

Coaxial

# DC Block *2.92 mm-F to 2.92mm*

**BLK-K44+**

50Ω 10 MHz to 40 GHz

## The Big Deal

- Ultra-wideband, 10MHz to 40 GHz
- Flat response
- Low insertion loss, 0.43 dB typ



CASE STYLE: DJ1861-1

## Product Overview

Mini-Circuits' BLK-K44+ is a coaxial DC Block supporting a wide range of applications from 10 to 40GHz including 5G systems, Ka-Band SatCom, test and measurement and more. This model provides low insertion loss, excellent return loss, RF input handling up to 2 watts and DC voltage handling up to 200V. The unit features 2.92mm-Female connector at one end and 2.92mm-Male connector at the other end and comes housed in a rugged stainless steel body, measuring only 0.36" in diameter and 0.87" in length.

## Key Features

Feature	Advantages
Wideband, 10MHz to 40 GHz	Wide frequency range up to 40GHz provides application flexibility and makes this model ideal for broad- band and multi-band use.
Excellent Return Loss, 25dB typ	Provides good matching for 50Ω systems and minimizes signal reflections across wide frequency range enabling its use in test and measurement.
Low insertion loss, 0.43 dB typ.	Provides excellent signal power transmission from input to output.
Passivated stainless steel construction.	Stands up to wear and tear in demanding test environments and provides excellent reliability.
Very wide operating temperature range, -55 to +100°C	Withstands extreme operating conditions and is suitable for use near high power components where heat rise is common and for use in over temperature tests

### Notes

- A. 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.  
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.  
C. 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/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)



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# DC Block 2.92 mm-F to 2.92mm-M

## BLK-K44+

50Ω 10 MHz to 40 GHz

### Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
DC Input Voltage	200V Max.
Input Power	33 dBm Max.

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

### Features

- wideband
- low insertion loss, 0.43 dB typ.
- rugged stainless steel body and coupling nut

### Applications

- test and measurement instrumentation
- communication systems
- defense systems



Generic photo used for illustration purposes only

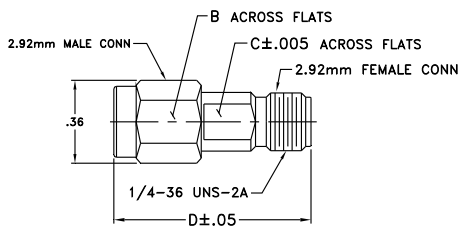
CASE STYLE: DJ1861-1

Connectors	Model
2.92mm-F to 2.92mm-M	BLK-K44+

**+RoHS Compliant**

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

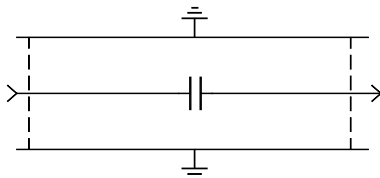
### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	D	E	wt
0.36	0.312	0.281	0.87	--	grams
9.14	7.93	7.14	22.10	--	4.9

### Electrical Schematic

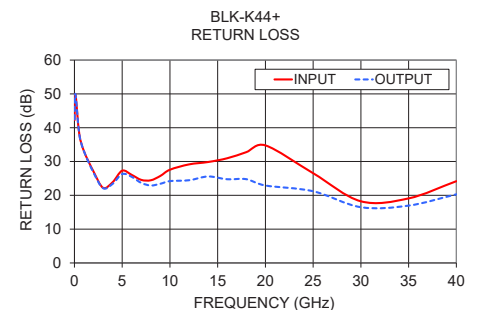
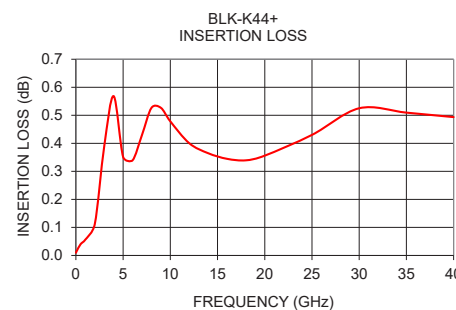


### Electrical Specifications at 25°C

FREQUENCY (MHz)	INSERTION LOSS (dB)		RETURN LOSS (dB)	
	Typ.	Max.	Typ.	Min.
10-2000	0.06	0.75	35	14.5
2000-10000	0.43	0.75	25	14.5
10000-40000	0.43	0.75	23	14.5

### Typical Performance Data

Frequency (GHz)	Insertion Loss (dB)	Return Loss (dB)	
		Female	Male
0.01	0.01	42.23	42.49
0.10	0.02	49.88	49.96
0.50	0.04	38.29	38.23
1.00	0.06	33.04	33.01
2.00	0.11	27.03	26.70
3.00	0.39	22.22	22.11
4.00	0.57	23.88	23.40
5.00	0.35	27.29	26.29
6.00	0.34	26.04	25.46
7.00	0.43	24.57	23.67
8.00	0.53	24.46	22.91
9.00	0.53	25.74	23.42
10.00	0.48	27.57	24.21
12.00	0.40	29.15	24.46
14.00	0.36	29.85	25.58
16.00	0.34	30.97	24.76
18.00	0.34	32.77	24.77
20.00	0.36	34.77	22.91
25.00	0.43	26.54	21.21
30.00	0.53	18.24	16.49
35.00	0.51	19.09	16.96
40.00	0.49	24.18	20.30



### Notes

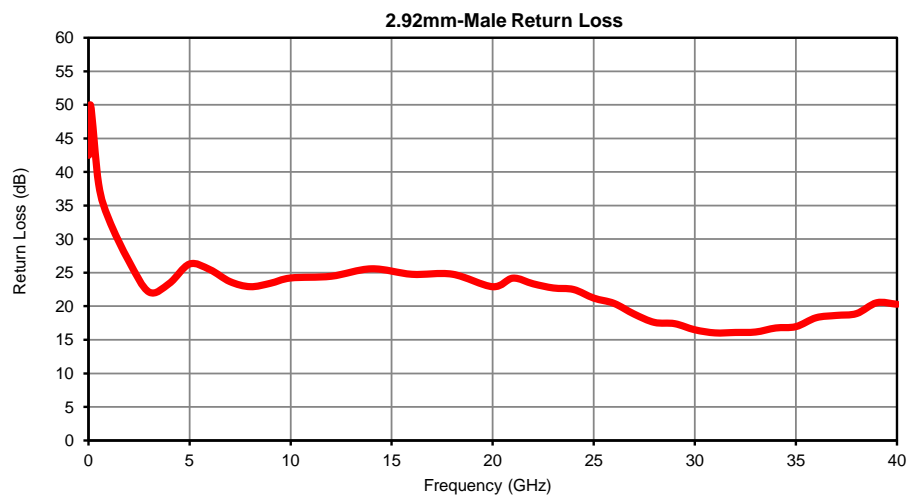
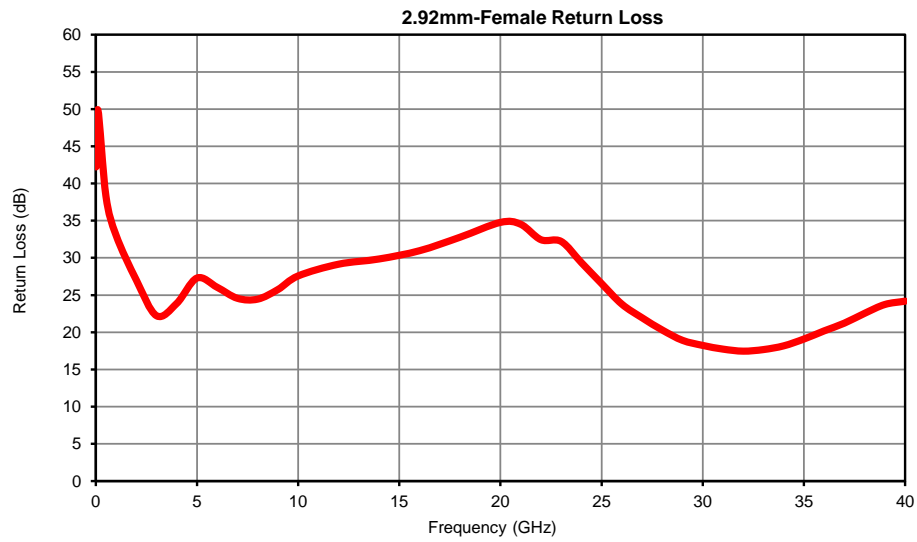
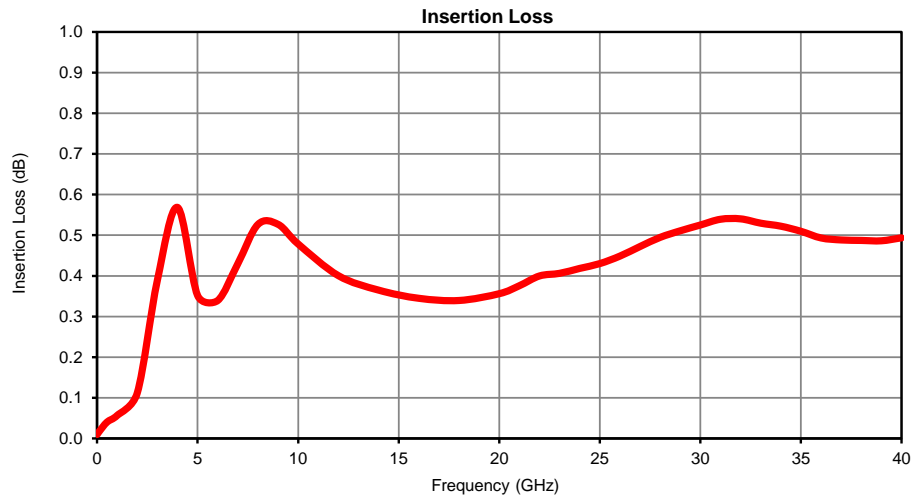
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*Typical Performance Data*

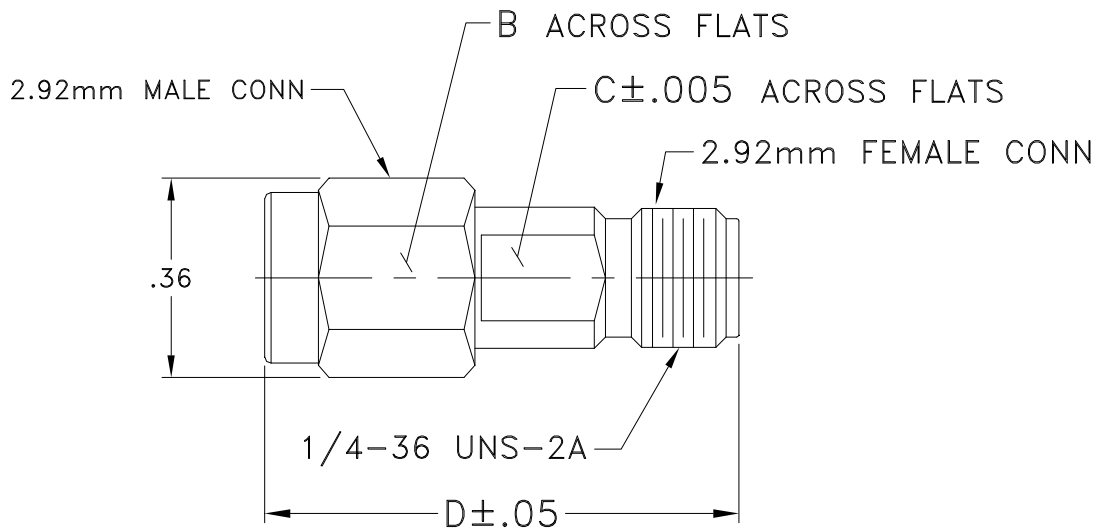
FREQUENCY (GHz)	INSERTION LOSS (dB)	2.92mm-FEMALE Return Loss (dB)	2.92mm-MALE Return Loss (dB)
0.01	0.01	42.23	42.49
0.1	0.02	49.88	49.96
0.5	0.04	38.29	38.23
1	0.06	33.04	33.01
2	0.11	27.03	26.70
3	0.39	22.22	22.11
4	0.57	23.88	23.40
5	0.35	27.29	26.29
6	0.34	26.04	25.46
7	0.43	24.57	23.67
8	0.53	24.46	22.91
9	0.53	25.74	23.42
10	0.48	27.57	24.21
12	0.40	29.15	24.46
14	0.36	29.85	25.58
16	0.34	30.97	24.76
18	0.34	32.77	24.77
20	0.36	34.77	22.91
21	0.38	34.52	24.18
22	0.40	32.45	23.34
23	0.41	32.21	22.72
24	0.42	29.37	22.49
25	0.43	26.54	21.21
26	0.45	23.78	20.43
27	0.47	21.95	18.82
28	0.49	20.30	17.59
29	0.51	18.91	17.40
30	0.53	18.24	16.49
31	0.54	17.73	16.03
32	0.54	17.46	16.09
33	0.53	17.68	16.16
34.0	0.52	18.18	16.76
35.0	0.51	19.09	16.96
36.0	0.49	20.19	18.29
37.0	0.49	21.23	18.63
38.0	0.49	22.55	18.91
39.0	0.49	23.74	20.52
40.0	0.49	24.18	20.30

Typical Performance Curves



DJ1861-1

## Outline Dimensions



CASE #	A	B	C	D	E	WT. GRAM
DJ1861-1	.36 (9.14)	.312 (7.93)	.281 (7.14)	.87 (22.10)	-- --	4.87

Dimensions are in inches (mm). Tolerances: 2 Pl. ± .03; 3Pl. + .015

### Notes:

1. Case material:Stainless Steel.
2. Finish: Passivation.



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RF/IF MICROWAVE COMPONENTS



All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Thermal Shock	-65° to 125°C, 5 cycles	MIL-STD-202, Method 107, Condition B
Connector Durability	500 Mating / Unmating Cycles	MIL-PRF-390 / 2E, Paragraph 4, 6, 12