

VMDC-50K/67G-32-16-1.85-X

FEATURES

- ♦ Operating frequency: 50KHz~67GHz
- ♦ Low VSWR: 1.2:1 Typ. @50KHz~67GHz
- ♦ DC voltage value: 16V DC Max. @50KHz~67GHz
- ♦ Excellent insertion loss: $\leq 1.5\text{dB}$ @50KHz~67GHz
- ♦ High through power: 32dBm Max. @50KHz~67GHz
- ♦ Good Group Delay Ripple: $\pm 50\text{ps}$ Typ. @50KHz~67GHz

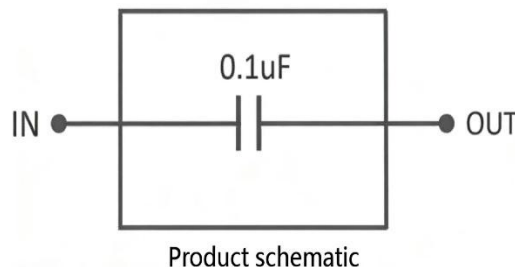


TYPICAL APPLICATIONS

- ♦ Optical Communications
- ♦ Satellite Communications
- ♦ Data Transmission
- ♦ High-Speed Pulse Experiments
- ♦ Research and Development
- ♦ Antenna Measurements

PRODUCT OVERVIEW

The VMDC-50K/67G-32-16-1.85-X is a compact, high-performance, and small-footprint DC Block supporting a range of applications from 50KHz to 67GHz. This model provides low insertion loss, excellent VSWR, and Group Delay Ripple. It is often used to protect sensitive RF components from direct current or to protect precision instruments and equipment from damage caused by the entry of direct current. It is RoHS-compliant.



CONFIGURATIONS

- ♦ VMDC-50K/67G-32-16-1.85-A - Input port: 1.85mm male, Output port: 1.85mm female
- ♦ VMDC-50K/67G-32-16-1.85-B - Input port: 1.85mm female, Output port: 1.85mm female
- ♦ VMDC-50K/67G-32-16-1.85-C - Input port: 1.85mm male, Output port: 1.85mm male

There are three configurations of this DC-Block. The model VMDC-50K/67G-32-16-1.85-X is used as an example in this datasheet. For more information, please refer to the Physical Dimensions section.

ELECTRICAL SPECIFICATIONS

Parameter	Test Condition	Min.	Typ.	Max.	Unit
Frequency Range	-	0.05	-	67000	MHz
Nominal Impedance	50KHz~67GHz	-	50	-	Ω
VSWR	50KHz~67GHz		1.2	1.5	:1
Insertion Loss	50KHz~67GHz	-	1	1.5	dB
Input Reflection	<25GHz	-	-20	-18	dB
	<67GHz	-	-15	-12	dB
Group Delay Ripple	50KHz~67GHz	-	± 50	-	ps
Operating RF input Power	50KHz~67GHz	-	-	32	dBm
DC Voltage	-	-	-	16	V

MECHANICAL SPECIFICATIONS

Item	Spec.	Units
Connectors	1.85-male/1.85-female	-
Physical Dimensions(L*W*H)	17 * 10 * 30.8	mm
Net Weight	≈ 16.9	g
Material	Aluminum alloy & Copper	-
Surface Finish	Conductive oxidation & Gold-plated copper	-
Color	Aluminum color & Golden	-

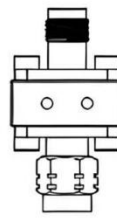
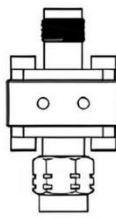
Note: Package Dimensions & Gross Weight are subject to the actual delivery.

OTHER SPECIFICATIONS

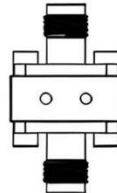
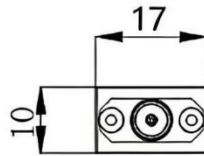
Item	Spec.	Units
Operating Temperature	+20 ~ +60	°C
Storage Temperature	-45 ~ +85	°C
Humidity range	<95%@40°C	%rh

OUTLINE DRAWING

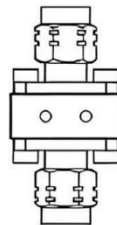
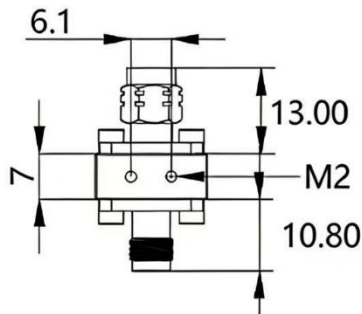
All Dimensions in mm



Version A



Version B



Version C

INTERFACE INFORMATION

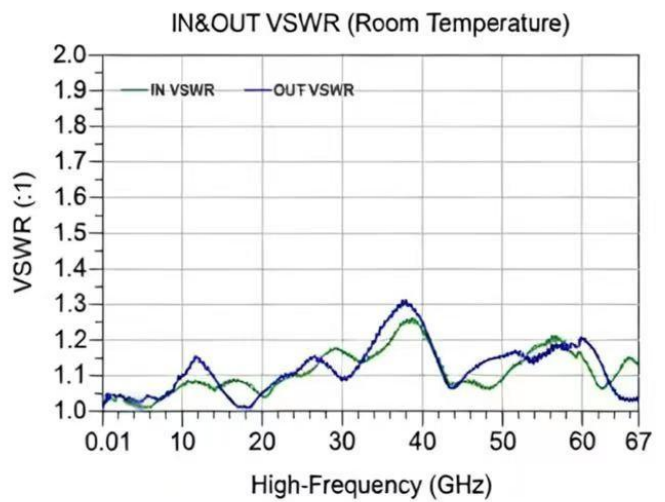
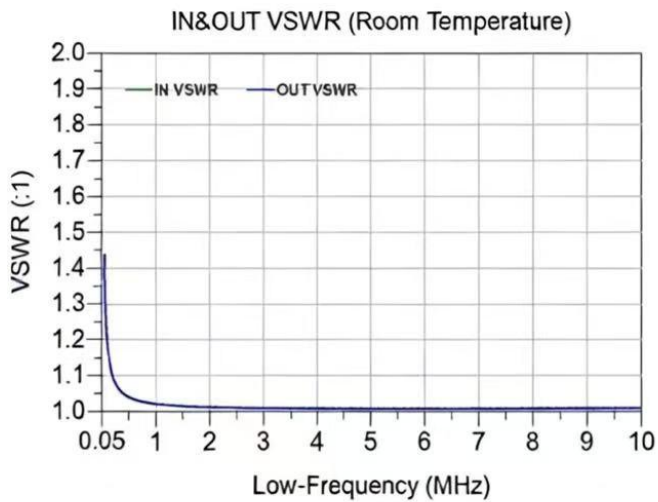
NO.	Function	Description
1	IN	RF input port
2	OUT	RF output port

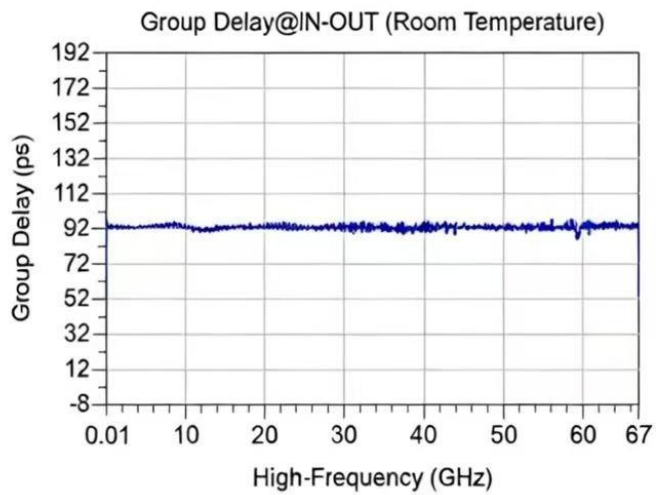
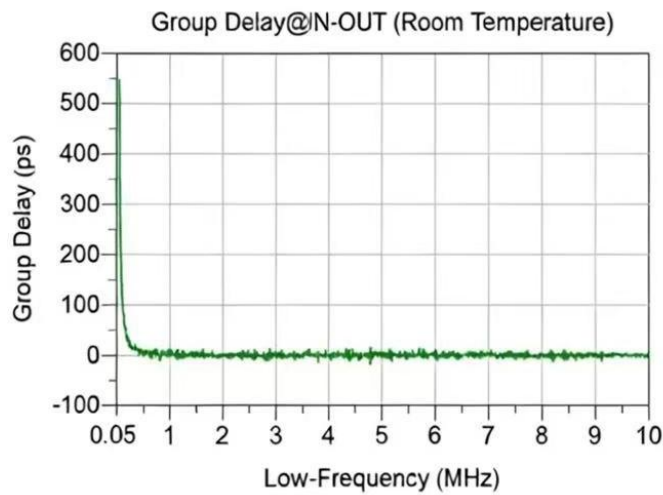
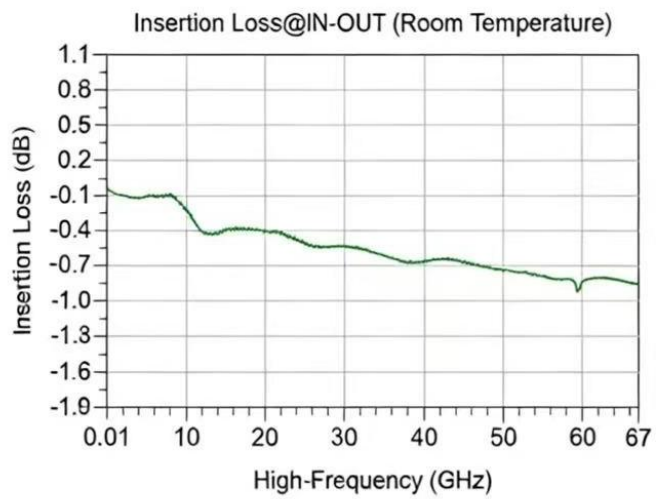
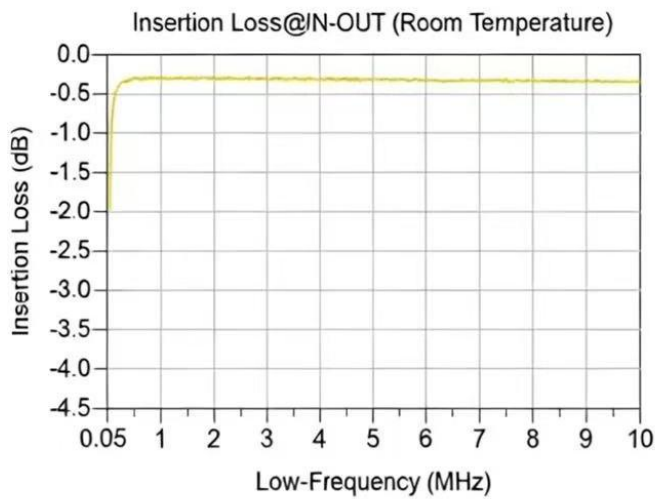
* Note: Please refer to the physical dimensions of the corresponding ports.

TYPICAL PERFORMANCE DATA

Freq. (MHz)	VSWR (:1)		Insertion Loss (dB)
	IN VSWR	OUT VSWR	IN-OUT
0.05	1.44	1.44	-
1	1.02	1.02	-0.30
4	1.01	1.01	-0.32
7	1.01	1.01	-0.32
10	1.00	1.01	-0.03
400	1.04	1.02	-0.06
700	1.03	1.05	-0.07
1000	1.04	1.04	-0.08
4000	1.02	1.03	-0.12
7000	1.03	1.03	-0.11

10000	1.08	1.10	-0.22
14000	1.06	1.10	-0.42
17000	1.09	1.01	-0.39
20000	1.04	1.05	-0.40
24000	1.10	1.11	-0.49
27000	1.14	1.15	-0.55
30000	1.17	1.09	-0.54
34000	1.16	1.19	-0.60
37000	1.23	1.30	-0.66
40000	1.22	1.25	-0.67
44000	1.08	1.07	-0.66
47000	1.08	1.12	-0.70
50000	1.09	1.16	-0.73
54000	1.18	1.14	-0.78
57000	1.20	1.18	-0.82
60000	1.15	1.20	-0.83
64000	1.10	1.06	-0.81
67000	1.13	1.04	-0.85





Note: The above is typical data and is not used as an acceptance reference.