

# RADITEK

## YIG Filters & Oscillators



### Standard Band YIG Tuned Band-Stop Filters

- Frequency coverage of 0.5 to 18 GHz
- Excellent tuning linearity
- Low loss and high stop
- Wide operating temperature range
- Digital or analog continuous tuning control



### High Sweeping YIG Tuned Bandpass Filters

- Broad frequency coverage
- High tuning speed up to 80 $\mu$ s / GHz
- Excellent tuning linearity;
- High sideband rejection;
- Wide operating temperature range;
- Digital or analog continuous tuning control



### Miniature YIG Tuned Bandpass Filters

- Broad frequency coverage of 1 to 8 GHz;
- Compact and low energy-consuming;
- Excellent tuning linearity;
- High out-of-band rejection;
- Wide operating temperature range;
- Digital or analog continuous tuning control



### Ultrabroad Band YIG Tuned Oscillators

- Frequency coverage of 2 to 20 GHz;
- Linearity up to  $\pm 0.1\%$  to  $\pm 0.25\%$ ;
- Excellent frequency spectrum;
- Wide operating temperature range

### Low Harmonic YIG Tuned Oscillators

- Excellent frequency spectrum;
- Integrated YTF frequency selective low harmonic output
- YTO/YTF
- Wide operating temperature range



### Advanced YIG FILTERS

- 0.5~1 GHz, 1~2 GHz, 2~4GHz, 2-6GHz, 4~8 GHz, 8~12 GHz, 12~18 GHz, 18~26 GHz, and 26.5~ 40GHz
- Band Pass, or Band stop available
- *Ultra wideband available, e.g. 200MHz min at 2GHz!*
- *(Everyone else struggles to meet 100MHz at 2 GHz!!!!!!)*
- Special, custom models in reasonable volume
- Analog voltage driver available
- Digital driver available



### YIG Tuned Bandpass Tracking Filters

- Broad frequency coverage;
- Linear continuous tracking of main channel and tracking channel;
- Excellent tuning linearity;
- High sideband rejection;
- Wide operating temperature range;
- Digital or analog continuous tuning control



### Advanced Ultra broad-band YIG Oscillators

- 2 to 8GHz, 2 to 10 GHz, 4 to 18 GHz,
- 2 to 18 GHz, and 2 to 20 GHz...
- Single and dual out puts (<18GHz)
- 10dBm typical outputs (<18GHz)
- Custom models in reasonable volume
- Analog voltage driver available
- Digital driver available



RRx/RTx5764-X Flier

## SPECIFICATIONS

- Superheterodyne conversion (Rx)
- SiGe BiCMOS Technology
- Frequency band 57-64GHz
- Integrated image reject filter
- Integrated 9GHz IF filter
- Integrated Frequency Synthesizer with single external reference crystal
- Low noise amplifier <6dB NF
- Programmable IF gain blocks
- Universal I/Q interface
- Integrated FM & AM detectors
- Three-wire serial digital interface

Raditek Baseband Group will quote to design your base band, FPGA design solution using this revolutionary chip set. This is a high volume, commercial device; it requires special design techniques that Raditek will quote on demand, as well as the volume complete module. Applications include: HD video, High speed data (>1Gbps) and other high data rate applications.

Contact RADITEK for more information.

Typical RxIC Performance

Parameter	Typical	Units
Gain	0-70*	dB
Noise Figure	5-6.7**	dB
S11, RF in	-15	dB
Image Rejection	>30	dB
P1dB (in)	-37**	dBm
IIP3	-30**	dBm
Phase Noise (10MHz)	-113 to	dBc/Hz
Tripled	-115	
Phase Noise Floor	-130	dBc/Hz
I/Q Balance-Phase	0 to 4	degrees
I/Q Balance-Amplitude	<1	dB
Power Dissipation	195 (2.7V)	mA
	6 (1.2V)	

\* Adjustable in 1-dB steps.

Typical TxIC Performance

Parameter	Typical	Units
Gain	26-30*	dB
P1dB	9-12	dBm
Psat	12-16	dBm
Image Rejection	20-30	dB
PAE of PA	6-10	%
Carrier Suppression	21-25	dB
3xLO Spur	-25 to -20	dBm
Phase Noise (10MHz)	-113 to	dBc/Hz
Tripled	-115	
I/Q Balance-Phase	+/-2	degrees
I/Q Balance-Amplitude	+/-0.5	dB
Power Dissipation	190 (2.7V)	mA
	70 (4.0V)	
	6 (1.2V)	

\*At maximum IFVGA gain.