

TETRA UHF

DBLC-TET-N

Branch Line Antenna Combiner

12/04/2013 v6



- Combines two TETRA radios on the same antenna
- Combines two antennas on the same radio

When you can only fit one antenna on a vehicle, then this combiner is the solution providing > 26dB isolation over 380-430MHz with an antenna match at 1.2:1 with low insertion loss.

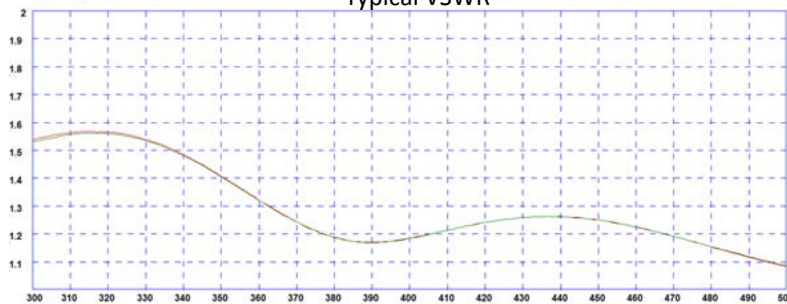
Technical Note:

The isolation provided by this device is dependent on the antenna VSWR. An antenna match of 1.5:1 VSWR will result in a reduction of isolation to 20dB.

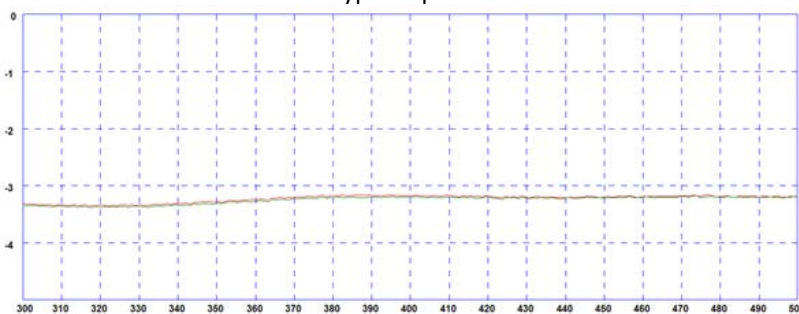
Higher VSWR on the antenna port will result in a further reduction in isolation between the TX ports.

During operation extreme care should be taken to ensure that the VSWR of the antenna connected to the combiner does not exceed 1.5:1.

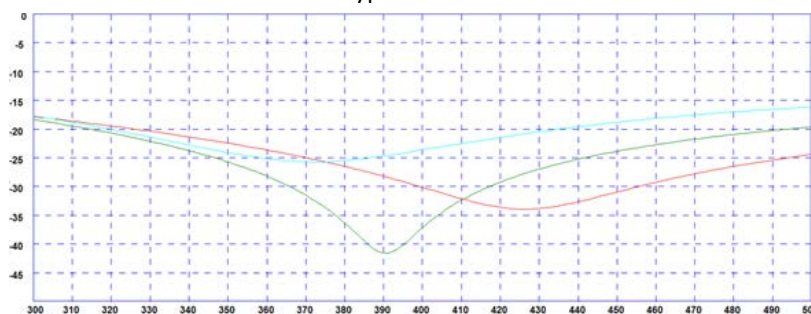
Typical VSWR



Typical split loss

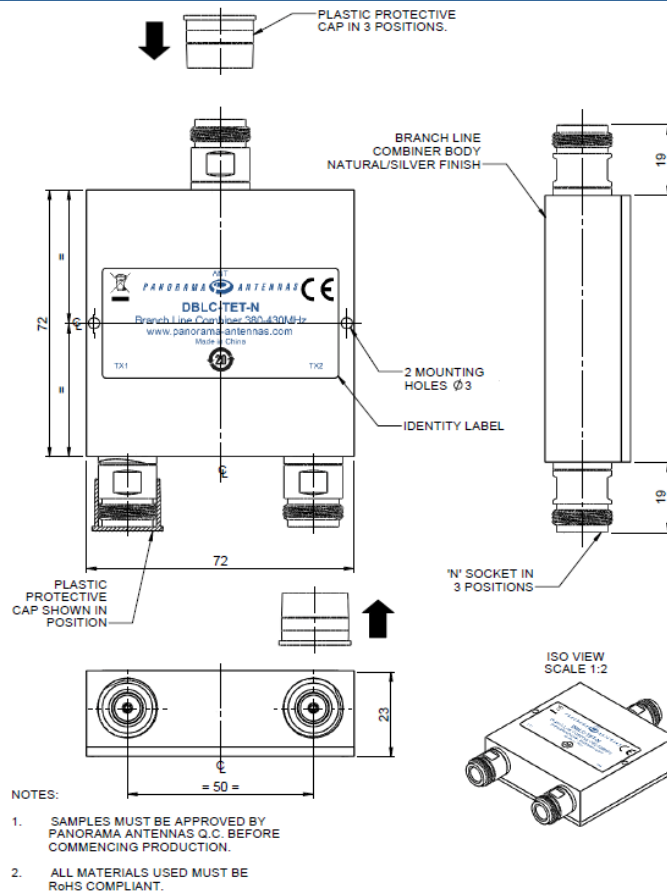


Typical Isolation



Red Plot – 1:1 load on antenna port
 Green Plot – 1.2:1 load on antenna port
 Aqua Plot – 1.5:1 load on antenna port

Technical Drawing



Part No

DBLC-TET-N

Electrical Data

Frequency Range (MHz)	380-430
Split Loss	3dB
Insertion Loss	< 0.5dB
Isolation TX1 - TX2	≥ 26dB VSWR of 1.1:1 at antenna port ≥ 26dB VSWR of 1.2:1 at antenna port ≥ 20dB VSWR of 1.5:1 at antenna port
Typical VSWR at Tx1 / Tx2	< 1.5:1 VSWR of 1.5:1 at antenna port
Max input power (W)	20 per port

Mechanical Data

Dimensions (mm)	Length	72 (2.83")
	Width	72(2.83")
	Height	23 (0.90")
Operating Temp (°C)		-40° / +80°C (-40° / 176°F)
Material		Aluminium
Colour		Natural / Silver
Termination		N sockets on all ports

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