

Duplexer

380 ... 470 MHz

The duplexer is suited to combine **one or more** transmitters with **one or more** receivers to a common antenna.

It can also be used to combine two transmitters to a common antenna.

Design and construction:

The duplexer consists of a 3-cavity or 4-cavity S-P filter (Stop-Pass filter) for the low band and a 3-cavity or 4-cavity S-P filter for the high band. The two S-P filters are interconnected to a common antenna output using cables of defined electrical lengths.

The S-P filters are designed to allow the transmitter to be operated in the low band or the high band.

Tuning:

The duplexer, because of its special construction can only be tuned at the factory. Special requests like other duplex spacings, switching bandwidths or attenuation values can be taken into account.

When ordering please specify the desired high **and** low band frequencies.



718 313



719 237

Technical Data

Type No.	718 313					719 237					
Number of resonators	3 + 3					4 + 4					
Frequency range	380 ... 470 MHz										
Duplex spacing	5 MHz		10 MHz			5 MHz		10 MHz			
Switching bandwidth	0.2 MHz	0.5 MHz	0.5 MHz	1.0 MHz	2.0 MHz	0.5 MHz *	1.0 MHz *	2.0 MHz	3.0 MHz	4.0 MHz	5.0 MHz *
Insertion loss ¹⁾	< 1.2 dB	< 1.5 dB	< 0.7 dB	< 0.8 dB	< 1.0 dB	< 1.6 dB	< 1.8 dB	< 1.0 dB	< 1.2 dB	< 1.5 dB	< 1.8 dB
Isolation ²⁾	> 65 dB	> 60 dB	> 75 dB	> 70 dB	> 65 dB	> 70 dB	> 60 dB	> 80 dB	> 75 dB	> 70 dB	> 60 dB
VSWR	< 1.4										
Impedance	50 Ω										
Input power ³⁾	< 100 W (-30 ... +55 °C) / < 50 W (+55 ... +70 °C) * < 50 W (-30 ... +55 °C) / < 30 W (+55 ... +70 °C)										
Temperature range	-30 ... +70 °C										
Connectors	N female, silver-plated										
Material	S-P resonators: Brass, silver-plated										
Cable	RG 223/U										
Installation	With 4 screws (M5)										
Weight	2.9 kg					3.8 kg					
Packing size	410 mm x 85 mm x 205 mm					410 mm x 85 mm x 205 mm					
Dimensions (w x h x d)	270 mm x 58 mm x 190 mm (with connectors)					350 mm x 58 mm x 190 mm (with connectors)					

¹⁾ Low band ↔ Antenna / High band ↔ Antenna

²⁾ Low band ↔ High band

³⁾ Input power of the low band or the high band or total sum of the input power of the low band and the high band.

Duplexer

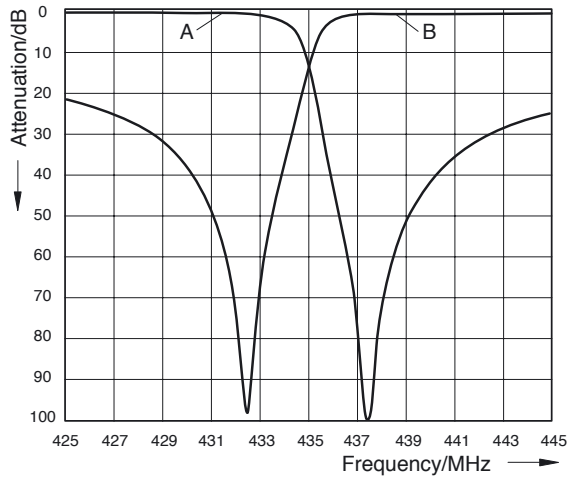
380 ... 470 MHz

Typical attenuation curves

Tuning examples:

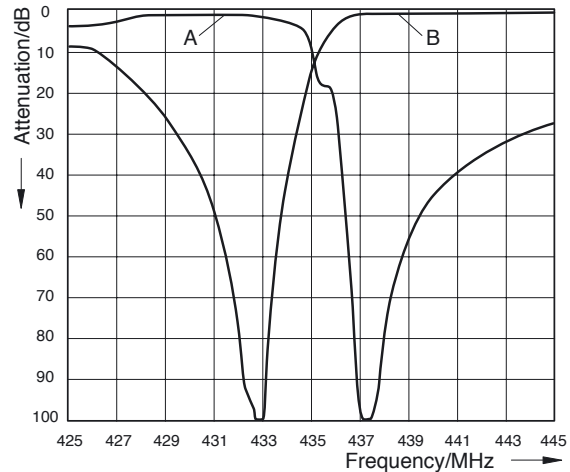
Duplexer 718 313

Duplex spacing : 5 MHz
Switching bandwidth: 0.5 MHz

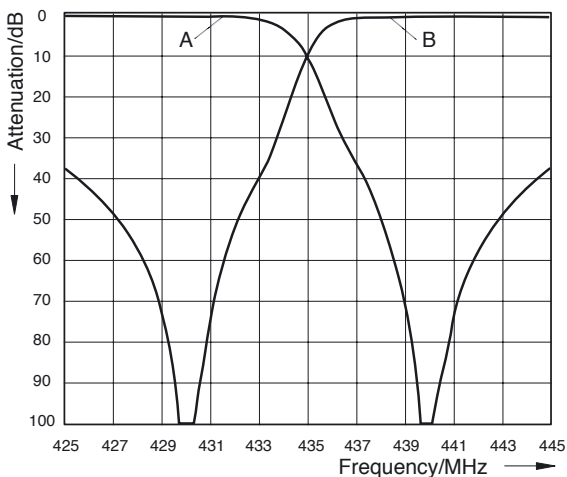


Duplexer 719 237

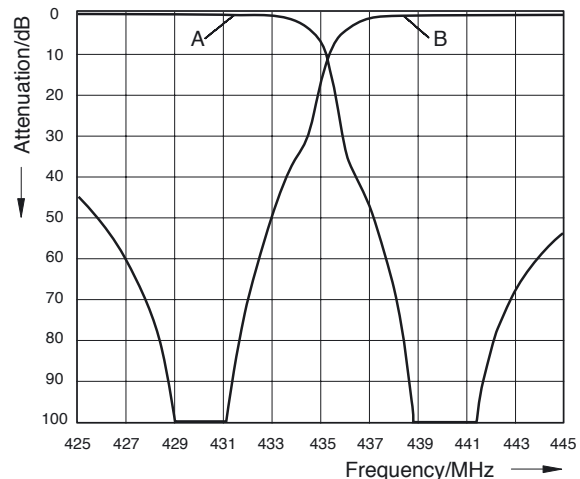
Duplex spacing : 5 MHz
Switching bandwidth: 1.0 MHz



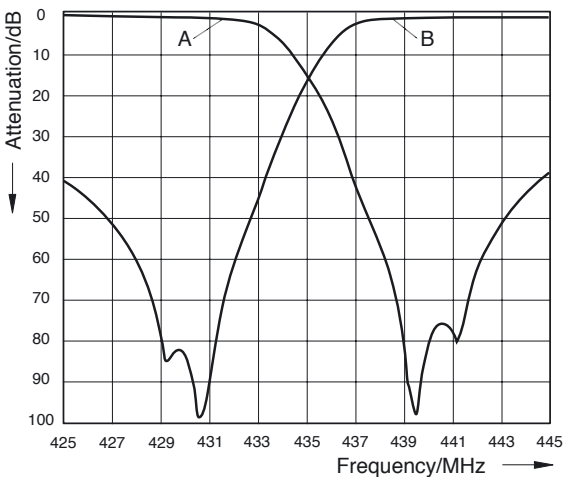
Duplex spacing : 10 MHz
Switching bandwidth: 1.0 MHz



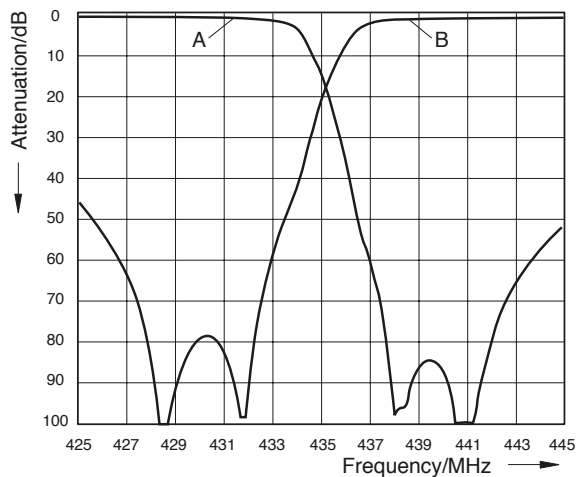
Duplex spacing : 10 MHz
Switching bandwidth: 2.0 MHz



Duplex spacing : 10 MHz
Switching bandwidth: 2.0 MHz



Duplex spacing : 10 MHz
Switching bandwidth: 4.0 MHz



A: Low band ↔ Antenna
B: High band ↔ Antenna