



Mini-Circuits

Instrumentation Test Cable

VNAC-2R1-K+

50Ω 25 in DC to 40 GHz Low Loss 2.92 mm-Male to 2.92 mm-Rugged Female

THE BIG DEAL

- Ultra-Wideband Operation, DC to 40 GHz
- Rugged 2.92 mm-Female Connector for Direct Interface With VNA
- Rugged Construction, Crush and Torque Resistant



Generic photo used for illustration purposes only

Model No.	VNAC-2R1-K+
Case Style	NE1922-2.1
Connectors	2.92 mm-Male to 2.92 mm-Rugged Female

APPLICATIONS

- Military and Defense Applications
- Research & Development Labs

+RoHS Compliant

The +Suffix identifies RoHS Compliance.
See our website for methodologies and qualifications

PRODUCT OVERVIEW

Mini-Circuits' VNAC-2R1-K+ is an ultra-wideband precision instrumentation cable specially designed for use with VNA equipment in test environments. The cable provides excellent VSWR and very low insertion loss over the entire frequency range. Passivated stainless steel rugged 2.92 mm (F) connector interfaces directly with the ports of the VNA¹, and a rugged crush and torque resistant outer sheath protects the cable from damage in demanding lab settings.

KEY FEATURES

Features	Advantages
DC to 40 GHz Operation Designed for Use With Vector Network Analyzers (VNA)	Covers a wide range of test applications; rugged 2.92 mm connector interfaces directly with VNA without the need for an adapter for improved VSWR performance.
Rugged Cable-Connector Interface	Chrome-plated metal back shell maintains integrity of the cable-connector interface improving the reliability and extending life of use.
Extra Rugged Yet Flexible Armored Cable Construction	100% coverage, non-interleaved, stainless steel spiral sheath provides crush resistance and captured, opposing force steel braid provides torque resistance. PET monofilament yarn outer cover eliminates conductivity and allows easy handling.
25" Length	Standard VNA cable length makes VNAC-2R1-K+ a high performing, cost-effective replacement for expensive OEM cables.

1. Compatible with 2.92 mm-female connector or customer VNA equipment.

REV. B
ECO-027496
VNAC-2R1-K+
MCL NY
251029





Mini-Circuits

Instrumentation Test Cable

VNAC-2R1-K+

50Ω 25 in DC to 40 GHz Low Loss 2.92 mm-Male to 2.92 mm-Rugged Female

ELECTRICAL SPECIFICATIONS AT +25°C

Parameter	Frequency (GHz)	Min.	Typ.	Max.	Units
Frequency Range		DC		40	GHz
Length			2.08		ft
Insertion Loss	DC-6		0.79	0.97	dB
	6-18		1.44	1.60	
	18-26.5		1.81	2.03	
	26.5-40		2.25	2.43	
Return Loss	DC-6	15.5	27.1		dB
	6-18	15.5	22.6		
	18-26.5	15.5	20.8		
	26.5-40	15.5	18.1		

ABSOLUTE MAXIMUM RATINGS

Parameter	Ratings
Operating Temperature	+18°C to +30°C
Storage Temperature	-40°C to +70°C
Power Handling at +25°C, Sea Level	10 W

Permanent damage may occur if any of these limits are exceeded.

Product Guarantee

Mini-Circuits® will repair or replace your test cable at its option if the connector attachment fails within six months of shipment. This guarantee excludes cable or connector interface damage from misuse or abuse.

Mini-Circuits®www.minicircuits.com P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

PAGE 2 OF 4



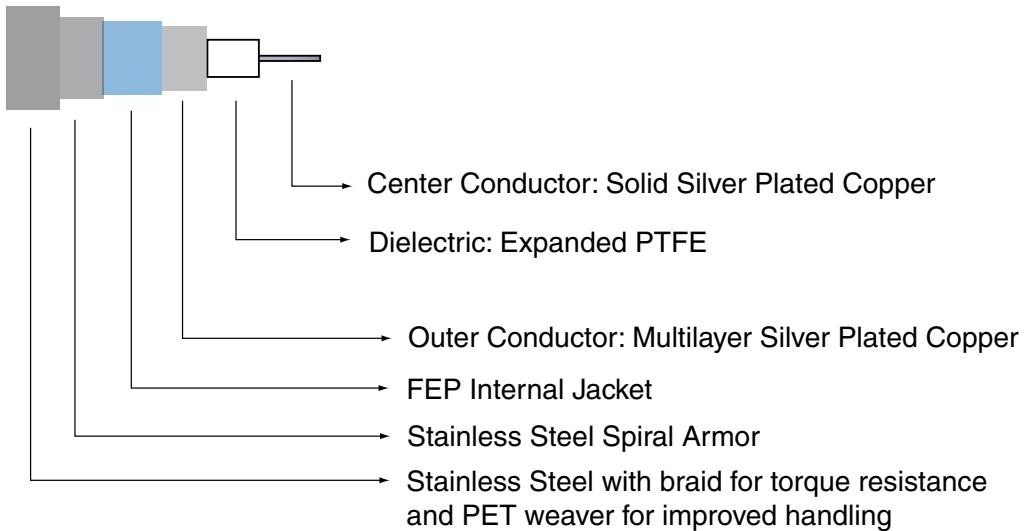
Instrumentation Test Cable

VNAC-2R1-K+

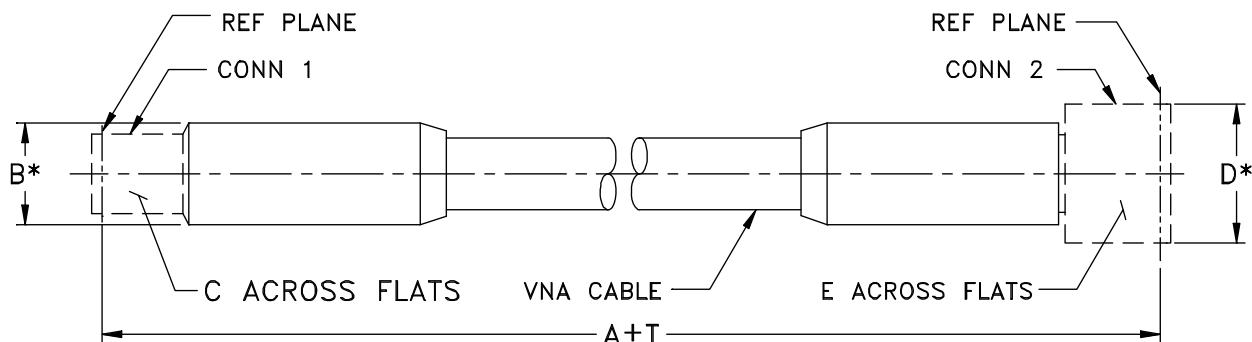
Mini-Circuits

50Ω 25 in DC to 40 GHz Low Loss 2.92 mm-Male to 2.92 mm-Rugged Female

CABLE CONSTRUCTION



OUTLINE DRAWING



OUTLINE DIMENSIONS (Inch mm)

A	B	C	D	F	T	wt
Feet	Meters	0.62	0.312	0.86	0.750	Inches mm grams
2.08	0.63	15.75	7.92	21.84	19.05	+50/-0 +12.7/-0 182

Mini-Circuits®

www.minicircuits.com P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

PAGE 3 OF 4



Mini-Circuits

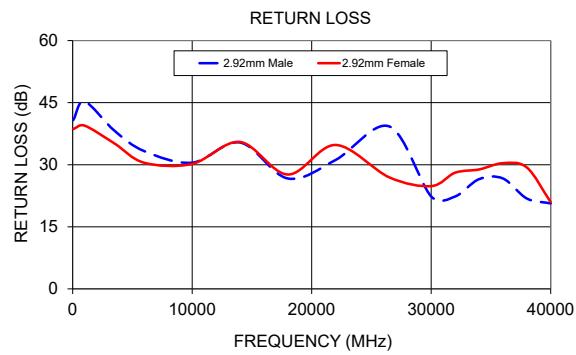
Instrumentation Test Cable

VNAC-2R1-K+

50Ω 25 in DC to 40 GHz Low Loss 2.92 mm-Male to 2.92 mm-Rugged Female

TYPICAL PERFORMANCE DATA AND CHARTS

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	
		2.92 mm-Male	2.92 mm-Female
50	0.05	40.79	38.62
1000	0.27	45.25	39.44
3500	0.52	38.21	35.13
6000	0.69	33.27	30.46
10000	0.95	30.50	30.19
14000	1.12	35.37	35.50
18000	1.30	26.68	27.64
22000	1.49	31.15	34.78
26500	1.64	39.25	26.94
30000	1.84	22.33	24.83
32000	1.87	22.32	28.08
34000	1.90	26.50	28.85
36000	1.97	26.68	30.37
38000	2.21	21.84	29.34
40000	2.17	20.66	20.97

**NOTES**

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the standard terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/terms/viewterm.html

Mini-Circuits®www.minicircuits.com P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

PAGE 4 OF 4