

Many microwave subsystems such as Radar Warning Receivers, EW Simulation systems, and various types of Test Equipment employ adaptive filtering to select frequency bands of interest.

Sage Laboratories switched filter banks are each tailored to specific customer requirements and use the most appropriate filter and switch technologies to achieve the best overall performance. This includes design options such as MMIC FET switches for fast switching requirements, discrete PIN diode switches for high isolation, or may involve multiple filter topologies or using multiplexed filter banks for multi-channel switched filters. Additional features may include:

- RF Input Power Limiting
- Video Filtering
- BITE Oscillators
- Notch Filters
- Channel-to-Channel Amplitude Matching
- Coupled Detectors
- Flat Group Delay Filters
- Laser Seal for Harsh Environments

TYPICAL SPECIFICATIONS



	Narrowband Preselection	IF Preselection
Number of Channels	4	5
Frequency Range	8-12 GHz	2-4 GHz
Filter Technology	Machined Compline	Machined Compline
Passband Loss	5 dB	3 dB
Out of Band Rejection	60 dB	70 dB
Switching Speed	< 300 nS	< 300 nS
Third Order Input Intercept Point	+40 dBm	+40 dBm
DC Input	±5 V @ 120 mA	±5 V @ 100 mA
RF Connectors	SMA	SMA
Pwr/Ctrl Connector	I/O Pins	I/O Pins





	Video BW Selection	Wideband Channelization
Number of Channels	4	4
Frequency Range	800-1100 MHz	2-18 GHz
Filter Technology	Lumped Element	Suspended Substrate & Lumped Element
Passband Loss	9 dB	4.5 dB
Out of Band Rejection	60 dB	60 dB
Switching Speed	< 1 μ S	< 300 nS
RF Power	+20 dBm input operating	+33 dBm input w/o damage
DC Input	+5 V @ 25 mA	+10 V @ 75 mA -10 V @ 25 mA
RF Connectors	SMA	SMA & GPO
Pwr/Ctrl Connector	I/O Pins	I/O Pins



	High Band Preselection	Low Band Preselection
Number of Channels	5	8
Frequency Range	8-26.5 GHz	2-8 GHz
Filter Technology	Suspended Substrate	Suspended Substrate & Machined Comblines
Passband Loss	8.5 dB	8.5 dB
Out of Band Rejection	55 dB	60 dB
Switching Speed	< 100 nS	< 200 nS
RF Power	+20 dBm input w/o damage	+20 dBm input w/o damage
DC Input	+5 V @ 100 mA -15 V @ 100 mA	+5 V @ 300 mA -15 V @ 125 mA
RF Connectors	2.92 mm	SMA



L A B O R A T O R I E S

