

# MDCX & MDHC

Smiths Interconnect's multipin MDCX and MDHC coax connectors have a constant 50 Ohm airline impedance interface and are 30% smaller than our SCX coaxial connectors. Each coax contact has a maximum overall diameter of 0.125" fitted into a low-profile metalized housing. They are RoHS compliant.

MDCX and MDHC coaxial contacts are compact in size allowing multiple high density connections in a Micro-D style shell for applications where space and weight savings are important. No cumbersome spring mounts are required. These connectors are also available with locking post mechanisms or blind-mate hardware attachment.

Insert arrangements are available in 2, 4, 6, 8 and 10 way coax assemblies as well as mixed signal, power, coax and high speed twinax contacts for hybrid arrangements.

MDHC high frequency coaxial contacts are a drop in replacement to Smiths Interconnect's MDCX RF contacts with an increased frequency range from 10 GHz to 40 GHz.

- MDCX VSWR of 1.25:1 (typ) up to 10 GHz (max mated pair).
- MDHC VSWR of 1.3:1 (typ) up to 30GHz (max mated pair).
- MDHC VSWR of 1.5:1 (typ) up to 40GHz (max mated pair).

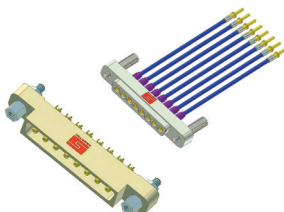
## MDCX Connectors



## MDHC Connectors



## Multipin Coax Connector with Locking Post



## Mechanical & Environmental Specifications

Temperature Rating	-65°C to + 165°C
Corrosion	MIL-STD-202 Method 101, Test Condition B
Shock	MIL-STD-202 Method 213, Test Condition B
Vibration	MIL-STD-202 Method 204, Test Condition B
Thermal Shock	MIL-STD-202 Method 107, Test Condition B
Durability	1,000 cycles min. 500 cycles min. signal contacts
Mating/Unmate Force	1 lb. min
Float Mount Constraints	0.010" full radial & 0.010" axial misalignment max.

## Specifications

Dielectric Withstanding Voltage	500 VDC @sea level with 70% relative humidity
Insulation Resistance	5000 mega-ohms min. @ 200 VDC
Contact Current Rating	5 Amps max. for 0.030" Signal Pins 2 Amps max. for 0.015" Signal Contacts
Characteristic Impedance	50 Ohm constant airline impedance
RF HI Potential Withstanding Voltage	125 VRMS @ 5 MHz
Corona Level @ 70,000 ft.	Center contact to intermediate contact: 125 VAC
Permeability	2.0 max.
Frequency Range	MDHC: DC-40 GHz MDCX: DC-10 GHz
VSWR	1.5:1 (typ) Mated Pair up to 40 GHz (MDHC) 1.3:1 (typ) Mated Pair up to 30 GHz (MDHC) 1.25:1 (typ) Mated Pair up to 10 GHz (MDCX)

## Materials and Finishes

Center & Outer Spring Contacts	Brass per ASTM-B16, alloy UNS C36000 or BeCu per ASTM-B196, alloy UNS C17200, C17300 Gold Plate per MIL-DTL-45204, Type II, Class 1
Insulators	PTFE per ASTM D-1710
Connector Plug/Receptacle Shells	Aluminum per ASTM-B211/221, 6061-T6 Electroless Nickel Plate per SAE-AMS-C-26074

All specifications subject to change without notice.