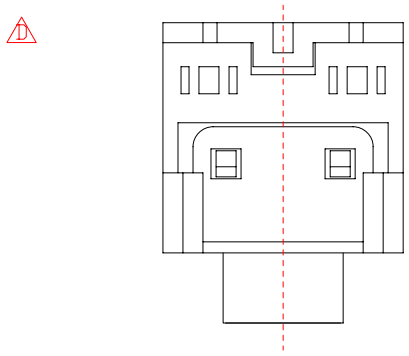
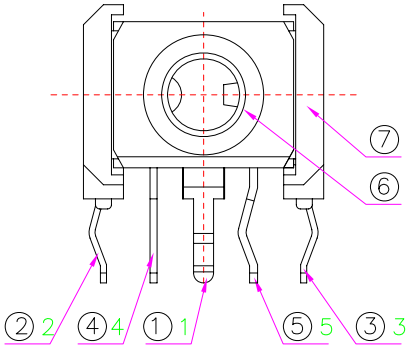
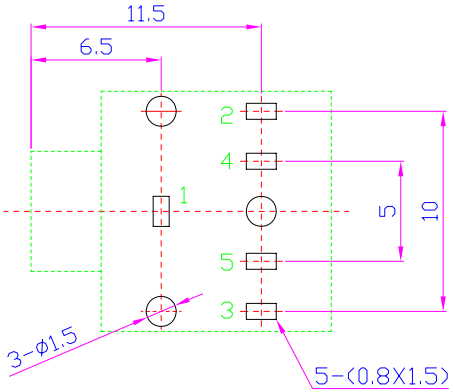
DWG. NO. JK-0862-F REV. "D"

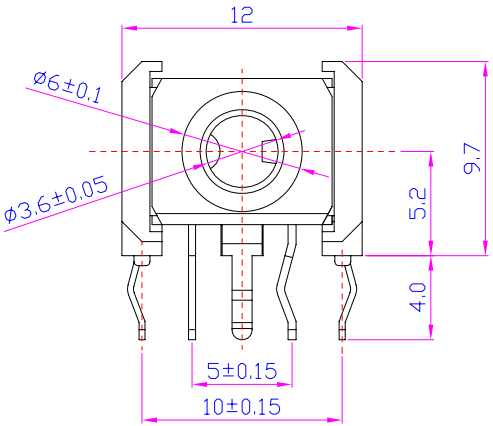
PART NO. RSJ-50X-NL SERIES

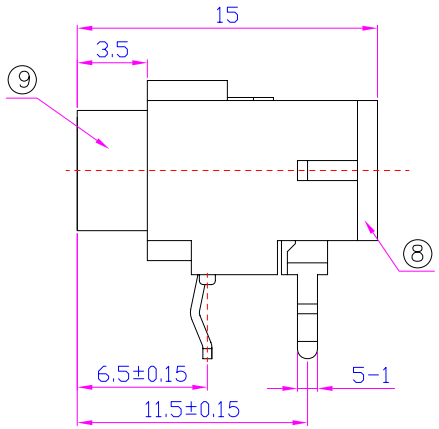


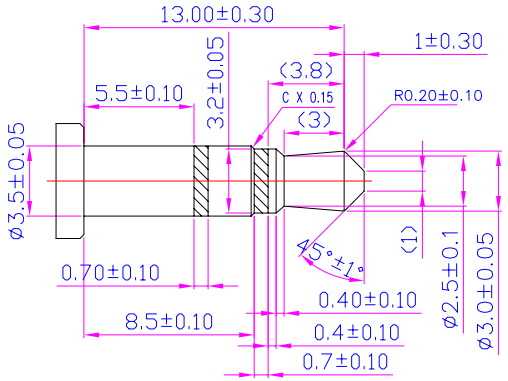




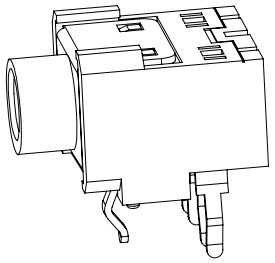
PCB LAYOUT TOP VIEW

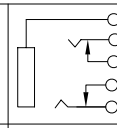
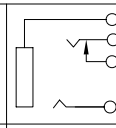
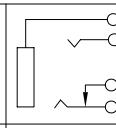
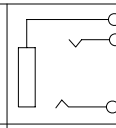






φ3.50mm 3 POLE PLUG DETAIL DRAWING



SCHEMATIC				
NON THREADED	RSJ-500N-NL	RSJ-501N-NL	RSJ-502N-NL	RSJ-503N-NL

No.	PART NAME	QTY	MATERIAL (THICK, COLOR)	REMARK
⑧	COVER	1	PBT (BLACK)	
⑦	HOUSING	1	PBT (BLACK)	
⑥	FIX TURN	1	H59(铜合金)	CuSn-PLATED
⑤	TERMINAL	1	BRASS t=0.35	Ag-PLATED
④	TERMINAL	1	BRASS t=0.35	Ag-PLATED
③	TERMINAL	1	PHOSPHOR BRONZE t=0.30	Ag-PLATED
②	TERMINAL	1	PHOSPHOR BRONZE t=0.30	Ag-PLATED
①	TERMINAL	1	BRASS t=0.45	Ag-PLATED

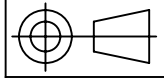
NOTE:
ALL DIMS ARE IN MM.

TABLE:

UNLESS OTHERWISE NOTED TOLERANCE AS FOLLOW:	
DIMENSIONS	TOL.
0.0	±0.5
0.00	±0.3
0.000	±0.15

ECN#	DATE	SYM	REVISION RECORD	AUTH	BY
15-042	09/01/15	D	REVISE PRODUCT DIMENSIONS AND MATERIAL SPECS	Bill C	Tina
10-250	09/02/10	C	REVISE MATERIAL SPECS	MD	AL
08-437	12/09/08	B	REVISED P/N TO RSJ-50X-NL SERIES	CP	JY
08-385	10/30/08	A	CHANGED THE DRAWING TO RoHS COMPLIANT	CP	JY

PROJECTION



SCALE NONE

TOLERANCE EXCEPT AS NOTED

DEC. INCHES N/A

DEC. MILLIMETERS SEE TABLE

ANG. N/A

RDI Research Develop Innovate

RDI, Inc. 333 North Bedford Road, Suite 135, Mount Kisco, NY 10549

TITLE: STEREO JACK-RoHS COMPLIANT

DR.	DATE	REF.	SHEET
JOEY	9/26/02	P/N: RSJ-50X-NL SERIES	1 OF 4
CK.	PRE-	DRAWING NO.	SIZE / REV.
SL	JK	0862	F / D

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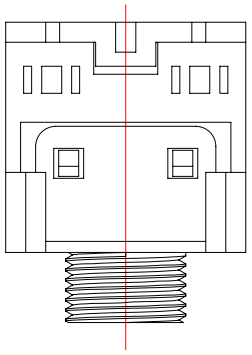
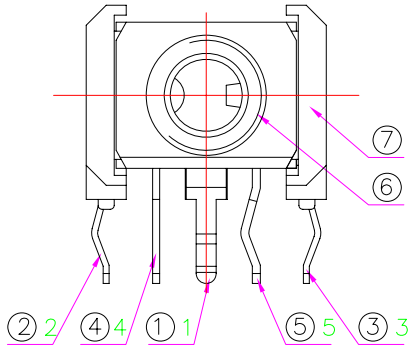
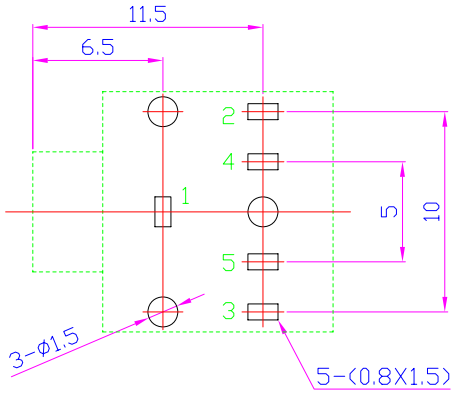
DWG. NO. JK-0862-F REV. "D"

PART NO. RSJ-50X-NL SERIES







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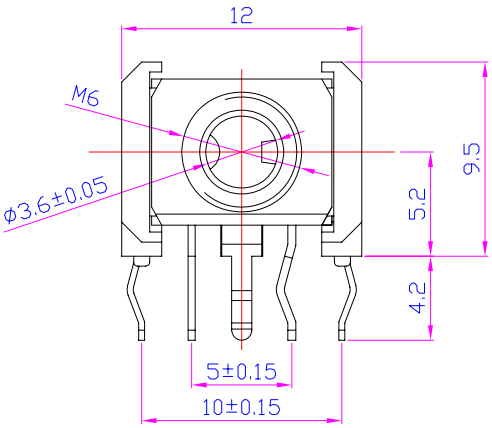

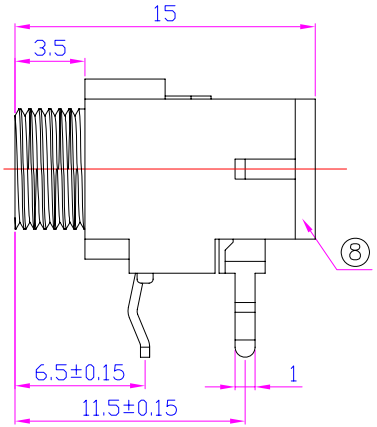

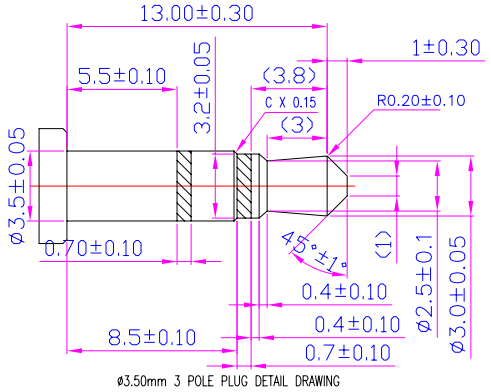

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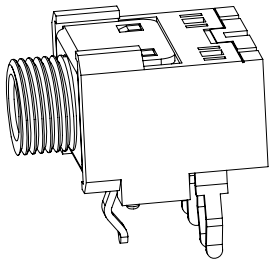
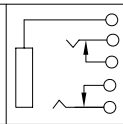
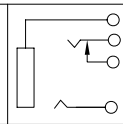
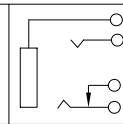
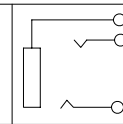


SCHEMATIC				
THREADED	RSJ-500-NL	RSJ-501-NL	RSJ-502-NL	RSJ-503-NL

No.	PART NAME	QTY	MATERIAL (THICK, COLOR)	REMARK
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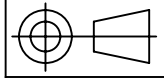

SCALE NONE

TOLERANCE EXCEPT AS NOTED

DEC. INCHES N/A

DEC. MILLIMETERS SEE TABLE

ANG. N/A

RDI Research Develop Innovate

RDI, Inc. 333 North Bedford Road, Suite 135, Mount Kisco, NY 10549

TITLE: STEREO JACK-RoHS COMPLIANT

DR.	DATE	REF.	SHEET
JOEY	9/26/02	P/N: RSJ-50X-NL SERIES	2 OF 4

CK.	PRE-	DRAWING NO.	SIZE	REV.
SL	JK	0862	F	D

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SPECIFICATION

1. GENERAL

SCOPE

THIS SPECIFICATION COVERS THE GENERAL REQUIREMENTS OF THE 3.5mm EARPHONE JACK, USED ON AUDIO SYSTEMS AND OTHER RELATED ELECTRONIC APPARATUS.
THIS SPECIFICATION APPLIES TO THE NORMAL PLASTIC FOR THE THROUGH HOLE SOLDERING PROCESS.

MATED PLUG

THE MATED PLUG SHOULD COMPLIED WITH STANDARD PLUG AS SHOWN IN THE DRAWING ATTACHED.

2. MECHANICAL

2a. TERMINAL STRENGTH

THE TERMINALS SHALL BE CAPABLE OF WITHSTANDING A FORCE OF 500 GRAMS APPLIED IN ANY DIRECTION FOR 10 SECONDS WITHOUT LOOSENING OR BREAKDOWN, WITH EXCEPTION OF BENDING THE TERMINALS.

2b. INSERTION AND EXTRACTION FORCE

INSERTION FORCE

CONDITIONS	VALUE OF SPEC.
INITIAL CONDITION	0.4 KgS TO 3.0 KgS
AFTER LIFE TEST AFTER HUMIDITY TEST AFTER HEAT TEST AFTER COLD TEST AFTER RESISTANCE TO SOLDERING HEAT TEST	0.3 KgS TO 3.0 KgS

EXTRACTION FORCE

CONDITIONS	VALUE OF SPEC.
INITIAL CONDITION	0.4 KgS TO 3.0 KgS
AFTER LIFE TEST AFTER HUMIDITY TEST AFTER HEAT TEST AFTER COLD TEST AFTER RESISTANCE TO SOLDERING HEAT TEST	0.3 KgS TO 3.0 KgS

3. ELECTRICAL

3a. WITHSTAND VOLTAGE TEST

500 VOLTS AC/RMS OF COMMERCIAL FREQUENCY 50 TO 60 Hz APPLIED BETWEEN ADJACENT OPEN TERMINALS FOR 1 MINUTE WITHOUT BREAKDOWN.

3b. INSULATION RESISTANCE

THE INSULATION RESISTANCE BETWEEN MUTUAL INSULATED CONTACTS SHOULD COMPLY WITH FOLLOWING SPECIFICATION UNDER 500 VOLTS DC.

CONDITION	VALUE OF SPEC.
INITIAL CONDITION	100 MΩ MIN
AFTER LIFE TEST AFTER HEAT TEST AFTER COLD TEST AFTER RESISTANCE TO SOLDERING HEAT TEST	100 MΩ MIN
AFTER HUMIDITY TEST	50 MΩ MIN

NOTE: THE MATE PLUG USED FOR THIS MEASUREMENT SHALL BE CLEANED TO REMOVE OXIDATION FILM ON THE SURFACE BEFORE TEST.

3c. CONTACT RESISTANCE

CONTACT RESISTANCE OF JACK SHALL NOT EXCEED THE VALUE DEFINED IN THE TABLE LISTED AT A CURRENT LESS THAN 1.0 AMP. DC BY FOUR TERMINALS METHOD.

CONDITIONS	VALUE OF SPEC.	
	PLUG TO CONTACTS	PLUG TO SHUNT
INITIAL CONDITION	50 mΩ MAX.	30 mΩ MAX.
AFTER HUMIDITY TEST AFTER HEAT TEST AFTER COLD TEST AFTER RESISTANCE TO SOLDERING HEAT TEST	50 mΩ MAX.	30 mΩ MAX.
AFTER DURABILITY TEST	100 mΩ MAX.	60 mΩMAX.

NOTE: THE MATE PLUG USED FOR THIS MEASUREMENT SHALL BE CLEANED TO REMOVE OXIDATION FILM ON THE SURFACE BEFORE TEST.

4. ENDURANCE

DURABILITY TEST

THE DURABILITY TEST SHALL CONSIST OF 5000 MATING CYCLES OF INSERTION AND EXTRACTION WITH THE MATED PLUG OR THE GAUGE PLUG AT A RATE 10-20 CYCLES PER MINUTE, NO LOAD CONDITION, WITH OR WITHOUT LUBRICANT, WHICH SHOULD BE SPECIFIED IN THE DETAIL REQUIREMENT. THE PERFORMANCE OF THE JACK BEFORE AND AFTER THIS TEST SHOULD COMPLY WITH PARAGRAPHS 2b AND 3c.

MEASURING CONDITION

ALL MEASUREMENTS AND TESTS SHALL BE PERFORMED AT A TEMPERATURE 10°C TO 35°C WITH A RELATIVE HUMIDITY OF 45%RH TO 85%RH UNDER STANDARD ATMOSPHERIC PRESSURE UNLESS OTHERWISE SPECIFIED.

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PROJECTION

SCALE NONE

TOLERANCE EXCEPT AS NOTED

DEC. INCHES N/A

DEC. MILLIMETERS SEE TABLE

ANG. N/A

RDI Research Develop Innovate

RDI, Inc. 333 North Bedford Road, Suite 135, Mount Kisco, NY 10549

TITLE: STEREO JACK-RoHS COMPLIANT

DR.	DATE	REF.	SHEET
JOEY	9/26/02	P/N: RSJ-50X-NL SERIES	3 OF 4

CK.	PRE-	DRAWING NO.	SIZE	REV.
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SPECIFICATION

5. ENVIRONMENT

5a. HUMIDITY TEST

THE JACK SHALL BE PLACED IN THE TESTING CHAMBER AT THE CONDITION OF 40°C±2°C AND A RELATIVE HUMIDITY OF 90% TO 95% RH FOR 96 HRS. THE DEW DROPS ON THE SURFACE OF JACK SHALL BE BLOWN OFF AND REMOVED FROM THE SURFACE OF JACK AND THEN PLACED IN AMBIENT TEMPERATURE FOR MORE THAN A 30 MINUTES, RECOVERY PERIOD. THE RELATIVE TEST BEFORE AND AFTER THIS TEST SHOULD COMPLY WITH PARAGRAPH 2b AND 3.

5b. HEAT TEST

THE JACK SHALL BE PLACED IN THE TESTING CHAMBER AT A TEMPERATURE OF 70°C±2°C AND A RELATIVE HUMIDITY OF LESS THAN 50%RH FOR 96 HRS. AND THEN PLACED IN AMBIENT TEMPERATURE FOR MORE THAN A 30 MINUTE RECOVERY PERIOD. THE RELATIVE TEST BEFORE AND AFTER THIS SHOULD COMPLIED WITH PARAGRAPHS 2b AND 3.

5c. COLD TEST

THE JACK SHALL BE PLACED IN THE TESTING CHAMBER AT A TEMPERATURE OF -40°C±2°C AND THE RELATIVE HUMIDITY OF LESS THAN 50%RH FOR 96 HRS. AND THEN PLACED IN AMBIENT TEMPERATURE FOR MORE THAN A 30 MINUTE RECOVERY PERIOD. THE RELATIVE TEST BEFORE AND AFTER THIS SHOULD COMPLIED WITH PARAGRAPHS 2b AND 3.

6. SOLDERING TEST

6a. SOLDER ABILITY

THE TERMINAL OF JACK TESTED SHALL BE DIPPED INTO SOLDERING FLUX OR EQUIVALENT FOR A PERIOD OF 5 TO 10 SECTIONS AND THEN IMMERSED INTO MOLTEN SOLDER Sn63, AT A CONTROLLED TEMPERATURE OF 240°C±5°C FOR 3 ± 0.5 SECTIONS AFTER AGING. THE COVERAGE SHOULD MORE THAN 95% BY THE MICROSCOPE OF MORE THAN 10X.

6b. RESISTANCE TO SOLDERING HEAT

THE JACK MOUNTED ON PCB COMPLIED WITH ACTUAL APPLICATION. THE ALL TERMINALS OF THE JACK SHOULD BE IMMERSED INTO MOLTEN SOLDER, Sn 63, AT A CONTROLLED TEMPERATURE OF 260°C±5°C FOR 5 ± 1 SECONDS. THE RELATIVE TEST AFTER THIS TEST SHOULD COMPLY WITH PARAGRAPH 2b AND 3. THE LOOK OF THE JACK SHOULD HAVE NO REMARKABLE DETERIORATION.

7. OPERATING TEMPERATURE

THE RANGE: -25 °C TO +100°C

8. RATING

RATED VOLTAGE: 16 VOLTS DC

RATED CURRENT: 0.3 AMPERE DC

REMARK:

THIS SPECIFICATION SUIT FOR ALL KIND OF FULL SHIELD MINI-DIN, GENERAL TYPE.

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