Coaxial

DC Block *1.85mm-F to 1.85mm-M* BLK-E653+

50Ω 10 MHz to 65 GHz

The Big Deal

- Ultra-wideband, 10MHz to 65 GHz
- Flat response
- Low insertion loss, 0.70 dB typ. up to 65 GHz
- Mates with 2.4 mm

CASE STYLE: DJ2591-1

Product Overview

Mini-Circuits' BLK-E653+ is a coaxial DC Block supporting a wide range of applications from .010 to 65GHz 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 1 watts and DC voltage handling up to 16V. The unit features 1.85mm-Female connector at one end and 1.85mm-Male connector at the other end and comes housed in a rugged stainless steel body, measuring only 0.31" in diameter and 0.81" in length. Mates with 2.4 mm.

Key Features

Feature	Advantages
Wideband, 10 MHz to 65 GHz	Wide frequency range up to 65 GHz provides application flexibility and makes this model ideal for broad-band and multi-band use.
Excellent Return Loss, 22 dB typ	Provides good matching for 50 systems and minimizes signal reflections across wide frequency range enabling its use in test and measurement.
Low insertion loss, 0.70 dB typ. up to 65GHz	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.
Wide operating temperature range, -55 to +100˚C	Withstands wide operating conditions.

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Generic photo used for illustration purposes only

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Connectors	Model
1.85mm-F to 1.85mm-M	BLK-E653+

+RoHS Compliant

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

Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
DC Input Voltage	16V Max.
Input Power	30 dBm Max.

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

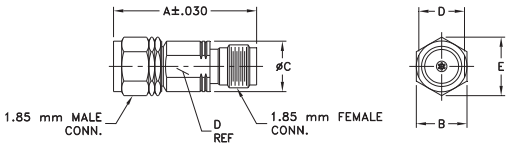
Features

- wideband
- low insertion loss, 0.70 dB typ.
- rugged stainless steel body and coupling nut

Applications

- test and measurement instrumentation
- communication systems
- defense systems

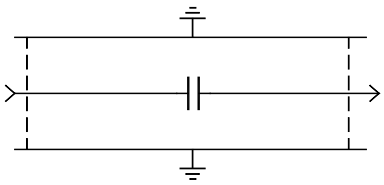
Outline Drawing



Outline Dimensions (inch / mm)

A	B	C	D	E	wt
0.81	0.31	0.31	0.28	0.36	grams
20.45	8.00	8.00	7.14	9.14	5.6

Electrical Schematic



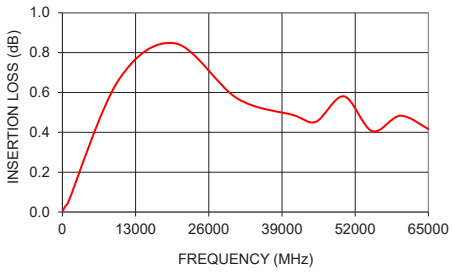
Electrical Specifications at 25°C

Parameter	Frequency (GHz)	Min.	Typ.	Max.	Unit
Frequency Range		0.01	—	65	GHz
Insertion Loss	0.01 - 40	—	0.6	1.3	dB
	40 - 50	—	0.6	1.3	
	40 - 65	—	0.7	1.3	
Return Loss	0.01 - 65	12	22	—	dB

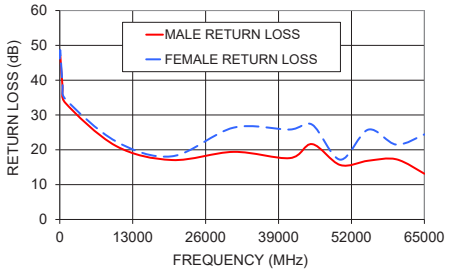
Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	
		Female	Male
10	0.01	46.2	47.1
100	0.01	48.4	47.0
500	0.03	38.5	38.0
1000	0.05	34.6	33.5
10000	0.66	22.4	21.1
20000	0.85	18.1	17.1
31000	0.57	26.4	19.4
41000	0.49	25.8	17.6
45000	0.45	27.2	21.6
50000	0.58	17.2	15.6
55000	0.41	25.8	16.9
60000	0.48	21.5	17.3
65000	0.42	24.4	13.1

BLK-E653+
INSERTION LOSS



BLK-E653+
RETURN LOSS



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