Diplexer for the 0 - 520 MHz and 790 - 2700 MHz Ranges

DESCRIPTION

- Diplexer for combining or splitting the two ranges 0 - 520 MHz and 790 - 2700 MHz.
- Excellent wide-band coverage.
- Can be used to combine e.g. TETRA and GSM/UMTS on a common multiband antenna.
- Smaller model in milled aluminium box.
- Extraordinarily high mechanical strength.
- Black vinyl-coated to prevent corrosion.
- Provided with brackets for panel mounting.
- N-connections on all ports.

ORDERING

Type	Product No.
PRO-DIPX 520/790-2.7G-N XS	200002173

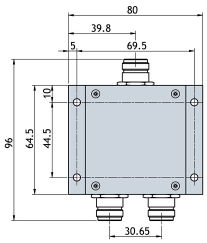
SPECIFICATIONS

Electrical		
Model	PRO-DIPX 520/790-2.7G-N XS	
Frequency	Ant-low port : 0 - 520 MHz Ant-high port : 790 - 2700 MHz	
Max. Input Power	Ant-low port: 35 W Ant-high port: 15 W	
Insertion Loss	Ant-low port: 0 - 520 MHz: Max. 0.5 dB typ. < 0.4 dB	Ant-high port: 790 - 2500 MHz: Max. 0.7 dB typ. < 0.5 dB 790 - 2700 MHz: Min. 40 dB typ. > 50 dB
Impedance	50 Ω on all ports	
Isolation Low-High Port	0 - 520 MHz: Min. 45 dB typ. > 50 dB 790 - 2700 MHz: Min. 40 dB typ. > 50 dB	
VSWR	Low: < 1.5:1 (0 - 520 MHz) Other ports terminated with 50 Ω	High: < 1.5:1 (790 - 2500 MHz) < 2.0 (2500 - 2700 MHz) Other ports terminated with 50 Ω

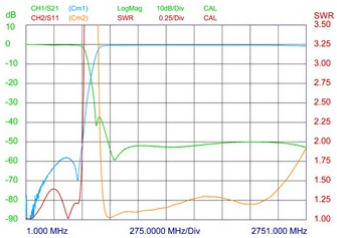
Mechanical	
Connection(s)	Low : N(f) High : N(f) Antenna: N(f)
Dimensions	96 (incl. connectors) x 80 mm (incl. flanges) x 32 mm / 3.7 x 3.2 x 1.2 in.
Weight	0.35 kg / 0.77 lb
Mounting	4.2 mm dia (4 holes)

Environmental	
Operating Temperature Range	-30°C to +60°C
Ingress Protection	IP64

MOUNTING DETAILS



TYPICAL RESPONSE CURVES



INSTALLATION

The PRO-DIPX 520/790-2.7G-N XS makes it possible to use only one antenna for the operation of two transceivers (one in each range). See the figure below. The antenna must be a dual-frequency antenna, i.e. it must be resonant on the actual frequencies in the two bands.

The transceivers may be used independently and will have no degrading influence on each other. Typically, the diplexer is installed next to the transceivers and only one cable is used between the diplexer and the antenna. The diplexer is suitable both for base station and mobile use.

The main tasks of the diplexer are to protect the individual receiver input from being destroyed by the transceiver in the contrary band and to ensure a low-loss path between the transceiver and the antenna which is not loaded by the other branch.

The diplexer can be operated together with any set of transceivers operating within the 0 - 520 MHz and 790 - 2700 MHz frequency bands.

Dual-frequency antennas are available for both mobile and base station applications.