

## Helical BandPass Filter MERITS

Temwell RF BandPass Helical Filter has so many special features that engineers must know it. In order to let customers have more clearly information, Temwell introduce the comparison list to you for reference. Such as, Center Frequency range, the difference between Bandwidth feature and Insertion Loss, the difference in Group Delay, Input Power, Customized service, etc.

**The most important point is the relationship between Insertion Loss (IL) and Bandwidth (Pass Band)**

1. Helical Filter: The larger Bandwidth, the less Insertion Loss.

ex: IL =2~5 dB at BW=10~60MHz

IL < 1 dB at BW=100 MHz

2. Saw Filter: The larger Bandwidth, the more Insertion Loss.

ex: IL =1~5 dB at BW=1~10MHz

IL > 20 dB at BW > 40 MHz

Items	Helical BP Filter	Saw Filter
Center Frequency (Fo.)	<u>Fo = 44~2600MHz</u> (Accept Customized Fo.)	<u>Fo = Fixed Freq. only</u> (Each Freq. needs a New mask)
Band Width (B.W.)	<u>B.W.= 2~250MHz</u> (Accept Customized BW)	<u>B.W.=0.1MHz UP Only</u> (Fixed B.W.)
*Insertion Loss (I.L.)	<u>IL=1.0 ~ 8.0 dB</u> ( The more BW, the less IL about 0.5 dB)	<u>IL=3 ~ 30 dB</u> ( The more BW, the more IL about >10~20 dB)
*BW & Insertion Loss	BW <10 MHz , <u>IL= 2.0~ 5.0 dB</u> BW >100 MHz , <u>IL &lt; 1.0 dB</u>	BW< 10 MHz, <u>IL=1.0 ~ 5.0 dB</u> BW> 40 MHz, <u>IL &gt; 20 dB</u>
*Group Delay	<u>&lt;10~20 nsec</u> ( The more BW, the less Group Delay )	<u>&gt; 20 nsec</u> ( The more BW, the more Group Delay )
Customized Service Initial Charge	<u>USD120~200</u> per item	<u>Thousands USD</u> per mask
Impedance	<u>50 /75 Ohms</u>	<u>500 ~ 2k Ohms</u>
Delivery (Lead Time): Sample/ Mass Prod.	<u>7~10/ 35~45 Work Days</u>	<u>60~90/ 60~90 Days</u>
Min. Order Q'ty	Min. Order Qty <u>10 PCS / per item</u>	Min. Order Qty <u>Thousands PCS / per item</u>
In-put Power	<u>1~4 Watts</u> (depend on frequency)	<u>&lt;0.2 Watts</u>
Case Type	<u>Pin Type</u>	<u>SMD Type</u>

\* **Special feature**