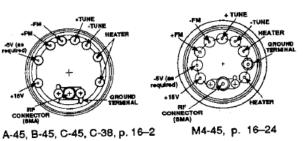
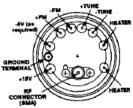


# **Octave Band YIG-Tuned Oscillators**

### **Features**

- Full 1.0 to 18 GHz Coverage
- Rugged Hermetic Packaging
- **Reliable Thin Film Construction**
- ± 0.05% to ±0.2% Tuning Linearity
- 0° to 65 °C, Temperature Range





M3-45, M3-60, p. 16-24

## **DESCRIPTION**

Avantek Octave Band Series YIG-tuned fundamental transistor oscillators are compact and lightweight and are cost-effective for commercial instrument applications.

They are built using the same Avantek thin-film construction and hermetic packaging that has proven itself ultimately reliable under severe military and aerospace environmental conditions. This family of oscillators is designed for wideband applications in receivers and instruments where tuning linearity and spectral purity are crucial.

They make ideal local oscillators for frequency-agile receivers and spectrum analyzers and are excellent as signal sources for microwave sweep generators and synthesizers.

The tuning curves (Ituning vs. Fout) for this series of YTO's are linear and will deviate from the ideal straight line only  $\pm$  0,05% to  $\pm$  0,2% (typically).

The power output remains flat within  $\pm$  1.5dB to  $\pm$  3.0dB over the entire tuning range

These oscillators have compatible tuning port characteristics of 20 MHz/mA and 5 kHz bandwidth up to 12.4 GHz.

This helps to simplify the design of multiband equipment and minimizes the number of current drives necessary.

All Octave Band Series oscillators have a low inductance FM tuning in addition to the main tuning coil.

This coil is in close proximity to the YIG sphere and is used to fine-tune the oscillator frequency, to phase lock the YTO or to frequency modulate the output signal.

The sensitivity of this port is much less than that of the main tuning coil, but it has a much wider 3 dB bandwidth and permits input modulation or control signals to deviate the output frequency by as much as 15 to 100 MHz at a rate up to 1 MHz

## **ELECTRICAL AND PERFORMANCE SPECIFICATIONS**

Guaranteed specifications at 0° to +65°C Case Temperature (Unless Otherwise Noted) AV-7104 AV-7203 AV-7204 AV-7224 Model No. Frequency Range, Min. 1 - 2.2 GHz 2 - 4 GHz 2 - 4 GHz 2 - 4 GHz 40mW/+16dBm 25mW/+14 dBm 40mW/+16dBm Power Output into 50 ohm load, Min. at 25°C 100mW/+20 dBm Power Output Variation vs. Frequency, Max. 3.0 dB 3.0 dB 3.0 dB 3.0 dB 0°C to +65°C 0°C to +65°C 0°C to +65°C Operating Case Temperature Range 0°C to +65°C Frequency Drift Over Operating Temperature. Max. 10 MHz 10 MHz 10 MHz 10 MHz Pulling Figure (12dB Return Loss). Typ. 0.5 MHz 0.1 MHz 0.5 MHz 0.5 MHz Pushing Figure, +15 VDC Supply. Typ. 0.5 MHz/V 0.5 MHz/V 0.5 MHz/V 0.1 MHz/V -5 VDC Supply, Typ. N/A N/A N/A 1.5 MHz/V Magnetic Susceptibility @ 60 Hz Typ. 70KHz/Gauss 70KHz/Gauss 70KHz/Gauss 70KHz/Gauss 2nd Harmonic, @ 25°C, Min. -12 dBc -15 dBc -12 dBc -20 dBc 3rd Harmonic, @ 25°C. Min. -20 dBc -20 dBc -20 dBc -12 dBc Spurious Output, Min. -60 dBc -60 dBc -60 dBc -60 dBc Main Tuning Port Characteristics Sensitivity 20±1 MHz/ma 20±1 MHz/mA 20±1 MHz/mA 20±1 MHz/mA 3 dB Bandwidth. Typ. 5KHz 5KHz 5KHz 5KHz Linearity, Typ ±0.1% ±0.05% ±0.05% ±0.05% Hysteresis, Typ. 1.7 MHz 3 MHz 3 MHz 3 MHz Input impedance @ 1KHz, Typ. 10 ohm in series 10 ohm in series 10 ohm in series 10 ohm in series with 95 mH with 95 mH with 95 mH with 95 mH **FM Port Characteristics** Sensitivity, Typ. 310 KHz/mA 310 KHz/mA 310 KHz/mA 310 KHz/mA 3 dB Bandwidth, Typ. 800 KHz 800 KHz 800 KHz 800 KHz Deviation at 3 dB Bandwidth, Max 15 MHz 20 MHz 20 MHz 20 MHz Input impedance @ 1KHz, Typ 1 ohm in series 1 ohm in series 1 ohm in series 1 ohm in series with 1.7  $\mu H$ with 1.7 µH with 1.7 µH with 1.7 µH DC Circuit Power, Max. 150 mA 100 mA 90 mA 150 mA +15 ±0.5V -5 ±0.1V +Vc@ 35 mA (\*) 60 mA YIG Heater Power Input Voltage Range 20 to 28 VDC 20 to 28 VDC 20 to 28 VDC 20 to 28 VDC Power @ 25°C, Max. 1.5 watts 1.5 watts 1.5 watts 1.5 watts Power @ 0°C, Max. 2.0 watts 2.0 watts 2.0 watts 2.0 watts Weight, Max. 10 07 10 oz. 10 oz. 10 oz. Case Style A-45 B-45 C-45

(\*) Terminal VC requires a linear voltage ramp proportional to frequency.

The voltage at 2 GHz is factory selected within the range +7 to +13 Volts and the voltage at 4 GHz is +15 Volts

Model No.	AV-7403	AV-7453	AV-7443	AV-77011	AV-7871
Frequency Range, Min.	4 - 8 GHz	4 - 8 GHz	4 - 8 GHz	7 - 11 GHz	8 – 12.4 GHz
Power Output into 50 ohm load, Min. at 25°C	20mW/+13dBm	50mW/+17 dBm	100mW/+20dBm		30mW/+14.8 dBm
Power Output Variation vs. Frequency, Max.	6.0 dB	6.0 dB	6.0 dB	6.0 dB	6.0 dB
Operating Case Temperature Range	0° to +65°C	0° to +65°C	0° to +65°C	0° to +65°C	0° to +65°C
Freq. Drift Over Operating Temperature. Max.	20 MHz	20 MHz	20 MHz	25 MHz	25 MHz
Pulling Figure (12dB Return Loss). Typ.	2 MHz	0.5 MHz	0.2 MHz	0.5 MHz 0.1 MHz/V	5 MHz
Pushing Figure, +15 VDC Supply. Typ5 VDC Supply, Typ.	0.5 MHz/V	0.1 MHz/V	0.1 MHz/V	0.1 MHZ/V N/A	0.1 MHz/V N/A
Magnetic Susceptibility @ 60 Hz Typ.	1.5 MHz/V 70KHz/Gauss	1.5 MHz/V 70KHz/Gauss	2.0 MHz/V 70KHz/Gauss	50KHz/Gauss	50KHz/Gauss
2nd Harmonic, @ 25°C, Min.	-12 dBc	-12 dBc	-12 dBc	-12 dBc	-12 dBc
3rd Harmonic, @ 25°C. Min.	-20 dBc	-12 dBc	-20 dBc	-15 dBc	-20 dBc
Spurious Output, Min.	-60 dBc	-20 dBc	-60 dBc	-60 dBc	-60 dBc
Main Tuning Port Characteristics	-00 abc	-00 abc	-00 abc	-00 abc	-00 abc
Sensitivity	20±1 MHz/ma	20±1 MHz/mA	20±1 MHz/mA	20±1 MHz/mA	20±1 MHz/mA
3 dB Bandwidth. Typ.	5KHz	5KHz	5KHz	5KHz	5KHz
Linearity, Typ	±0.05%	±0.05%	±0.05%	±0.01%	±0.01%
Hysteresis, Typ.	6 MHz	±0.05 / 0 6 MHz	±0.0570 6 MHz	6 MHz	6 MHz
Input impedance @ 1KHz, Typ.	10 ohm in series	10 ohm in series	10 ohm in series	9 ohm in series	9 ohm in series
1 1	with 95 mH	with 95 mH	with 95 mH	with 60 mH	with 60 mH
FM Port Characteristics					
Sensitivity, Typ.	310 KHz/mA	310 KHz/mA	310 KHz/mA	450 KHz/mA	450 KHz/mA
3 dB Bandwidth, Typ.	800 KHz	800 KHz	800 KHz	400 KHz	400 KHz
Deviation at 3 dB Bandwidth, Max	40 MHz	40 MHz	40 MHz	70 MHz	40 MHz
Input impedance @ 1KHz, Typ	1 ohm in series	1 ohm in series	1 ohm in series	0.5 ohm in series	0.5 ohm in series
DO O'read Decree Man	with 1.7 μH	with 1.7 μH	with 1.7 μH	with 2 μH	with 2 μH
DC Circuit Power, Max.	40 1	450 4	200 1		
+15 ±0.5V	40 mA	150 mA	200 mA	-	-
-5 ±0.1V	40 mA -	60 mA	60 mA	300mA	10F m A
+15 +0.5/-3.5V	=	-	-	SUUMA	125 mA
YIG Heater Power	00 1- 00 1/00	00 (- 00 )/D0	00.100.1/D0	00.100.1/D0	00 (- 00 )/D0
Input Voltage Range	20 to 28 VDC	20 to 28 VDC	20 to 28 VDC	20 to 28 VDC	20 to 28 VDC
Power @ 25°C, Max.	1.5 watts	1.5 watts	1.5 watts	1.5 watts	1.5 watts
Power @ 0°C, Max. Weight, Max.	2.0 watts 10 oz.	2.0 watts 10 oz.	2.0 watts 10 oz.	2.0 watts 12 oz.	2.0 watts 12 oz.
Case Style	C-38	C-38	C-45	M4-45	M4-45
ouse style	0 00	0 00	0 40	IVIT TO	1414 40
Model No.	AV-7872	AV-7873	AV-71241	AV-71251	AV-71261
Frequency Range, Min.	8 – 12.4 GHz	8 – 12.4 GHz	12 - 18 GHz	12 - 18 GHz	12 - 18 GHz
Power Output into 50 ohm load, Min. at 25°C	60mW/+17.8 dBm	100mW/+20 dBm	20mW/+13dBm	40mW/+16 dBm	80mW/+19 dBm
Power Output Variation vs. Frequency, Max.	6.0 dB	6.0 dB	6.0 dB	6.0 dB	6.0 dB
Operating Case Temperature Range	0° to +65°C	0° to +65°C	0° to +65°C	0° to +65°C	0° to +65°C
Freq. Drift Over Operating Temperature. Max.	25 MHz	25 MHz	40 MHz	40 MHz	40 MHz
Pulling Figure (12dB Return Loss). Typ.	1 MHz	1 MHz	5 MHz	1 MHz	$\cap \subseteq M \sqcup \neg$
Pushing Figure, +15 VDC Supply. Typ.					0.5 MHz
	0.1 MHz/V	0.1 MHz/V	0.1 MHz/V	0.1 MHz/V	0.1 MHz/V
-5 VDC Supply, Typ.	N/A	0.1 MHz/V N/A	N/A	0.1 MHz/V N/A	0.1 MHz/V N/A
-5 VDC Supply, Typ.  Magnetic Susceptibility @ 60 Hz Typ.	N/A 50KHz/Gauss	0.1 MHz/V N/A 50KHz/Gauss	N/A 50KHz/Gauss	0.1 MHz/V N/A 50KHz/Gauss	0.1 MHz/V N/A 50KHz/Gauss
-5 VDC Supply, Typ.  Magnetic Susceptibility @ 60 Hz Typ.  2nd Harmonic, @ 25°C, Min.	N/A 50KHz/Gauss -12 dBc	0.1 MHz/V N/A 50KHz/Gauss -12 dBc	N/A	0.1 MHz/V N/A	0.1 MHz/V N/A 50KHz/Gauss -12 dBc
-5 VDC Supply, Typ.  Magnetic Susceptibility @ 60 Hz Typ.  2nd Harmonic, @ 25°C, Min.  3rd Harmonic, @ 25°C. Min.	N/A 50KHz/Gauss -12 dBc -20 dBc	0.1 MHz/V N/A 50KHz/Gauss -12 dBc -20 dBc	N/A 50KHz/Gauss -12 dBc -	0.1 MHz/V N/A 50KHz/Gauss -12 dBc -	0.1 MHz/V N/A 50KHz/Gauss -12 dBc
-5 VDC Supply, Typ. Magnetic Susceptibility @ 60 Hz Typ. 2nd Harmonic, @ 25°C, Min. 3rd Harmonic, @ 25°C. Min. Spurious Output, Min.	N/A 50KHz/Gauss -12 dBc	0.1 MHz/V N/A 50KHz/Gauss -12 dBc	N/A 50KHz/Gauss	0.1 MHz/V N/A 50KHz/Gauss	0.1 MHz/V N/A 50KHz/Gauss -12 dBc
-5 VDC Supply, Typ.  Magnetic Susceptibility @ 60 Hz Typ.  2nd Harmonic, @ 25°C, Min.  3rd Harmonic, @ 25°C. Min.  Spurious Output, Min.  Main Tuning Port Characteristics	N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc	0.1 MHz/V N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc	N/A 50KHz/Gauss -12 dBc - -60 dBc	0.1 MHz/V N/A 50KHz/Gauss -12 dBc - -60 dBc	0.1 MHz/V N/A 50KHz/Gauss -12 dBc - -60 dBc
-5 VDC Supply, Typ.  Magnetic Susceptibility @ 60 Hz Typ.  2nd Harmonic, @ 25°C, Min.  3rd Harmonic, @ 25°C. Min.  Spurious Output, Min.  Main Tuning Port Characteristics  Sensitivity	N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc 20±1 MHz/ma	0.1 MHz/V N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc 20±1 MHz/mA	N/A 50KHz/Gauss -12 dBc - -60 dBc 18±1 MHz/mA	0.1 MHz/V N/A 50KHz/Gauss -12 dBc - -60 dBc 18±1 MHz/mA	0.1 MHz/V N/A 50KHz/Gauss -12 dBc - -60 dBc 18±1 MHz/mA
-5 VDC Supply, Typ.  Magnetic Susceptibility @ 60 Hz Typ.  2nd Harmonic, @ 25°C, Min.  3rd Harmonic, @ 25°C. Min.  Spurious Output, Min.  Main Tuning Port Characteristics  Sensitivity  3 dB Bandwidth. Typ.	N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc 20±1 MHz/ma 5KHz	0.1 MHz/V N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc 20±1 MHz/mA 5KHz	N/A 50KHz/Gauss -12 dBc - -60 dBc 18±1 MHz/mA 5KHz	0.1 MHz/V N/A 50KHz/Gauss -12 dBc - -60 dBc 18±1 MHz/mA 5KHz	0.1 MHz/V N/A 50KHz/Gauss -12 dBc - -60 dBc 18±1 MHz/mA 5KHz
-5 VDC Supply, Typ.  Magnetic Susceptibility @ 60 Hz Typ.  2nd Harmonic, @ 25°C, Min.  3rd Harmonic, @ 25°C. Min.  Spurious Output, Min.  Main Tuning Port Characteristics  Sensitivity  3 dB Bandwidth. Typ.  Linearity, Typ	N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc 20±1 MHz/ma 5KHz ±0.1%	0.1 MHz/V N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc 20±1 MHz/mA 5KHz ±0.1%	N/A 50KHz/Gauss -12 dBc - -60 dBc 18±1 MHz/mA 5KHz ±0.1%	0.1 MHz/V N/A 50KHz/Gauss -12 dBc - -60 dBc 18±1 MHz/mA 5KHz ±0.1%	0.1 MHz/V N/A 50KHz/Gauss -12 dBc - -60 dBc 18±1 MHz/mA 5KHz ±0.1%
-5 VDC Supply, Typ.  Magnetic Susceptibility @ 60 Hz Typ. 2nd Harmonic, @ 25°C, Min. 3rd Harmonic, @ 25°C. Min. Spurious Output, Min.  Main Tuning Port Characteristics Sensitivity 3 dB Bandwidth. Typ. Linearity, Typ Hysteresis, Typ.	N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc 20±1 MHz/ma 5KHz ±0.1% 6 MHz	0.1 MHz/V N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc 20±1 MHz/mA 5KHz ±0.1% 6 MHz	N/A 50KHz/Gauss -12 dBc - -60 dBc 18±1 MHz/mA 5KHz ±0.1% 9 MHz	0.1 MHz/V N/A 50KHz/Gauss -12 dBc - -60 dBc 18±1 MHz/mA 5KHz ±0.1% 9 MHz	0.1 MHz/V N/A 50KHz/Gauss -12 dBc - -60 dBc 18±1 MHz/mA 5KHz ±0.1% 9 MHz
-5 VDC Supply, Typ.  Magnetic Susceptibility @ 60 Hz Typ.  2nd Harmonic, @ 25°C, Min.  3rd Harmonic, @ 25°C. Min.  Spurious Output, Min.  Main Tuning Port Characteristics  Sensitivity  3 dB Bandwidth. Typ.  Linearity, Typ	N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc  20±1 MHz/ma 5KHz ±0.1% 6 MHz 9 ohm in series	0.1 MHz/V N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc 20±1 MHz/mA 5KHz ±0.1% 6 MHz 9 ohm in series	N/A 50KHz/Gauss -12 dBc60 dBc  18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series	0.1 MHz/V N/A 50KHz/Gauss -12 dBc - -60 dBc 18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series	0.1 MHz/V N/A 50KHz/Gauss -12 dBc - -60 dBc 18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series
-5 VDC Supply, Typ.  Magnetic Susceptibility @ 60 Hz Typ. 2nd Harmonic, @ 25°C, Min. 3rd Harmonic, @ 25°C. Min. Spurious Output, Min.  Main Tuning Port Characteristics Sensitivity 3 dB Bandwidth. Typ. Linearity, Typ Hysteresis, Typ. Input impedance @ 1KHz, Typ.	N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc 20±1 MHz/ma 5KHz ±0.1% 6 MHz	0.1 MHz/V N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc 20±1 MHz/mA 5KHz ±0.1% 6 MHz	N/A 50KHz/Gauss -12 dBc - -60 dBc 18±1 MHz/mA 5KHz ±0.1% 9 MHz	0.1 MHz/V N/A 50KHz/Gauss -12 dBc - -60 dBc 18±1 MHz/mA 5KHz ±0.1% 9 MHz	0.1 MHz/V N/A 50KHz/Gauss -12 dBc - -60 dBc 18±1 MHz/mA 5KHz ±0.1% 9 MHz
-5 VDC Supply, Typ.  Magnetic Susceptibility @ 60 Hz Typ. 2nd Harmonic, @ 25°C, Min. 3rd Harmonic, @ 25°C. Min. Spurious Output, Min.  Main Tuning Port Characteristics Sensitivity 3 dB Bandwidth. Typ. Linearity, Typ Hysteresis, Typ. Input impedance @ 1KHz, Typ.	N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc  20±1 MHz/ma 5KHz ±0.1% 6 MHz 9 ohm in series with 60 mH	0.1 MHz/V N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc 20±1 MHz/mA 5KHz ±0.1% 6 MHz 9 ohm in series with 60 mH	N/A 50KHz/Gauss -12 dBc60 dBc  18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series with 73 mH	0.1 MHz/V N/A 50KHz/Gauss -12 dBc - -60 dBc 18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series with 73 mH	0.1 MHz/V N/A 50KHz/Gauss -12 dBc - -60 dBc 18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series with 73 mH
-5 VDC Supply, Typ.  Magnetic Susceptibility @ 60 Hz Typ. 2nd Harmonic, @ 25°C, Min. 3rd Harmonic, @ 25°C. Min. Spurious Output, Min.  Main Tuning Port Characteristics Sensitivity 3 dB Bandwidth. Typ. Linearity, Typ Hysteresis, Typ. Input impedance @ 1KHz, Typ.  FM Port Characteristics Sensitivity, Typ.	N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc  20±1 MHz/ma 5KHz ±0.1% 6 MHz 9 ohm in series with 60 mH  450 KHz/mA	0.1 MHz/V N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc 20±1 MHz/mA 5KHz ±0.1% 6 MHz 9 ohm in series with 60 mH	N/A 50KHz/Gauss -12 dBc60 dBc  18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series with 73 mH  450 KHz/mA	0.1 MHz/V N/A 50KHz/Gauss -12 dBc - -60 dBc 18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series with 73 mH	0.1 MHz/V N/A 50KHz/Gauss -12 dBc - -60 dBc 18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series with 73 mH
-5 VDC Supply, Typ.  Magnetic Susceptibility @ 60 Hz Typ. 2nd Harmonic, @ 25°C, Min. 3rd Harmonic, @ 25°C. Min. Spurious Output, Min.  Main Tuning Port Characteristics Sensitivity 3 dB Bandwidth. Typ. Linearity, Typ Hysteresis, Typ. Input impedance @ 1KHz, Typ.	N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc  20±1 MHz/ma 5KHz ±0.1% 6 MHz 9 ohm in series with 60 mH	0.1 MHz/V N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc 20±1 MHz/mA 5KHz ±0.1% 6 MHz 9 ohm in series with 60 mH	N/A 50KHz/Gauss -12 dBc60 dBc  18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series with 73 mH	0.1 MHz/V N/A 50KHz/Gauss -12 dBc - -60 dBc 18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series with 73 mH	0.1 MHz/V N/A 50KHz/Gauss -12 dBc - -60 dBc 18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series with 73 mH
-5 VDC Supply, Typ.  Magnetic Susceptibility @ 60 Hz Typ.  2nd Harmonic, @ 25°C, Min.  3rd Harmonic, @ 25°C. Min.  Spurious Output, Min.  Main Tuning Port Characteristics  Sensitivity  3 dB Bandwidth. Typ.  Linearity, Typ  Hysteresis, Typ. Input impedance @ 1KHz, Typ.  FM Port Characteristics  Sensitivity, Typ.  3 dB Bandwidth, Typ.  Deviation at 3 dB Bandwidth, Max	N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc  20±1 MHz/ma 5KHz ±0.1% 6 MHz 9 ohm in series with 60 mH  450 KHz/mA 400 KHz	0.1 MHz/V N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc 20±1 MHz/mA 5KHz ±0.1% 6 MHz 9 ohm in series with 60 mH 450 KHz/mA 400 KHz	N/A 50KHz/Gauss -12 dBc60 dBc  18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series with 73 mH  450 KHz/mA 1 MHz	0.1 MHz/V N/A 50KHz/Gauss -12 dBc60 dBc  18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series with 73 mH  450 KHz/mA 1 MHz	0.1 MHz/V N/A 50KHz/Gauss -12 dBc - -60 dBc 18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series with 73 mH 450 KHz/mA 1 MHz
-5 VDC Supply, Typ.  Magnetic Susceptibility @ 60 Hz Typ. 2nd Harmonic, @ 25°C, Min. 3rd Harmonic, @ 25°C. Min. Spurious Output, Min.  Main Tuning Port Characteristics Sensitivity 3 dB Bandwidth. Typ. Linearity, Typ Hysteresis, Typ. Input impedance @ 1KHz, Typ.  FM Port Characteristics Sensitivity, Typ. 3 dB Bandwidth, Typ.	N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc  20±1 MHz/ma 5KHz ±0.1% 6 MHz 9 ohm in series with 60 mH  450 KHz/mA 400 KHz 40 MHz 0.5 ohm in series	0.1 MHz/V N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc  20±1 MHz/mA 5KHz ±0.1% 6 MHz 9 ohm in series with 60 mH  450 KHz/mA 400 KHz 40 MHz 0.5 ohm in series	N/A 50KHz/Gauss -12 dBc60 dBc  18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series with 73 mH  450 KHz/mA 1 MHz 70 MHz 0.5 ohm in series	0.1 MHz/V N/A 50KHz/Gauss -12 dBc60 dBc  18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series with 73 mH  450 KHz/mA 1 MHz 70 MHz 0.5 ohm in series	0.1 MHz/V N/A 50KHz/Gauss -12 dBc - -60 dBc 18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series with 73 mH 450 KHz/mA 1 MHz 70 MHz 0.5 ohm in series
-5 VDC Supply, Typ.  Magnetic Susceptibility @ 60 Hz Typ. 2nd Harmonic, @ 25°C, Min. 3rd Harmonic, @ 25°C. Min. Spurious Output, Min.  Main Tuning Port Characteristics Sensitivity 3 dB Bandwidth. Typ. Linearity, Typ Hysteresis, Typ. Input impedance @ 1KHz, Typ.  FM Port Characteristics Sensitivity, Typ. 3 dB Bandwidth, Typ. Deviation at 3 dB Bandwidth, Max Input impedance @ 1KHz, Typ  DC Circuit Power, Max. +15 +0.5/-3.5V	N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc  20±1 MHz/ma 5KHz ±0.1% 6 MHz 9 ohm in series with 60 mH  450 KHz/mA 400 KHz 40 MHz	0.1 MHz/V N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc 20±1 MHz/mA 5KHz ±0.1% 6 MHz 9 ohm in series with 60 mH 450 KHz/mA 400 KHz 40 MHz	N/A 50KHz/Gauss -12 dBc60 dBc  18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series with 73 mH  450 KHz/mA 1 MHz 70 MHz	0.1 MHz/V N/A 50KHz/Gauss -12 dBc60 dBc  18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series with 73 mH  450 KHz/mA 1 MHz 70 MHz	0.1 MHz/V N/A 50KHz/Gauss -12 dBc  -60 dBc 18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series with 73 mH 450 KHz/mA 1 MHz 70 MHz
-5 VDC Supply, Typ.  Magnetic Susceptibility @ 60 Hz Typ. 2nd Harmonic, @ 25°C, Min. 3rd Harmonic, @ 25°C. Min. Spurious Output, Min.  Main Tuning Port Characteristics Sensitivity 3 dB Bandwidth. Typ. Linearity, Typ Hysteresis, Typ. Input impedance @ 1KHz, Typ.  FM Port Characteristics Sensitivity, Typ. 3 dB Bandwidth, Typ. Deviation at 3 dB Bandwidth, Max Input impedance @ 1KHz, Typ  DC Circuit Power, Max. +15 +0.5/-3.5V YIG Heater Power	N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc  20±1 MHz/ma 5KHz ±0.1% 6 MHz 9 ohm in series with 60 mH  450 KHz/mA 400 KHz 40 MHz 0.5 ohm in series with 2 µH 250 mA	0.1 MHz/V N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc 20±1 MHz/mA 5KHz ±0.1% 6 MHz 9 ohm in series with 60 mH 450 KHz/mA 400 KHz 40 MHz 0.5 ohm in series with 2 µH 250 mA	N/A 50KHz/Gauss -12 dBc60 dBc  18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series with 73 mH  450 KHz/mA 1 MHz 70 MHz 0.5 ohm in series with 2.3 µH 125 mA	0.1 MHz/V N/A 50KHz/Gauss -12 dBc60 dBc  18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series with 73 mH  450 KHz/mA 1 MHz 70 MHz 0.5 ohm in series with 2.3 µH 150 mA	0.1 MHz/V N/A 50KHz/Gauss -12 dBc - -60 dBc 18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series with 73 mH 450 KHz/mA 1 MHz 70 MHz 0.5 ohm in series with 2.3 µH 200 mA
-5 VDC Supply, Typ.  Magnetic Susceptibility @ 60 Hz Typ. 2nd Harmonic, @ 25°C, Min. 3rd Harmonic, @ 25°C. Min. Spurious Output, Min.  Main Tuning Port Characteristics Sensitivity 3 dB Bandwidth. Typ. Linearity, Typ Hysteresis, Typ. Input impedance @ 1KHz, Typ.  FM Port Characteristics Sensitivity, Typ. 3 dB Bandwidth, Typ. Deviation at 3 dB Bandwidth, Max Input impedance @ 1KHz, Typ  DC Circuit Power, Max. +15 +0.5/-3.5V YIG Heater Power Input Voltage Range	N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc  20±1 MHz/ma 5KHz ±0.1% 6 MHz 9 ohm in series with 60 mH  450 KHz/mA 400 KHz 40 MHz 0.5 ohm in series with 2 µH 250 mA	0.1 MHz/V N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc  20±1 MHz/mA 5KHz ±0.1% 6 MHz 9 ohm in series with 60 mH  450 KHz/mA 400 KHz 40 MHz 0.5 ohm in series with 2 µH 250 mA	N/A 50KHz/Gauss -12 dBc60 dBc  18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series with 73 mH  450 KHz/mA 1 MHz 70 MHz 0.5 ohm in series with 2.3 µH 125 mA	0.1 MHz/V N/A 50KHz/Gauss -12 dBc60 dBc  18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series with 73 mH  450 KHz/mA 1 MHz 70 MHz 0.5 ohm in series with 2.3 µH 150 mA	0.1 MHz/V N/A 50KHz/Gauss -12 dBc60 dBc  18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series with 73 mH  450 KHz/mA 1 MHz 70 MHz 0.5 ohm in series with 2.3 µH 200 mA
-5 VDC Supply, Typ.  Magnetic Susceptibility @ 60 Hz Typ. 2nd Harmonic, @ 25°C, Min. 3rd Harmonic, @ 25°C. Min. Spurious Output, Min.  Main Tuning Port Characteristics Sensitivity 3 dB Bandwidth. Typ. Linearity, Typ Hysteresis, Typ. Input impedance @ 1KHz, Typ.  FM Port Characteristics Sensitivity, Typ. 3 dB Bandwidth, Typ. Deviation at 3 dB Bandwidth, Max Input impedance @ 1KHz, Typ  DC Circuit Power, Max. +15 +0.5/-3.5V YIG Heater Power Input Voltage Range Power @ 25°C, Max.	N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc  20±1 MHz/ma 5KHz ±0.1% 6 MHz 9 ohm in series with 60 mH  450 KHz/mA 400 KHz 40 MHz 0.5 ohm in series with 2 µH 250 mA  20 to 28 VDC 1.5 watts	0.1 MHz/V N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc  20±1 MHz/mA 5KHz ±0.1% 6 MHz 9 ohm in series with 60 mH  450 KHz/mA 400 KHz 40 MHz 0.5 ohm in series with 2 µH 250 mA  20 to 28 VDC 1.5 watts	N/A 50KHz/Gauss -12 dBc60 dBc  18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series with 73 mH  450 KHz/mA 1 MHz 70 MHz 0.5 ohm in series with 2.3 µH 125 mA  20 to 28 VDC 1.5 watts	0.1 MHz/V N/A 50KHz/Gauss -12 dBc60 dBc  18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series with 73 mH  450 KHz/mA 1 MHz 70 MHz 0.5 ohm in series with 2.3 µH 150 mA  20 to 28 VDC 1.5 watts	0.1 MHz/V N/A 50KHz/Gauss -12 dBc60 dBc  18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series with 73 mH  450 KHz/mA 1 MHz 70 MHz 0.5 ohm in series with 2.3 µH 200 mA  20 to 28 VDC 1.5 watts
-5 VDC Supply, Typ.  Magnetic Susceptibility @ 60 Hz Typ. 2nd Harmonic, @ 25°C, Min. 3rd Harmonic, @ 25°C. Min. Spurious Output, Min.  Main Tuning Port Characteristics Sensitivity 3 dB Bandwidth. Typ. Linearity, Typ Hysteresis, Typ. Input impedance @ 1KHz, Typ.  FM Port Characteristics Sensitivity, Typ. 3 dB Bandwidth, Typ. Deviation at 3 dB Bandwidth, Max Input impedance @ 1KHz, Typ  DC Circuit Power, Max. +15 +0.5/-3.5V YIG Heater Power Input Voltage Range	N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc  20±1 MHz/ma 5KHz ±0.1% 6 MHz 9 ohm in series with 60 mH  450 KHz/mA 400 KHz 40 MHz 0.5 ohm in series with 2 µH 250 mA	0.1 MHz/V N/A 50KHz/Gauss -12 dBc -20 dBc -60 dBc  20±1 MHz/mA 5KHz ±0.1% 6 MHz 9 ohm in series with 60 mH  450 KHz/mA 400 KHz 40 MHz 0.5 ohm in series with 2 µH 250 mA	N/A 50KHz/Gauss -12 dBc60 dBc  18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series with 73 mH  450 KHz/mA 1 MHz 70 MHz 0.5 ohm in series with 2.3 µH 125 mA	0.1 MHz/V N/A 50KHz/Gauss -12 dBc60 dBc  18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series with 73 mH  450 KHz/mA 1 MHz 70 MHz 0.5 ohm in series with 2.3 µH 150 mA	0.1 MHz/V N/A 50KHz/Gauss -12 dBc - -60 dBc 18±1 MHz/mA 5KHz ±0.1% 9 MHz 6 ohm in series with 73 mH 450 KHz/mA 1 MHz 70 MHz 0.5 ohm in series with 2.3 µH 200 mA