100 W Diplexer for the 0 - 174 MHz and 200 - 960 MHz Ranges

DESCRIPTION

- Diplexer for combining or splitting the two ranges 0 – 174 MHz and 200 – 960 MHz.
- Chebychev design ensures very high isolation across the whole pass ranges.
- High power handling capability.
- Low insertion loss.
- Low weight.
- Wide temperature range.
- Milled aluminium box ensures extraordinarily high mechanical strength.
- PRO-DIPX 174/200-... is coated with black vinyl to prevent corrosion.
- N-connectors on all ports (standard).
- Also available with SMA-, TNC- or BNC- connector types.



SPECIFICATIONS

Electrical	
Model	PRO-DIPX 174/200-...
Frequency	COM-LOW port: 0 - 174 MHz COM-HIGH port: 200 - 960 MHz
Max. Input Power	100 W CW simultaneously on both HIGH and LOW port See Note *)
Insertion Loss	0 - 174 MHz: ≤ 0.8 dB 200 - 960 MHz: ≤ 0.8 dB
Impedance	50 Ω
Isolation	LOW to HIGH port: ≥ 40 dB
VSWR	< 1.5:1

Mechanical	
Connection(s)	COM : N(f) LOW : N(f) HIGH : N(f) (Other types available on request)
Dimensions	133 x 80 x 31 mm / 5.24 x 3.15x 1.22 in. (incl. connectors and flanges)
Weight	Approx. 0.38 kg / 0.84 lb.
Mounting	4.3 mm / 0.17 in. dia. (4 holes)

Environmental	
Operating temperature range	-40 °C to +60 °C
Ingress Protection	IP64

ORDERING

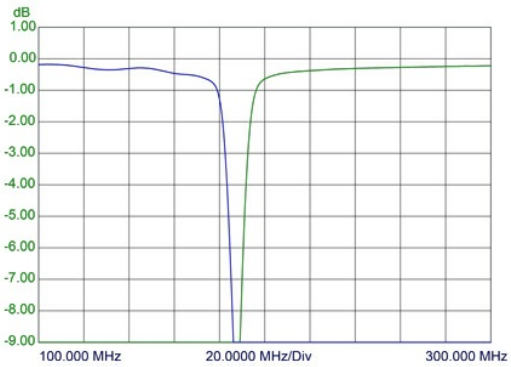
Model	Product No.
PRO-DIPX 174/200-N(f)	200002252
PRO-DIPX 174/200-SMA(f)	200002253
PRO-DIPX 174/200-TNC(f)	200002254
PRO-DIPX 174/200-BNC(f)	200002255

NOTE *)

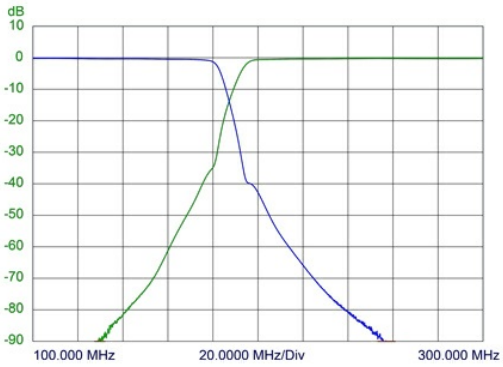
Adequate cooling to keep maximum temperature of the box surface below +60 °C must be provided (e.g. by heat sink or active cooling).

TYPICAL RESPONSE CURVES

Insertion Loss [dB]



Port Attenuation [dB]



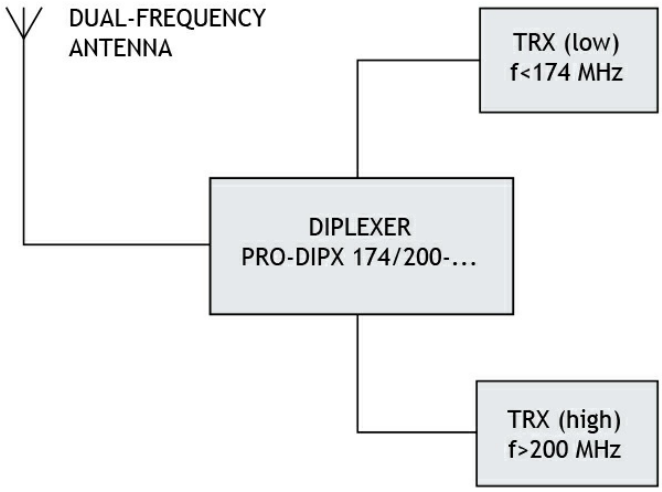
INSTALLATION

The PRO-DIPX 174/200-... 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.

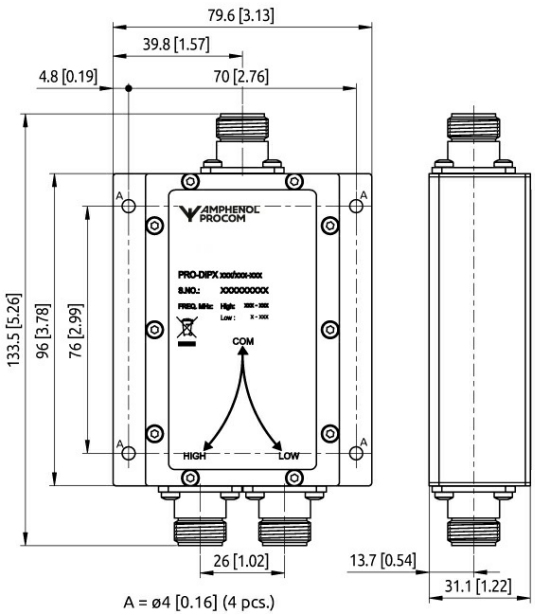
The transceivers may be used independently and will have no degrading influence on each other. Typically, the diplexer is installed next to the transceivers and only one cable is used between the diplexer and the antenna. The diplexer is suitable both for base station and mobile use.

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 - 174 MHz and 200 - 960 MHz frequency bands.



MOUNTING DETAILS



All dimensions are given in mm [in.]