

HIGH FREQUENCY

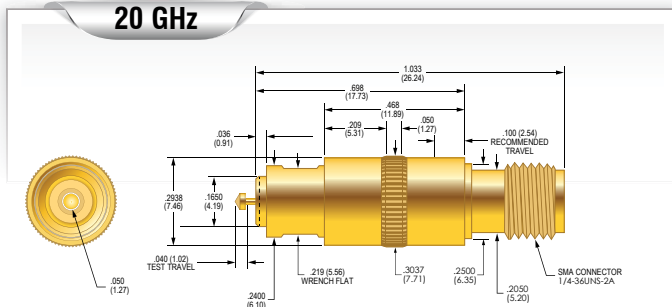
The K-50 series is developed in cooperation with a leading manufacturer of advanced communications systems and is supported by a leading instrument equipment manufacturer.

The precisely-controlled physical and electrical characteristics of the K-50 make it an ideal port-extending accessory for Network Analyzers and Time Domain Reflectometers. The RF center conductor system is captivated for maximum reliability. The K-50 incorporates spring probes in an open architecture format to accommodate a wide range of physical circuit topologies and to alleviate the need for special geometry contact pads on the circuit under test.

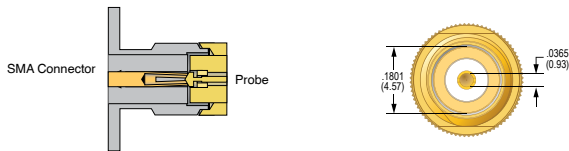


CSP-30ES-013

CSP-30JS-012



Connection to SMA Connector



Mechanical

Recommended Travel:	.100 (2.54)
Recommended Travel inner conductor:	.040 (1.02)
Recommended Travel outer conductor:	.100 (2.54)
Full Travel:	.200 (5.08)
Operating Temperature:	-55°C to 85°C
Connection (instrument side):	SMA Connector, 1/4 -36UNS-2A

Spring Force in oz. (grams)

	Order Code	Preload	Rec. Travel
Standard	CSP-30ES-013	3.06 (86.7)	4.0 (113.4)

Electrical (Static Conditions)

Nominal Impedance:	50 Ohms
Average Probe Resistance:	<50 mOhms
Bandwidth @ -1 dB:	>20 GHz

Materials and Finishes

Housing:	Brass, Gold plated
Dielectric:	Rexolite
Spring:	Stainless Steel, Gold plated over hard Nickel

Mounting

Hole diameter:	Ø.297 (7.54)
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Replaceable Probes

Order Number (CSP-30ES-013):	SPL-30E-030
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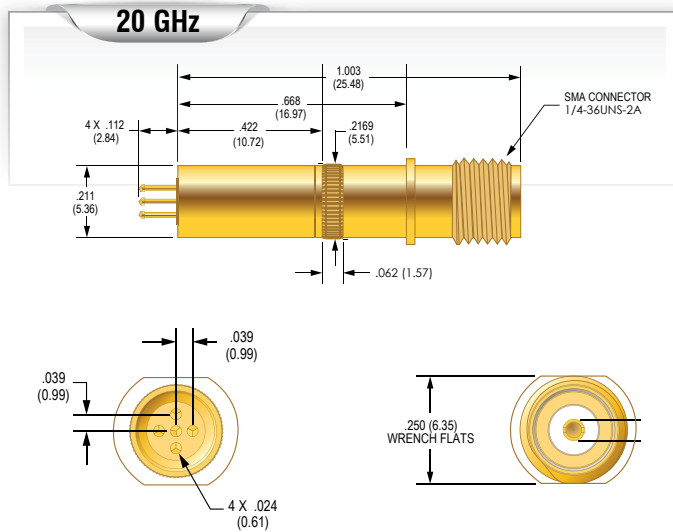
Applications

The CSP-30ES-013 was specifically designed to mate with SMA connectors. Designed for use in interconnect applications where signal integrity is required, such as accessing high frequency RF connectors on circuit boards. Can also be used as R.F. mating connector.

COMING SOON

CSP-30TS-011

CSP-03B-006 CSP-03G-003



Mechanical

Recommended Travel:	.100 (2.54)
Recommended Travel inner conductor:	.040 (1.02)
Recommended Travel outer conductor:	.100 (2.54)
Full Travel:	.200 (5.08)
Operating Temperature:	-55°C to 85°C
Connection (instrument side):	SMA Connector, 1/4 -36UNS-2A

Spring Force in oz. (grams)

Order Code	Preload	Rec. Travel
Standard CSP-30TS-011	1.59 (40.4)*	7.0 (198.5)*

* Fully populated - 5 probes total

Electrical (Static Conditions)

Nominal Impedance:	50 Ohms
Average Probe Resistance:	<50 mOhms
Bandwidth @ -1 dB:	>20 GHz

Materials and Finishes

Housing:	Brass, Gold plated
Dielectric:	Rexolite
Spring:	Stainless Steel, Gold plated over hard Nickel

Mounting

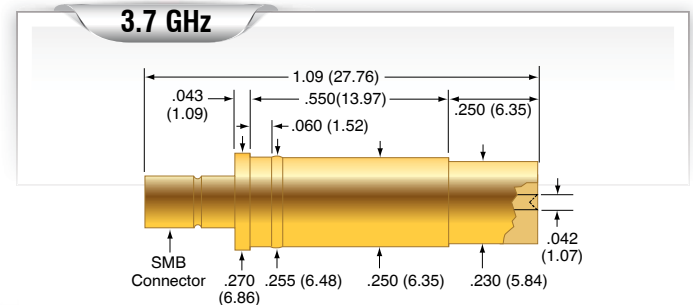
Hole diameter:	Ø.213 (5.41)
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Replaceable Probes

Order Number (CSP-30TS-011):	
Signal	SPL-30T-020
Ground	SPL-30T-021

Applications

Designed for use in interconnect applications where signal integrity is required, such as accessing high frequency RF targets on circuit boards. Can also be used as R.F. mating connector.



CSP-03B-006

CSP-03G-003

Mechanical

Recommended Travel:	.167 (4.24)
Full Travel:	.250 (6.35)
Operating Temperature:	-35°C to +105°C
Connection:	Standard SMB 27-1 or equivalent Connector

Spring Force in oz. (grams)

Standard	CSP-03B-006	0.80 (22)	4.0 (113)
Standard	CSP-03G-003	0.80 (22)	4.0 (113)

Electrical (Static Conditions)

Nominal Impedance:	50 Ohms
Average Probe Resistance:	<50 mOhms
Dielectric Voltage Rating:	1K VAC
Minimum Insertion Loss @ 1GHz (tested with target):	0.13 dB typical
Maximum VSWR @ 1GHz (tested with target):	1.15:1 typical

Materials and Finishes

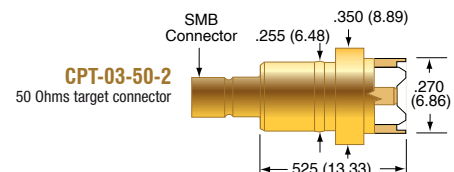
Housing:	Brass, Gold plated
Dielectric:	Premium virgin Teflon per MIL-P-18468

Replaceable Probes

Order Number (CSP-03B-006):	SPL-03B-121
Order Number (CSP-03G-003):	SPL-03G-043

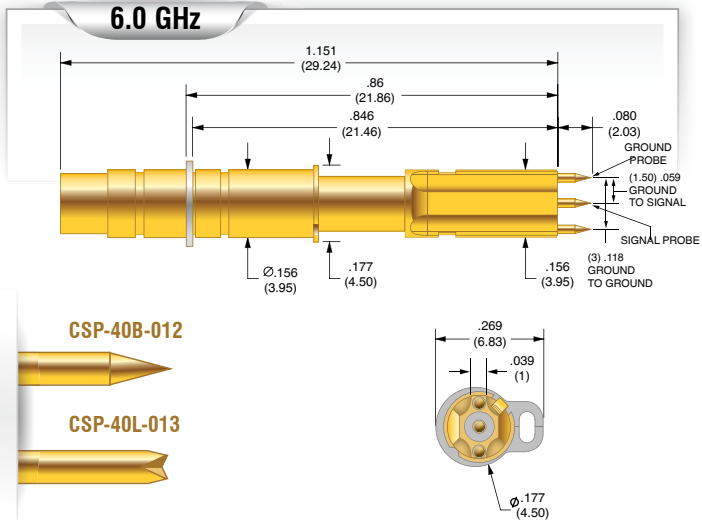
Applications

Designed for use in interconnect applications where signal integrity is required, such as accessing high frequency targets on circuit boards. Can also be used as R.F. mating connector.



High Frequency Probe

CSP-40B-012 CSP-40L-013



CSP-40B-012

CSP-40L-013

Mechanical

Recommended Travel: 0.133 (3.38) SHIELD, 0.211 (5.36) INCLUDING TRAVEL OF PROBES
 Full Travel: 0.200 (5.08) SHIELD, 0.275 (6.99) INCLUDING TRAVEL OF PROBES
 Operating Temperature CSP-40B-012: -35°C to +155°C
 Operating Temperature CSP-40L-013: -35°C to +105°C
 Connection: MMCX

Spring Force in oz. (grams)

Standard	CSP-40B-012	1.9 (53.9)	8.0 (226.8)
Standard	CSP-40L-013	1.9 (53.9)	8.0 (226.8)

Electrical (Static Conditions)

Nominal Impedance: 50 Ohms
 Dielectric Voltage Rating: 1K VAC
 Bandwidth @ -1 dB: 6 GHz

Materials and Finishes

Housing: Brass, Gold plated
 Dielectric: Teflon
 Spring: Stainless Steel, Nickel Plated

Replaceable Probes

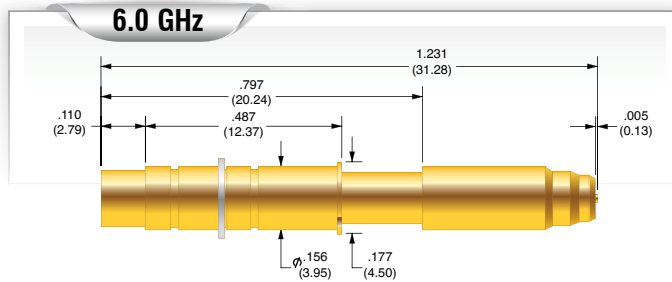
Ground Probe, Order Number (CSP-40B-012) SPL-00B-089
 Signal Probe, Order Number (CSP-40B-012) SPL-40B-045
 Ground Probe, Order Number (CSP-40L-013) SPL-00L-088
 Signal Probe, Order Number (CSP-40L-013) SPL-40L-046

Applications

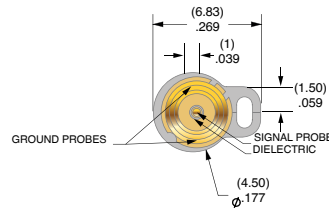
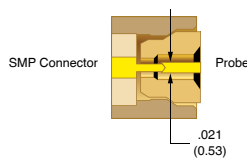
The CSP-40 coaxial probe provides instrumentation-quality interface for broadband R.F. measurements up to 6 GHz. With the CSP-40 R.F. Circuit Design, impedance characterization measurements can be performed using it as a Network Analyzer port-extending accessory. Accurate and repeatable small signal and R.F. power (50 Watts) measurements provide consistent and repeatable results.

CSP-40A-015

K-50B-S K-50H-S



Connection to SMP Connector



Mechanical

Recommended Travel: 0.133 (3.38) SHIELD, 0.211 (5.36) INCLUDING TRAVEL OF PROBES
 Full Travel: 0.200 (5.08) SHIELD, 0.275 (6.99) INCLUDING TRAVEL OF PROBES
 Operating Temperature: -35°C to + 155°C
 Connection: MMCX

Spring Force in oz. (grams)

Standard	CSP-40A-015	6.2 (175.2)	8.0 (226.8)
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Electrical (Static Conditions)

Nominal Impedance: 50 Ohms
 Dielectric Voltage Rating: 1K VAC
 Bandwidth @ -1 dB: 6 GHz

Materials and Finishes

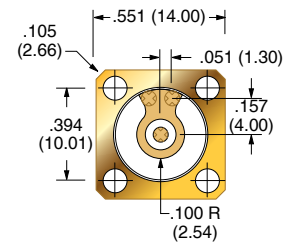
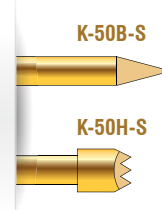
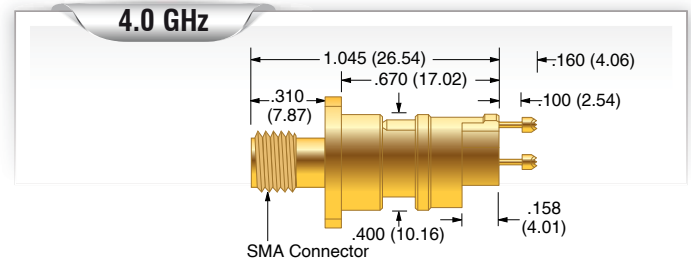
Housing: Brass, Gold plated
 Dielectric: Teflon

Replaceable Probes

Signal Probe, Order Number (CSP-40A-015) HPA-40G
 (more information on this probe in the General Purpose section)

Applications

The CSP-40 coaxial probe provides instrumentation-quality interface for broadband R.F. measurements up to 6 GHz to an SMP male connector. With the CSP-40 R.F. Circuit Design, impedance characterization measurements can be performed using it as a Network Analyzer port-extending accessory. Accurate and repeatable small signal and R.F. power (50 Watts) measurements provide consistent and repeatable results.



Mechanical

Recommended Travel: .090 (2.29)
 Full Travel: .100 (2.54)
 Operating Temperature: -55°C to +105°C
 Connection: Standard SMA Connector

Spring Force in oz. (grams)

Standard	K-50B-S	4.47 (127)	12.00 (340)
Standard	K-50H-S	4.47 (127)	12.00 (340)

Electrical (Static Conditions)

Nominal Impedance: 50 Ohms
 Minimum Return Loss @ 1GHz: 23 dB, 26 dB typical
 Minimum Insertion Loss @ 1GHz: 0.12 dB, 0.06 dB typical
 Maximum VSWR @ 1GHz: 1.15:1, 1.11:1 typical

Materials and Finishes

Housing: Brass, Gold plated
 Dielectric: Premium virgin Teflon per MIL-P-18468

Replaceable Probes

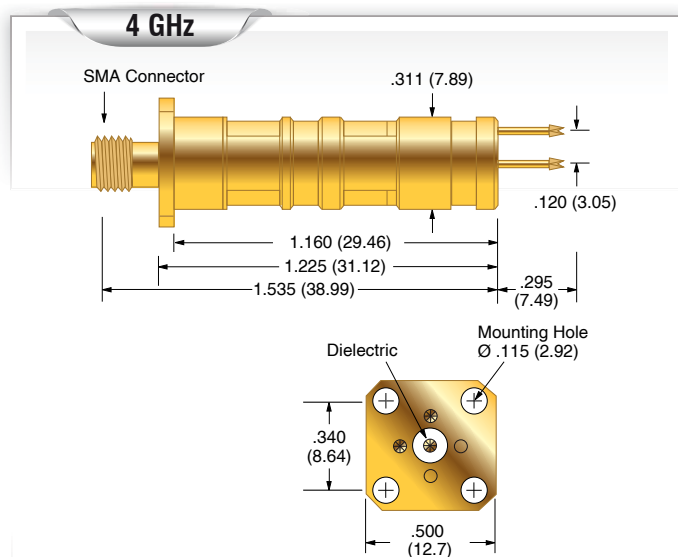
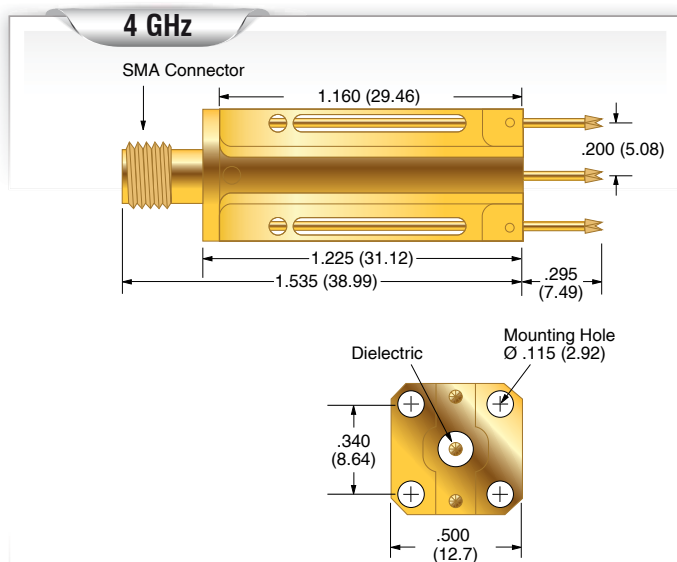
Order Number (K-50B-S): SPL-01B-119
 Order Number (K-50H-S): SPL-01H-116

Applications

The K-50H-S coaxial probe is a shorter version of the K-50 series measurement probe with .100 full travel and a slightly larger mounting flange. Electrical characteristics and applications are similar to the K-50.

K-50L

K-50L-QG



Mechanical

Recommended Travel:	.225 (5.72)
Full Travel:	.250 (6.35)
Operating Temperature:	-55°C to +105°C
Connection:	Standard SMA Connector

Spring Force in oz. (grams)

	Order Code	Preload	Rec. Travel
Standard	K-50L	3.27 (93)	8.13 (231)

Electrical (Static Conditions)

Nominal Impedance:	50 Ohms
Minimum Return Loss @ 1GHz:	23 dB, 26 dB typical
Minimum Insertion Loss @ 1GHz:	0.12 dB, 0.06 dB typical
Maximum VSWR @ 1GHz:	1.15:1, 1.11:1 typical

Materials and Finishes

Housing:	Brass, Gold plated
Dielectric:	Premium virgin Teflon per MIL-P-18468

Replaceable Probes

Order Number:	SPL-01L-039
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Mechanical

Recommended Travel:	.225 (5.72)
Full Travel:	.250 (6.35)
Operating Temperature:	-55°C to +105°C
Connection:	Standard SMA Connector

Spring Force in oz. (grams)

	Order Code	Preload	Rec. Travel
Standard	K-50L-QG	3.27 (93)	8.13 (231)

Electrical (Static Conditions)

Nominal Impedance:	50 Ohms
Minimum Return Loss @ 1GHz:	23 dB, 26 dB typical
Minimum Insertion Loss @ 1GHz:	0.12 dB, 0.06 dB typical
Maximum VSWR @ 1GHz:	1.15:1, 1.11:1 typical

Materials and Finishes

Housing:	Brass, Gold plated
Dielectric:	Premium virgin Teflon per MIL-P-18468

Replaceable Probes

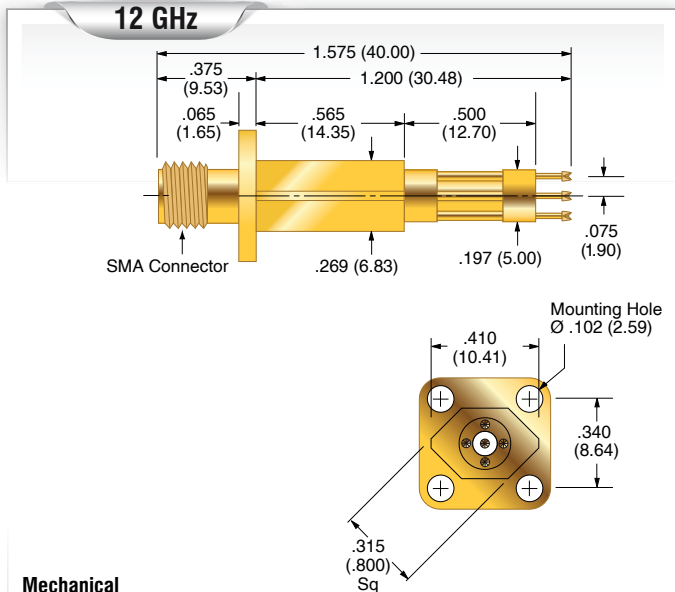
Order Number:	SPL-01L-039
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Applications

The K-50 coaxial probe provides an instrumentation-quality interface for broadband R.F. measurements up to 4 GHz. With the K-50 R.F. Circuit Design, impedance characterization measurements can be performed using it as a Network Analyzer port-extending accessory. Accurate and repeatable small signal and R.F. power (50 Watts) measurements provide consistent and repeatable results.

K-50L-QG-75

K-50L-QG-75R



Mechanical

Recommended Travel:	.067 (1.70)
Full Travel:	.100 (2.54)
Operating Temperature:	-55°C to +105°C
Connection:	Standard SMA Connector

Spring Force in oz. (grams)

	Order Code	Preload	Rec. Travel
Standard	K-50L-QG-75R	3.74 (106)	14.35 (407)

Electrical (Static Conditions)

Nominal Impedance:	50 Ohms
Minimum Return Loss @ 1GHz:	23.8 dB, 22.8 dB typical
Minimum Return Loss @ 5GHz:	18.3 dB, 16.4 dB typical
Minimum Return Loss @ 10GHz:	17.7 dB, 17.0 dB typical
Minimum Insertion Loss @ 1GHz:	0.183 dB, 0.186 dB typical
Minimum Insertion Loss @ 5GHz:	0.370 dB, 0.371 dB typical
Minimum Insertion Loss @ 10GHz:	0.577 dB, 0.572 dB typical
Maximum VSWR @ 1GHz:	1.14:1, 1.16:1 typical
Maximum VSWR @ 5GHz:	1.28:1, 1.36:1 typical
Maximum VSWR @ 10GHz:	1.30:1, 1.33:1 typical

Materials and Finishes

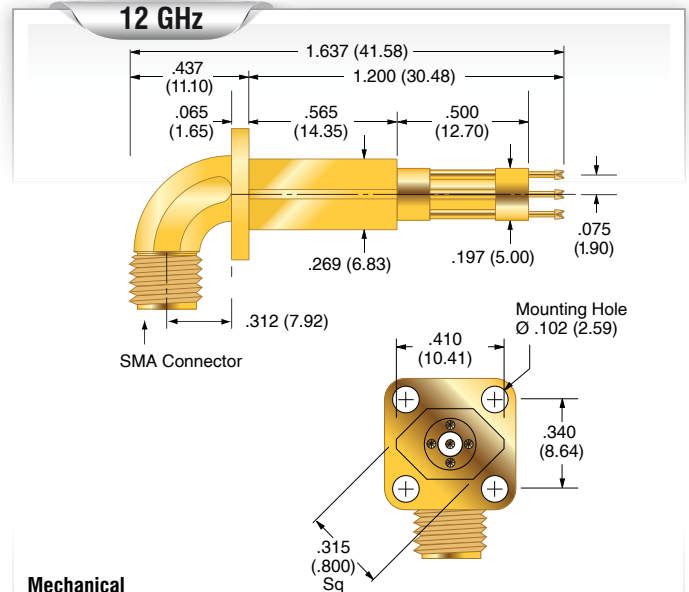
Housing:	Brass, Gold plated
Dielectric:	Premium virgin Teflon per MIL-P-18468

Replaceable Probes

Order Number Ground Probe:	HPA-OL
Order Number Signal Probe:	SPG-72L-005

Applications

The K-50L-QG-75 series coaxial probe provides an instrumentation-quality interface for broadband R.F. measurements up to 12 GHz. With the K-50L-QG-75 R.F. Circuit Design, impedance characterization measurements can be performed using it as a Network Analyzer port-extending accessory. Accurate and repeatable small signal and R.F. power (50 Watts) measurements provide consistent and repeatable results.



Mechanical

Recommended Travel:	.067 (1.70)
Full Travel:	.100 (2.54)
Operating Temperature:	-55°C to +105°C
Connection:	Standard SMA Connector

Spring Force in oz. (grams)

	Order Code	Preload	Rec. Travel
Standard	K-50L-QG-75R	3.74 (106)	14.35 (407)

Electrical (Static Conditions)

Nominal Impedance:	50 Ohms
Minimum Return Loss @ 1GHz:	25.1 dB, 25.2 dB typical
Minimum Return Loss @ 5GHz:	18.0 dB, 17.5 dB typical
Minimum Return Loss @ 10GHz:	27.0 dB, 35.3 dB typical
Minimum Insertion Loss @ 1GHz:	0.160 dB, 0.159 dB typical
Minimum Insertion Loss @ 5GHz:	0.421 dB, 0.405 dB typical
Minimum Insertion Loss @ 10GHz:	0.489 dB, 0.429 dB typical
Maximum VSWR @ 1GHz:	1.12:1, 1.12:1 typical
Maximum VSWR @ 5GHz:	1.29:1, 1.31:1 typical
Maximum VSWR @ 10GHz:	1.09:1, 1.03:1 typical

Materials and Finishes

Housing:	Brass, Gold plated
Dielectric:	Premium virgin Teflon per MIL-P-18468

Replaceable Probes

Order Number Ground Probe:	HPA-OL
Order Number Signal Probe:	SPG-72L-005