

## SPECIFICATIONS

Hewlett-Packard guarantees that your adapters will equal or exceed the following specifications in the +20° to +26°C (+68° to +79°F) temperature range.

DC to 8 GHz	≥34 dB return loss
8 to 18 GHz	≥28 dB return loss

The allowable recession of the center conductor of the NMD-3.5 mm (f) connector is 0.0000 to 0.0022 inches (0.000 to 0.056 mm) below the mating surface of the outer conductor.

The allowable pin position for type-N connectors is:

<b>male</b>	= 0.2070 to 0.2075 inch (5.2578 to 5.2705 mm)
<b>female</b>	= 0.2065 to 0.2070 inch (5.2451 to 5.2578 mm)

In a mated pair of type-N connectors the center conductor's mating plane is offset from the outer conductor's mating plane by 0.207 inch (5.2578 mm) in the direction of the male connector (Figure 1).

Zero the gages before each use by attaching the appropriate gage master to the end of the gage, torquing the connection to 12 in-lb with a 3/4 inch torque wrench, and adjusting the dial on the face of the gage so the gage reads zero.

Both type-N gages, male and female, read zero when the center conductor to outer conductor offset is nominally 0.2070 inch (5.2578 mm).

When gaging a male connector the actual recession of the center conductor is  $-0.2070$  inch *plus* the reading on the gage.

When gaging a female connector the actual recession of the center conductor is  $+0.2070$  inch *plus* the reading on the gage.

Example. For a gage reading of  $-0.0001$  inch, the following is true:

Gage Reading	Actual Pin Position	
	(versus outer mating plane)	
(this number corresponds to your gage reading)	Male	Female
$-0.0001$ inch	$-0.207 + (-0.0001)$ = $-0.2071$ inch	$+0.2070 + (-0.0001)$ = $+0.2069$ inch

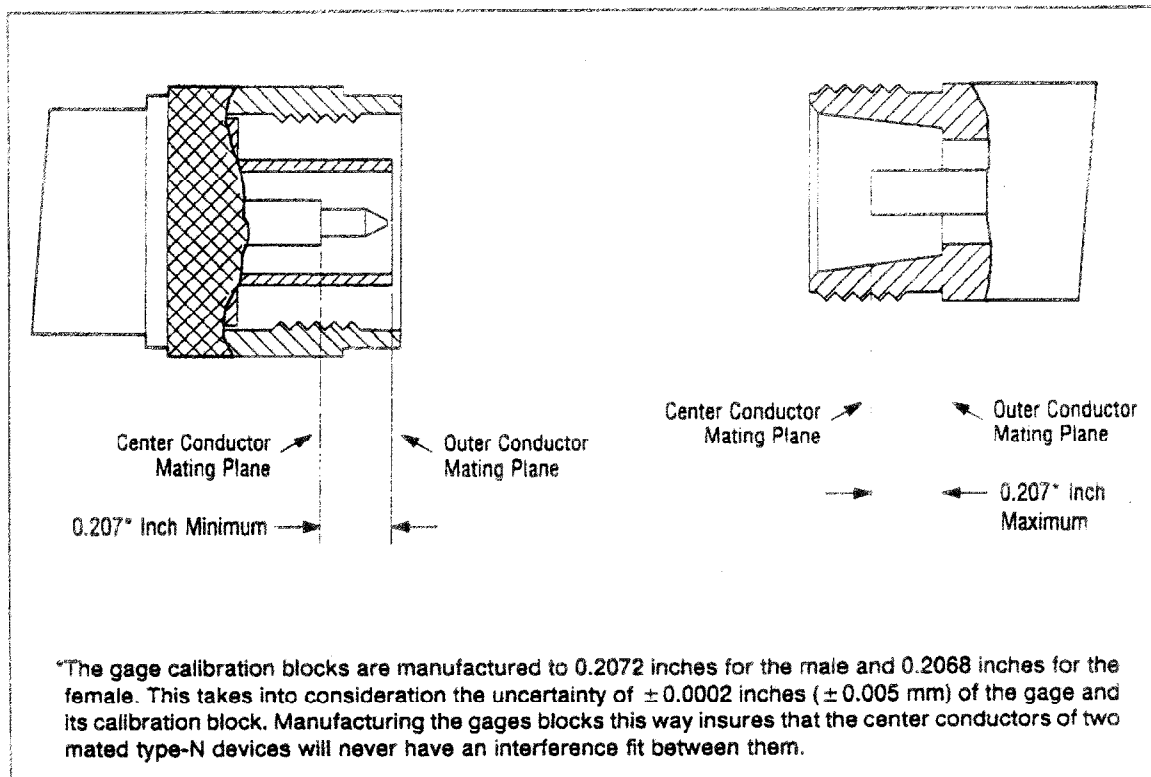


Figure 1. Type-N Connectors

## PERFORMANCE TESTS

Using an HP 8510 Network Analyzer perform the following test on your adapters as soon as you receive them, and periodically repeat the test to determine if their performance meets the electrical specifications stated above or if they need to be replaced. An initial period of one year between performance tests is recommended.

Required Equipment	HP Part Number
HP 8510A/B Network Analyzer System with time domain option	8510 Opt. 010
Type-N loads (part of the HP 85054B calibration kit)	
male	85054-60033
female	85054-60034
Type-N 50 $\Omega$ airline, 12.5 cm (part of the HP 85055A verification kit)	85055-60001