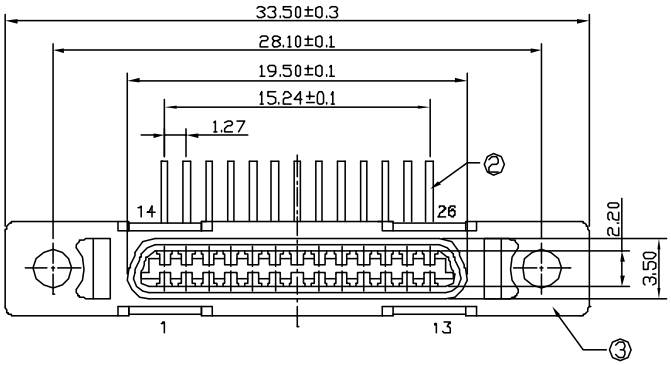
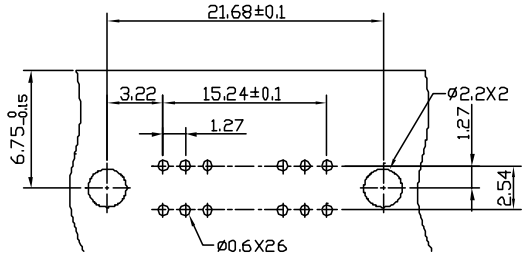
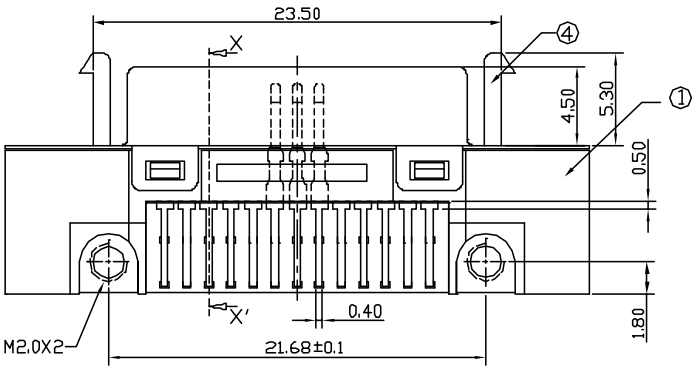
DWG. NO. CO-1977-F REV. "-"

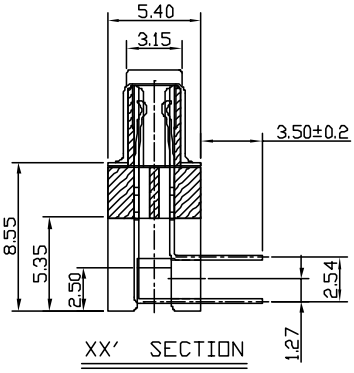
PART NO. DRHP-12715A





RECOMMENDED P.C.B LAYOUT





XX' SECTION

ALL DIMS ARE GIVEN IN mm

NO.	DESCRIPTION	MATERIAL	COLOR	REMARK
4	HOOK	BRASS	———	NICKEL PLATED
3	SHELL	BRASS	———	NICKEL PLATED
2	TERMINAL	BRASS	———	GOLD/TIN PLATED
1	HOUSING	NY-6T	BLACK	UL94V-0

ECN#	DATE	SYM	REVISION RECORD	AUTH	BY

PROJECTION

SCALE 3:1

TOLERANCE EXCEPT AS NOTED

DEC. MILLIMETERS
30- ±0.50
10-30 ±0.30
-10 ±0.15

ANG. ±2°

RDI Research Develop Innovate

RDI, Inc. 400 Columbus Avenue Valhalla, NY 10595

TITLE: CONNECTOR

DR.	DATE	REF.	SHEET
LUCIA	07/05/04	P/N: DRHP-12715A	1 OF 3

CK.	PRE-	DRAWING NO.	SIZE	REV.
JOEY	CO	1977	F	-

DWG. NO. CO-1977-F REV. "-"

PART NO. DRHP-12715A SERIES

THE SUBJECT MEET THE FOLLOWING SPECIFICATION WHEN TESTED UNDER THE CONDITION:

1. MATERIAL
   - 1-1 INSULATION- NY-6T UL94V-0 COLOR- BLACK
   - 1-2 CONTACT - PHO. BRONZE
   - 1-3 PLATING- SELECTIVE PLATED GOLD/TIN
   - 1-4 SHELL- SPCC; NICKEL PLATED
   - 1-5 HOOK-ZINE ALLOY;NICKEL PLATED
   - 1-6 PLATING THE THICKNESS:

     P/N: 12715 X - XX XX X - X

     A C D E F

     A. FEATURE: A: RIGHT ANGLE DIP TYPE; S: STRAIGHT DIP TYPE;

     B. FEATURE: R: RIGHT ANGLE DIP TYPE; S: STRAIGHT DIP TYPE;

     C. NO. OF PINS.

     D. CONTACT AREA:

     G1: 5u" MIN. GOLD PLATE OVER 30u" MIN. NICKEL.
     G2: 1u" MIN. GOLD WATER FLASH PLATE OVER 30u" MIN. NICKEL.
     G3: 10u" MIN. GOLD PLATE OVER 30u" MIN. NICKEL.
     G4: 15u" MIN. GOLD PLATE OVER 30u" MIN. NICKEL.
     G5: 30u" MIN. GOLD PLATE OVER 30u" MIN. NICKEL.
     G6: 50u" MIN. GOLD PLATE OVER 30u" MIN. NICKEL.
     OTHER AREA: 1u" . GOLD WATER FLASH OVER 30u" MIN. NICKEL.
     S1: 5 u" MIN. GOLD IN CONTACT/100u" MIN. TIN IN SOLDER AREA.
     S2: 1 u" MIN. GOLD FLASH IN CONTACT AREA /100u" MIN. TIN IN SOLDER AREA.
     S3: 10u" MIN. GOLD IN CONTACT/100u" MIN. TIN IN SOLDER AREA.
     S4: 15u" MIN. GOLD IN CONTACT/100u" MIN. TIN IN SOLDER AREA.
     S5: 30u" MIN. GOLD IN CONTACT/100u" MIN. TIN IN SOLDER AREA.
     S6: 50u" MIN. GOLD IN CONTACT/100u" MIN. TIN IN SOLDER AREA.

     E. "T" INDICATE SELECTIVE PLATED
     SOLDER AREA: 100u" MIN. TIN PLATE OVER 30u" MIN. NICKEL.

     F. SERIES NO: INDICATE DIFFERENT OUTSIDE DIMENSION(EX: HOUSING DIMENSION,SOLDER TAIL LENGTH ETC...)OF PRODUCT. NOT EFFECT THE MECHANICAL AND ELECTRICAL CHARACTERISTICS

2. CHARACTERISTICS:
   UNITS AND VALUE INDICATED IN THE SPECIFICATION ARE THE FORMER UNITS AND THE SPECIFIED VALUES.

   A. STANDARD ATMOSPHERIC CONDITION:
   UNLESS OTHERWISE SPECIFIED,THE STANDARD RANGE OF ATMOSPHERIC CONDITION FOR MARKING
   MEASUREMENT AND TESTS IS AS FOLLOWS:
   AMBIENT TEMPERATURE: 15°C TO 35°C
   RELATIVE HUMIDITY: 63 % TO 67 %
   AIR PRESSURE: 86 Kpa TO 106Kpa

   B. OPERATING TEMPERATURE RANGE:
   OPERATING TEMPERATURE RANGE IS THE RANGE OF AMBIENT TEMPERATURE FOR THE CONNECTOR HOUSING THAT CAN BE OPERATED CONTINUOUSLY AT RATED VOLTAGE AND RATED CURRENT.
   -40°C TO 105°C

   C. STORAGE TEMPERATURE:
   STORAGE TEMPERATURE RANGE IS THE RANGE OF AMBIENT TEMPERATURE AT WHICH THE CONNECTOR HOUSING CAN BE STORED WITHOUT LOAD
   -40°C TO 105°C

3. ELECTRICAL CHARACTERISTICS

	ITEM/STANDARD	TEST CONDITIONS	SPECIFICATION
1	RATED VOLTAGE/ RATED CURRENT	WHEN THE TEMPERATURE RISE OF THE TERMINAL REACHES 30°C WITH RESISTANCE LOAD,THEN MEASURE THE CURRENT.	AC 150V 0.5A
2	TEMPERATURE RISE	ALL THE TERMINAL SHALL BE CONNECTED IN A DIRECTED SERIES, THEN APPLIED THE RATED CURRENT. UNTIL THE TEMPERATURE BE NOT CHANGE,(ABOUT 3 HOURS). USING THERMOCOUPLE MEASURE THE TEMPERATURE OF THE TERMINAL SURFACE.	30°C OR LESS
3	CONTACT RESISTANCE	APPLY THE LEVEL CONDITION OF DC 20mV ImA MAX. FOR THE OPEN CIRCUIT VOLTAGE AND DC 10mA Max. FOR THE CLOSED CIRCUIT CURRENT .THEN MEASURE THEM THAT BETWEEN EACH COUPLED TERMINAL WHEN MATE WITH 12716S SERIES.	INITIAL RESISTANCE Ri ≤ 60m OHM AFTER TEST Rf ≤ Ri± 20m OHM
4	INSULATION RESISTANCE	APPLIED DC 500V FOR 1 MINUTE BETWEEN ADJACENT TERMINAL OR GROUND.	1000M OHM OR MORE
5	DIELECTRIC STRENGTH	APPLIED DC 500V FOR 1 MINUTE 1 mA BETWEEN ADJACENT TERMINAL OR GROUND.	WITHOUT DAMAGED SUCH AS ARCING OR BREAKDOWN ETC.

4. MECHANICAL CHARACTERISTICS

	ITEM/STANDARD	TEST CONDITIONS	SPECIFICATION
1	TERMINAL RETENTION	1. THE PULL SPEED SHALL BE 25mm TO 100mm PER MINUTE. 2. EACH CONTACT TO BE TESTED SHALL BE CONNECTED TO MATING HEADER PIN OR MATING GAUGE AND INSERTED OR WITHDRAWN 3 TIMES, AFTER WHICH MEASUREMENT SHALL BE MADE.	0.3Kg OR MORE min/pin
2	INSERTION FORCE	SOLDER EACH OF THE PLUG AND RECEPTACLE CONNECTOR TO THE P.C. BOARD THEN DO INSERTION/ EXTRACTION ALONG THE AXIS 3 TIMES AT SPEED 25mm TO 100mm.AFTER PLACE EACH OF THE P.C. BOARD ONTO THE PUSH-ON/PULL-OFF MACHINE TO BE MEASUREMENT THE INSERTION FORCE. WHEN MATE WITH 12716S SERIES	5.0Kg max/pcs AT FULL SET
3	EXTRACTION FORCE	SOLDER EACH OF THE PLUG AND RECEPTACLE CONNECTOR TO THE P.C. BOARD THEN DO INSERTION/ EXTRACTION ALONG THE AXIS 3 TIMES AT SPEED 25mm TO 100mm.AFTER PLACE EACH OF THE P.C. BOARD ONTO THE PUSH-ON/PULL-OFF MACHINE TO BE MEASUREMENT THE INSERTION FORCE. WHEN MATE WITH 12716S SERIES	0.6Kg (min/pcs) AT FULL SET

ECN#	DATE	SYM	REVISION RECORD	AUTH	BY

PROJECTION

SCALE NONE

TOLERANCE EXCEPT AS NOTED

DEC. MILLIMETERS NONE

DEC. MILLIMETERS NONE

ANG. NONE

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TITLE: CONNECTOR

DR.	DATE	REF.	SHEET
LUCIA	07/05/04	P/N: DRHP-12715A SERIES	2 OF 3

CK.	PRE-	DRAWING NO.	SIZE	REV.
JOEY	CO	1977	F	-

4	LIFE TEST	SOLDER EACH OF THE PLUG AND RECEPTACLE CONNECTOR TO THE P.C. BOARD THEN PLACE EACH OF THE P.C. BOARD ONTO THE PUSH-ON/PULL-OFF MACHINE,THEN DO MATING/UNMATING 5000 CYCLES ALONG THE AXIS AT SPEED OF 100mm PER MIN.	RESISTANCE VALUE AFTER TEST Rf ≤ Ri± 20m OHM APPEARANCE SHALL NOT BE CRACKING AND PIN LOOSENS.
5	APPEARANCE	VISUAL	NO PEELING OFF THE PLATING,DEFORMATION OF THE BASE OR DAMAGE.

5. MOUNTING CHARACTERISTICS

	ITEM/STANDARD	TEST CONDITIONS	SPECIFICATION
1	SOLDER ABILITY	IMMERSE THE SOLDER PIN OF THE CONNECTOR IN THE SOLDER BATH AT 230°C ± 5°C FOR 5± 0.5 SECONDS. AFTER DIPPED THE PIN IN THE FLUX OF RAM OR R TYPE FOR 5 SECONDS.	MORE THAN 95 % OF THE DIPPED SURFACE SHALL BE WET WITH SOLDER
2	RESISTANCE TO SOLDERING HEAT	PLACE THE CONNECTOR ON THE P.C. BOARD, THEN IMMERSE THE SOLDER PIN UP TO THE SURFACE OF THE BOARD IN THE SOLDER BATH AT 260°C ± 5°C FOR 10 SECONDS.	WITHOUT DEFORMATION OF CASE OR EXCESSIVE LOOSENS. ELECTRICAL CHARACTERISTICS SHALL BE SATISFIED.
3	HOT AIR REFLOW OR IR REFLOW FOR SMD CURING PROCESS	PLACE THE CONNECTOR ON THE P.C. BOARD AND EXPOSE THEM TO THE REFLOW OVEN AND APPLY THE FOLLOWING CONDITION. ROOM 1: PREHEAT TEMPERATURE 150°C -170°C FOR 60 SECS. ROOM 2: PREHEAT TEMPERATURE 170°C -190°C FOR 60 SECS. ROOM 3 : REFLOW TEMPERATURE 200°C -240°C -200°C FOR -30-40 SEC. (FOR 240°C ONLY 3-5 SECONDS)	APPEARANCE SHALL NOT BE DISTINCT DAMAGE. MORE THAN 95 % OF THE MOUNTING PIN SURFACE SHALL BE WET SOLDER

6. ENDURANCE

	ITEM/STANDARD	TEST CONDITIONS	SPECIFICATION
1	VIBRATION TEST	EACH TERMINAL SHALL BE CONNECTED IN SERIES AND THEN 100mA DC SHALL BE CARRIED. SOLDER EACH OF PLUG AND RECEPTACLE CONNECTOR TO THE P.C. BOARD,THEN MATE THEM TOGETHER. PLACE THE MATED CONNECTOR FIRMLY ON THE VIBRATOR AND APPLY THE FOLLOWING CONDITION SHALL BE DONE FREQUENCY: 10Hz-55Hz-10Hz/MIN. DIRECTION: ALONG THREE MUTUALLY PERPENDICULAR DIRECTION SWEEP TIME: 2 HOURS ALONG EACH DIRECTION, A TOTAL 6 HOURS AMPLITUDE: 1.52mm	1. NO ELECTRICAL DISCONTINUITY GREATER THAN 1 u SEC. SHALL OCCUR. 2. LOOSEN AND BREAKAGE OF THE PLASTIC PART AND OTHER DETRIMENTAL DAMAGE SHALL NOT BE OBSERVED. 3. THE CONTACT RESISTANCE Rf = 2 Ri.
2	THERMAL SHOCK	SOLDER EACH OF THE PLUG AND RECEPTACLE CONNECTOR TO THE P.C. BOARD,THEN MATE THEM TOGETHER,AND EXPOSE THEM TO THE FOLLOWING ENVIRONMENTAL CONDITION. TEMPERATURE: -55°C ± 3°C(30 min), STANDARD ATMOSPHERIC CONDITION(10-15 MIN) TO 85°C± 2°C (30 MIN.), STANDARD ATMOSPHERIC CONDITION(10-15 MIN.) TRANSITION TIMES: 5 MIN. MAX. NUMBER OF EXPOSURE: 5 CYCLES IT SHALL BE SUBJECTED TO STANDARD ATMOSPHERIC CONDITION FOR 1 TO 2H,AFTER WHICH MEASUREMENTS SHALL BE MADE.	RESISTANCE VALUE AFTER TEST Rf= Ri ± 20m OHM APPEARANCE SHALL NOT BE CRACKING AND PIN LOOSENS.
3	SALT WATER SPRAY	SOLDER EACH OF THE PLUG AND RECEPTACLE CONNECTOR TO THE P.C. BOARD,THEN MATE THEM TOGETHER,AND EXPOSE THEM TO THE FOLLOWING ENVIRONMENTAL CONDITION. TEMPERATURE: 35°C ± 2°C DENSITY OF SALT WATER: 5± 1 % DURATION: 4 HR ± 15 MIN. IT SHALL BE SUBJECTED TO STANDARD ATMOSPHERIC CONDITION 1 H. AFTER REMOVING THE SALT DEPOSITS.	BY VISUAL INSPECTION WITHOUT NOTICEABLE RUST. RESISTANCE VALUE AFTER TEST Rf= Ri ± 20m OHM
4	HUMIDITY (STEADY STATE)	SOLDER EACH OF THE PLUG AND RECEPTACLE CONNECTOR TO THE P.C. BOARD,THEN MATE THEM TOGETHER,AND EXPOSE THEM TO THE FOLLOWING ENVIRONMENTAL CONDITION. TEMPERATURE: 50± 2°C RELATIVE HUMIDITY: 90 % - 95 % DURATION: 96 HOURS IT SHALL BE SUBJECTED TO STANDARD ATMOSPHERIC CONDITION FOR 1 HOUR AFTER WHICH MEASUREMENTS SHALL BE MADE.	RESISTANCE VALUE AFTER TEST Rf = TWICE OF Ri. APPEARANCE SHALL NOT BE DISTINCT DAMAGE. THE INSULATION RESISTANCE AND DIELECTRIC STRENGTH MUST COINCIDE PREVIOUSLY SPECIFICATION.
5	DRY HEAT	THE CONNECTOR HOUSING SHALL BE STORE AT TEMPERATURE OF 85± 2°C FOR 96 HOURS ,THEN IT SHALL BE SUBJECTED TO STANDARD ATMOSPHERIC CONDITION FOR 1 H. AFTER WHICH MEASUREMENTS SHALL BE MADE.	RESISTANCE VALUE AFTER TEST Rf = TWICE OF Ri. APPEARANCE SHALL NOT BE DISTINCT DAMAGE.
6	SHOCK	SOLDER EACH OF THE PLUG AND RECEPTACLE CONNECTOR TO THE P.C. BOARD THEN MATE THEM TOGETHER,THEN EACH TERMINAL SHALL BE CONNECTED IN SERIES AND THEN DC 100 mA BE CARRIED. PLACE THE MATED CONNECTOR FIRMLY ON THE SHOCK MACHINE AND APPLY THE FOLLOWING CONDITION TO BE TESTED. PEAK ACCELERATION: 50G MAX. DURING OF THE PLUS: 11m SECOND. WAVE: HALF SINUSOIDAL NUMBER OF DROPS: 18 TIMES DIRECTION: ALONG 3 MUTUALLY PERPENDICULAR DIRECTION.	RESISTANCE VALUE AFTER TEST Rf = TWICE OF Ri. APPEARANCE SHALL NOT BE DISTINCT DAMAGE. NO ELECTRICAL DISCONTINUITY GREATER THAN 1 u SEC SHALL OCCUR
7	COLD	SOLDER EACH OF THE PLUG AND RECEPTACLE CONNECTOR TO THE P.C. BOARD,THEN MATE THEM TOGETHER,AND EXPOSE THEM TO THE FOLLOWING ENVIRONMENTAL CONDITION. TEMPERATURE: -25°C± 3°C DURATION: 48± 1 HOUR IT SHALL BE SUBJECTED TO STANDARD ATMOSPHERIC CONDITION FOR 1 HOUR AFTER WHICH MEASUREMENTS SHALL BE MADE.	RESISTANCE VALUE AFTER TEST Rf = TWICE OF Ri. APPEARANCE SHALL NOT BE DISTINCT DAMAGE.

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PROJECTION

SCALE NONE

TOLERANCE EXCEPT AS NOTED

DEC. MILLIMETERS NONE

DEC. MILLIMETERS NONE

ANG. NONE

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JOEY	CD	1977	F	-