Voltage Controlled Oscillator - VCO
RQS-Series

Features

- Frequency Range up to 3.5 GHz
- Compatible to Murata MQE-series
- Low Profile, 1.9 mm
- Low Power Consumption

Applications

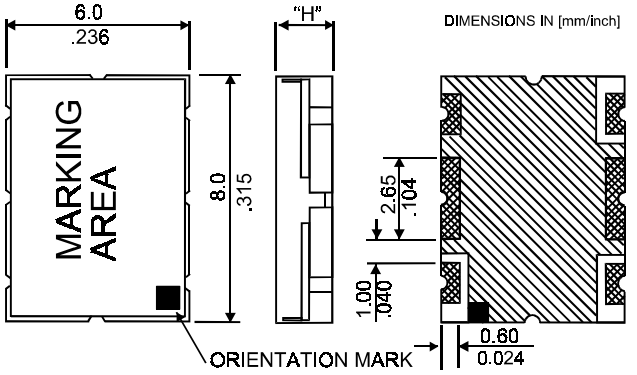
- Wireless Networks
- Cordless Phones
- Telecommunications
- Navigation

Description

The RQS-series is ideally suited for cost-sensitive applications. With its small dimensions and low power consumption, the RQS-series meets the requirements of portable and wireless applications. A high degree of process-automation ensures consistent performance at high volume and lowest cost.

Mechanical Specification

TOP VIEW | SIDE VIEW | BOTTOM VIEW | SOLDER PATTERN | COMMENTS



Pad / Functions:
No Industry-standard is established for numbering scheme of 6x8 package. (2001/2002)

Height "H" (max):
1.9 mm / .075"

Outline Tolerances:
±0.20mm / ±.008"

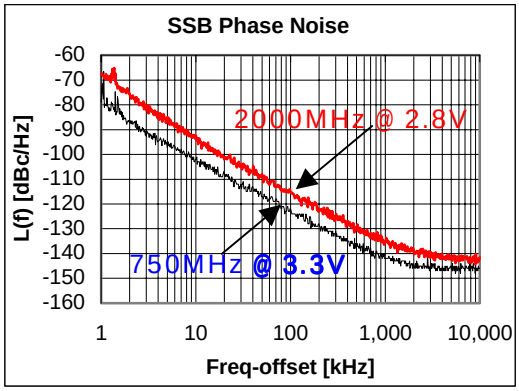
Electrical Specification

PARAMETER	COMMENTS, EXAMPLES	SYMBOL	MIN	TYP	MAX	UNIT
Max Frequency	Currently available in RQS-package	fo			2500	MHz
Tuning Ratio	Ratio of upper-to-lower freq (2 = "Octave-VCO")	f-up : f-low		1.1	2.0	-
Tuning Voltage	Range is typ. 2V for battery-operated applications	Vt	0~2	0~5		V
Supply Voltage	Mobile devices typ. operated at 2.7V and up	Vcc	2.7	3.3		V
Supply Current	Dependent on Frequency and Output Power	Icc	6	15	25	mA
Output Power	Output Power Tolerance is typically ±3dB	Pout	-3	0	+5	dBm
Harmonic Suppression	Dependent on Tuning Range and Frequency	a(2fo)		-10		dBc
Pushing	Dependent on Freq, Tuning R., typ 0.5%~1% fo	df/dVcc	2	5	10	MHz/V
Pulling	Dependent on Freq, Output Power and Circuit.	df/dZL	2	5	10	MHz

General Specification

1. Load Impedance is 50 Ohms.
2. Operating temperature range is typically –40°C…+85°C.
3. The package is non-hermetic. Substrate is glass-reinforced laminate, the cover is folded nickel-silver.
4. Bypass-capacitors (ceramic) from Vcc to Ground are recommended: 1nF||100pF.
5. Customized specifications may deviate from this General Specification.
6. Phase-noise performance depends on the individual specification. Phase Noise is strongly dependent on (a) frequency (b) supply voltage and (c) tuning range.
7. The phase noise graph (to right) shows the characteristic of two typical RQS-VCOs at 0dBm output power, ±1% tuning range and 3.3V / 2.8V supply voltage.

Phase Noise Examples



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