

UHF



**UHF Connectors**



# UHF Connector Series

## Description

Invented in the 1930's by an Amphenol Engineer named E. Clark Quackenbush, UHF coaxial connectors are general purpose units developed for use in low frequency systems from DC – 300 MHz. Invented for use in the radio industry, UHF is an acronym for Ultra High Frequency. UHF connectors feature a threaded coupling. Because these connectors are low-cost, the impedance is variable.

Amphenol's commercial grade connector offering carries the part number designation "RFX" for easy recognition. These low-cost connectors typically utilize die cast and molded components. While performance will not be equal to the industrial or military grade products, these connectors are ideal for use on a variety of commercial applications.

## Features/Benefits

- Optional reducing adapters accommodate a wide range of popular coaxial cables
- Solder termination types require no special assembly tools
- Crimp termination types provide a lower cost installation method
- Large-size threaded coupling is rugged design
- Non-demanding specifications and low cost

## Applications

- Antennas
- Cable Assembly
- Low Frequency Applications
- Public Address Systems
- CB Radios

## UHF Specifications

### Electrical

Impedance  
Frequency range  
Voltage rating (at sea level)  
Insulation resistance  
Dielectric withstanding voltage

Non-constant  
DC - 300 Hz (usable to 500 Hz)  
≤ 500 V peak (depending on cable)  
5,000 MΩ minimum  
1,000 Vrms (at sea level)

### Mechanical

Mating  
Center conductor cable affixment  
Durability (matings)

5/8-24 Threaded coupling  
Braid solder. set screw, clamp and crimp  
500 cycles minimum

### Environmental

Temperature range  
- copolymer of styrene:  
Thermal shock  
Corrosion  
Vibration  
Mechanical shock

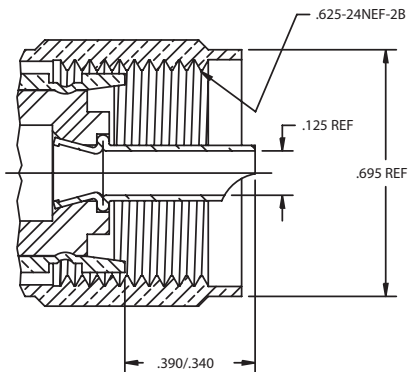
-65°C to +165°C  
-55°C to +85°C  
MIL-STD-202, method 107, cond. A  
MIL-STD-202, method 101, cond. B  
MIL-STD-202, method 204, cond. A  
MIL-STD-202, method 213, cond. 1

### Material

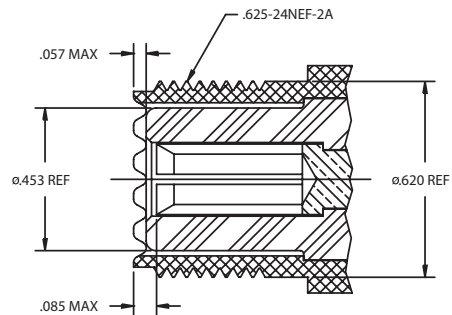
Body and outer contacts  
Male contact  
Female contact  
Crimp ferrule  
Other metal parts  
Insulator

Bodies: brass or zinc alloy  
Brass, silver plated  
Beryllium copper, silver plated  
Copper or brass  
Brass, nickel plated  
PTFE, copolymer of styrene, or mica-filled phenolic

### Plug



### Jack



## Cable Connectors

### Straight Plugs



Cable Group	Part Number	Body	Plating		Termination	
			Contact	Body	Contact	
C	083-58FCP	Nickel	Nickel	Crimp	Crimp	
C	083-58FCP-RFX	Nickel	Gold	Crimp	Crimp	
C	083-58SP	Nickel	Silver	Crimp	Solder	
C1	083-58SP-1002	Nickel	Silver	Crimp	Solder	
E	083-59SP	Nickel	Silver	Crimp	Solder	
G4	083-1SP	Silver	Silver	Solder	Solder	
G4	083-1SP-1050	Nickel	Silver	Solder	Solder	
G4	083-1SP-15RFX	Nickel	Silver	Solder	Solder	
G4	083-822	Nickel	Silver	Solder	Solder	
G4	083-8SP-RFX	Nickel	Silver	Crimp	Solder	
G4	083-1SP-4051	Nickel	Silver	Solder	Solder	
G4	083-1SPB-15RFX	Nickel	Silver	Solder	Solder	
G4	083-886	Nickel	Silver	Solder	Solder	
G4	083-886-2050	Silver	Silver	Solder	Solder	

### Angle Plugs



Cable Group	Part Number	Body	Plating		Termination	
			Contact	Body	Contact	
G4	083-67	Nickel	Silver	Solder	Solder	
G4	083-59	Nickel	Silver	Solder	Solder	

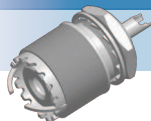
## Receptacles

### Panel Jacks



Part Number	Body	Plating		Description
		Contact	Body	
083-1R	Nickel	Silver	Solder Cup	4-hole Square Flange
083-1R-RFX	Nickel	Silver	Solder Cup	4-hole Square Flange
083-798	Nickel	Silver		4-hole Square Flange

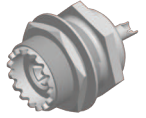
### Front Mount Bulkhead Jacks



Part Number	Body	Plating	
		Contact	Body
083-875	Nickel	Silver	
083-875-1002	Nickel	Silver	

## Rear Mount Bulkhead Jacks

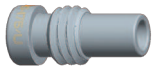
Part Number	Body	Plating	Contact
083-878	Nickel		Silver
083-878-RFX	Nickel		Silver



## Adapters

### Reducing Adapters

Cable Group	Part Number	Body Plating
C	083-185 (UG 175/U)	Nickel
C	083-185-RFX	Nickel
E	083-168 (UG 176/U)	Nickel
E	083-168-RFX	Nickel



### Straight Plug-Plug

Part Number	Body	Plating	Contact
083-877	Nickel		Silver



### Straight Jack-Jack

Part Number	Body	Plating	Contact
083-1J	Nickel		Silver



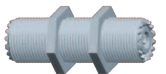
### Angle Jack-Plug

Part Number	Body	Plating	Contact
083-1AP	Nickel		Silver



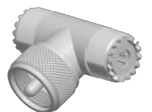
### Bulkhead Jack-Jack

Part Number	Body	Plating	Contact
083-1F	Nickel		Silver



### T-Adapters, Jack-Plug-Jack

Part Number	Body	Plating	Contact
083-1T	Nickel		Silver



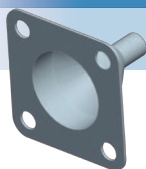
## Accessories

### Male Cap & Chain



Part Number	Description
083-1AC-RFX	UHF Cap & Chain
083-1AC	UHF Cap & Chain

### In-Series Adapters: Hoods



Part Number	Description
083-1H	4-Hole Flange Hood - Adapts Panel Receptacle 83-1R to RG-8, 10, 11, 12, 63, 79, 115, 149, 213, 215 cables
083-765	4-Hole Flange Hood - Adapts Panel Receptacle 83-1R to RG-58, 141 cables
083-909	4-Hole Flange Hood – Adapts Panel Receptacle 83-1R to RG-55, 142, 223, 400 cables.



# Notes

Cable Group	Cable Type
A	RG-178, 196
B	RG-174, 188A, 316, Belden 7805
B1	RG-179, 187, Belden 9221
B2	RD-188/U, RD-316/U
B3	RD-179/U, AT&T 19224L2
C	RG-58, 58A, 58C, 141, 303, LMR195, Belden 7806A, 9907
C1	RG-55, 142, 223, 400
C2	LMR200, Belden 7807A
D	RG-58/U Plenum, Thinnet, RG-122/U, Belden 88240, 89907
E	RG-59, 62, 140, 210, Belden 8241, 8263, 8279, 9209
E1	RG-59/U 20 AWG center conductor, Belden 1426A, 1505A, 9100, 9278
E2	RD-59/U, Belden 8281, 9141, 9231
E3	RG-59/U Quad Shield, Belden 1152A
F	RG-59/U Plenum, Belden 1560A, 9259, 82259, 89259, 88241
F1	RG-59/U Plenum 20 AWG center conductor, Belden 82108
G1	RG-6, 143, 212
G2	8X, LMR240, Belden 7808A, 9258
G3	LMR400, Belden 7810A, 8214, 9913
G4	RG-8, 8A, 9, 87A, 213, 214, 225, 393
G5	RD-6/U
H	RG-11
H1	Belden 1694A, 9248
H2	Belden 1859A, 7731, 8213, 9292
H3	RG-54A/U
I	AT&T 734A, Belden 1505A
I2	AT&T 735A, Belden 735A1
J	Quad 59 headend cable
K	LMR600
K2	Belden 1695A
K3	RG-122, 180, 195, Belden 1855, 1865A, 8218
L	.141 semi-rigid, RG-402/U
L2	.085, .086, .087 semi-rigid, RG-405/U
L3	.250 semi-rigid
L4	.047 semi-rigid, Belden 1674
M	1/2 inch annular corrugated
M1	1 1/4 inch annular corrugated
M2	1 5/8 inch annular corrugated
M3	7/8 inch annular corrugated
N	1/4 Helical
N1	3/8 Helical
N2	1/2 Helical
N3	7/8 inch SFC
P1	.81 mm OD micro-cable
P2	1.13 mm OD micro-cable, TCB-068
P3	1.32 mm OD micro-cable
P4	1.37 mm OD micro-cable