

# MicroTCA High Power D-SUB Product Overview



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Solutions  
for  
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Manufacturing

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# MicroTCA High Power D-SUB

Design for PICMG MicroTCA specification.

Integrate 2 signal pins and 2 power pins in one connection (7W2)



- **Application**
  - Power connector for uTCA backplane system.
  - Redundant power, hot swap and power control.
- **Advantage**
  - Integrated design for power and signal pins.
  - Certified 24 Amp DC under 30°C max Temperature Rise.
- **Status**
  - Sample

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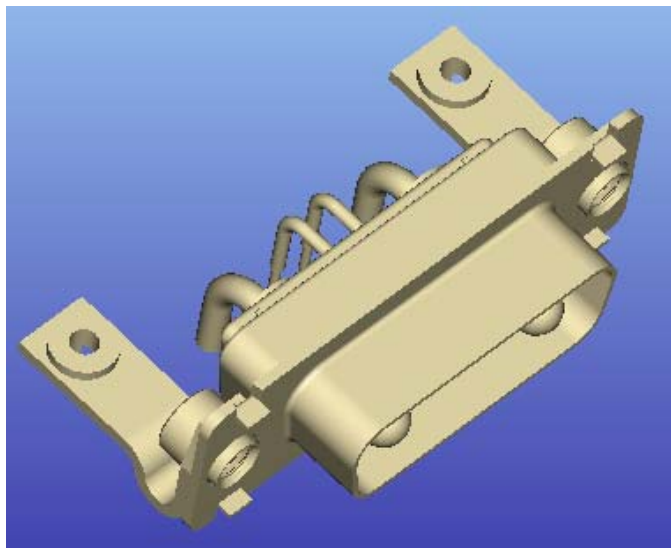
# Competitors

Competitor	Product Name
Positronic FCI	MicroTCA POWER INPUT CONNECTORS D-subminiature MicroTCA High Power IO

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# MicroTCA High Power D-SUB



## Single Port

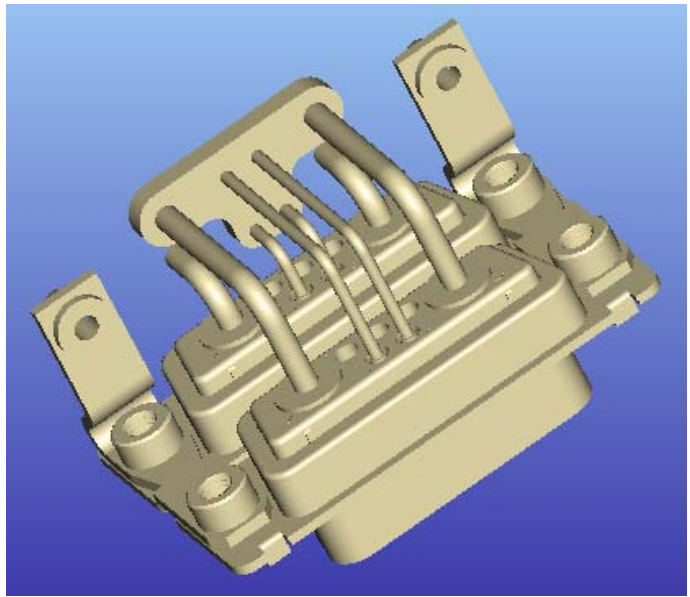


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# MicroTCA High Power D-SUB



## Dual Port



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# MicroTCA High Power D-SUB Specification

## Materials And Finish:

**Housing: High Temperature Plastic, UL94V-0**

**Contacts: Copper Alloy with Gold30u” Over Nickel**

## Electrical Characteristics:

**Working Current: Power Contact 24A**

**Signal Contact 0.375A**

**Temperature Rise: 30°C max**

**Contact Resistance: Power Contact: 0.5 m ohms max;**

**Signal Contact: 8 m ohms max**

**Working Voltage: 300 V r.m.s.**

**Insulation Resistance :  $\geq$  5 G ohms.**

## Durability:

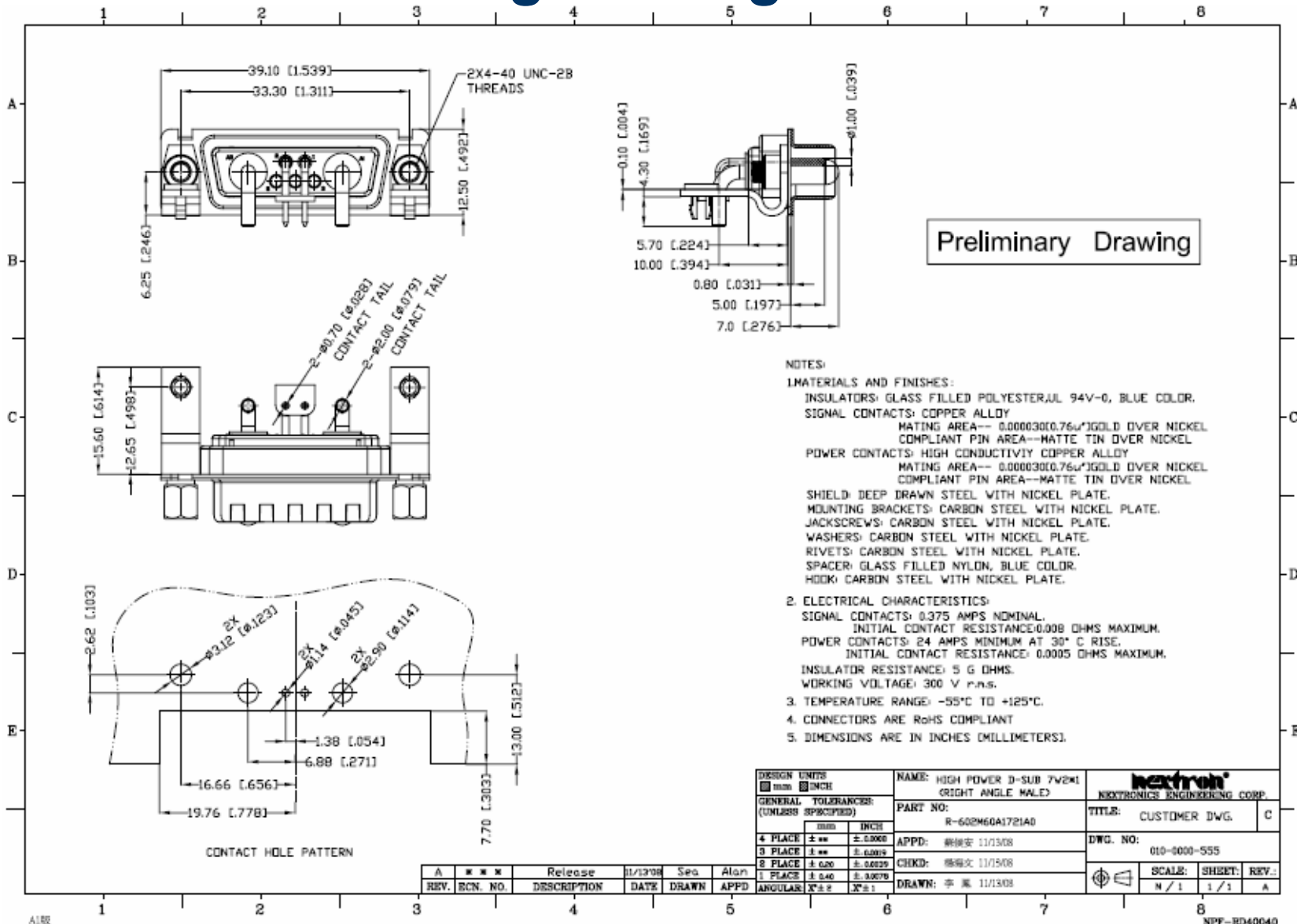
**200 mating cycles**

## Temperature Range

**-55 °C to +125 °C**

# MicroTCA High Power D-SUB

## Customer Drawing for Single Port



Preliminary Drawing

- NOTES:
- MATERIALS AND FINISHES:
    - INSULATORS: GLASS FILLED POLYESTER/UL 94V-0, BLUE COLOR.
    - SIGNAL CONTACTS: COPPER ALLOY
    - MATING AREA-- 0.000300.76μ"IGOLD OVER NICKEL
    - COMPLIANT PIN AREA--MATTE TIN OVER NICKEL
    - POWER CONTACTS: HIGH CONDUCTIVITY COPPER ALLOY
    - MATING AREA-- 0.000300.76μ"IGOLD OVER NICKEL
    - COMPLIANT PIN AREA--MATTE TIN OVER NICKEL
    - SHIELD: DEEP DRAWN STEEL WITH NICKEL PLATE.
    - MOUNTING BRACKETS: CARBON STEEL WITH NICKEL PLATE.
    - JACKSCREWS: CARBON STEEL WITH NICKEL PLATE.
    - WASHERS: CARBON STEEL WITH NICKEL PLATE.
    - RIVETS: CARBON STEEL WITH NICKEL PLATE.
    - SPACER: GLASS FILLED NYLON, BLUE COLOR.
    - HOOD: CARBON STEEL WITH NICKEL PLATE.
  - ELECTRICAL CHARACTERISTICS:
    - SIGNAL CONTACTS: 0.375 AMPS NOMINAL.
    - INITIAL CONTACT RESISTANCE: 0.008 OHMS MAXIMUM.
    - POWER CONTACTS: 24 AMPS MINIMUM AT 30° C RISE.
    - INITIAL CONTACT RESISTANCE: 0.0005 OHMS MAXIMUM.
    - INSULATOR RESISTANCE: 5 G OHMS.
    - WORKING VOLTAGE: 300 V r.m.s.
  - TEMPERATURE RANGE: -55°C TO +125°C.
  - CONNECTORS ARE RoHS COMPLIANT
  - DIMENSIONS ARE IN INCHES (MILLIMETERS).

DESIGN UNITS mm INCH	NAME: HIGH POWER D-SUB 7P2X1 (RIGHT ANGLE MALE)	nexttron® NEXTRONICS ENGINEERING CORP.
GENERAL TOLERANCES: (UNLESS SPECIFIED)	PART NO: R-602M60A1721A0	TITLE: CUSTOMER DWG. C
4 PLACE ± .005 ± 0.0005 3 PLACE ± .002 ± 0.0005 2 PLACE ± 0.010 ± 0.0025 1 PLACE ± 0.040 ± 0.0075	APPD: 8/8/08 11/13/08 CHKD: 8/8/08 11/13/08 DRAWN: 8/8/08 11/13/08	DWG. NO: 010-0000-555
ANGULAR X ± 0.5 X ± 1		SCALE: N / 1 SHEET: 1 / 1 REV: A

A	*	*	*	Release	01/13/08	Sea	Alan
REV.	BCN.	NO.		DESCRIPTION	DATE	DRAWN	APPD

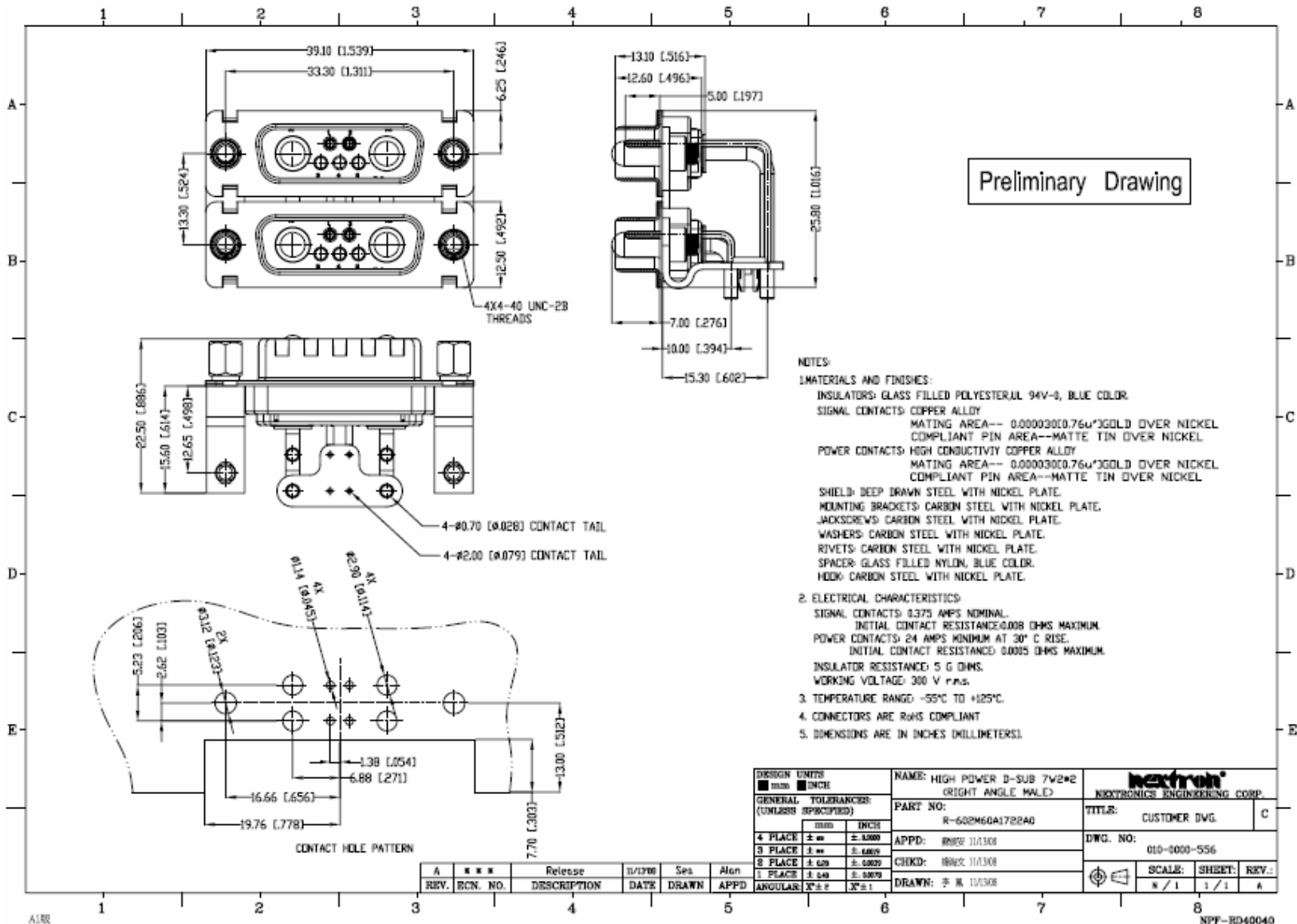
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# MicroTCA High Power D-SUB

## Customer Drawing for Dual Port



Preliminary Drawing

DESIGN UNITS mm INCH	NAME: HIGH POWER D-SUB 7x2#2 (RIGHT ANGLE MALE)	nexttron® NEXTRONICS ENGINEERING CORP.
GENERAL TOLERANCES: (UNLESS SPECIFIED)	PART NO: R-602M60A1722A0	TITLE: CUSTOMER DWG. C
4 PLACE ±.00 INCH ±.0000	APPD: RRR/ 11/13/08	DWG. NO: 010-0000-556
3 PLACE ±.00 INCH ±.0000	CHKD: RRR/ 11/13/08	SCALE: SHEET: REV.: */1 1/1 A
2 PLACE ±.00 INCH ±.0000	DRAWN: 李 11/13/08	
1 PLACE ±.00 INCH ±.0000		
ANGULAR: 20±1		

A	***	Relese	11/17/08	Sep	Alan
REV.	RCN. NO.	DESCRIPTION	DATE	DRAWN	APPD

A18R

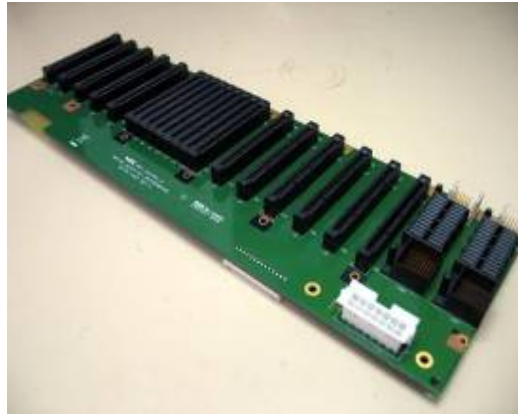
NPF-RD40040

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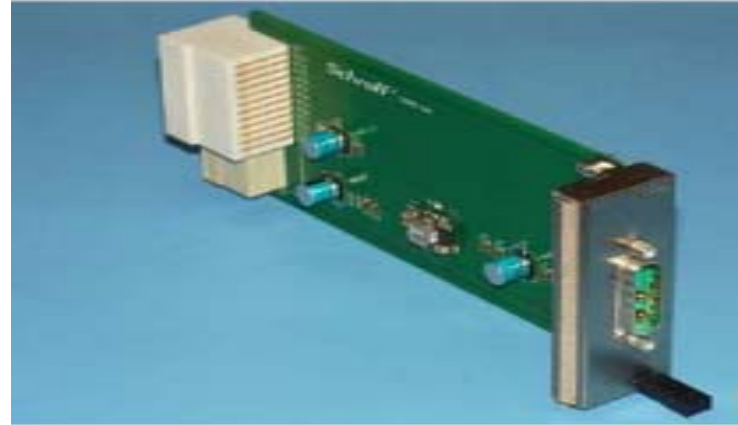


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# Target Applications



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*More information please visit:  
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