

Bias TEEs 4003-4007 Series



ETL's 4003 to 4007 series offers Bias TEEs with 10MHz pass or rejection, and operation over L-band and broad-band (IF to S-band).

These components are available with the following RF connector options: 50Ω SMA, N-type, BNC and 75Ω BNC or F-type.

All modules are designed to facilitate mounting (either onto a base, front or rear panel) and are supplied in EMC shielded non hermetic housings. Options include traps for 10MHz rejection and high current versions for powering multiple modules or modules up to 5A and 48V.

Key Features

- Broad band options covering IF to S-band, 10 MHz to 3000 MHz
- High power options, up to 7A current rating

Typical Applications

- Telecom infrastructures
- Satellite Systems
- RF & Microwave Links
- Military Comms & radar Networks
- Tests & Instrumentations
- Cellular / Base station Applications



Bias TEEs with 10MHz pass - typical performance

Model Number	Description	Freq. (MHz)	Insertion Loss (dB)		Return Loss (dB)		Isolation Typical (dB)
			Typ.	Max	Typ.	Min	
4003							
TEEB4-4003-B5B5	Broad band bias TEE module, with 10 MHz pass and 50 ohm BNC connectors. 48V & 5A DC rated.	500 to 2500	0.7	1.1	14	10	35
TEEB4-4003-B7B7	Broad band bias TEE module, with 10 MHz pass and 75 ohm BNC connectors. 48V & 5A DC rated.	500 to 2500	1.0	1.4	12	8	35
TEEB4-4003-N5N5	Broad band bias TEE module with 10 MHz pass and 50 ohm N-type connectors. 48V & 5A DC rated.	500 to 2500	0.6	1.0	17	10	35
TEEB4-4003-S5S5	Broad band bias TEE module with 10 MHz pass and 50 ohm SMA connectors. 48V & 3A DC rated.	500 to 2500	0.6	1.0	17	10	35

4006

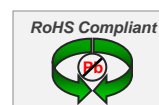
TEEL1-4006-B5B5	L-band Bias TEE module, with 10MHz pass. All RF ports are 50 ohm BNC connectors. 28V & 500mA DC rated.	850 to 2150	0.5	0.9	15	10	40
TEEL1-4006-B7B7	L-band Bias TEE module, with 10MHz pass. All RF ports are 75 ohm BNC connectors. 28V & 500mA DC rated.	850 to 2150	0.6	1.0	14	8	35
TEEL1-4006-F7F7	L-band Bias TEE module, with 10MHz pass. All RF ports are 75 ohm F-type connectors. 28V & 500mA DC rated.	850 to 2150	1.0	1.5	12	8	40
TEEL1-4006-N5N5	L-band Bias TEE module, with 10MHz pass. All RF ports are 50 ohm N-type. connectors. 28V & 500mA DC rated.	850 to 2150	0.5	0.9	16	10	40
TEEL1-4006-S5S5	L-band Bias TEE module, with 10MHz pass. All RF ports are 50 ohm SMA connectors. 28V & 500mA DC rated.	850 to 2150	0.4	0.8	18	12	40

L & S band Bias TEEs: 500mA or 5A current rating



ETL Systems Ltd, Coldwell Radio Station, Madley, Hereford, HR2 9NE, England

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Bias TEEs **without** 10MHz spec - typical performance

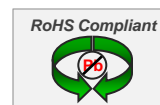
Model Number	Description	Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)		Isolation Typical (dB)
			Typ.	Max	Typ.	Min	
4007							
TEEL1-4007-B5B5	L-band bias TEE module with 10MHz pass and 50 ohm BNC connectors. 28V & 5A DC rated.	850 to 2150	0.5	0.9	15	10	40
TEEL1-4007-B7B7	L-band bias TEE module with 10MHz pass and 75 ohm BNC connectors. 28V & 5A DC rated.	850 to 2150	0.6	1.0	14	8	35
TEEL1-4007-F7F7	L-band bias TEE module with 10MHz pass and 75 ohm F-type connectors. 28V & 3A DC rated.	850 to 2150	1.0	1.5	12	8	40
TEEL1-4007-N5N5	L-band bias TEE module with 10MHz pass and 50 ohm N-type connectors. 28V & 7A DC rated.	850 to 2150	0.5	0.9	16	10	40
TEEL1-4007-S5S5	L-band bias TEE module with 10MHz pass and 50 ohm SMA connectors. 28V & 3A DC rated.	850 to 2150	0.4	0.8	18	12	40

L band Bias TEEs: with 3 to 7A current rating



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Bias TEEs with 10MHz rejection - typical performance

Model Number	Description	Freq. (MHz)	Insertion Loss (dB)		Return Loss (dB)		Isolation Typical (dB)
			Typ.	Max	Typ.	Min	

4004: 25dB 10MHz rejection

TEEL1-4004-B5B5	L-band Bias TEE module, with 10MHz rejection and 50 ohm BNC connectors. 28V & 500mA DC rated. Typical 10MHz rejection is 25dB.	850 to 2150	0.5	0.9	15	10	40
TEEL1-4004-B7B7	L-band Bias TEE module, with 10MHz rejection and 75 ohm BNC connectors. 28V & 500mA DC rated. Typical 10MHz rejection is 25dB.	850 to 2150	0.6	1.0	14	8	35
TEEL1-4004-F7F7	L-band Bias TEE module, with 10MHz rejection and 75 ohm F-type connectors. 28V & 500mA DC rated. Typical 10MHz rejection is 25dB.	850 to 2150	1.0	1.5	12	8	40
TEEL1-4004-N5N5	L-band Bias TEE module, with 10MHz rejection and 50 ohm N-type connectors. 28V & 500mA DC rated. Typical 10MHz rejection is 25dB.	850 to 2150	0.5	0.9	16	10	40
TEEL1-4004-S5S5	L-band Bias TEE module, with 10MHz rejection and 50 ohm SMA connectors. 28V & 500mA DC rated. Typical 10MHz rejection is 25dB.	850 to 2150	0.4	0.8	18	12	40

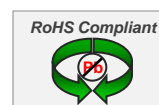
4005: 50dB 10MHz rejection

TEEL1-4005-B5B5	L-band bias Tee module, with 10MHz trap and 50 ohm BNC connectors at both RF ports. Maximum DC rating 28V, 500mA. Minimum 10MHz rejection is 50dB.	850 to 2150	0.8	1.1	15	10	40
TEEL1-4005-B7B7	L-band bias Tee module, with 10MHz trap and 75 ohm BNC connectors at both RF ports. Maximum DC rating 28V, 500mA. Minimum 10MHz rejection is 50dB.	850 to 2150	0.7	1.2	14	8	35
TEEL1-4005-F7F7	L-band bias Tee module, with 10MHz trap and 75 ohm F-type connectors at both RF ports. Maximum DC rating 28V, 500mA. Minimum 10MHz rejection is 50dB.	850 to 2150	1.1	1.7	12	8	40
TEEL1-4005-N5N5	L-band bias Tee module, with 10MHz trap and 50 ohm N-type connectors at both RF ports. Maximum DC rating 28V, 500mA. Minimum 10MHz rejection is 50dB.	850 to 2150	0.7	1.1	16	10	40
TEEL1-4005-S5S5	L-band bias Tee module, with 10MHz trap and 50 ohm SMA connectors at both RF ports. Maximum DC rating 28V, 500mA. Minimum 10MHz rejection is 50dB.	850 to 2150	0.5	0.8	18	12	40



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Maximum acceptable operating parameters for reliable and safe operation

Model Numbers	RF Power (dBm)	DC Voltage (V)	DC Current (Amp)	Operational Temperature °C	Storage Temperature °C	Humidity
TEEB4-4003	37 (5W)	48	5.0	0 to 40°C	-20°C to +75°C	85%
TEEL1-4004	37 (5W)	28	0.5	0 to 45°C	-20°C to +75°C	85%
TEEL1-4005	37 (5W)	28	0.5	0 to 45°C	-20°C to +75°C	85%
TEEL1-4006	37 (5W)	28	0.5	0 to 45°C	-20°C to +75°C	85%
TEEL1-4007	37 (5W)	28	7.0	0 to 35°C	-20°C to +75°C	85%

Comments

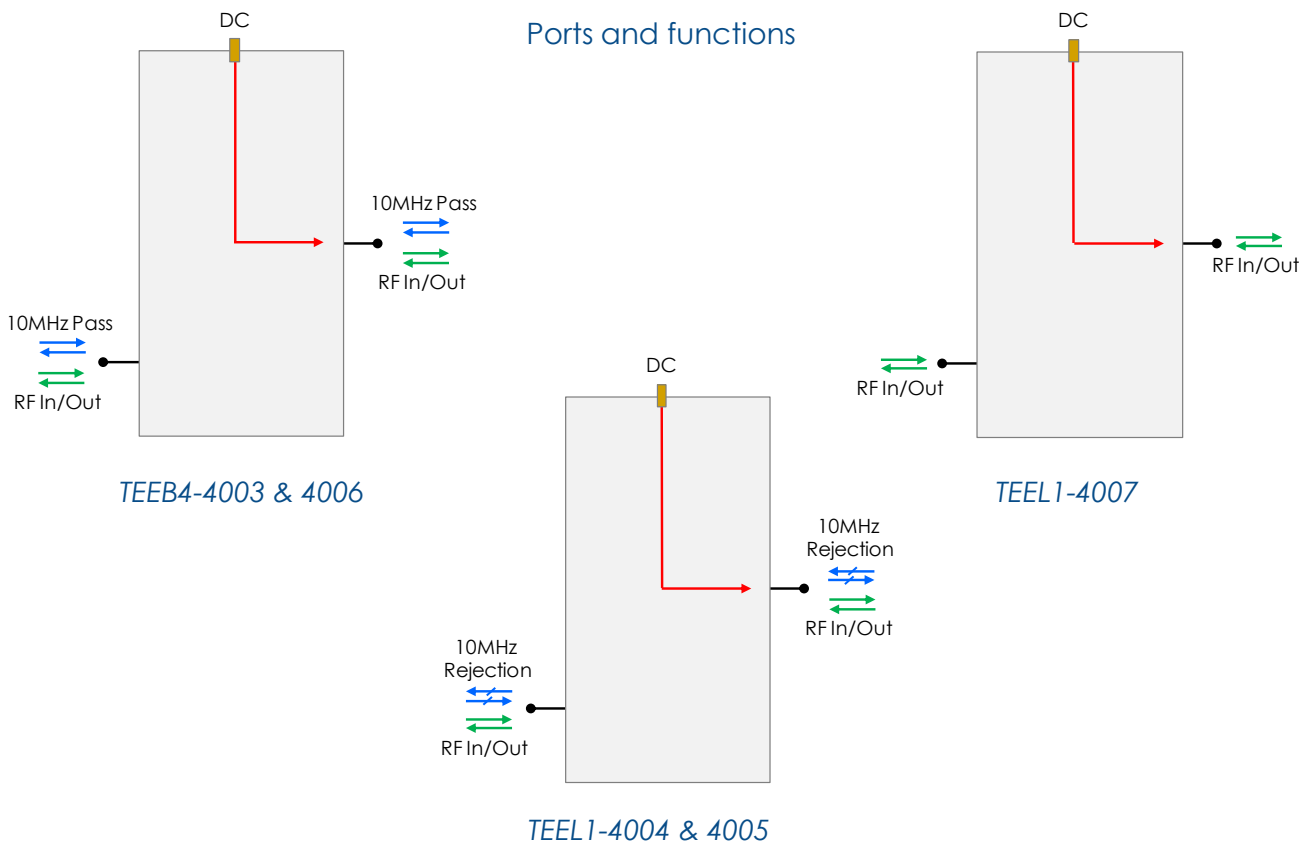
Total quoted RF power levels apply to all RF ports.

In door use only & non condensing environment.

Current ratings quoted above are also restricted by connector types. Maximum DC ratings of different connectors are: 3A if F-type & SMA, 5A if BNC and 7A if N-type.

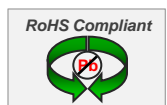
! Operation beyond these limits may cause instantaneous and permanent damage.

Ports and functions



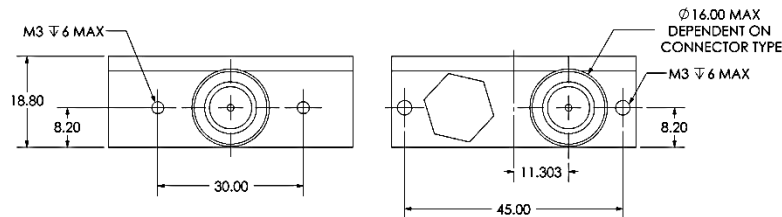
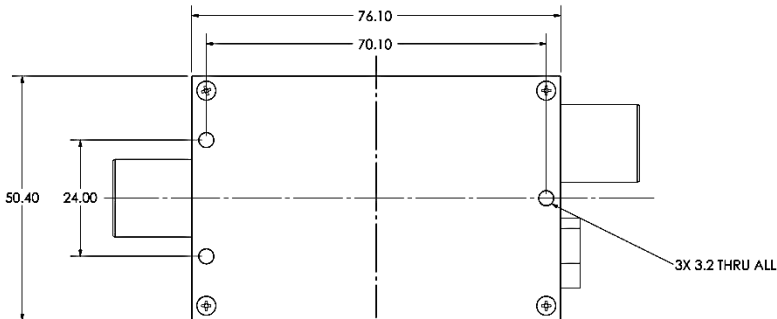
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Physical dimensions and photos



Standard DC port: Filter-con



With Molex DC connector option

We are pleased to offer the following options for customisation of our components to best meet our customer requirements

- **Option-TEE1:** Includes a Molex connector at the DC port together with a 1m cable to facilitate quick and easy connection (see image above)
- **Option-TEE2:** Change both or any one of the connectors from the standard female to male connector
- **Option-TEE3:** Alternative RF connector choice

If there are other customisations that you are interested in, please email info@etlsystems.com and we will be happy to discuss possible alternatives and other options.