DPF 2/6-150...

6-Cavity Base Station Duplexer for the 160 MHz Band

- The DPF 2/6-150... is a 6-cavity high-power, base-station duplex filter for the frequency band 138 - 175 MHz.
- The duplexer is delivered in two basic models:
  Model DPF 2/6-150 L can be tuned within the band 138 - 156 MHz and model DPF 2/6-150 H within the band 152 - 175 MHz, both with a nominal duplex separation of 4.5 MHz.



DESCRIPTION

- This filter type uses enlarged (40 x 40 mm), full quarter-wavelength cavities with silver-plated, temperature compensated resonator elements. The high Q's obtainable in these cavities enable the filter to work with very narrow duplex spacing while at the same time keeping low insertion losses. Further, duplex isolation is improved at medium spacings.
- The enlarged dimensions also improve the power-handling capability of the filter as insulation distances at high-voltage points are increased, and the inevitable power dissipation (which always will be present though insertion loss is kept to a minimum) will be distributed over a larger area. The filter is capable of working continuously at a power level of 150 W.
- The DPF 2/6-150... is primarily intended for equipment, where the TX and RX operate on single frequencies, but it can also, with slightly reduced data, be used where the TX and RX operate on several channels, i.e. within a certain port bandwidth. In the last case, factory-tuning is recommended.
- The housing is made of extruded aluminium, the chassis of passivated steel, and the rigid coaxial cables and the connectors are provided with teflon insulation.
- DPF 2/6-150... is coated with black vinyl to prevent corrosion.

ORDERING DESIGNATION

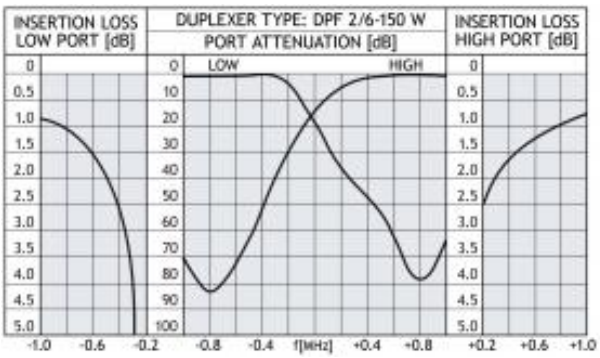
TYPE	PRODUCT NO.	TUNING RANGE (MHz)	DUPLEX SPACING (MHz)
DPF 2/6-150L-1/2	200000204	138 - 156	1 - 2
DPF 2/6-150L-2/4	200000216		2 - 4
DPF 2/6-150L-4/6	200000209		4 - 6
DPF 2/6-150L-6/8	200001863		6 - 8
DPF 2/6-150L-8/10	200001864		8 - 10
DPF 2/6-150H-1/2	200000199	152 - 175	1 - 2
DPF 2/6-150H-2/4	200000198		2 - 4
DPF 2/6-150H-4/6	200001648		4 - 6
DPF 2/6-150H-6/8	200001649		6 - 8
DPF 2/6-150H-8/10	200000189		8 - 10

SPECIFICATIONS

ELECTRICAL	
MODEL	DPF 2/6-150...
TX/RX FREQUENCY	DPF 2/6-150 L: 138 - 156 MHz DPF 2/6-150 H: 152 - 175 MHz
MAX. INPUT POWER	150 W
INSERTION LOSS TX-ANT AND ANT-RX (at 4.5 MHz duplex spacing) Single-channel tuned Multi-channel tuned, 1.5 MHz BW	 ≤ 1.2 dB (typ. 1.0 dB) ≤ 1.4 dB (typ. 1.2 dB)
TX NOISE SUPPRESSION ON RX-FREQUENCY Single-channel tuned Multi-channel tuned, 1.5 MHz BW	 > 80 dB > 60 dB
RX ISOLATION ON TX-FREQUENCY Single-channel tuned Multi-channel tuned, 1.5 MHz BW	 > 80 dB > 60 dB
DUPLEX SPACING	1 - 10 MHz
IMPEDANCE	Nom. 50 Ω
SWR	≤ 1.5

MECHANICAL	
TEMP. RANGE	–30° C → +60° C
FREQ. STABILITY	Approx. 4.5 ppm/° C
CONNECTORS	N-female
DIMENSIONS (L x W x H)	540 x 250 x 50 mm
WEIGHT	Approx. 4.5 kg

TYPICAL RESPONSE CURVES @ 1.6 MHZ DUPLEX SPACING



TYPICAL RESPONSE CURVES @ 4.5 MHZ DUPLEX SPACING

