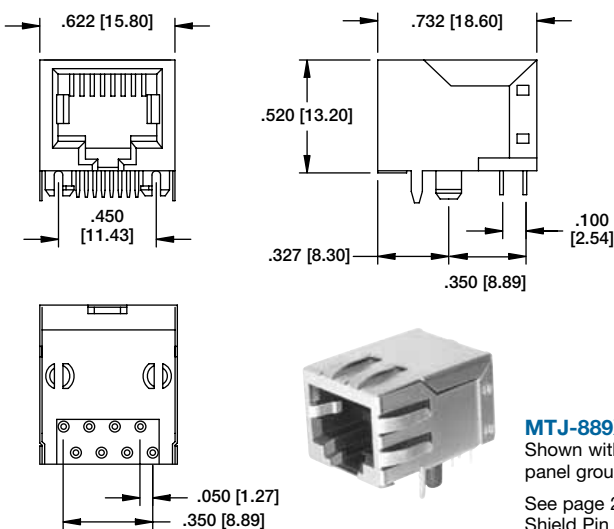
Recommended PCB Layout



MTJ-889X1



Recommended PCB Layout



MTJ-889X1-FSE

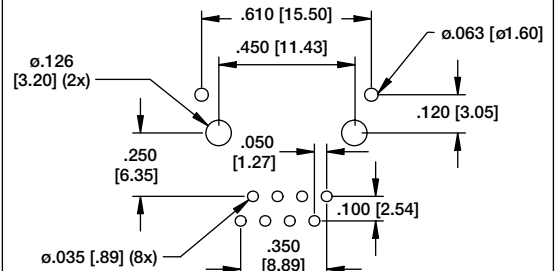
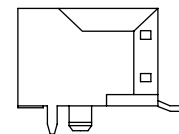


MTJ-889X1-FSE-PG

Shown with optional panel ground tabs
See page 20 for other Shield Pin Location Options

TYPE 9
8P8C
SHIELDED

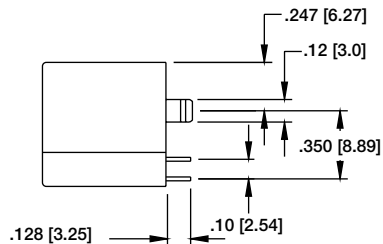
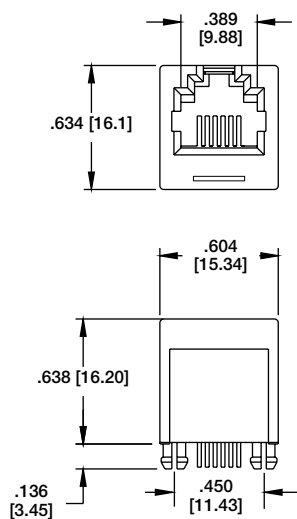
SMT Option



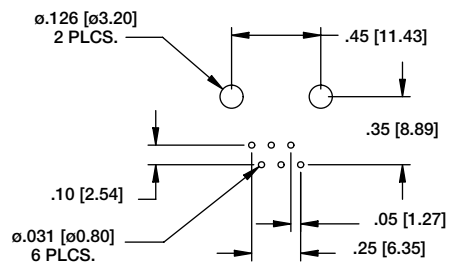
Recommended PCB Layout

Ordering Information pg. 9

TYPE F
6P6C

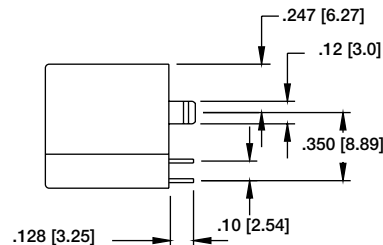
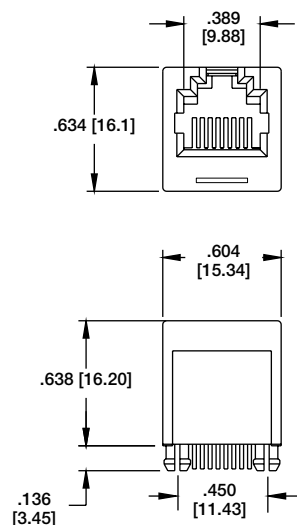


MTJ-66FX1

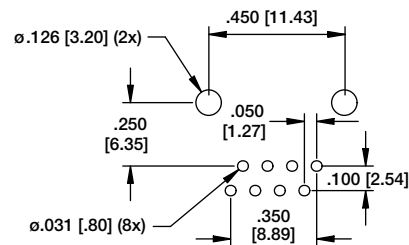


Recommended PCB Layout

TYPE F
8P8C

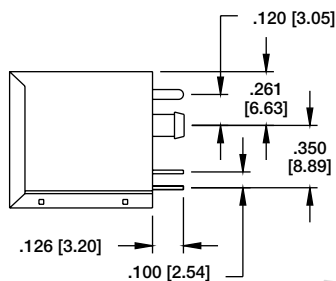
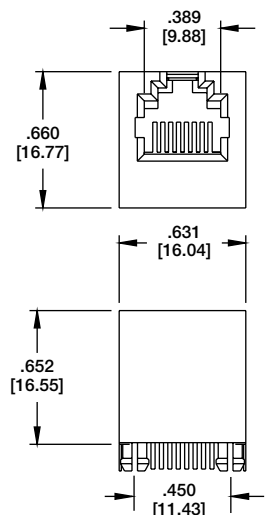


MTJ-88FX1

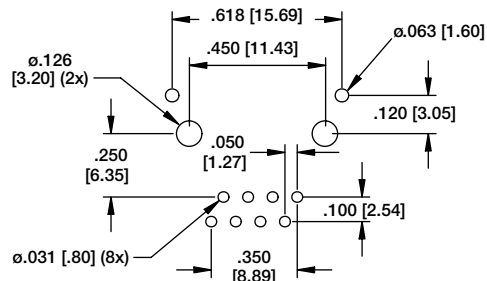


Recommended PCB Layout

TYPE F
SHIELDED
8P8C



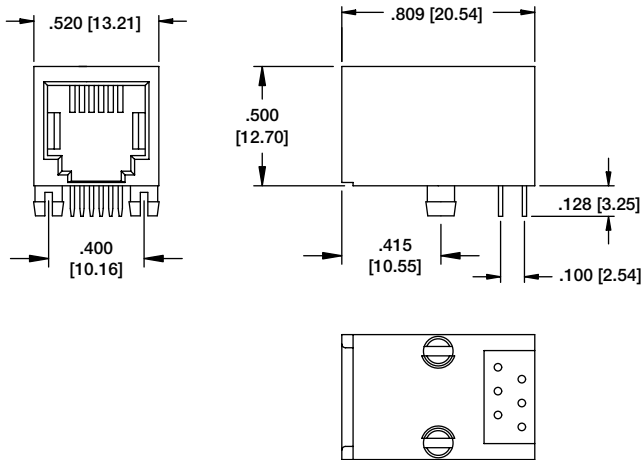
MTJ-88FX1-FS



Recommended PCB Layout

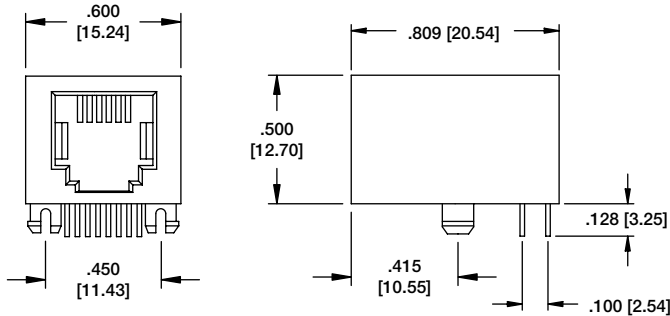
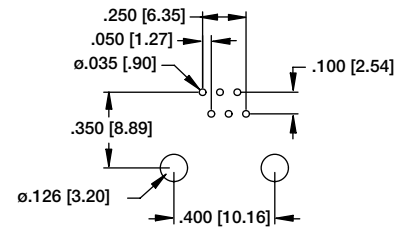
Ordering Information pg. 9

TYPE G
6P6C



MTJ-64GX1

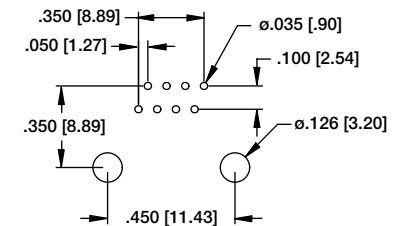
Recommended PCB Layout



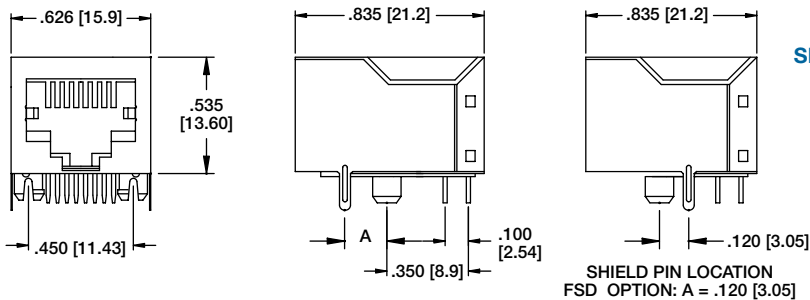
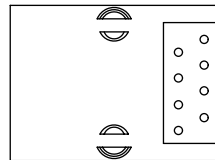
MTJ-88GX1

TYPE G
8P8C

Recommended PCB Layout

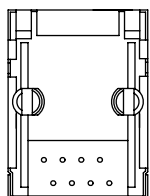
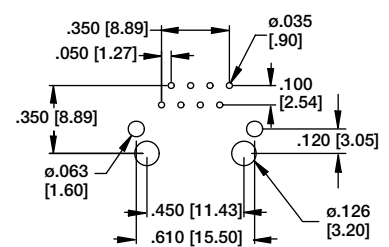


Panel Stops
Available with optional panel stops
Add -PS to end of part No.



TYPE G
SHIELDED
8P8C

Recommended PCB Layout (FSD)

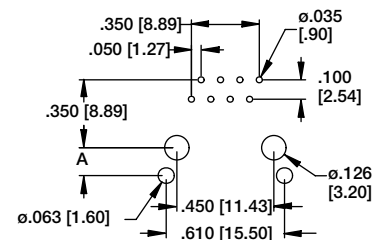


MTJ-88GX1-FSB-PG
Shown with Full Metal Shield
& Panel Ground Tab options



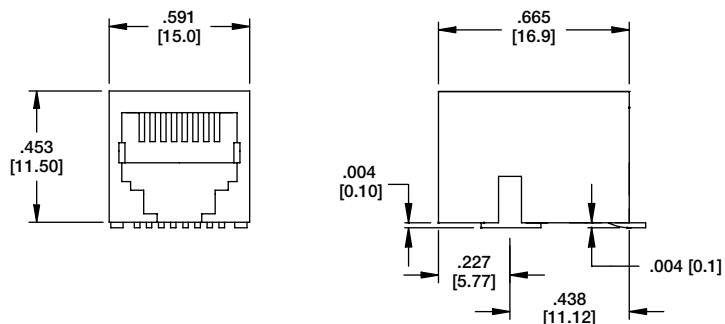
MTJ-88GX1-FSD
Shown with Full
Metal Shield option

PCB Layout (FSA, FSB, & FSE)

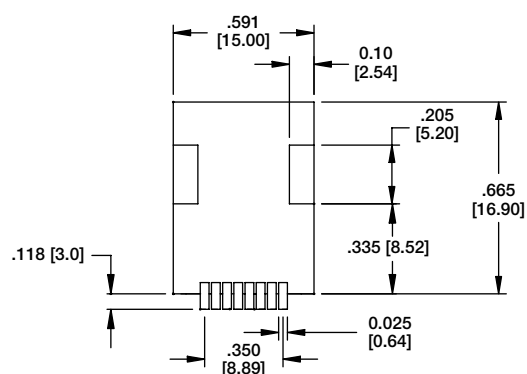
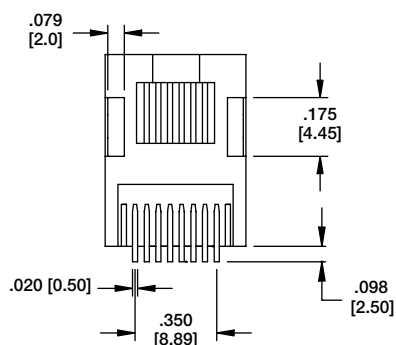


Ordering Information pg. 9

TYPE WA
SMT TABS IN
8P8C

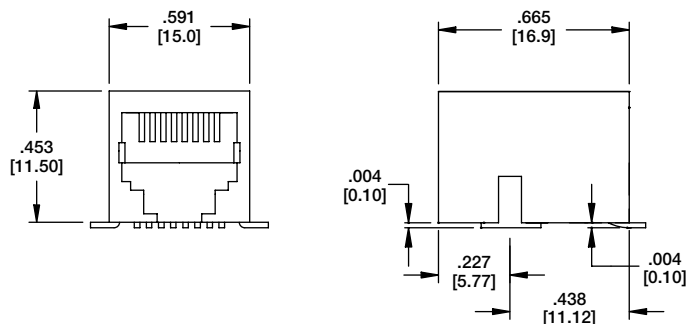


MTJ-88WAX1

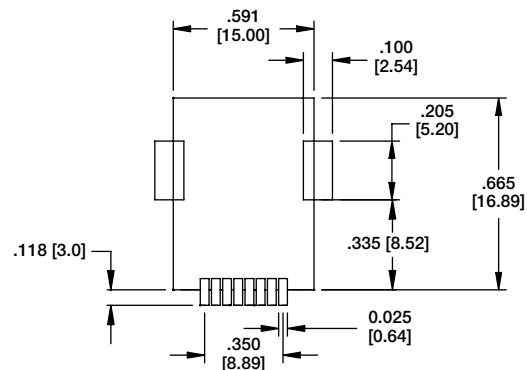
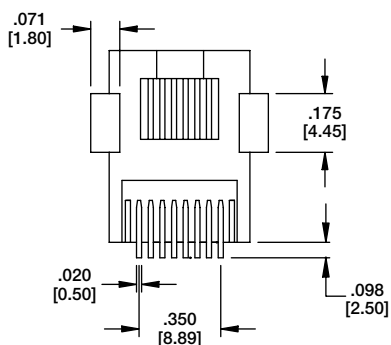


Recommended Solder Pad Layout

TYPE WB
SMT TABS OUT
8P8C



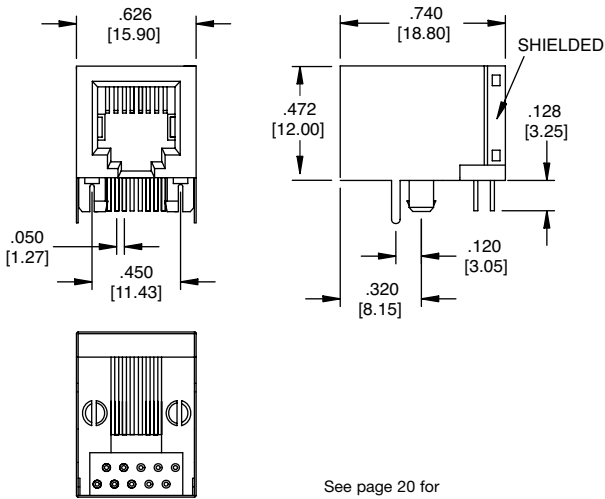
MTJ-88WBX1



Recommended Solder Pad Layout

Ordering Information pg. 9

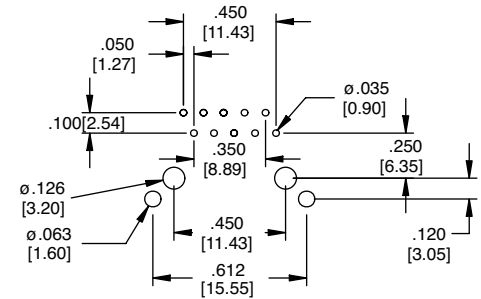
TYPE W
SHIELDED, THRU HOLE
8P8C
10P10C



MTJ-88WX1-FSE

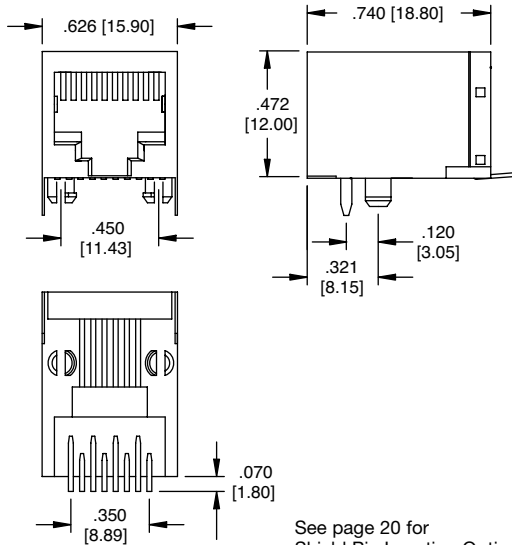


MTJ-88WX1-FSE-PG
Shown with optional
panel ground tabs



Recommended PCB Layout

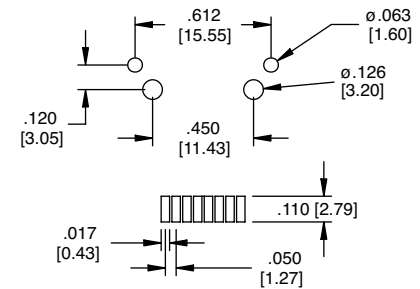
TYPE W
SHIELDED SMT WITH PLASTIC PEG
8P8C



MTJ-88WX1-FSE-SMT

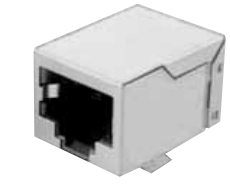
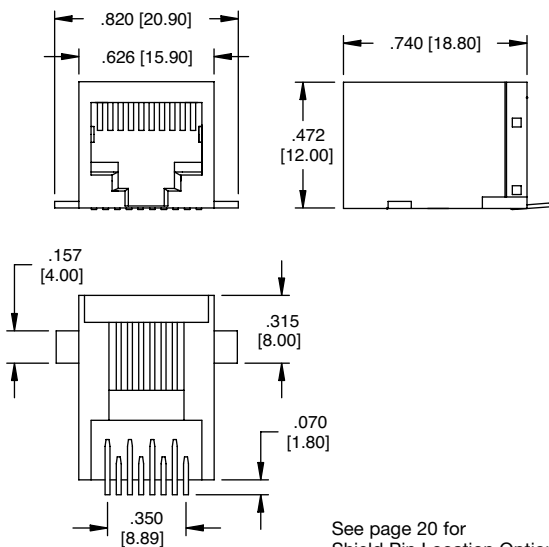


MTJ-88WX1-FSE-SMT-PG
Shown with optional
panel ground tabs



Recommended Solder Pad Layout

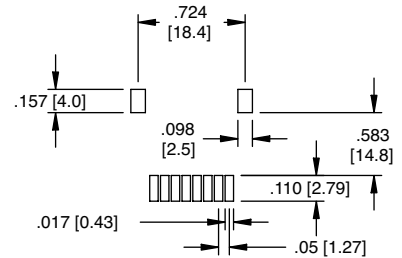
TYPE W
SHIELDED TRUE SMT
8P8C



MTJ-88WX1-FS-TSMT



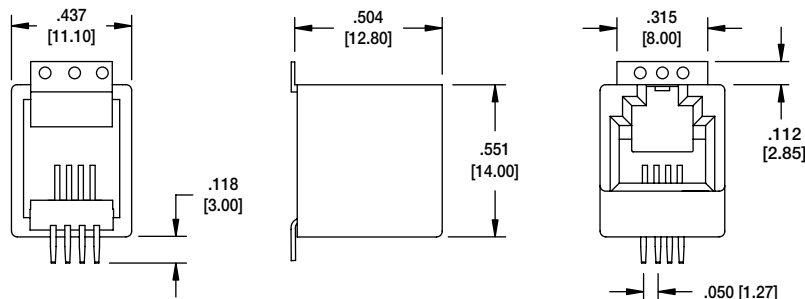
MTJ-88WX1-FS-TSMT-PG
Shown with optional
panel ground tabs



Recommended Solder Pad Layout

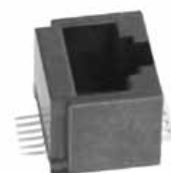
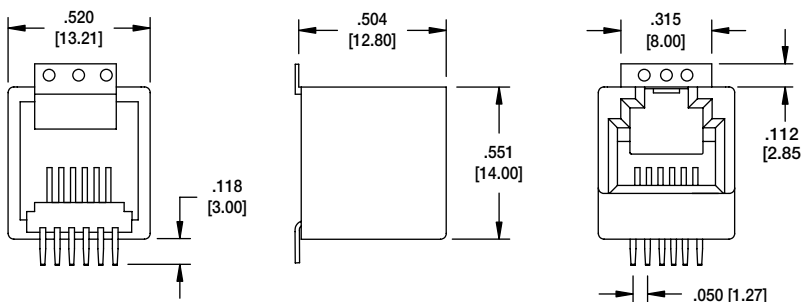
Ordering Information pg. 9

TYPE H
4P4C



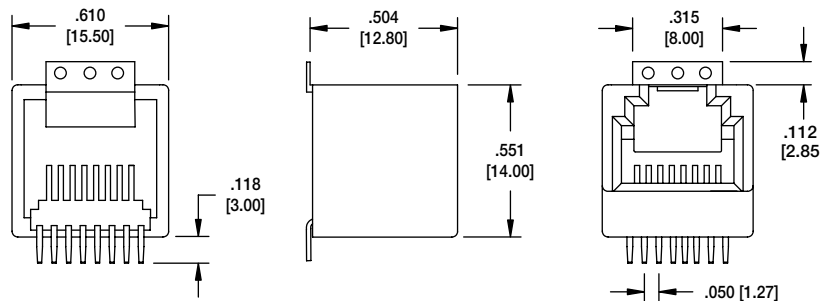
MTJ-44HX1

TYPE H
6P6C



MTJ-66HX1

TYPE H
8P8C



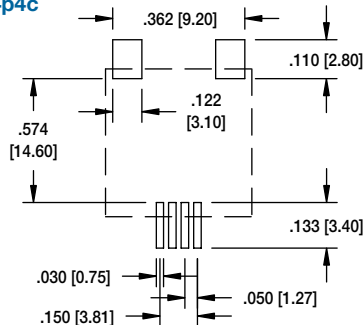
MTJ-88HX1



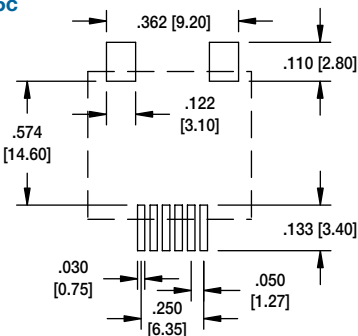
MTJ-88HX1-FS

Recommended PCB Layout

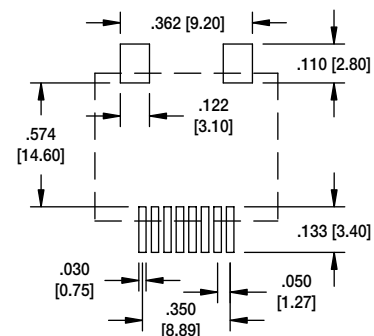
4p4c



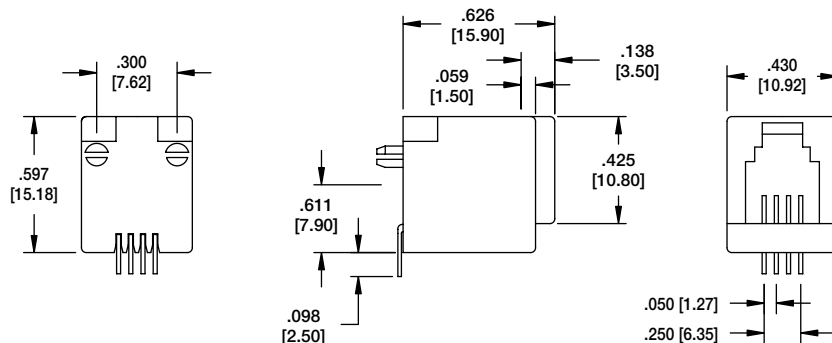
6p6c



8p8c



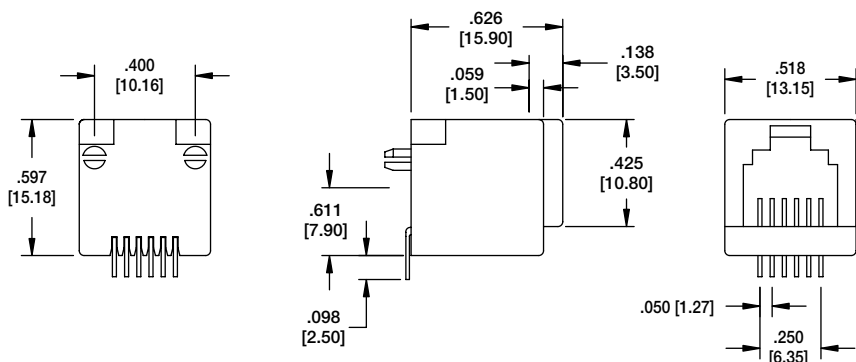
Ordering Information pg. 9



TYPE K
4P4C



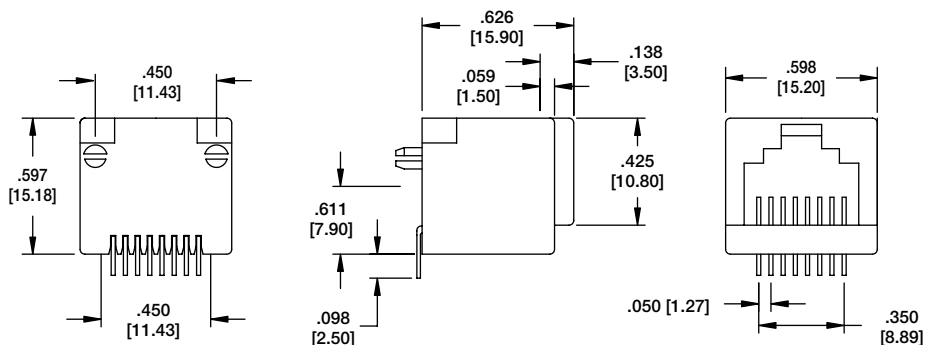
MTJ-44KX1



TYPE K
6P4C
6P6C



MTJ-66KX1



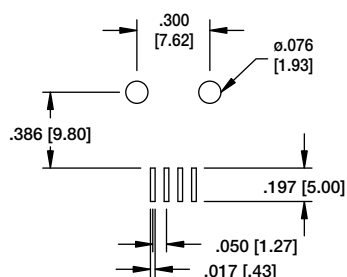
TYPE K
8P8C



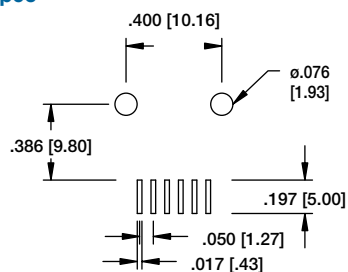
MTJ-88KX1

Recommended PCB Layout

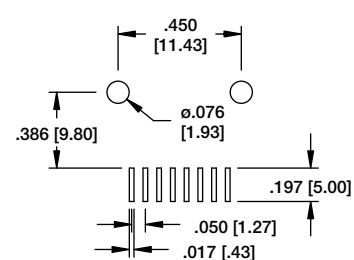
4p4c



6p6c

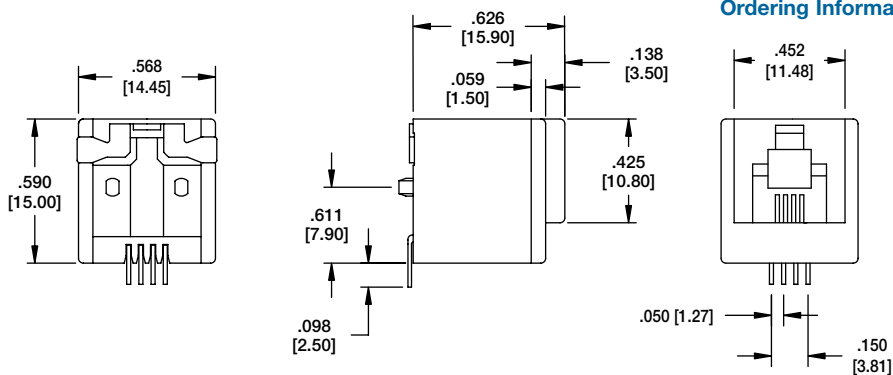


8p8c



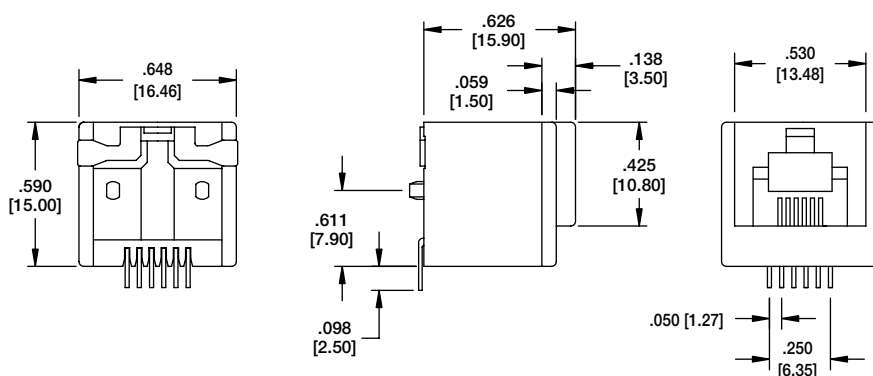
Ordering Information pg. 9

TYPE V
4P4C



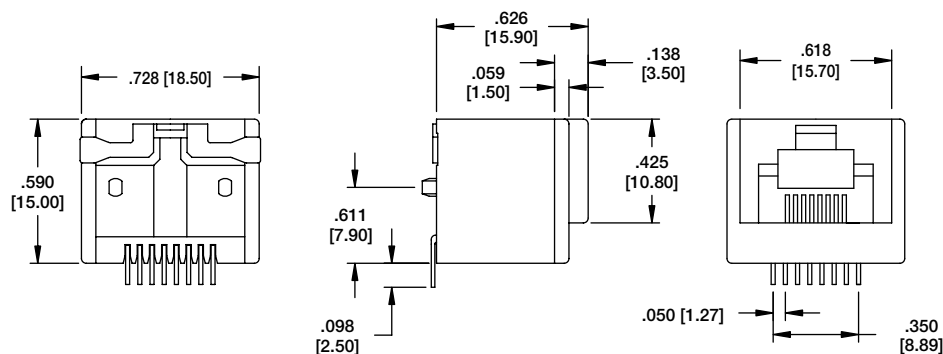
MTJ-44VX1

TYPE V
6P6C
6P4C



MTJ-66VX1

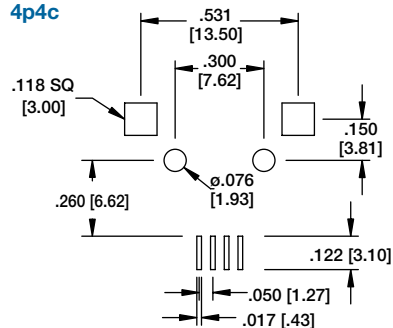
TYPE V
8P8C



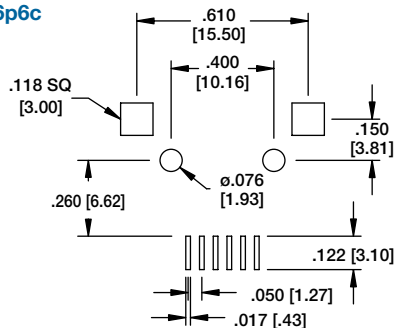
MTJ-88VX1

Recommended PCB Layout

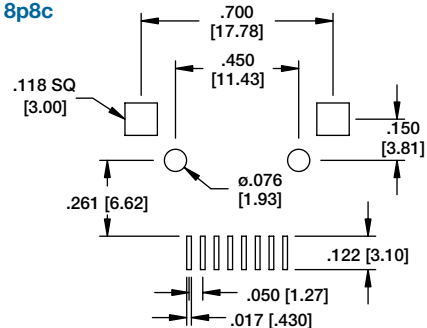
4p4c



6p6c

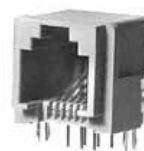
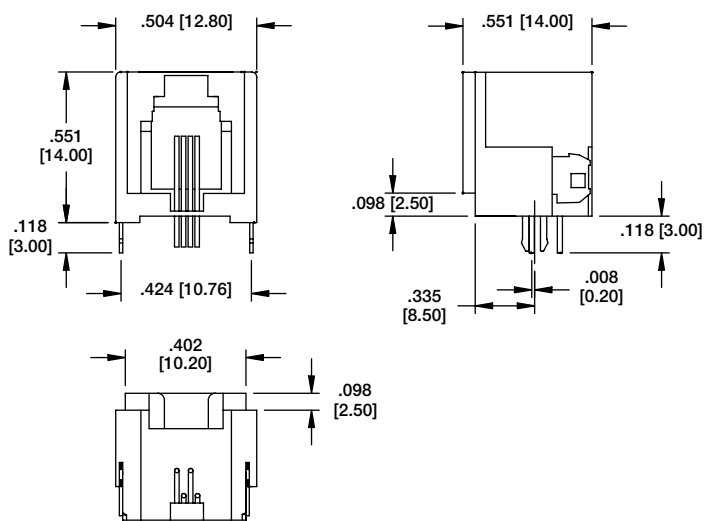


8p8c

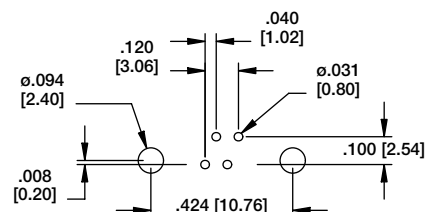


Ordering Information pg. 9

TYPE E
4P4C

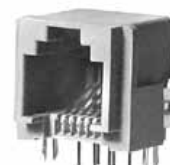
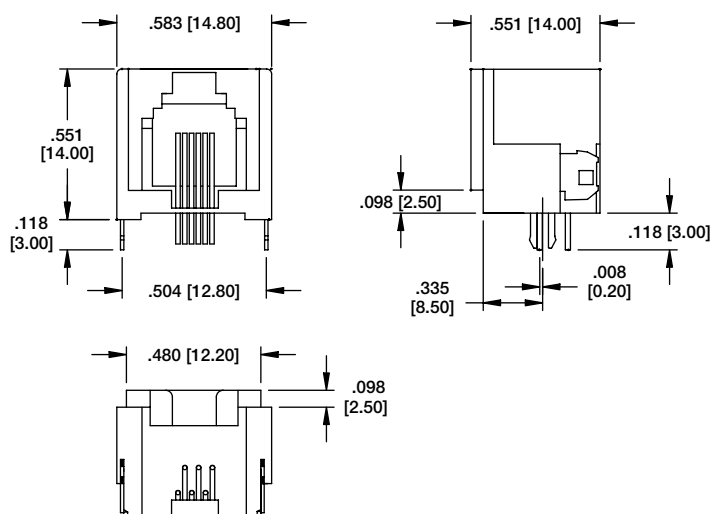


MTJ-44EX1

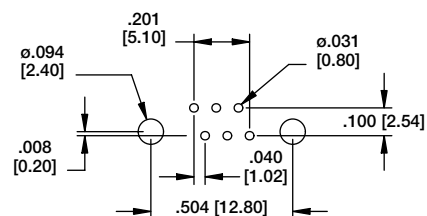


Recommended PCB Layout

TYPE E
6P4C
6P6C

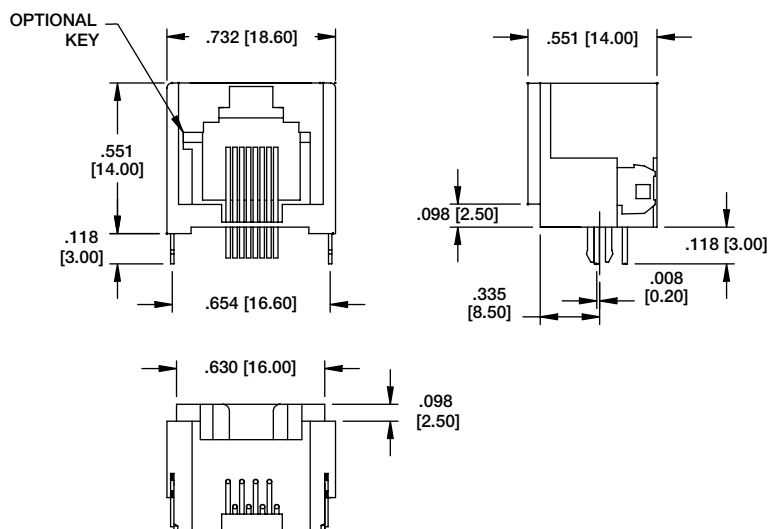


MTJ-66EX1

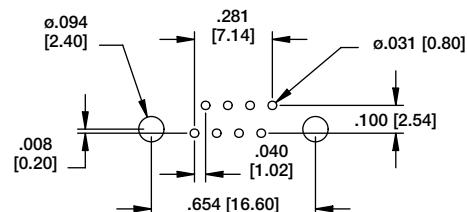


Recommended PCB Layout

TYPE E
8P8C

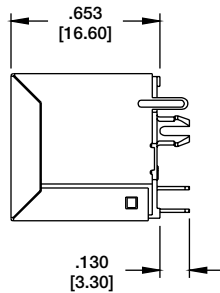
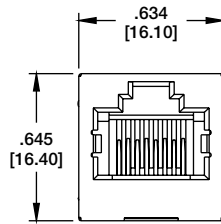


MTJ-88EX1



Recommended PCB Layout

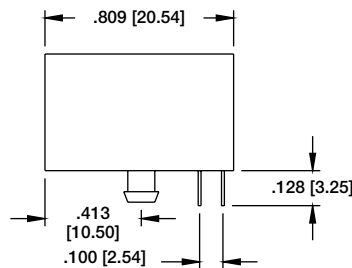
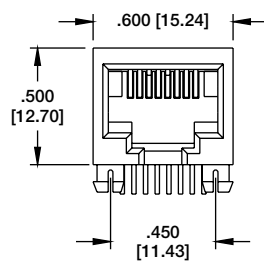
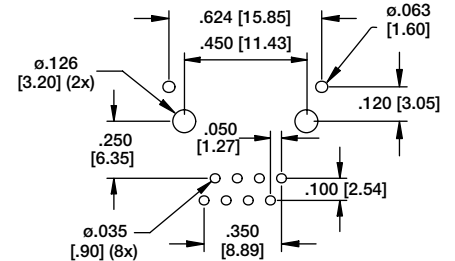
Ordering Information pg. 9



MTJ-88AX1-FSE

TYPE A
CAT. 5, TOP ENTRY
8P8C

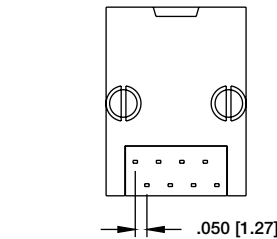
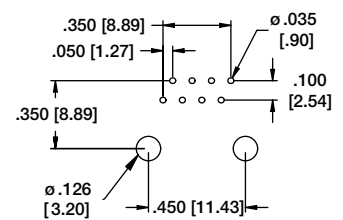
Recommended PCB Layout



MTJ-88TX1

TYPE T
CAT. 5, SIDE ENTRY
8P8C

Recommended PCB Layout

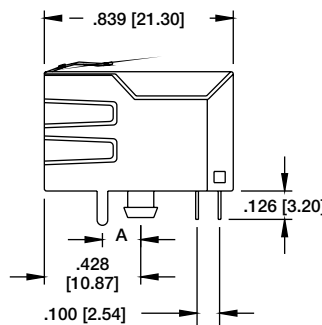
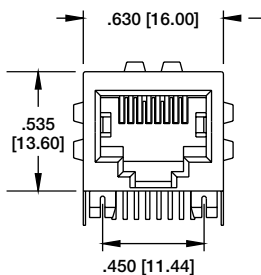


TYPE T
CAT. 5, SHIELDED
8P8C

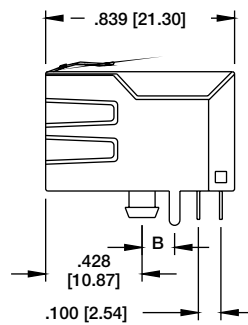


MTJ-88TX1-FSE-PG

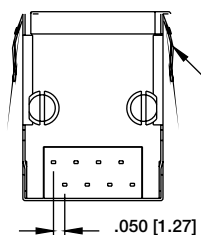
Available with or without panel ground tabs



FSA, FSB & FSE



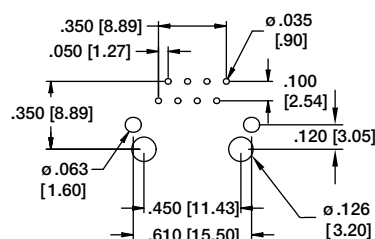
FSD = .120 [3.05]



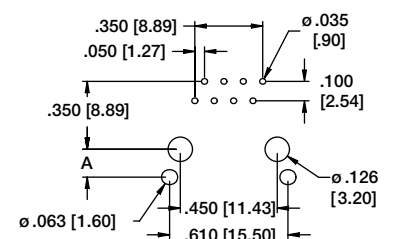
OPTIONAL
PANEL GROUND TABS

Dimensions A & B
SHIELD PIN LOCATION OPTIONS
FSA OPTION: A = .170 [4.32]
FSB OPTION: A = .144 [3.66]
FSE OPTION: A = .120 [3.05]
FSD OPTION: B = .120 [3.05]

PCB Layout (FSD)

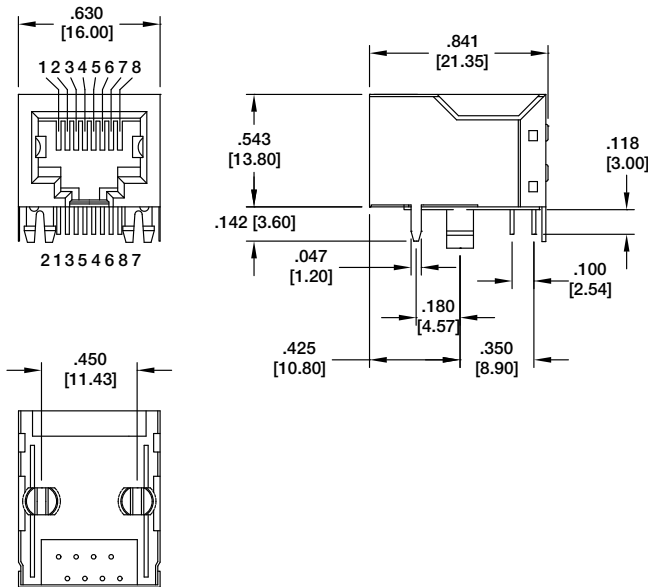


PCB Layout (FSA, FSB & FSE)



TYPE T

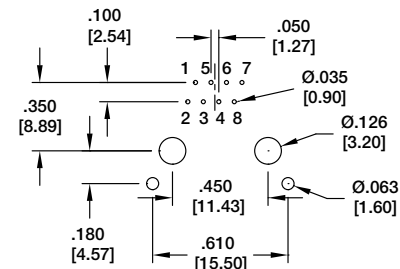
CAT. 5e, SHIELDED



MTJ-88TX1-FSG-C5e



MTJ-88TX1-FSG-PG-C5e

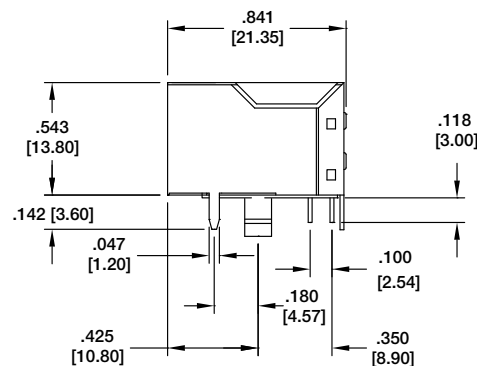
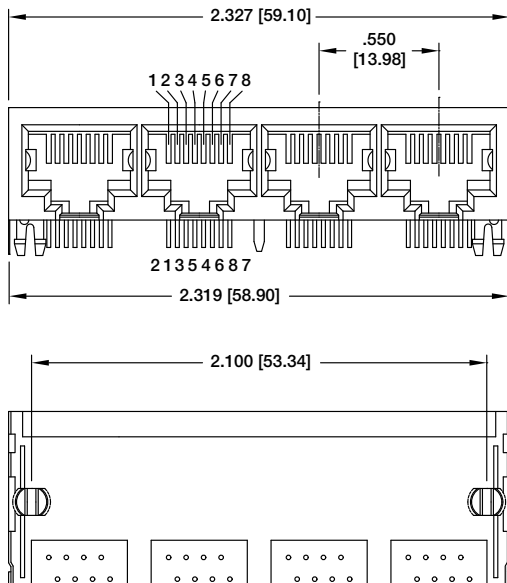


Recommended PCB Layout

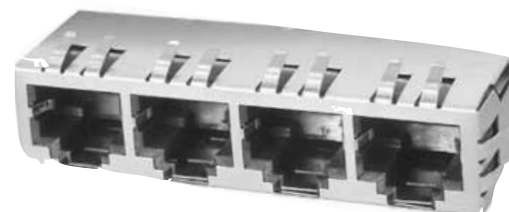
TYPE T

GANGED

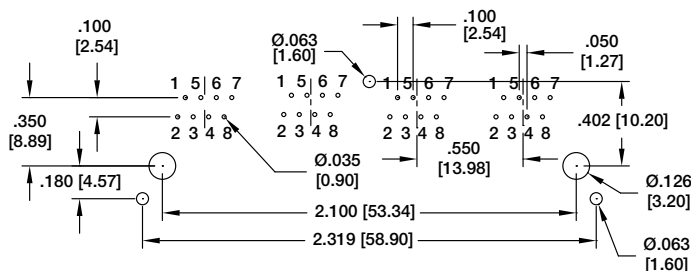
CAT. 5e, SHIELDED



MTJG-4-88TX1-FSG-C5e



MTJG-4-88TX1-FSG-PG-C5e



Recommended PCB Layout

TYPE AR

LED JACK .531" HEIGHT
TOP TAB & TOP LEDs, THRU HOLE
8P8C



MTJ-88ARX1-FS-LG

Also available with panel ground tabs

TYPE AA

LED JACK BOTTOM TAB &
BOTTOM LEDs THRU HOLE
8P8C



MTJ-88AAX1-FS-LG

TYPE D

TOP ENTRY LED JACK .610" HEIGHT WITH LEDs, NON-SHIELDED
8P8C



MTJ-88DX1-LG

Add suffix to end of P/N:

LED CONFIGURATION		
SUFFIX	LED 1	LED 2
LA	YELLOW	YELLOW
LD	GREEN	GREEN

See pg. 43 for additional LED options

Recommended PCB Layout

JACKS WITH LEDs ORDERING INFORMATION



SERIES INDICATOR
MTJ = Modular
telephone jack



**HOUSING
PLUG SIZE**
8 or 10



**NO. OF CONTACT
POSITIONS FILLED**
6, 8 or 10



HOUSING TYPE
AR, AA, D, G



PLATING
X = Gold Flash
0 = 15 μ in gold
1 = 30 μ in gold
2 = 50 μ in gold



**BODY
COLOR**
1 = Black
2 = Gray



**LED
CONFIGURATION**
See Chart
above
Leave blank
for no LEDs

OPTIONS:

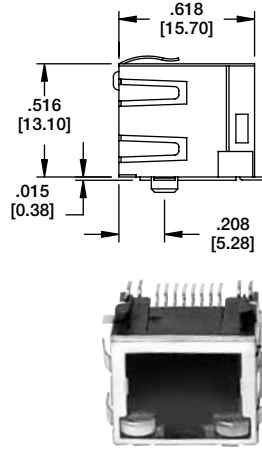
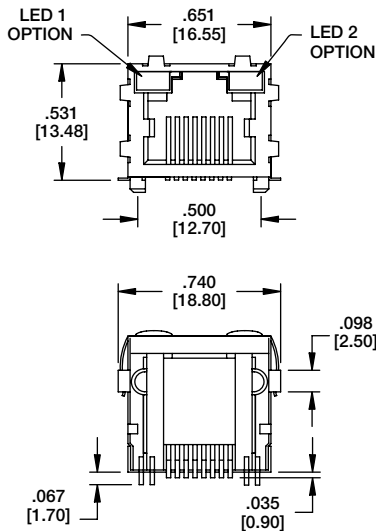
SMT = Surface mount tails with Hi-Temp insulator

PG = Panel Ground Tabs

LX = LEDs, use LA, LD, LG, LH, LI, see LED Configuration Chart

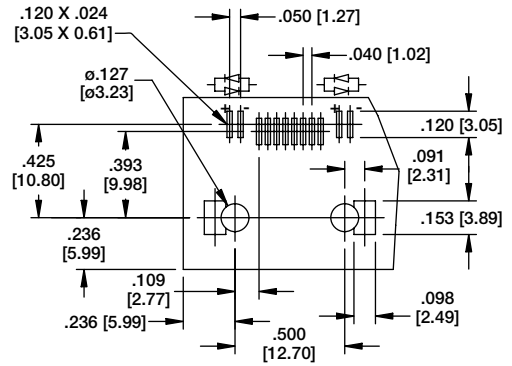
Ordering Information pg. 29

TYPE AR
WITH SMT OPTION
8P8C



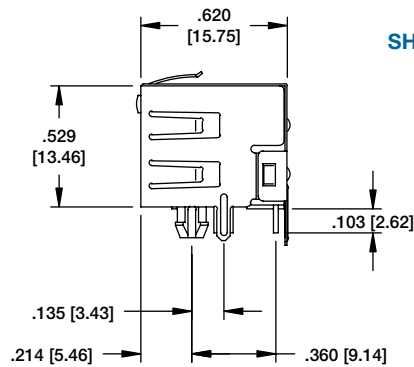
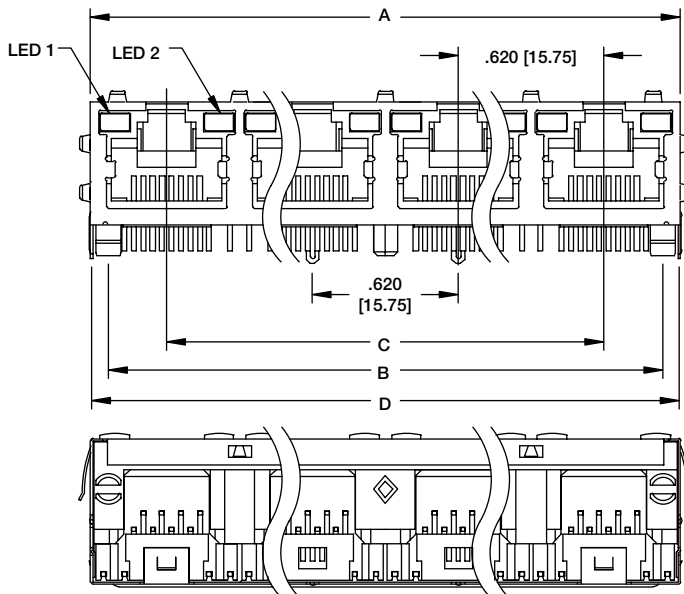
MTJ-88ARX1-FS-SMT-PG-LG

Also available without panel ground tabs



Ordering Information pg. 34

TYPE AR
GANGED WITH METAL
SHIELD, PANEL GROUND
TABS AND
LED OPTION
8P8C



MTJG-4-88ARX1-FSM-PG-LG

Shown with metal shield, panel ground tabs and LED options

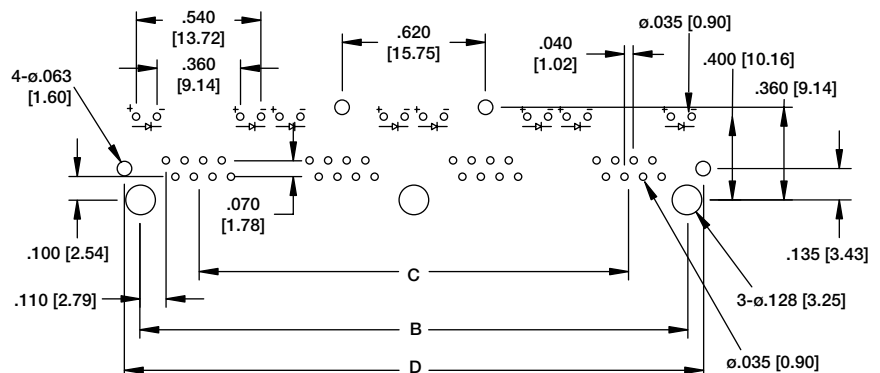
Add suffix to end of P/N:

LED CONFIGURATION		
SUFFIX	LED 1	LED 2
LA	YELLOW	YELLOW
LD	GREEN	GREEN

2, 4 & 8 Ports available

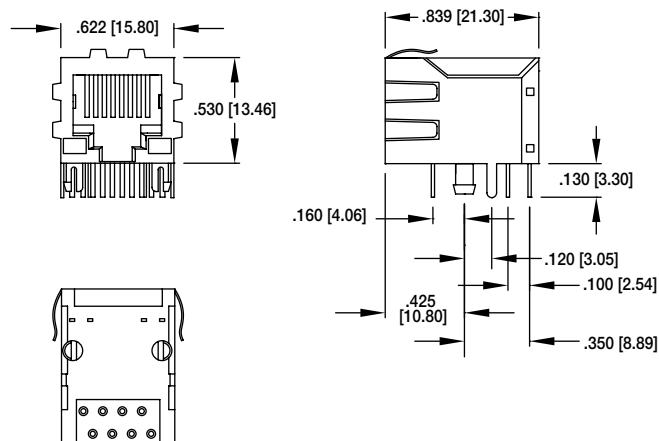
See pg. 43 for additional LED options

A = .620 [15.75] x No. of Ports + .029 [0.75]
B = .620 [15.75] x No. of Ports - 1 + .500 [12.70]
C = .620 [15.75] x No. of Ports - 1
D = .620 [15.75] x No. of Ports + .019 [0.50]



Ordering Information pg. 29

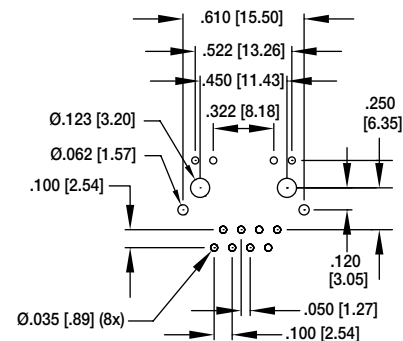
TYPE G WITH LEDs



MTJ-88GX1-FSD-LH

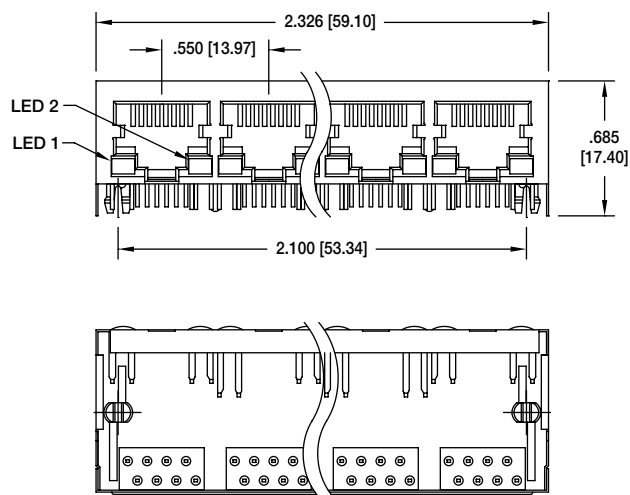


MTJ-88GX1-FSD-LH-PG

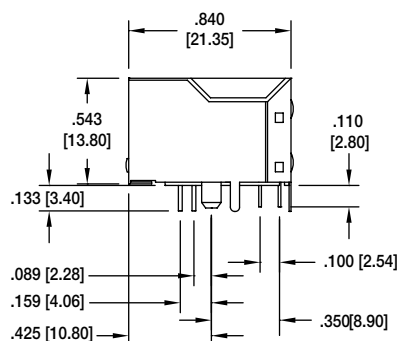


Recommended PCB Layout

TYPE G GANGED WITH LEDs



2, 4 & 6 PORTS AVAILABLE

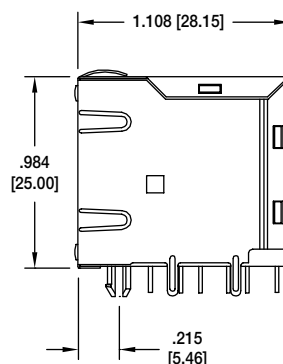
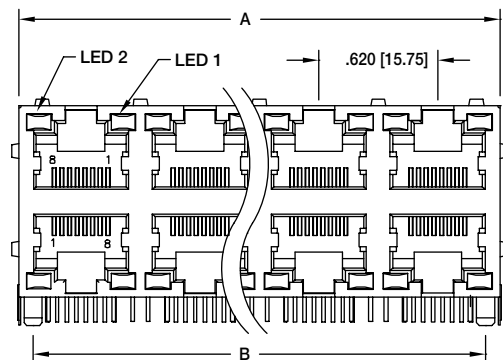


MTJG-4-88GX1-FSD-PG-LG



Ordering Information pg. 34

TYPE J STACKED WITH LEDs

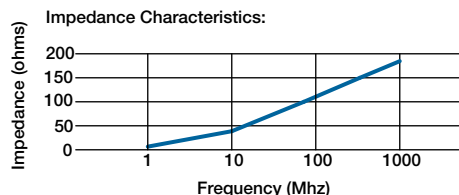


PART NUMBER	PORTS	DIMENSIONS	
		A	B
MTJG-2-88JX1-FSM-LXX	2 X 1	.650 [16.51]	.500 [12.70]
MTJG-4-88JX1-FSM-LXX	2 X 2	1.265 [32.15]	1.120 [28.45]
MTJG-8-88JX1-FSM-LXX	2 X 4	2.50 [63.65]	2.360 [59.95]
MTJG-12-88JX1-FSM-LXX	2 X 6	3.74 [95.15]	3.600 [91.45]

See pg. 43 for additional LED options

FILTERED MODULAR JACKS

Inductive filtered modular jacks improve signal integrity and are available in a variety of styles including tin plated copper shielding with a choice of magnetic transformer or ferrite filter. Adam Tech offers drop in equivalents to all industry standard filtered jacks



Ordering Information pg. 9

TYPE M

EMI FERRITE FILTERED JACK



MTJ-88MX1
Non-Shielded



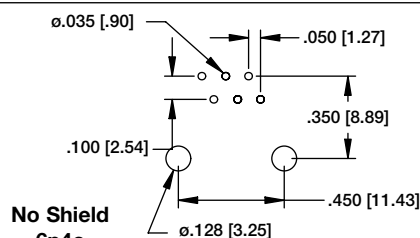
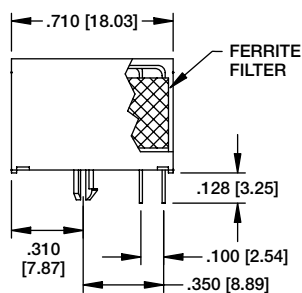
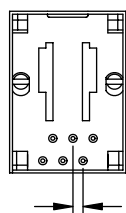
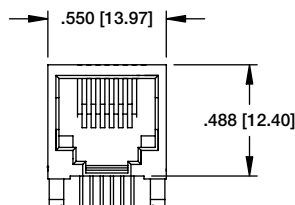
MTJ-88MX1-FSE
Metal Shielded



MTJ-88MX1-FSE-PG
Metal Shielded with
panel ground tabs

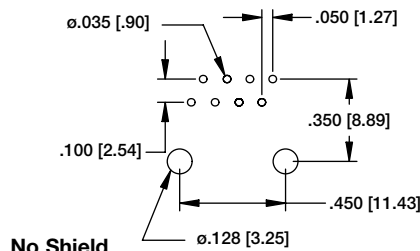
EMI FERRITE FILTERED JACK

TYPE M
6P6C
6P4C



No Shield
6p4c
6p6c

Recommended PCB Layout

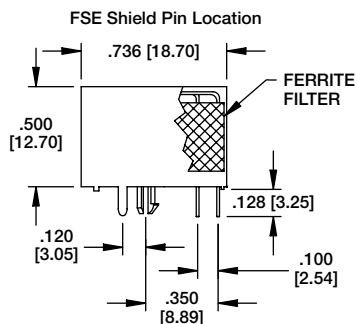
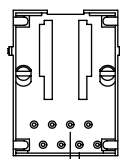
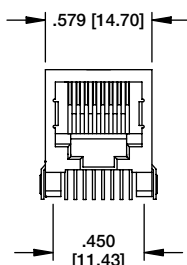


No Shield
8p8c

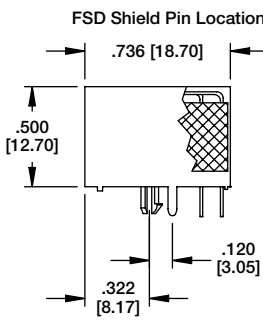
Recommended PCB Layout

EMI FERRITE FILTERED & SHIELDED JACK

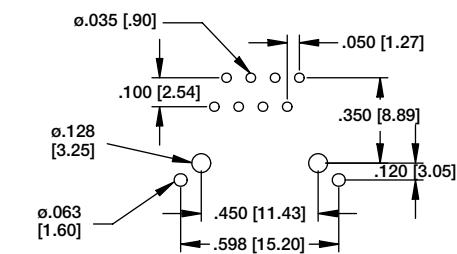
TYPE M
8P8C



MTJ-88MX1-FSE

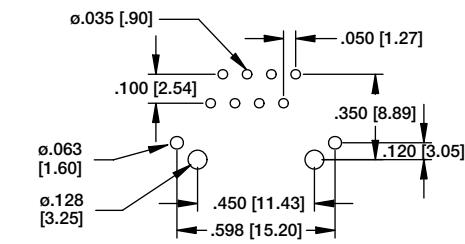


MTJ-88MX1-FSD



FSE Shield
8p8c

Recommended PCB Layout



FSD Shield
8p8c

Recommended PCB Layout

INTRODUCTION:

Adam Tech MTJ series RJ-45 connectors with integrated magnetics are designed to support Base 10, 100 and 1000-T applications such as hubs, routers, ADSL modems, and ATM transmission equipment. The integrated magnetics allows the design engineer to save PC board real-estate and lower the total part count per system. This series meets all applicable specifications for CAT 5, 5e, 6 and IEEE 802.3. The USB model meets all applicable USB 2.0 specifications. All configurations are available with optional LED's.

FEATURES:

Single, stacked and ganged configurations available All products have a full metal shield to guard against electromagnetic interference. Hi-Temp option available All products are fully lead free and RoHS compliant

MATING PLUGS:

Adam Tech modular telephone plugs and all industry standard telephone plugs.

SPECIFICATIONS:

Material:

Insulator: PBT, glass filled, rated UL94V-0

Insulator Color: Black

Contacts: Phosphor Bronze or Brass

Shield: Copper Alloy, Nickel or Tin plated

Contact Plating:

Gold over Nickel underplate on contact area, Tin over Copper underplate on solder tails.

ELECTRICAL:

Operating Voltage: 150V AC

Current Rating: 1.5 Amps Max.

Contact Resistance: 20 mΩ Max.

Insulation Resistance: 500 MΩ Min.

Dielectric Withstanding Voltage: 1500V AC for 1 Minute

DC resistance: 1.2 Ohms Max.

Interwinding capacitance: 35pF @ 1MHz

Insertion loss: 100KHz to 80MHz = -1.1dB Min.

Return loss: 1MHz to 30MHz = -18dB Min.

30MHZ to 80MHZ = -12dB Min.

Rise time: 30nS Max.

Cross talk: 1MHz to 100MHz = 40dB TYP.

Common to Common mode Attenuation: 35dB TYP.

MECHANICAL:

Insertion force: 8 Contacts: 22.5N

10 Contacts: 24.5N

TEMPERATURE RATING:

Operation Temperature: -40°C ~ +85°C

PACKAGING:

Anti-ESD plastic trays or tubes

SAFETY AGENCY APPROVALS:

UL Recognized & CSA Certified, File no. E224049



MAGNETICS TELEPHONE JACK ORDERING INFORMATION

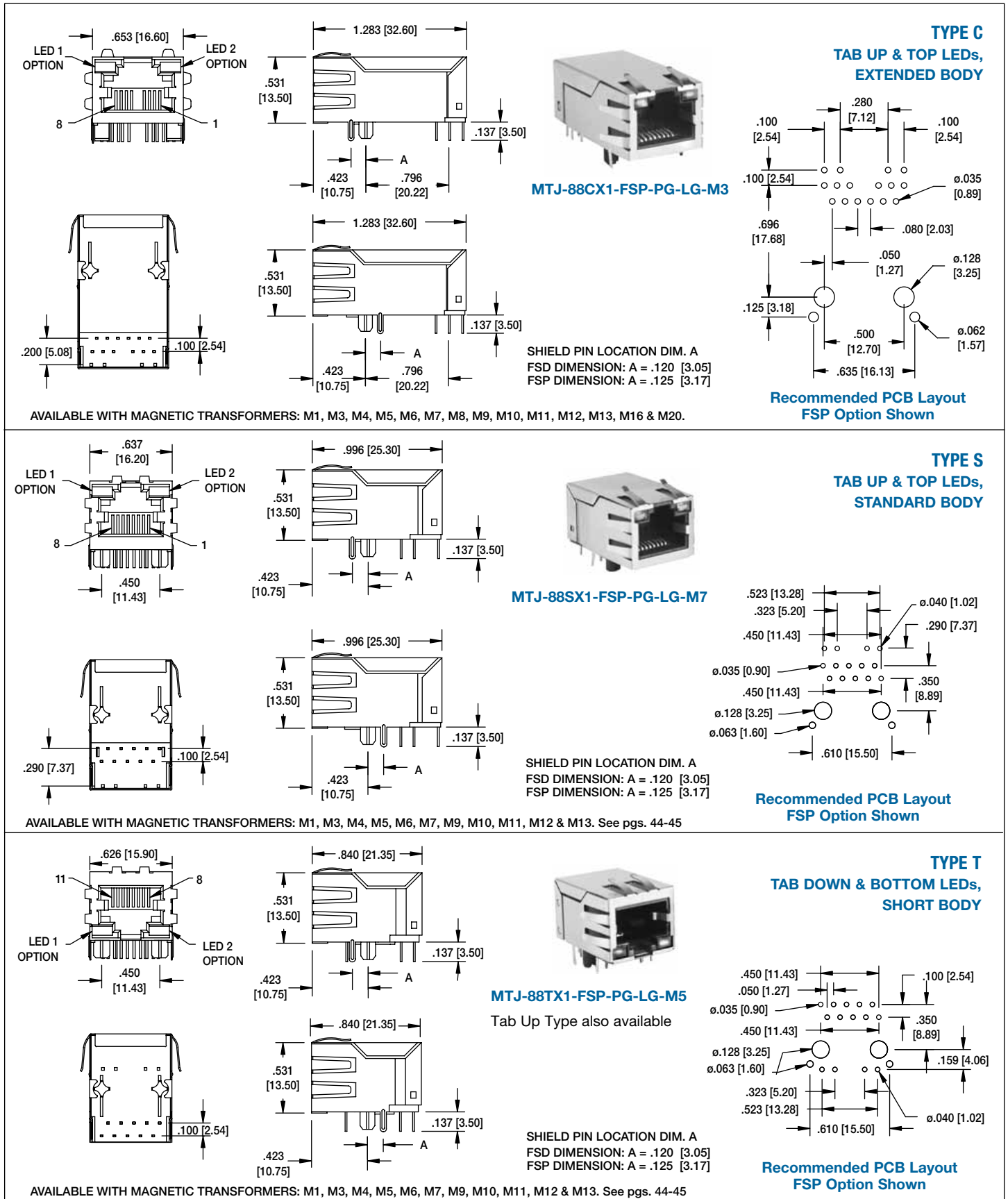
MTJ	8	8	C	X	1	FSD	LD	M5
SERIES INDICATOR MTJ = Modular Telephone Jack		NO. OF CONTACT POSITIONS FILLED 8 or 10		PLATING X = Gold Flash 0 = 15 μin gold 1 = 30 μin gold 2 = 50 μin gold		SHIELD PIN LOCATION OPTION FSD or FSP (See drawing on page 41)		TRANSFORMER TYPE M1 Thru M20 (See page 44-45) Consult Factory if transformer type required is not shown
	HOUSING PLUG SIZE 8 or 10		HOUSING TYPE C = Tab Up, Extended Body S = Tab Up, Standard Body T = Tab Down, Short Body		BODY COLOR 1 = Black		LED LX = Led Color (See Chart on page 43) RLX = Led with Resistor	

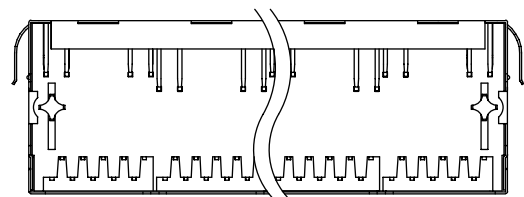
OPTIONS:

Add designator(s) to end of part number

HT = Hi-Temp insulator for Hi-Temp soldering processes up to 260°C

PG = Panel ground tabs

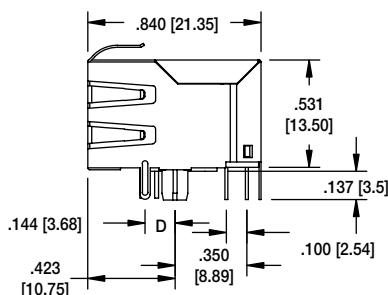




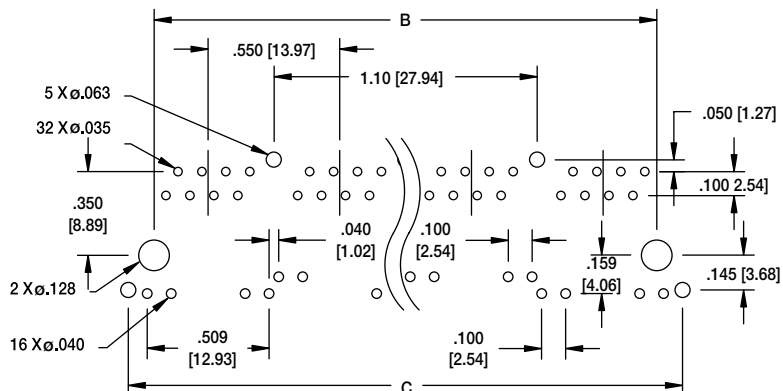
Drawing shown with metal shield, panel ground tabs, LEDs and magnetics option

AVAILABLE WITH MAGNETIC TRANSFORMERS: M1, M3, M4, M5, M6, M7, M9, M10, M11, M12 & M13. See pgs. 44-45

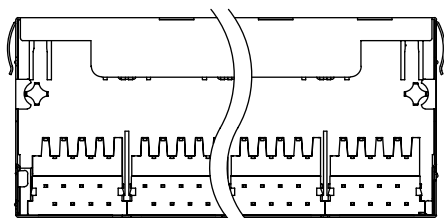
TAB DOWN, SHORT BODY
MAGNETICS & LEDs
2, 4 & 5 PORTS GANGED



"D" DIM.
FSA = .170 [4.32]
FSB = .144 [3.65]
FSG = .180 [4.57]
FSE = .120 [3.05]



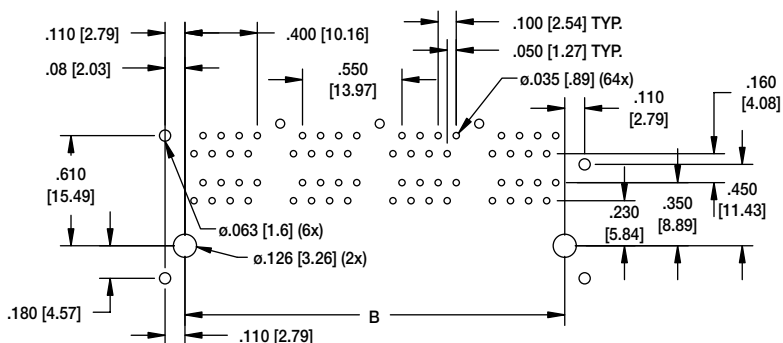
Recommended PCB Layout



Drawing shown with metal shield, panel ground tabs & LEDs.

Technical drawing of a mechanical part with dimensions in inches and millimeters:

- Top width: 1.107 [28.14]
- Left height: .996 [25.30]
- Right height: .140 [3.56]
- Bottom dimensions (from left to right):
 - .179 [4.57]
 - .350 [8.89]
 - .450 [11.43]
 - .509 [12.95]
 - .610 [15.49]



Recommended PCB Layout

**TYPE J
STACKED**

DIMENSIONS		
PORTS	A	B
2 X 1	.677 [17.20]	.450 [11.43]
2 X 2	1.227 [31.17]	1.00 [25.40]
2 X 4	2.331 [59.22]	2.100 [53.34]
2 X 5	2.876 [73.07]	2.650 [67.31]
2 X 6	3.426 [87.04]	3.200 [81.28]
2 X 8	4.527 [115.00]	4.300 [109.22]