

Multifunction Assemblies

Reactel has a long history of manufacturing Multifunction Assemblies. From Switched Filter Banks to Amplified Filters and Diplexers to Iso-Filter Assemblies, we can produce the design that can satisfy the most demanding requirements.

Switched filter banks combine any number of our filters with the proper switch to provide a superior performing unit in a compact, lightweight package.

Similarly, a Reactal filter is combined with the appropriate amplifier or isolator to produce the desired amplified filter, diplexer or iso-filter assembly.

Reactel's multifunction assemblies offer the convenience of a single package performing multiple tasks. The benefits are many as all elements of the multifunction assembly are tuned together to offer the best possible VSWR matching, provide the lowest possible insertion loss, eliminate costly cable runs and reduce overall size when compared to individual components.

Please contact the factory for assemblies designed to your unique requirement.



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4 Channel Switched Filter Bank

Comblines filters are integrated with PIN diode switches to make this X – band / Ku – band switched filter bank. The extremely fast switching speed is TTL controlled by way of external pins, with a D-sub connector as an option. Featuring low loss and high isolation, this compact assembly is suitable for demanding military environments.



Frequency	6 to 20 GHz
Insertion Loss	≤ 7.5 dB
Isolation	≥ 60 dB
DC Supply Voltage	+5 Vdc @ 100 mA -5 Vdc @ 60 mA
Switching Speed	1 μ S
Size	0.45" x 2.7" x 4.5"

Wireless Band Amplified Diplexer

Combining a high performance combline diplexer with a low noise amplifier, this unit offers low loss, high isolation and can handle power up to 100 W. This unit has 4 separate amplified outputs with +20 dB of gain and is suitable for outdoor applications.



Passbands	800 – 915 & 935 – 960 MHz, minimum
Insertion Loss	≤ 1.0 dB
LNA Gain	+20 dB
Channel – to – Channel Isolation	≥ 75 dB
Ultimate Attenuation	≥ 60 dB up to 3500 MHz
DC Supply Voltage	+12 V dc



Reactel, Incorporated — Reacting First to Your Filter Requirements

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L – Band High Power Iso-Filter

Two externally terminated circulators are paired with a High-Q combline filter to make this high power iso-filter. This robust unit can handle power levels up to 250 W while offering a return loss of better than 20 dB in-band and 15 dB out of band.



Passband	1024.5 – 1060.5 MHz, minimum
Insertion Loss	≤ 1.5 dB
Return Loss (in band)	≥ 20 dB
Return Loss (out of band)	≥ 15 dB
Attenuation	≥ 70 dB @ 950 & 1132 MHz

Dual Passband Cavity Filter

Two cavity filters are built in parallel to realize this dual passband unit. This approach, which can be repeated for virtually any set of frequencies, is perfect for applications where passing multiple signals while using a 2 port device is required.



Passbands	1212 – 1242 & 1530 – 1590 MHz, minimum
Insertion Loss	≤ 1.0 dB
VSWR	$\leq 1.5:1$ @ Passbands
Rejection	≥ 40 dB @ 1450 & 1625 MHz
Size	1.15" x 1.25" x 3.0"

