

Description

MCX connectors conform to the European CECC 22220 spec and were introduced in the 1980's. While the MCX uses identical inner contact and insulator dimensions as the SMB, the outer diameter of the plug is .140 inches, which is 30% smaller than the SMB. This series provides designers with options where weight and physical space are limited. MCX provides broadband capability though 6 GHz with a snap-on connector design. A range of connectors are available, including printed circuit board and cable connectors and they are all used in the Automotive, Wireless LAN, Broadband and Wireless Infrastructure markets.

Features/Benefits

- Broadband performance with low reflection DC to 6 GHz
- Quick connect/disconnect snap-on mating reduces installation time
- Accommodates a wide range of miniature RG flexible semi-rigid coaxial cables

Applications

- Base Station
- Components
- GPS
- Head End Equipment
- Instrumentation
- PC/LAN
- Radios
- Telecom
- Wireless/Networks Antenna

50 Ω MCX Specifications

Electrical

| | |
|---------------------------------|---|
| Impedance | 50 Ω |
| Frequency Range | 0-6 GHz |
| Voltage Rating | 335 VRMS |
| Dielectric Withstanding Voltage | 1,000 volts |
| VSWR | Straight connectors: 1.00 @ 2.5 GHz Right angle connectors: 1.10 @ 2.5 GHz |
| Contact Resistance | Center contact: 5 m Ω; Outer contact: 1.0 m Ω |
| Insulation Resistance | 5,000 M Ω minimum |
| Insertion Loss | 0.10 dB @ 1 GHz |

Mechanical

| | |
|----------------------------------|---|
| Mating | Snap-on coupling per CECC 22220 |
| Braid/Jacket Cable Affixment | Hex Crimp |
| Center Conductor Cable Affixment | Solder |
| Contact Captivation | All types unless noted otherwise |
| Engagement Forces | Engagement: 4.5 lbs (20N) maximum Disengagement: 2.3 lbs (10N) minimum |
| Connector Durability | 500 mating cycles minimum |

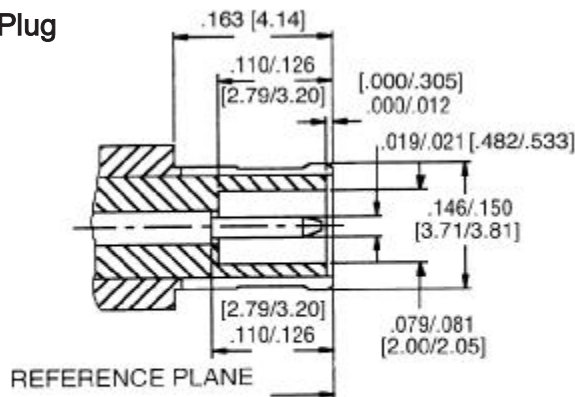
Material

| | |
|-------------------------|---|
| Male Contact | Brass per QQB-626 |
| Female Contact | Beryllium copper per QQC-530, heat-treated per MIL-H-7199 |
| Contact Plating | 30 μ" Gold |
| Body, Metal Parts | Brass per QQB-626 |
| Body/Metal Parts Finish | Nickel or Gold |
| Insulator | PTFE |
| Gasket | Silicone rubber |
| Crimp Ferrule | Seamless copper tubing alloy |
| Ferrule Finish | Nickel or Gold |

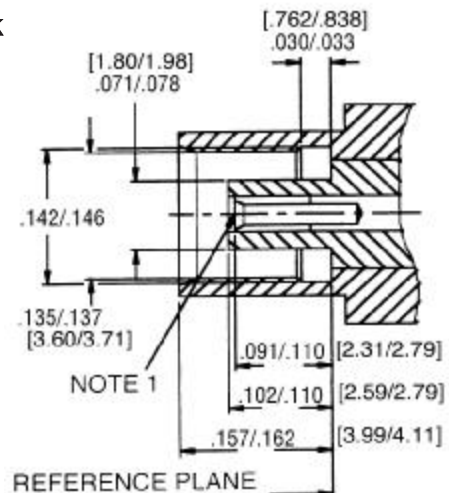
Environmental

| | |
|-------------------|---|
| Temperature Range | -65°C to +165°C |
| Thermal Shock | MIL-STD-202 method 107, test condition B (except high temperatures @ 200°C) |
| Shock | MIL-STD-202 method 213, snap-on, test condition B |
| Vibration | MIL-STD-202 method 204, snap-on, test condition B |
| Corrosion | MIL-STD-202 method 101, test condition B. 5% salt solution |

Plug



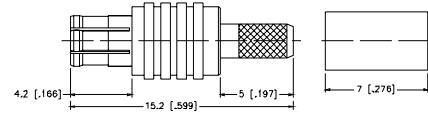
Jack



MCX Coaxial Connectors

Straight Crimp Plug - Miniature cable

| P.N. | Cable Group | Plt. | Ins. | Imp. | Crimp Tool |
|----------------------------|-------------|--------|--------|------|------------|
| MCX1121A1-NT30G-5-50 | 05 | Nickel | Teflon | 50 | 1 |
| MCX1121A1-3GT30G-5-50 | 05 | Gold | Teflon | 50 | 1 |
| MCX1121A1-002-NT30G-5A-50 | 5A | Nickel | Teflon | 50 | 2 |
| MCX1121A1-002-3GT30G-5A-50 | 05A | Gold | Teflon | 50 | 2 |
| MCX1121A1-NT30G-6-75 | 06 | Nickel | Teflon | 75 | 2 |
| MCX1121A1-3GT30G-6-75 | 06 | Gold | Teflon | 75 | 2 |
| MCX1121A1-NT30G-6A-75 | 06A | Nickel | Teflon | 75 | 2 |
| MCX1121A1-3GT30G-6A-75 | 06A | Gold | Teflon | 75 | 2 |
| MCX1121A1-NT30G-14-50 | 14 | Nickel | Teflon | 50 | 1 |
| MCX1121A1-3GT30G-14-50 | 14 | Gold | Teflon | 50 | 1 |



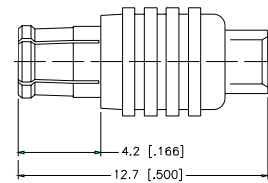
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Straight Solder Plug - Semi-Rigid Cable

| P.N. | Cable Group | Plt. | Ins. | Imp. | Crimp Tool |
|------------------------|-------------|--------|--------|------|------------|
| MCX1181A2-NT30G-10-50 | 10 | Nickel | Teflon | 50 | N/A |
| MCX1181A2-3GT30G-10-50 | 10 | Gold | Teflon | 50 | N/A |
| MCX1181A1-NT30G-11-50 | 11 | Nickel | Teflon | 50 | N/A |
| MCX1181A1-3GT30G-11-50 | 11 | Gold | Teflon | 50 | N/A |
| MCX1181A1-3GT30G-13-50 | 13 | Gold | Teflon | 50 | N/A |



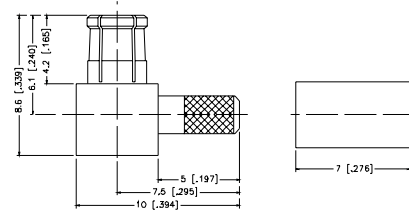
MCX1181A1-3GT30G-13-50



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Right Angle Crimp Plug - Standard and Miniature Cable

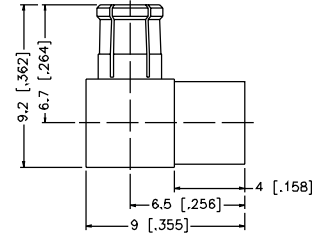
| P.N. | Cable Group | Pit. | Ins. | Imp. | Crimp Tool |
|------------------------|-------------|--------|--------|------|------------|
| MCX1112A1-NT30G-1-50 | 01 | Nickel | Teflon | 50 | 3 |
| MCX1112A1-3GT30G-1-50 | 01 | Gold | Teflon | 50 | 3 |
| MCX1112A1-NT30G-1A-50 | 01A | Nickel | Teflon | 50 | 4 |
| MCX1112A1-3GT30G-1A-50 | 01A | Gold | Teflon | 50 | 4 |
| MCX1112A1-NT30G-5-50 | 05 | Nickel | Teflon | 50 | 1 |
| MCX1112A1-3GT30G-5-50 | 05 | Gold | Teflon | 50 | 1 |
| MCX1112A1-NT30G-5A-50 | 05A | Nickel | Teflon | 50 | 2 |
| MCX1112A1-3GT30G-5A-50 | 05A | Gold | Teflon | 50 | 2 |
| MCX1112A1-NT30G-6-75 | 06 | Nickel | Teflon | 75 | 1 |
| MCX1112A1-3GT30G-6-75 | 06 | Gold | Teflon | 75 | 1 |
| MCX1112A1-NT30G-6A-75 | 06A | Nickel | Teflon | 75 | 2 |
| MCX1112A1-3GT30G-6A-75 | 06A | Gold | Teflon | 75 | 2 |
| MCX1112A1-NT30G-14-50 | 14 | Nickel | Teflon | 50 | 1 |
| MCX1112A1-3GT30G-14-50 | 14 | Gold | Teflon | 50 | 1 |



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Right Angle Solder Plug - Semi-Rigid Cable

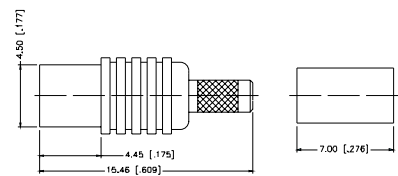
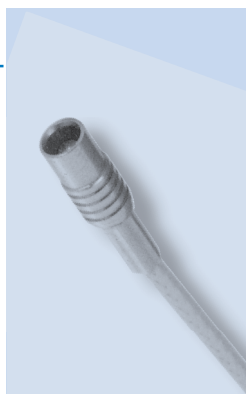
| P.N. | Cable Group | Pit. | Ins. | Imp. | Crimp Tool |
|------------------------|-------------|--------|--------|------|------------|
| MCX1182A1-NT30G-10-50 | 10 | Nickel | Teflon | 50 | N/A |
| MCX1182A1-3GT30G-10-50 | 10 | Gold | Teflon | 50 | N/A |
| MCX1182A1-NT30G-11-50 | 11 | Nickel | Teflon | 50 | N/A |
| MCX1182A1-3GT30G-11-50 | 11 | Gold | Teflon | 50 | N/A |
| MCX1182A1-3GT30G-13-50 | 13 | Gold | Teflon | 50 | N/A |



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Straight Crimp Jack - Miniature Cable

| P.N. | Cable Group | Pit. | Ins. | Imp. | Crimp Tool |
|------------------------|-------------|--------|--------|------|------------|
| MCX6121A1-NT30G-5-50 | 05 | Nickel | Teflon | 50 | 1 |
| MCX6121A1-3GT30G-5-50 | 05 | Gold | Teflon | 50 | 1 |
| MCX6121A1-NT30G-5A-50 | 05A | Nickel | Teflon | 50 | 2 |
| MCX6121A1-3GT30G-5A-50 | 05A | Gold | Teflon | 50 | 2 |
| MCX6121A1-NT30G-14-50 | 14 | Nickel | Teflon | 50 | 1 |
| MCX6121A1-3GT30G-14-50 | 14 | Gold | Teflon | 50 | 1 |
| MCX6121A1-NT30G-6-75 | 06 | Nickel | Teflon | 75 | 1 |
| MCX6121A1-3GT30G-6-75 | 06 | Gold | Teflon | 75 | 1 |
| MCX6121A1-NT30G-6A-75 | 06A | Nickel | Teflon | 75 | 2 |
| MCX6121A1-3GT30G-6A-75 | 06A | Gold | Teflon | 75 | 2 |

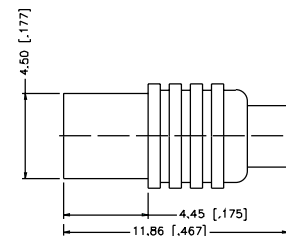
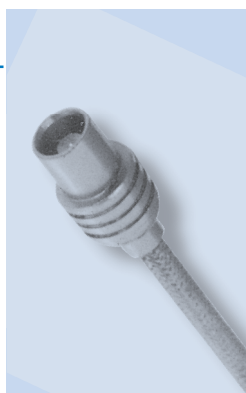


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Straight Solder Jack - Semi-Rigid Cable

| P.N. | Cable Group | Pit. | Ins. | Imp. | Crimp Tool |
|------------------------|-------------|--------|--------|------|------------|
| MCX6181A1-NT30G-11-50 | 11 | Nickel | Teflon | 50 | N/A |
| MCX6181A1-3GT30G-11-50 | 11 | Gold | Teflon | 50 | N/A |
| MCX6181A1-3GT30G-13-50 | 13 | Gold | Teflon | 50 | N/A |
| MCX6182A1-3GT30G-13-50 | 13 | Gold | Teflon | 50 | N/A |

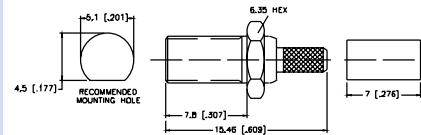
Right Angle Jack



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Straight Crimp Bulkhead Jack - Miniature Cable

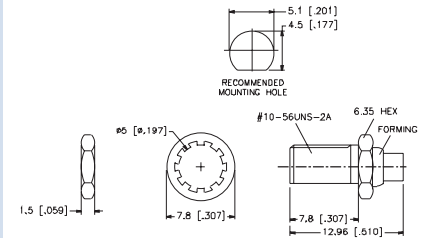
| P.N. | Cable Group | Plt. | Ins. | Imp. | Crimp Tool |
|--------------------------|-------------|--------|--------|------|------------|
| MCX6421A1-NT30G-5-50 | 05 | Nickel | Teflon | 50 | 1 |
| MCX6421A1-3GT30G-5-50 | 05 | Gold | Teflon | 50 | 1 |
| MCX6421A1-NT30G-5A-50 | 05A | Nickel | Teflon | 50 | 2 |
| MCX6421A1-3GT30G-5A-50 | 05A | Gold | Teflon | 50 | 2 |
| MCX6421A1-NT30G-6-75 | 06 | Nickel | Teflon | 75 | 1 |
| MCX6421A1-3GT30G-6-75 | 06 | Gold | Teflon | 75 | 1 |
| MCX6421A1-NT30G-6A-75 | 06A | Nickel | Teflon | 75 | 2 |
| MCX6421A1-3GT30G-6A-75 | 06A | Gold | Teflon | 75 | 2 |
| MCX6421A1-NT30G-14-50 | 14 | Nickel | Teflon | 50 | 1 |
| MCX6421A1-N/3GT30G-14-50 | 14 | Gold | Teflon | 50 | 1 |



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Straight Solder Bulkhead Jack - Semi-Rigid Cable

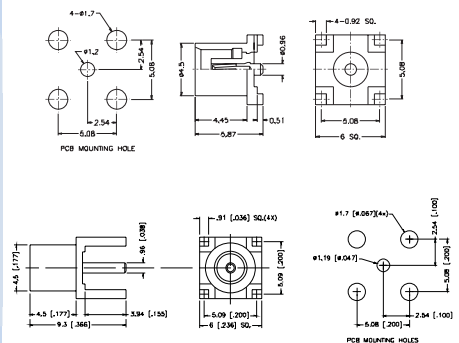
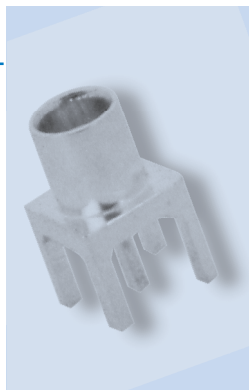
| P.N. | Cable Group | Plt. | Ins. | Imp. | Crimp Tool |
|------------------------|-------------|------|--------|------|------------|
| MCX6481A1-3GT30G-11-50 | 11 | Gold | Teflon | 50 | N/A |
| MCX6481A1-3GT30G-13-50 | 13 | Gold | Teflon | 50 | N/A |



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Assembly Instruction C - page 229

Straight Jack for P.C. Board

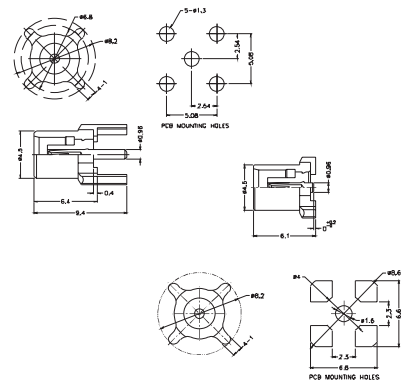
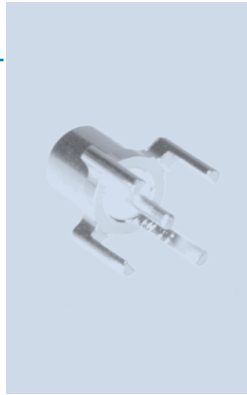
| P.N. | Cable Group | Plt. | Ins. | Imp. | Crimp Tool |
|--|-------------|--------|--------|------|------------|
| MCX6251B1-NT30G-50 | N/A | Nickel | Teflon | 50 | N/A |
| MCX6251B3-NT30G-50 2.92mm [1.15"] LEGS | N/A | Nickel | Teflon | 50 | N/A |
| MCX6251B1-3GT30G-50 | N/A | Gold | Teflon | 50 | N/A |
| MCX6251B3-3GT30G-50 2.92mm [1.15"] LEGS | N/A | Gold | Teflon | 50 | N/A |
| MCX6251B4-NT30G-50 Surface Mount | N/A | Nickel | Teflon | 50 | N/A |
| MCX6251B4-3GT30G-50 Surface Mount | N/A | Gold | Teflon | 50 | N/A |



Straight Jack for P.C. Board

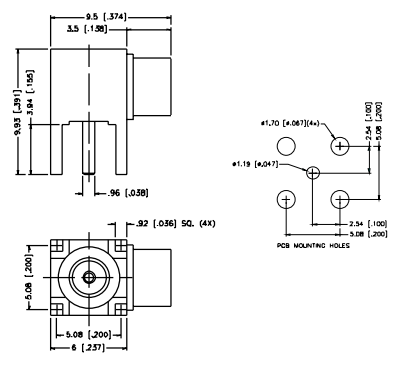
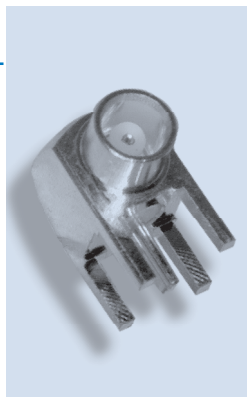
| P.N. | Cable Group | Pit. | Ins. | Imp. | Crimp Tool |
|---------------------|-------------|------|--------|------|------------|
| MCX6251A1-3GT30G-50 | N/A | Gold | Teflon | 50 | N/A |
| MCX6251A4-3GT30G-50 | N/A | Gold | Teflon | 50 | N/A |

Surface Mount
Low cost version, diecast



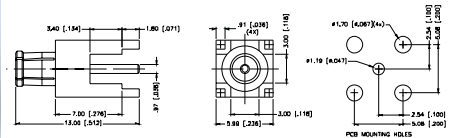
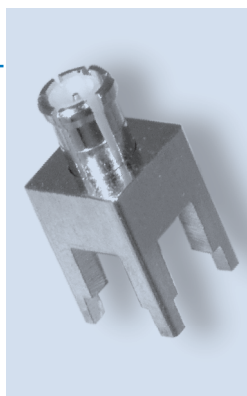
Right Angle Jack for P.C. Board

| P.N. | Cable Group | Pit. | Ins. | Imp. | Crimp Tool |
|-------------------------|-------------|--------|--------|------|------------|
| MCX6252B1-NT30G-50 | N/A | Nickel | Teflon | 50 | N/A |
| MCX6252B1-3GT30G-50 | N/A | Gold | Teflon | 50 | N/A |
| MCX6252B1-001-NT30G-50 | N/A | Nickel | Teflon | 50 | N/A |
| 2.92 mm [115] LEGS | | | | | |
| MCX6252B1-001-3GT30G-50 | N/A | Gold | Teflon | 50 | N/A |
| 1.73 mm [68] LEGS | | | | | |
| MCX6252B1-004-NT30G-50 | N/A | Nickel | Teflon | 50 | N/A |
| 1.73 mm [68] LEGS | | | | | |
| MCX6252B1-004-3GT30G-50 | N/A | Gold | Teflon | 50 | N/A |
| 1.73 mm [68] LEGS | | | | | |
| MCX6252B4-NT30G-50 | N/A | Nickel | Teflon | 50 | N/A |
| Surface Mount | | | | | |
| MCX6252B4-3GT30G-50 | N/A | Gold | Teflon | 50 | N/A |
| Surface Mount | | | | | |



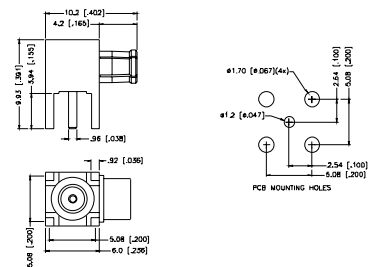
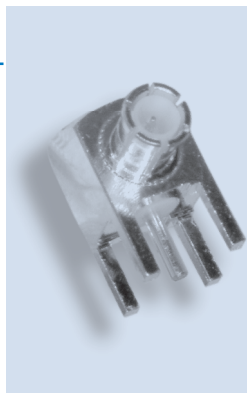
Straight Plug for P.C. Board

| P.N. | Cable Group | Pit. | Ins. | Imp. | Crimp Tool |
|-------------------------|-------------|--------|--------|------|------------|
| MCX1251B1-001-NT30G-50 | N/A | Nickel | Teflon | 50 | N/A |
| MCX1251B1-001-3GT30G-50 | N/A | Gold | Teflon | 50 | N/A |



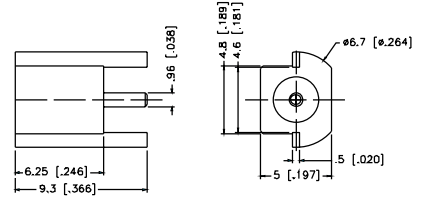
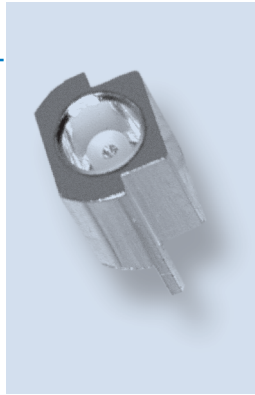
Right Angle Plug for P.C. Board

| P.N. | Cable Group | Pit. | Ins. | Imp. | Crimp Tool |
|---------------------|-------------|--------|--------|------|------------|
| MCX1252B1-NT30G-50 | N/A | Nickel | Teflon | 50 | N/A |
| MCX1252B1-3GT30G-50 | N/A | Gold | Teflon | 50 | N/A |



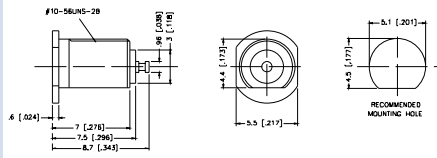
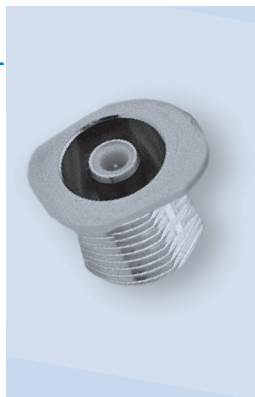
Edgecard Receptacle for P.C. Board

| P.N. | Cable Group | Pit. | Ins. | Imp. | Crimp Tool |
|-------------------------|-------------|--------|--------|------|------------|
| MCX625100-001-NT30G-50 | N/A | Nickel | Teflon | 50 | N/A |
| MCX625100-001-3GT30G-50 | N/A | Gold | Teflon | 50 | N/A |



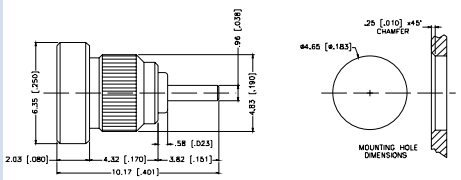
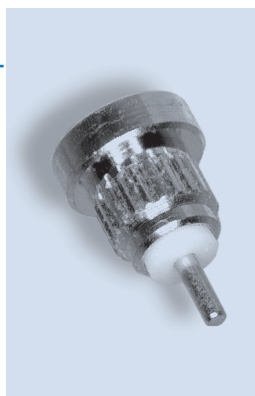
Straight Bulkhead Receptacle

| P.N. | Cable Group | Pit. | Ins. | Imp. | Crimp Tool |
|---------------------|-------------|--------|--------|------|------------|
| MCX6351B9-NT30G-50 | N/A | Nickel | Teflon | 50 | N/A |
| MCX6351B9-3GT30G-50 | N/A | Gold | Teflon | 50 | N/A |



Straight Bulkhead Receptacle - Press Fit

| P.N. | Cable Group | Pit. | Ins. | Imp. | Crimp Tool |
|---------------------|-------------|--------|--------|------|------------|
| MCX6051A1-NT30G-50 | N/A | Nickel | Teflon | 50 | N/A |
| MCX6051A1-3GT30G-50 | N/A | Gold | Teflon | 50 | N/A |



Straight Bulkhead Plug Receptacle

| P.N. | Cable Group | Pit. | Ins. | Imp. | Crimp Tool |
|-------------------------|-------------|--------|--------|------|------------|
| MCX1451A1-001-NT30G-50 | N/A | Nickel | Teflon | 50 | N/A |
| MCX1451A1-001-3GT30G-50 | N/A | Gold | Teflon | 50 | N/A |

