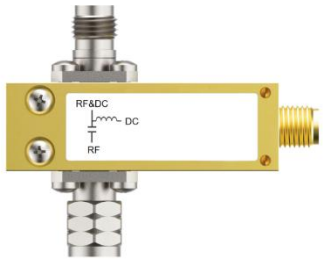
VMBT-50k/110G-35-1.6-1.0X

FEATURES



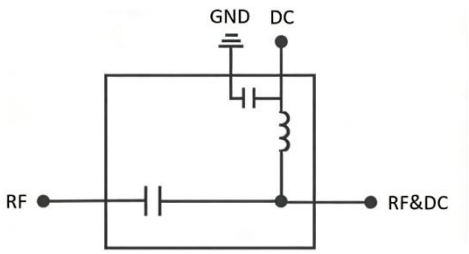
- Frequency Range, 50KHz~110GHz
- The Voltage, 35V DC Max.
- The Current, 0.4A DC Max.
- Excellent Group Delay for All-band
- Low VSWR, 1.35:1@50KHz~110GHz Typ.
- High RF performance, ultra-competitive price
- Low Insertion loss, 2.0dB@50KHz~110GHz Max.

TYPICAL APPLICATIONS

- Ultra-Broadband amplifier bias power supply
- Spatial Light Modulator bias power supply
- Photo-Communication & laser driver bias power supply
- Active antenna bias power supply

PRODUCT OVERVIEW

The VMBT-50k/110G-35-1.6-1.0X is an ultra-broadband, low loss, and supports a maximum 32dBm RF power input coaxial bias-tee, which covers the frequency of 50KHz to 110GHz, to provide a bias power supply for amplifiers, photodiodes or optical modulators, mainly used in biasing amplifiers, laser diodes, active antennas and other applications.



Product schematic

CONFIGURATIONS

- VMBT-50k/110G-35-1.6-1.0A -RF port: 1.00mm male, RF&DC port: 1.00mm female
- VMBT-50k/110G-35-1.6-1.0B -RF port: 1.00mm female, RF&DC port: 1.00mm male
- VMBT-50k/110G-35-1.6-1.0C -RF port: 1.00mm male, RF&DC port: 1.00mm male
- VMBT-50k/110G-35-1.6-1.0D -RF port: 1.00mm female, RF&DC port: 1.00mm female

There are four configurations of this bias-tee. The model VMBT-50k/110G-35-1.6-1.0X is used as an example in this datasheet. For more information, please refer to the Physical Dimensions section. The DC-port is always SMA female.

ELECTRICAL SPECIFICATIONS

Item	Condition		Min.	Typ.	Max.	Units
Frequency Range	-		0.05	-	110000	MHz
Nominal Impedance	-		-	50	-	Ω
Insertion Loss	50KHz~110GHz		-	1.5	2.0	dB
VSWR	RF port	50KHz~110GHz	-	1.35	1.8	:1
	RF&DC port	50KHz~110GHz	-	1.35	1.8	:1
Operating RF input Power	50KHz~110GHz		-	-	32	dBm
DC Resistance	DC to RF&DC port		-	2.75	-	Ω
DC Voltage	-		-	-	35	V
DC Current	-		-	-	0.4	A

MECHANICAL SPECIFICATIONS

Item	Spec.	Units
RF/RF&DC Connectors	1.0-male/1.0-female	-
DC Connectors	SMA-female	-
Physical Dimensions(L*W*H)	40 * 12.9 * 13	mm
Net Weight	≈44.2	g
Material	Aluminum alloy & Copper	-
Surface Finish	Conductive oxidation & Gold-plated copper	-
Color	Aluminum color & Golden	-

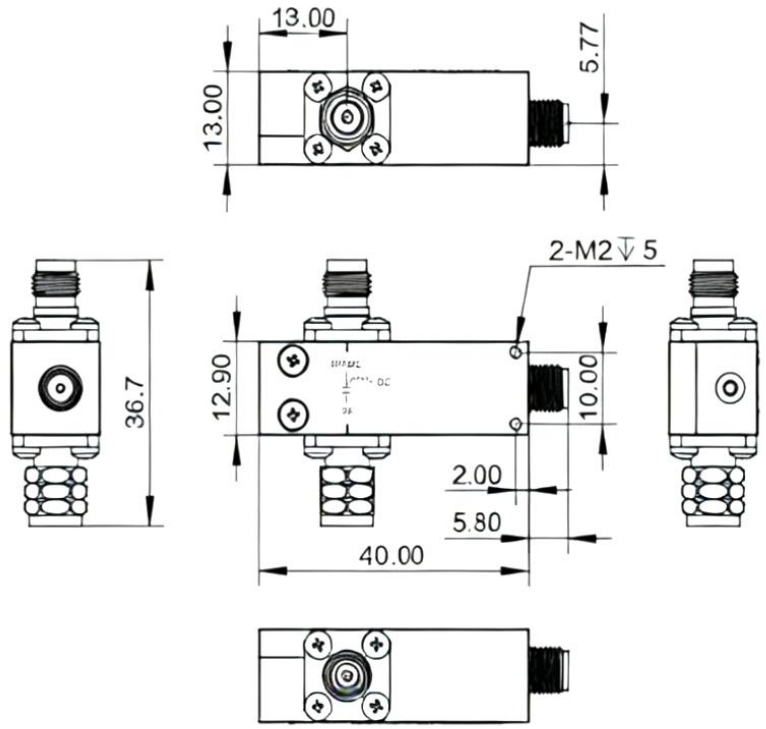
*** Note：Package Dimensions & Gross Weight are subject to the actual delivery.**

OTHER SPECIFICATIONS

Item	Spec.	Units
Operating Temperature	+10 ~ +50	℃
Storage Temperature	-45 ~ +85	℃
Humidity range	<93%@40℃	%rh
Altitude Range	<4600	m

OUTLINE DRAWING

Unit: mm



INTERFACE INFORMATION

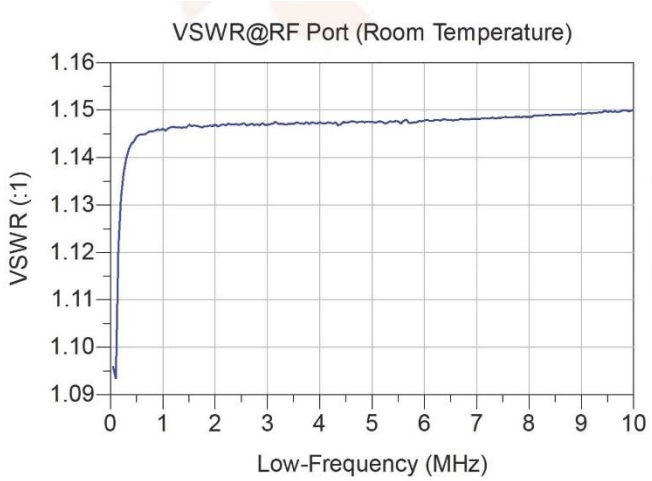
NO.	Function	Description
1	RF Port	RF signal input port
2	RF&DC Port	RF signal and DC output port
3	DC Port	DC input port

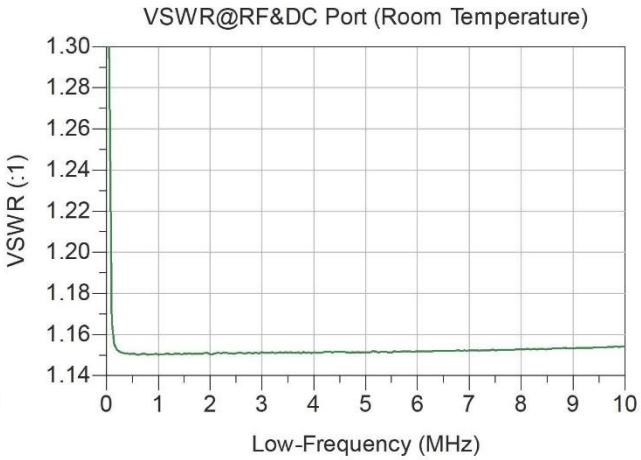
*** Note：Please refer to the physical dimensions of the corresponding ports.**

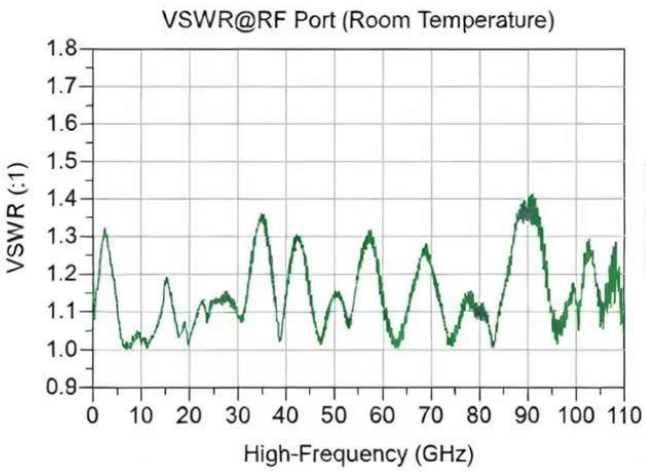
TYPICAL PERFORMANCE DATA

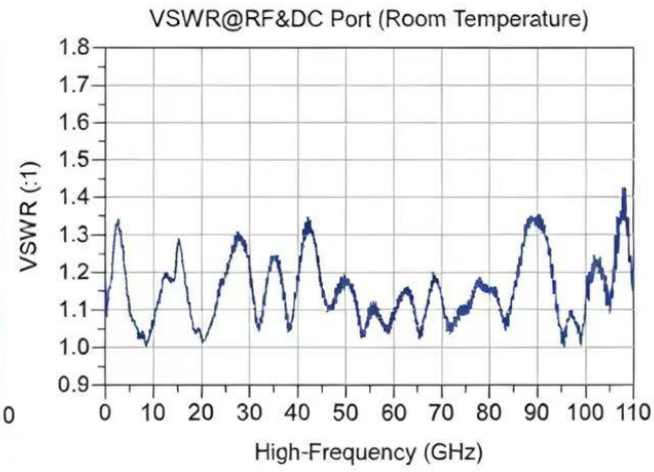
Freq. (MHz)	VSWR (:1)		Insertion Loss (dB) (with current)
	RF	RF&DC	RF to RF&DC
0.05	1.10	1.30	-0.64
0.1	1.09	1.17	-0.58
0.2	1.13	1.15	-0.62
0.5	1.14	1.15	-0.64
1	1.15	1.15	-0.64
2	1.15	1.15	-0.64
5	1.15	1.15	-0.65
10	1.15	1.15	-0.75
100	1.17	1.17	-0.72
300	1.10	1.10	-0.59
600	1.14	1.14	-0.82
900	1.16	1.16	-0.96

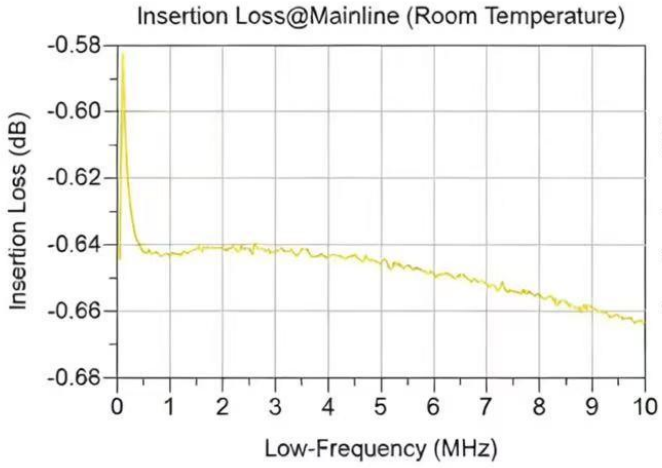
1000	1.16	1.16	-1.00
5000	1.13	1.09	-0.19
10000	1.03	1.06	-0.26
15000	1.18	1.26	-0.61
20000	1.03	1.03	-0.32
25000	1.13	1.20	-0.41
30000	1.09	1.21	-0.60
35000	1.35	1.24	-0.74
40000	1.15	1.19	-0.71
45000	1.14	1.16	-0.78
50000	1.15	1.19	-0.83
55000	1.21	1.08	-0.83
60000	1.12	1.08	-0.82
65000	1.10	1.06	-0.90
70000	1.22	1.13	-0.89
75000	1.03	1.11	-0.87
80000	1.10	1.15	-1.00
85000	1.15	1.14	-0.96
90000	1.35	1.33	-1.08
95000	1.11	1.03	-1.05
100000	1.13	1.12	-1.59
105000	1.13	1.13	-1.24
110000	1.01	1.20	-1.32

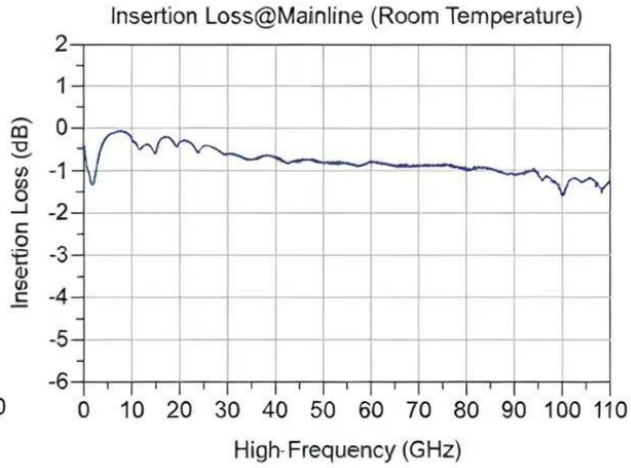


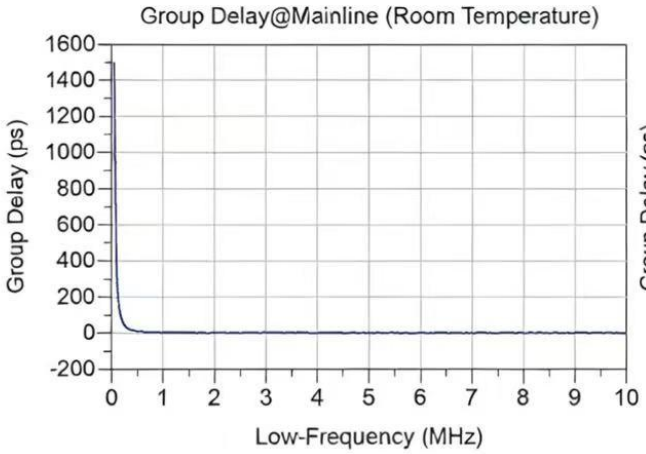


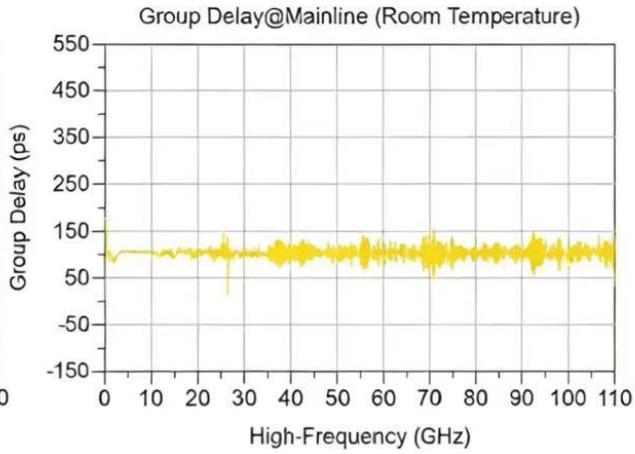












*** Note: The above is typical data and is not used as an acceptance reference.**