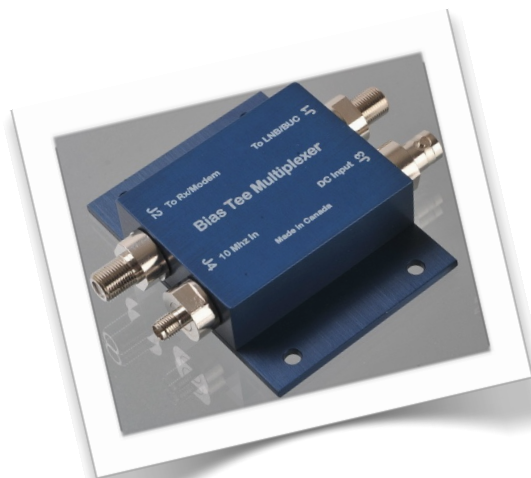


# Orbital Research Ltd

## "Tees"



The Orbital "Tees" Family is based on the original Orbital Mux/Tee that injects DC and Multiplexes a 10 MHz signal onto an L-Band signal. Subsequent "Tees" were derived from customer requests.

Each Tee type has superb L-Band filtering and extracts those same signals from the L-Band when the Tee is placed in reverse.

### Electrical Specs in common with all Tees

#### L Band

Bandpass: 900 to 2100 MHz  
 From 2.1 to 3.4 GHz with 0.7 dB insertion loss (max)  
 From 3.4 to 4.2 GHz with 1.0 dB insertion loss (max)  
 Thru Loss: 0.5 dB maximum  
 Ripple:  $\pm 0.3$  dB maximum  
 Input/Output VSWR: 1.3 : 1 maximum

#### 10 MHz

Passband: 1-100 MHz (3 dB down)  
 Thru Loss: 0.3 dB, 10 MHz to LNB port (max)

#### DC

Filtering: Hash filter, low pass filter  
 Resistance: 0.132 ohms (average)

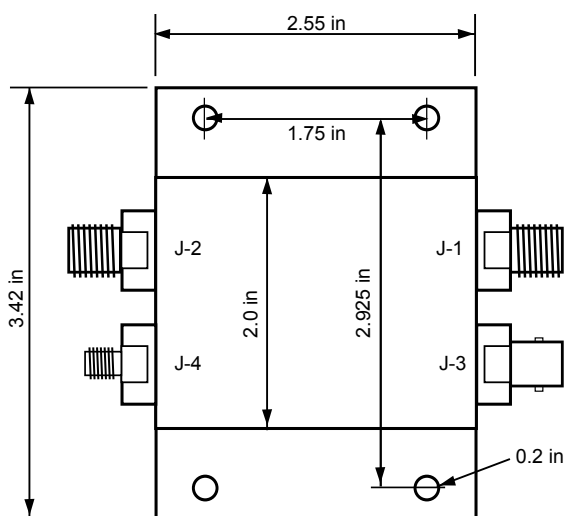
### Part Numbering System

<u>MT</u>	<u>25</u>	<u>N</u>	<u>N</u>	<u>B</u>	<u>S</u>
Tee Type	Power	J1	J2	J3	J4
MT	25 - 2.5A	F	F	F	F
DPT	40 - 4.0A	N	N	N	N
TT	60 - 6.0A	S	S	S	S
TMT		B	B	B	B
DET					
RET					

(F = F 75 $\Omega$ . N = N 50 $\Omega$ . S = SMA 50 $\Omega$ . B = BNC 50 $\Omega$ )

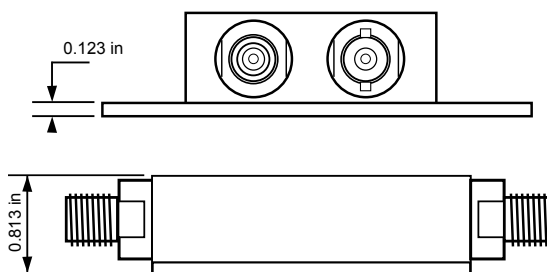
### Mechanical Diagrams

All Orbital Tees have the same mechanical characteristics.



### Mechanical Specs

Measurements: Tolerance  $\pm .005$  in.  
 Weight: 5 oz, 142 grams  
 Paint: Blue Anodized finish  
 Mil Spec Fed Std 595  
 Mounting holes: 0.200" (5 mm)  
 Accepts standard rackmounting screws: 10/32 or 10/34  
 MTBF: >125,000 hours  
 RoHs Compliant



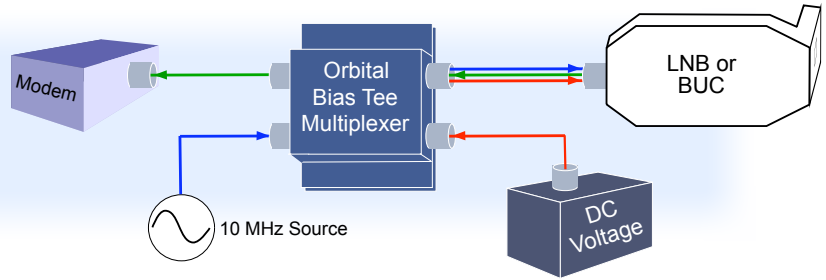
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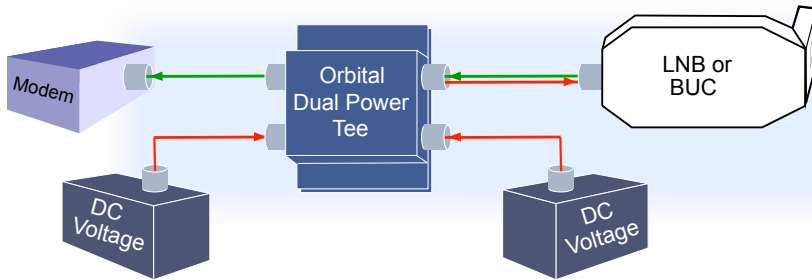
### Mux/Tee: MT25, MT40, MT60

- Multiplexes the 10 MHz and,
  - Biases the DC onto the L-Band line
- Example part #: MT25-NNBS



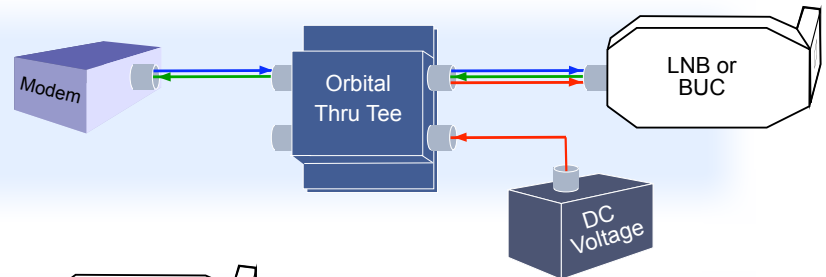
### Dual Power Tee: DPT25

- Bias Tee with dual DC inputs
  - DC inputs in redundant configuration
- Example part #: DPT25-FFBB



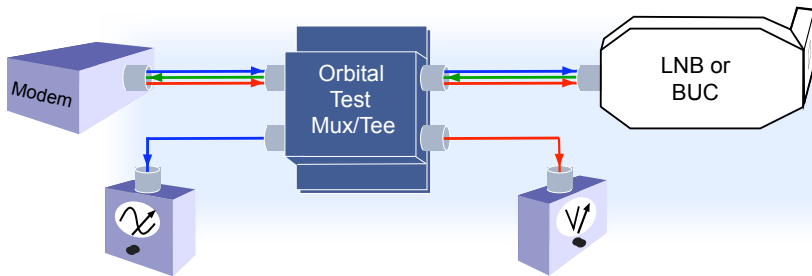
### Thru Tee: TT25, MT40

- Lets 10 MHz thru from modem
  - Biases DC onto L-Band line
- Example part #: TT25-NNBP



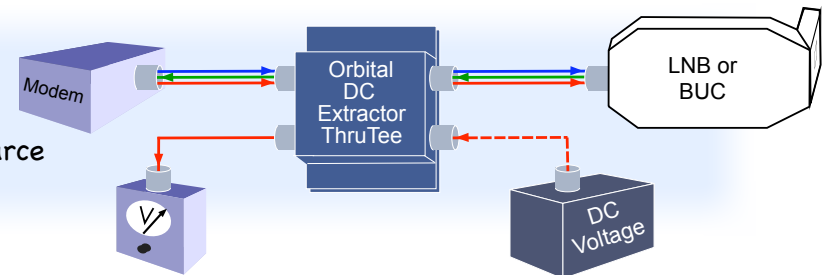
### Test Mux/Tee: TMT25, TMT40

- Lets 10 MHz & DC thru from modem
  - Taps 10 MHz & DC from L-Band
- Example part #: TMT25-FFBS



### DC Extractor Tee: DET25, DET40

- Lets 10 MHz & DC thru from modem
  - Taps DC from L-Band
  - DC can come from modem or other source
- Example part #: DET25-FFBB



### Ref Extractor Tee: RET25, RET40

- Lets 10 MHz thru from modem
  - Biases DC onto L-Band line
  - Taps 10 MHz from L-Band
- Example part #: RET25-FFBS

