Rantelon
RF/Microwave Electronics

# BT-6G
**BIAS-T 1.0 - 6.0GHz**

Product Information: Rev 1A, Issue July 2011, Revised October 2011

***BT-6G is outdoor current injector/extractor designed especially for wideband RF-systems. Low insertion loss and wide frequency range provide attractive possibilities for using of BT-6G in many applications.***

## KEY FEATURES

- Wideband
- Low insertion loss
- Outdoor
- Compact and reliable
- Wide volatge range
- Over-voltage protection
- Widely used DC-input

## APPLICATIONS

- Radio-monitoring
- Small signals receiving
- RF/IF-systems

Image is for illustrative purposes only.

## TECHNICAL SPECIFICATIONS

### RF characteristics*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Frequency range** | 1.0-6.0 | | | | | | **GHz** |
| **IN/OUT impedance** | 50/50 | | | | | | **Ohm** |
| | | | | | | | |
| **Frequency** | **1.0** | **2.0** | **3.0** | **4.0** | **5.0** | **6.0** | **GHz** |
| **Insertion loss** | 0.3 | 0.3 | 0.4 | 0.4 | 0.5 | 0.7 | **dB** |
| **VSWR IN/OUT** | <1.5 | <1.4 | <1.3 | <1.3 | <1.3 | <1.5 | |

* Measured at temperature T=+25°C

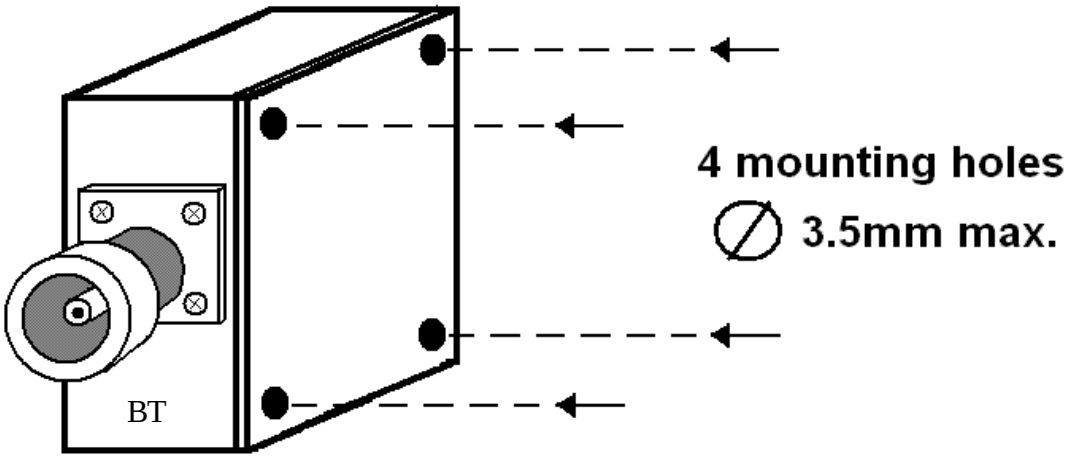
DC and mechanical characteristics

| | | |
|---|---|---|
| **Operating voltage** (DC) | 0…+20 (on order up to +32V available) | **V** |
| **IN/OUT Connector** | SMA female/ SMA female | |
| **Enclosure type** | Outdoor, aluminium | |
| **Mounting** | Suitable for mounting onto flat surface | |
| **DC input** | 2.1mm input, **positive is on central pin** | |
| **Dimensions** (with connectors) | 55x49x22 | **mm** |

### Absolute maximum ratings

| | | |
|---|---|---|
| **Operating current** | 400 | **mA** |
| **Input voltage** | +20 (on order up to +32V available) | **V** |
| **CW RF input power** | 30 | **dBm** |
| **Operating temperature** | -40…+85 | **°C** |

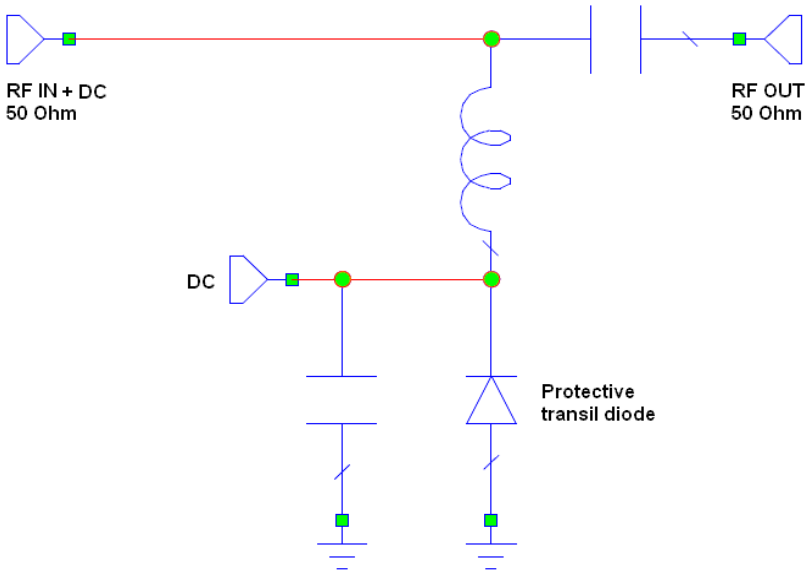
## INSTALLATION AND OPERATION INSTRUCTIONS



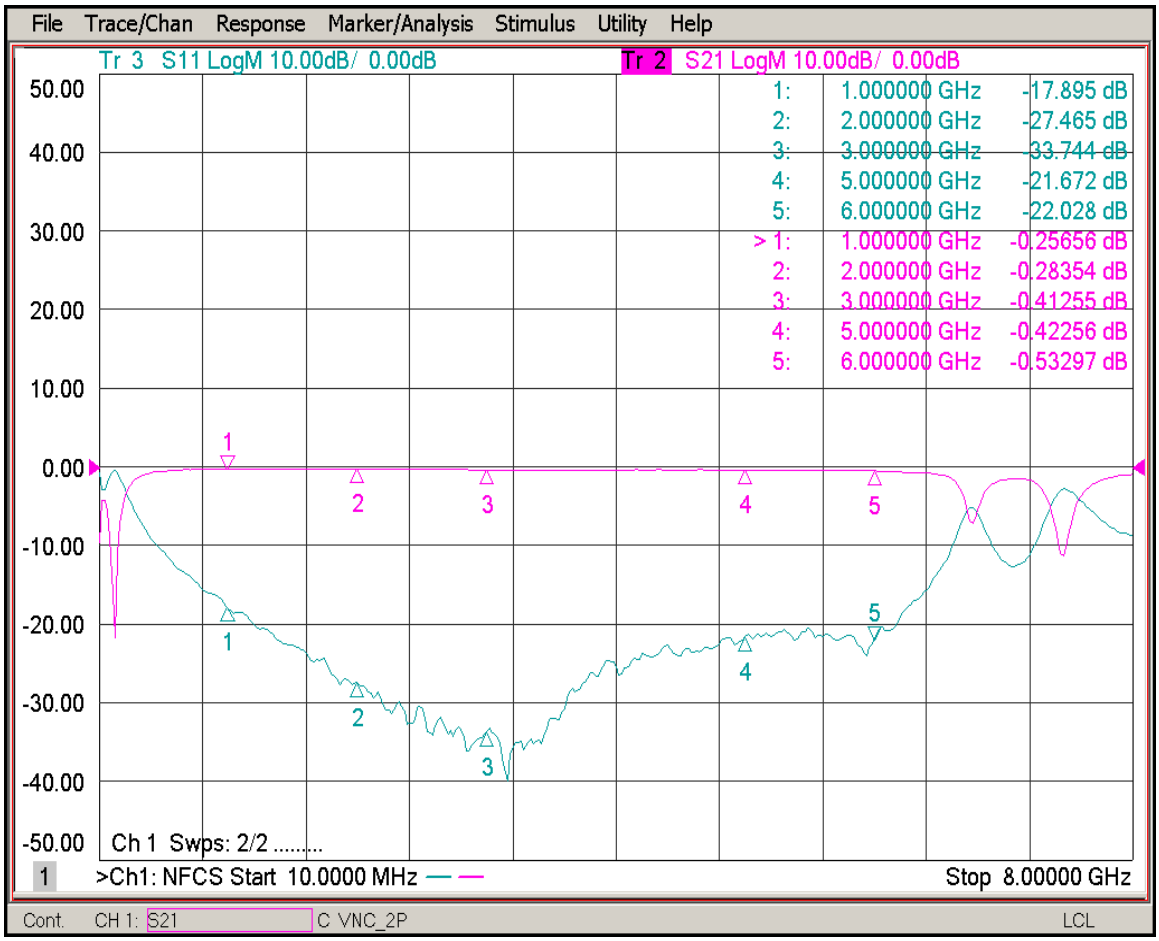

BT-6G can be mounted through four 3.5mm diameter holes, using suitable screws (as example M3x30) or other proper tools.

After connecting DC-plug into BT-6G the sum of RF and DC signals must appeared on RF IN+DC. At the same time on RF OUT pure RF signal can be found only. Actually RF signal direction between RF IN+DC and RF OUT is not important. Also direction of current between RF IN+DC and DC is not specified. Therefore BT-6G can be usable in both ways as current injector and current extractor.

### Principal circuit diagram of BT-6G



## Example of BT-6G transfer function curve




S21 = (-1) * insertion loss

*Rantelon reserves the right to change the specification without notice.*