

# Voltage Controlled Oscillator

# RS500AM

Optimized band 450 to 550 MHz

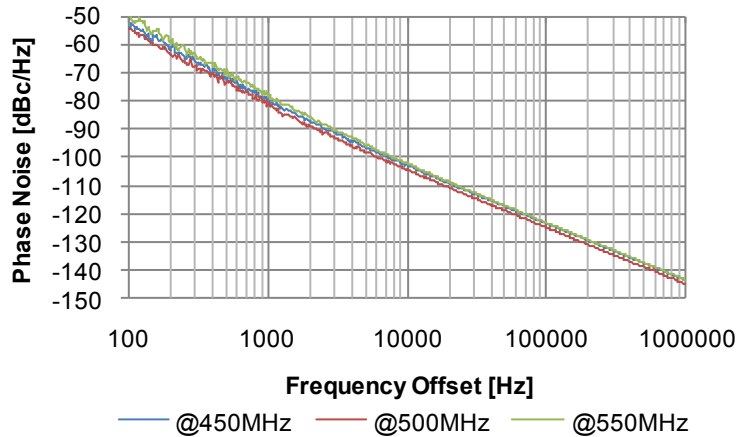
Rev. A

## Features

- Low phase noise
- Linear tuning characteristics
- Low pushing / Low pulling
- Aqueous washable

## Applications

- Base station
- Cable TV
- Satellite Communications
- UHF radio link

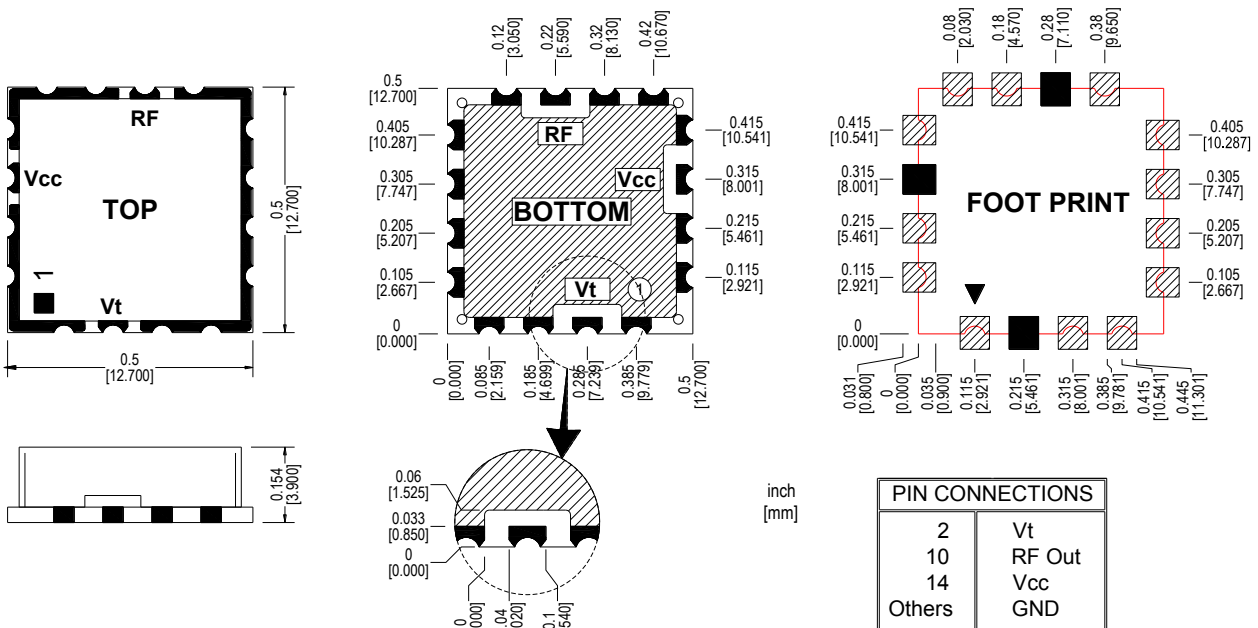


## Electrical Characteristics

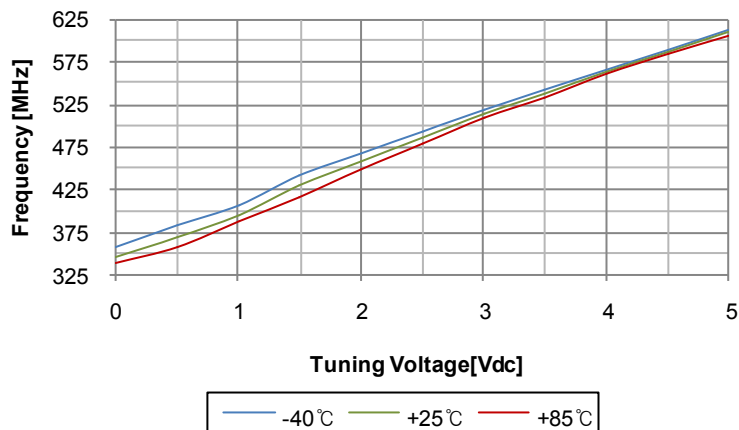


Parameter	Units	Min	Typ	Max
Operating Frequency Range	MHz	450		550
Output Power	dBm	+8.0	+10.0	+12.0
Output Impedance	$\Omega$		50	
Phase Noise	@10kHz offset		-102	
	@100kHz offset		-122	
Tuning Voltage (Vt)	Vdc	0.0		5.0
Tuning Voltage Sensivity (Kv)	MHz/V		50-57	
2nd Harmonic Suppression	dBc		-15	
Power Supply (Vcc)	Voltage		5	
	Current		15	30
Pushing Figure	MHz/V		0.9	
Pulling Figure	MHz		10	
Input Capacitance	pF		100	
Operating Temp. Range	$^{\circ}\text{C}$	-40		+85

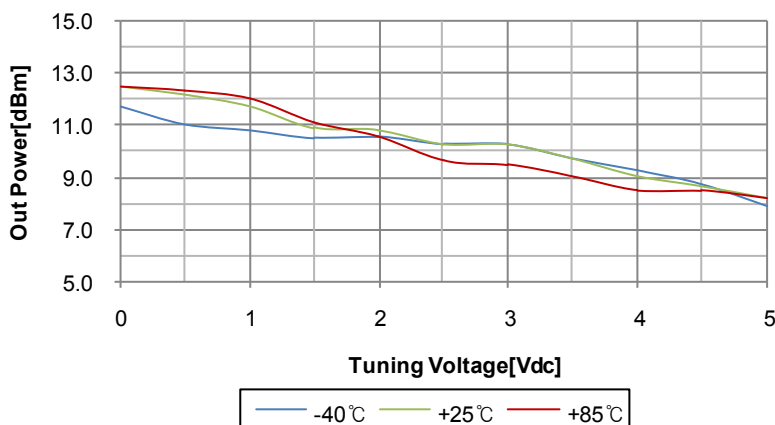
## Dimensions



## Tuning Curve



## Output Power Curve



## Performance Data

Vt [Vdc]	Frequency [MHz]			Kv [MHz/V]			Output Power [dBm]			2nd Harmonic [dBc]
	+25°C	+85°C	-40°C	+25°C	+85°C	-40°C	+25°C	+85°C	-40°C	
0.0	346.0	339.4	358.1	-	-	-	12.5	12.5	11.7	-6.1
0.5	368.4	357.4	382.1	44.7	36.0	48.0	12.2	12.3	11.0	-8.7
1.0	395.2	386.4	406.4	53.6	58.1	48.5	11.7	12.0	10.8	-10.1
1.5	429.1	416.6	440.6	67.8	60.3	68.4	10.9	11.1	10.5	-12.3
2.0	458.0	448.8	467.2	57.7	64.4	53.2	10.8	10.6	10.6	-15.1
2.5	486.6	478.0	494.0	57.2	58.4	53.5	10.3	9.6	10.3	-16.7
3.0	514.2	508.4	517.9	55.3	60.9	47.9	10.3	9.5	10.3	-18.9
3.5	538.6	533.6	541.2	48.6	50.4	46.6	9.7	9.1	9.8	-18.3
4.0	563.6	560.5	565.1	50.0	53.8	47.9	9.0	8.5	9.3	-16.9
4.5	586.4	583.7	587.8	45.6	46.3	45.4	8.6	8.5	8.8	-15.9
5.0	609.0	605.8	611.5	45.2	44.3	47.2	8.2	8.2	7.9	-15.3