

Environmental Requirements

Table 2-1 Environmental Requirements

Parameter	Limits
Operating temperature	+20 °C to +26 °C (+68 °F to +79 °F)
Storage temperature	-40 °C to +75 °C (-40 °F to +167 °F)
Altitude	
Operation	< 4,500 meters (≈15,000 feet)
Storage	< 4,500 meters (≈15,000 feet)
Relative humidity	Always non-condensing
Operation	Up to 80% at 30°C
Storage	Up to 95% at 40°C

Electrical Specifications

Table 2-2 Electrical Specifications

Cable	SWR	Return Loss (dB)	Insertion Loss (dB) ^a	Frequency Range (GHz)
85133E	≤1.44	≥15	≤0.1 + 0.57√f + 0.02f	DC to 50
85133F			≤0.1 + 0.38√f + 0.017f	
85133H				

a. f = frequency in GHz.

Supplemental Characteristics

Table 2-3 lists supplemental performance characteristics. These are not specifications, but are intended to provide additional information useful to your application. Supplemental characteristics are typical (but not warranted) performance parameters.

Table 2-3 Supplemental Characteristics (1 of 3)

Cable	Cable Length		Approximate Electrical Length		Magnitude and Phase Stability With a 90° Bend ^{a,b}	Random Use Magnitude and Phase Stability ^{a,c}	Minimum Recommended Bend Radius	
	cm	in	m	ft			cm	in
85133E	97.2	38.25	1.125	3.690	<0.15 dB Change <0.17° (f) + 0.5°	<0.07 dB Change <0.09° (f) + 0.5°	6.352	2.5
85133F	62.9	24.75	0.7376	2.418	<0.08 dB Change <0.08° (f) + 0.5°	<0.04 dB Change <0.04° (f) + 0.5°		
85133H								

a. (f) = frequency in GHz.

b. With a 90°, 2.5-inch bend radius.

c. After three 90°, 2.5-inch bend radius/straighten cycles.

Table 2-3 Supplemental Characteristics (2 of 3)

Cable Set	Number of Cables	Test Set End Connector Type	DUT End Connector Type
85133E	1	NMD-2.4 mm -f- Slotted	PSC-2.4 mm -f- Slotless
85133F	2	NMD-2.4 mm -f- Slotted	NMD-2.4 mm -m- and PSC-2.4 mm -f- Slotless
85133H	1	NMD-2.4 mm -f- Slotted	NMD-2.4 mm -m-

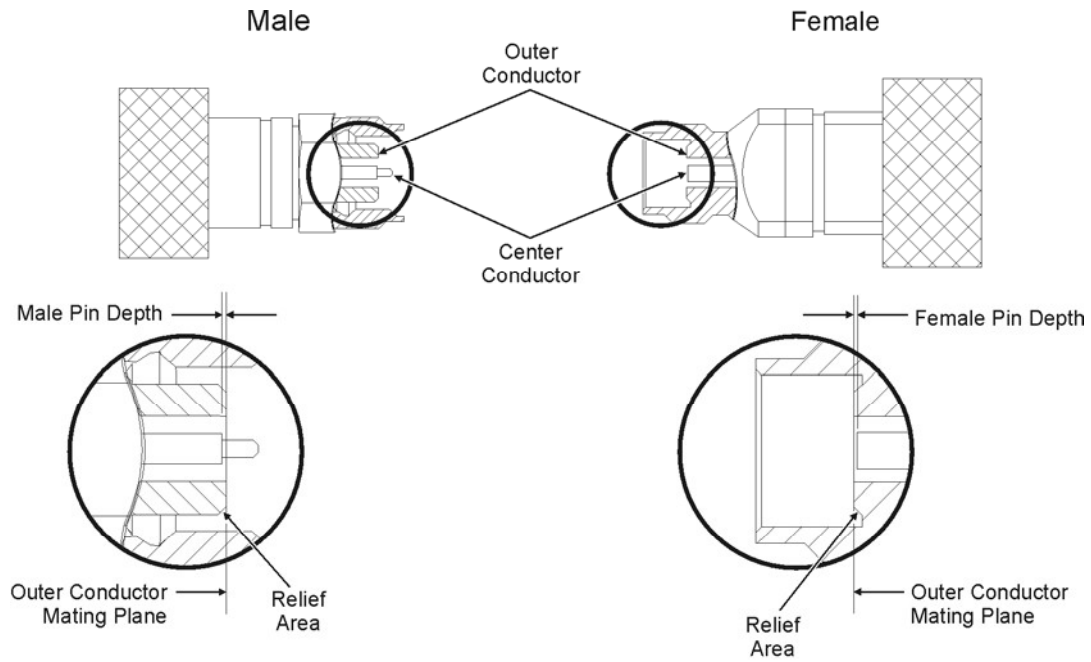
Center Conductor Pin Depth

Center conductor pin depth is the distance the center conductor mating plane differs from being flush with the outer conductor mating plane. See Figure 2-1 The pin depth of a center conductor can be in one of two states: either protruding or recessed.

Protrusion is the condition in which the center conductor extends beyond the outer conductor mating plane. This condition will indicate a positive value on the connector gage.

Recession is the condition in which the center conductor is set back from the outer conductor mating plane. This condition will indicate a negative value on the connector gage.

Figure 2-1 Connector Center-Conductor Pin Depth



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Table 2-3 Supplemental Characteristics (3 of 3)

Precision Connector	Center-Conductor Pin Depth			
	Allowable Recession ^a		Allowable Protrusion	
	mm	in	mm	in
NMD-2.4 mm -f-	-0.000 to -0.056	-0.0000 to -0.0022	0.0000	0.0000
NMD-2.4 mm -m-	-0.0025 to -0.0254	-0.0001 to -0.001		
PSC-2.4 mm -f-	-0.0025 to -0.0254	-0.0001 to -0.001		

a. Center conductor shoulder behind outer conductor mating plane.