INSTALLATION PROCEDURES FOR PRINTED CIRCUIT BOARD TERMINATORS D-607-XX

1. SCOPE

This engineering standard contains the termination procedures and inspection requirements for the printed circuit board (PCB) terminators D-607-XX.

2. REFERENCES

2.1 Raychem Specification Control Drawings.

1. D-607-09--PC Board Terminator, Coaxial, Straight, 0.200 inch (5,08 mm) Grid
2. D-607-10--PC Board Terminator, Coaxial, Right Angle, 0.200 inch (5,08 mm) Grid
3. D-607-20--PC Board Terminator, Coaxial, Right Angle, 0.200 inch (5,08 mm) Grid.

2.2 Raychem Application Equipment Instructions.

1. AA-400 Super Heater Instructions

2. CV-5300 MiniGun® 1 Instructions

3. IR-550 Operating and Maintenance Instructions

3. APPLICATION EQUIPMENT AND TOOLS

3.1 Heating Tools.

Heating Tool	Reflector
AA-400 Super Heater (Portable, compressed air)	#979663 Mini SolderSleeve® Reflector or #979646 SolderSleeve® Reflector
CV-5300 MiniGun®△1 (Portable, electric blower)	MG-1 SolderSleeve® Reflector
IR-550 Heating Tool (Portable, focused infrared)	RG-4 Nosecone Reflector

△1 CV-5300 MiniGun® 1 and MG-1 replaces CV-5700 MiniGun® 3 and MG-7 respectively both CV-5300 and CV-5700 can be used, but CV-5300 is preferred over CV-5700.

3.2 Holding Fixtures.

1. AD-1461 for D-607-09 straight PCB terminators.

2. AD-1462 for D-607-10 and D-607-20 right-angle PCB terminators.

4. GENERAL INFORMATION

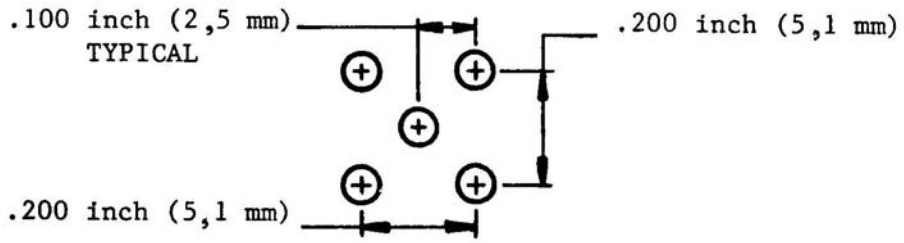
4.1 Description.

The D-607-XX PCB terminators are designed for matched - impedance termination of coaxial cables to printed circuit boards.

PCB terminators solder to the shields of coaxial cable by means of a preinstalled solder preform in a heat-shrinkable sleeve.

4.2 Printed Circuit Board Accommodation.

PCB terminators will fit the PC board hole pattern shown below.

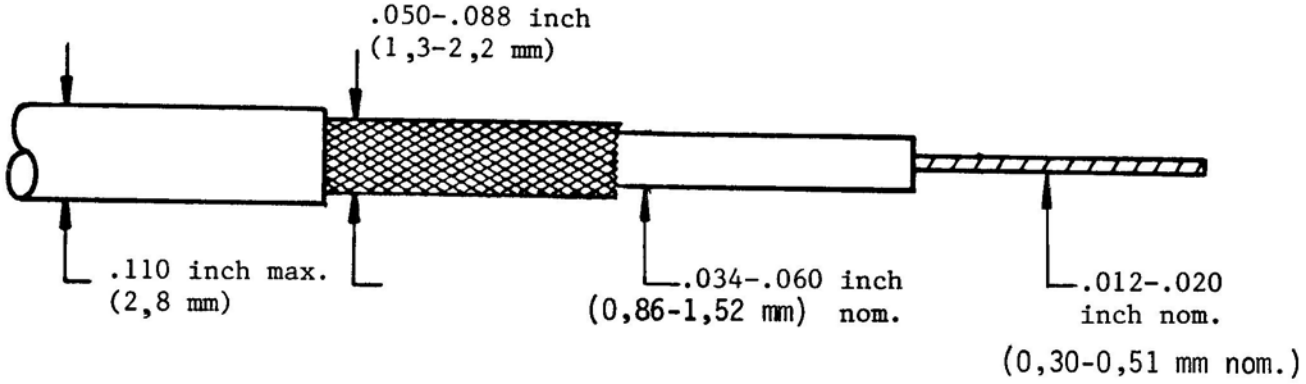


Minimum mounting hole diameter for one mounting leg per hole:
0.046 inch (1, 2 mm).

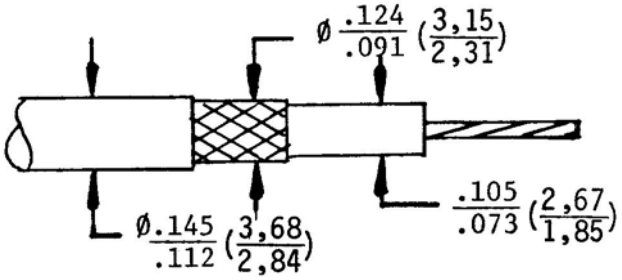
Minimum mounting hole diameter if adjacent PCB terminators share mounting holes: 0.055 inch (1,4 mm).

4.3 Coaxial Cable Accommodation.

4.3.1 D-607-09 and D-607-10 PCB terminators will accommodate coaxial cables with the dimensions shown below. Consult Raychem for other cable constructions.



4.3.2 D-607-20 PCB terminators will accommodate coaxial cables with the dimensions shown below. Consult Raychem for other cable constructions.

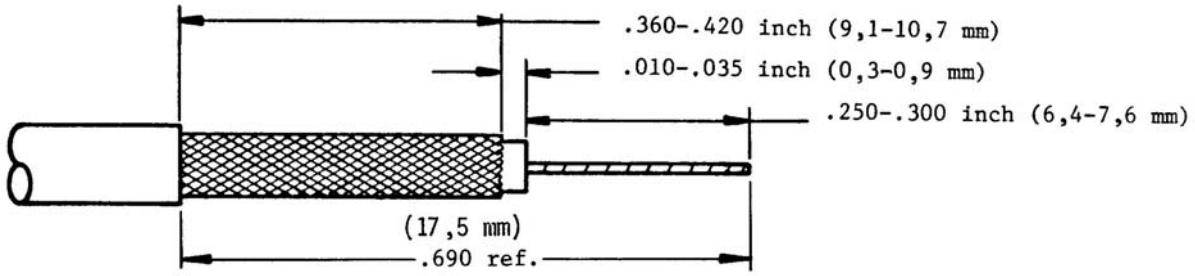


5. TERMINATION PROCEOURES

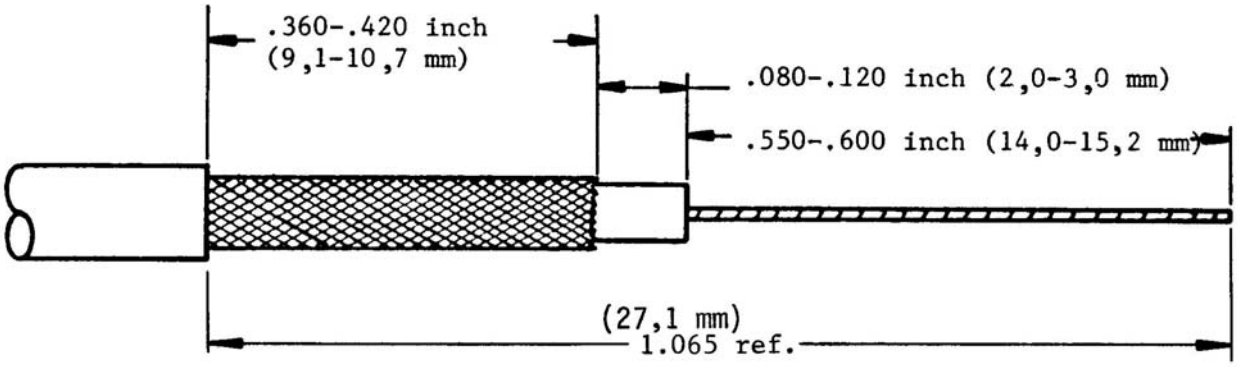
5.1 Coaxial Cable Preparation.

1 .Strip the coaxial cable as shown in the appropriate figure below.

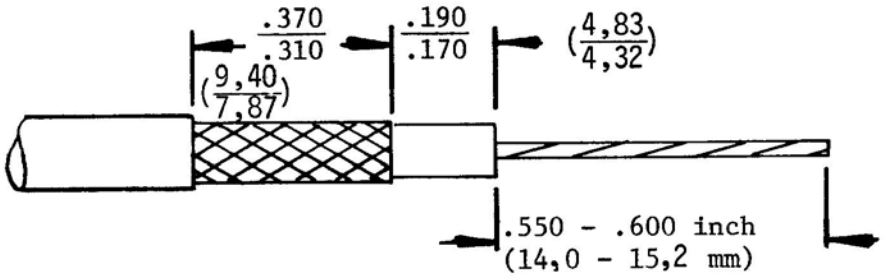
a. Cable strip dimensions for D-607-09 straight PCB terminators.



b. Cable strip dimensions for D-607-10 right-angle PCB terminators.



c. Cable strip dimensions for D-607-20 right-angle PCB terminators.



2. Make sure that there are no braid or center conductor strands extending across the stripped dielectric.

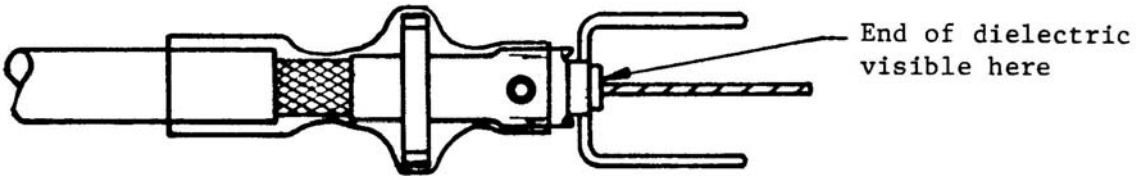
3. Prating the center conductor, if desired.

NOTE
Pretinning the tip of stranded center conductor makes assembly and insertion into the printed circuit board easier.

5.2 Inserting Prepared Cable Into PCB Terminator.

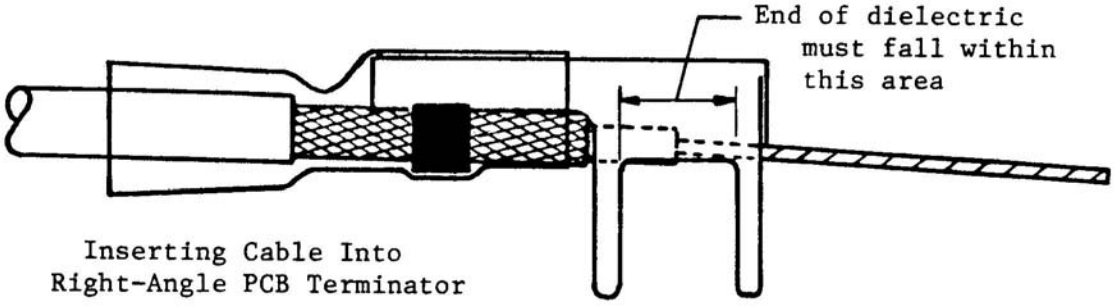
1. Insert the cable into the PCB terminator until the braid contacts stop as described below:

   a. For straight PCB terminators, insert cable until the braid contacts the flat surface, and the dielectric extends through the hole in the flat surface.



Inserting Cable Into Straight PCB Terminator (D-607-09)

   b. For right-angle PCB terminators, insert cable until the braid contacts the tabs inside the terminator body, and the end of the dielectric is approximately centered between the four legs.



Inserting Cable Into
Right-Angle PCB Terminator

D-607-10

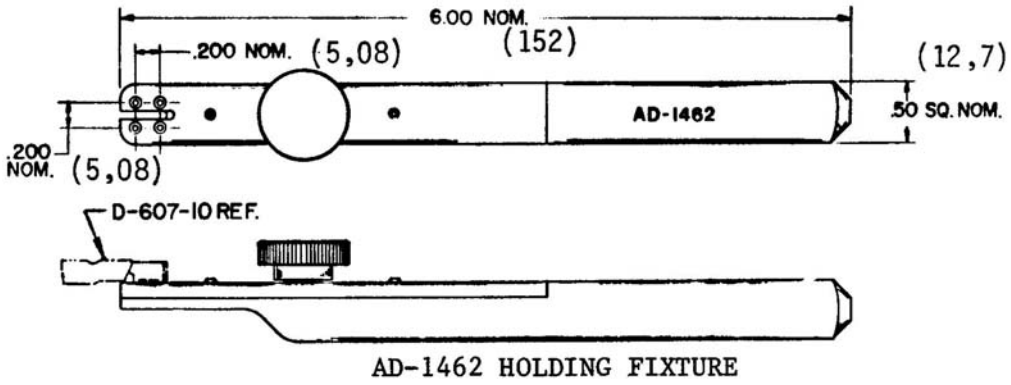
2. Inspect to make sure that there are no wire strands extending across the stripped dielectric.

NOTE
If any such strands are found, cut them off cleanly.

5.3 Heating

1. Install the cable/terminator assembly in the correct holding fixture.

> **NOTE**
> Straight PCB terminators require the AD-1461 holding fixture. Right-angle PCB terminators require the AD-1462 holding fixture.



AD-1462 HOLDING FIXTURE

2. Position the cable/terminator assembly in the reflector slot of the heating tool.

> **NOTE**
> Hold the assembly so that both the braid and the solder preform can be seen. If using the IR-550 heating tool, rest the holding fixture in the bottom of the reflector slot.

   Center the solder preform left to right.

   Make sure that the parts remain properly assembled.

3. Apply heat until the solder melts and flows, forming fillets between the braid and the terminator body.

4. Remove the assembly from the heating tool and allow it to cool at least five seconds.

5. Remove the terminated assembly from the holding fixture.

> **NOTE**
> For right-angle terminators, the center conductor can be bent at this time, or this can be done prior to insertion into the PC board.

6. Inspect the completed termination according to Section 6.

6. INSPECTION

6.1 Assembly Inspection.

Visually inspect for correct positioning as follows:

Straight PCB terminators:	The cable dielectric must extend through the hole so that the center conductor cannot contact the terminator body (whereby causing short circuit).
Right-angle PCB terminators:	The end of the cable dielectric must be located within the area between the two tabs.

6.2 Heating Inspection.

Visually inspect for correct heating as follows:

1. The solder preform must be melted and flowed so that:

   a. Preform shows no trace of its original form. (Presence of the original preform shape indicates an underheated condition.)

   b. Solder fillet is visible between the shield braid and body of the PCB terminator. (Insufficient visible solder caused by solder wicking indicates an overheated condition.)

2. The insulating sleeve must be shrunk over the terminator body and over the visible shield braid.

3. The insulating sleeve must not be darkened so as to obscure the solder joints or hinder inspection. (Such darkening indicates an overheated condition.)

4. The coaxial cable insulation must not show signs of damage or overheating outside of the insulating sleeve.

7. REPAIR AND REWORK

7.1 Underheated Terminations.

Reheat as directed in Paragraph 5.3, and reinspect per Section 6.

7.2 Overheated or Improperly Assembled Terminations.

1. Remove the PCB terminator from the cable as directed in Section 7.3.

2. Check the cable for damage and incorrect stripping.

   If the cable is damaged, cut off the damaged portion and restrip per Section 5.1.

   If stripping is incorrect, restrip as required (Section5.1).

3. Install a new PCB terminator (Sections 5.2 and 5.3).

7.3 Removing PCB Terminator From Cable.

1. Use a sharp knife or razor blade to score the insulating sleeve full length.

CAUTION
Avoid cutting into the cable jacket.

2. Holding the assembly by the cable, heat the PCB terminator in the heating tool until the solder melts, and pull the heated PCB terminator off the cable using pliers.

NOTE
If the insulating sleeve remains stuck to the cable jacket slide it off the end of the cable using pliers. If necessary, warm the sleeve carefully so that it can be pulled off.