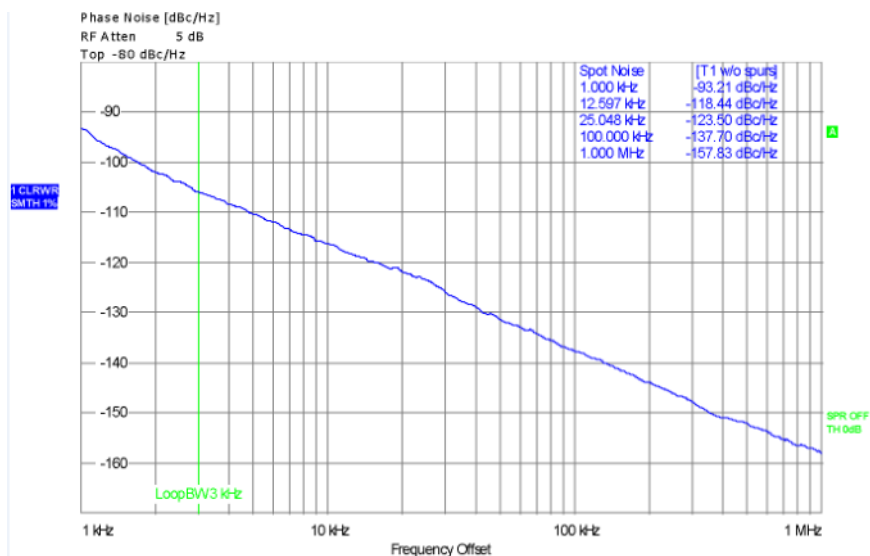
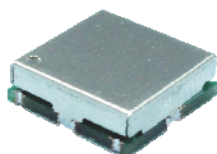


# SURFACE MOUNT MODEL VOLTAGE CONTROLLED OSCILLATOR

**Frequency**      **350-400MHz**

**VH375MT**



## FEATURES

- ▶ **Miniature Size**
- ▶ **Surface Mount Package**
- ▶ **Low Phase Noise Performance**
- ▶ **Electrically Shielded**
- ▶ **Highly Linear Tuning**

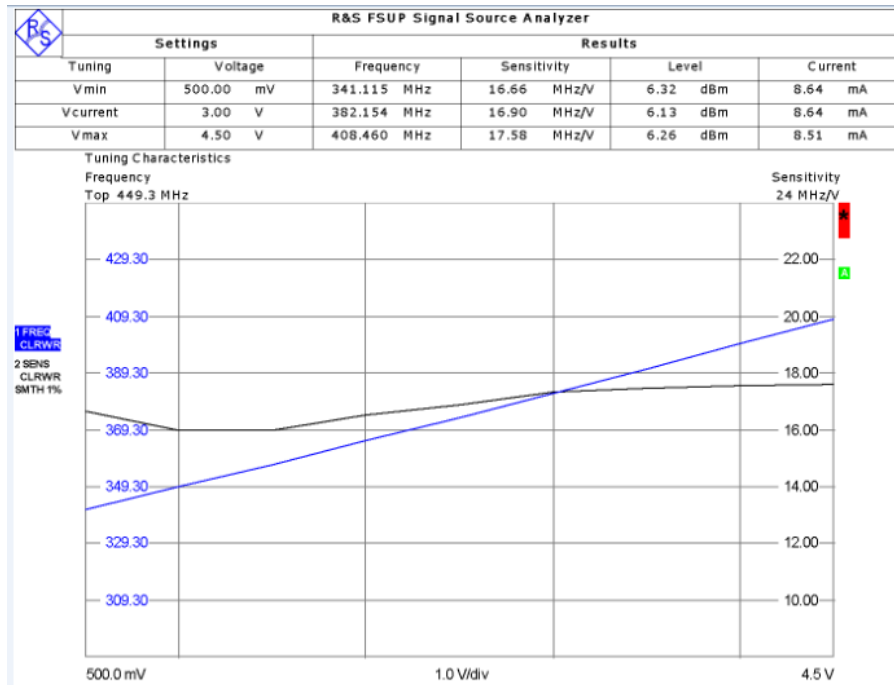
**Electrical Specifications,  $T_A = +25^\circ\text{C}$ ,  $V_{CC} = +5\text{V}$  (unless otherwise stated)**

| Parameter                  | Test Conditions         | Min  | Typ      | Max  | Units            |
|----------------------------|-------------------------|------|----------|------|------------------|
| Frequency Rangs            |                         | 350  |          | 400  | MHz              |
| Tuning Voltage (V)         |                         | 0.5  |          | 4.5  | V                |
| RF Output Power            | 350-400MHz              | 6    | 6.3      | 7.0  | dBm              |
| Supply Voltage (Vcc)       |                         | 4.75 | 5        | 5.25 | V                |
| Supply Current (Icc)       |                         |      | 8.5      | 9.5  | mA               |
| Phase Noise :              |                         |      |          |      |                  |
|                            | @12.5kHz Offset:        |      | -118     | -117 | dBc/Hz           |
|                            | @100kHz Offset:         |      | -137     | -136 | dBc/Hz           |
| Average Tuning Sensitivity | 221-248MHz              |      | 16.5     |      | MHz/V            |
| Modulation deviation       | @Freq:1kHz Ampl:500mV   |      | $\pm 70$ |      | KHz              |
| Harmonic Outputs           |                         | -6.7 | -6.0     | -3.7 | dBc              |
| OperatingTemperature       |                         | -40  |          | +85  | $^\circ\text{C}$ |
| Tune Input Capacitance     |                         |      | 100      |      | PF               |
| Output Impedance -         |                         |      | 50       |      | $\Omega$         |
| Package Type               | SK625A(9.52X9.52X3.1mm) |      |          |      |                  |

## Comments

X Indicates parameter to be tested 100% in production

| V<br>TUNE | TUNING<br>SENS.<br>(MHz/V) | FREQUENCY(MHz) |       |       | POWER OUTPUT(dBm) |      |      | HARMONIC(dBc) |      |      |
|-----------|----------------------------|----------------|-------|-------|-------------------|------|------|---------------|------|------|
|           |                            | -40℃           | +25℃  | +85℃  | -40℃              | +25℃ | +85℃ | -40℃          | +25℃ | +85℃ |
| 0.5       | 16.8                       | 343.4          | 341.3 | 338.8 | 5.0               | 5.6  | 6.3  | -3.7          | -4.5 | -4.8 |
| 1.0       | 15.9                       | 352.2          | 349.5 | 347.1 | 5.2               | 5.6  | 6.4  | -3.4          | -3.7 | -4.1 |
| 1.5       | 15.9                       | 360.3          | 357.3 | 355.4 | 5.6               | 5.9  | 6.6  | -4.3          | -4.1 | -4.8 |
| 2.0       | 16.5                       | 368.2          | 365.3 | 363.4 | 6.0               | 6.1  | 6.6  | -5.3          | -5.7 | -6.3 |
| 2.5       | 16.9                       | 376.1          | 373.7 | 371.5 | 6.4               | 6.4  | 6.4  | -5.1          | -6.7 | -7.3 |
| 3.0       | 17.2                       | 384.7          | 382.2 | 379.7 | 6.3               | 6.5  | 5.9  | -4.6          | -6.4 | -7.2 |
| 3.5       | 17.5                       | 393.9          | 390.8 | 388.1 | 6.0               | 6.5  | 5.7  | -4.5          | -5.6 | -6.2 |
| 4.0       | 17.6                       | 403.3          | 400.0 | 397.0 | 5.8               | 6.3  | 5.6  | -5.0          | -5.6 | -5.8 |
| 4.5       | 17.6                       | 412.4          | 409.0 | 406.3 | 5.6               | 6.2  | 5.7  | -4.9          | -5.7 | -6.1 |

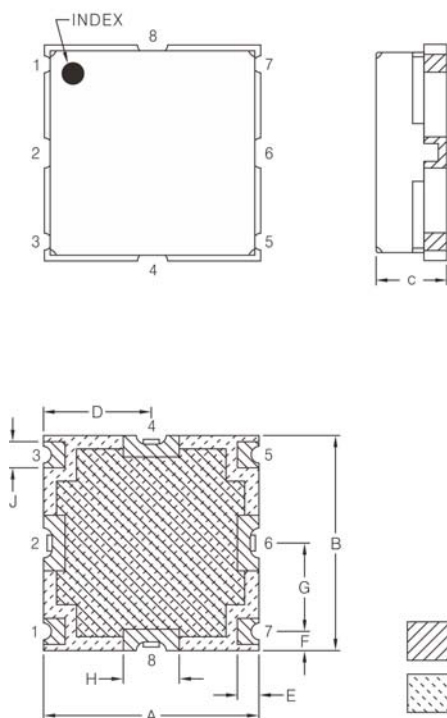


# Case Style

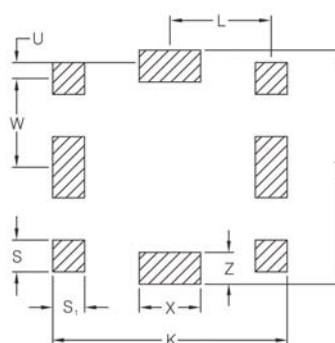
SK625

A

## Outline Dimensions



## PCB Land Pattern



| SK625       | A     | B     | C     | D     | E     | F     | G     | H     | J     |
|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| MILLIMETERS | 9.52  | 9.52  | 3.10  | 4.76  | 1.00  | 0.85  | 3.91  | 2.40  | 1.10  |
| INCHES      | 0.375 | 0.375 | 0.122 | 0.187 | 0.039 | 0.033 | 0.154 | 0.094 | 0.043 |

| SK625       | K     | L     | S     | S <sub>1</sub> | T     | U     | W     | X     | Z     |
|-------------|-------|-------|-------|----------------|-------|-------|-------|-------|-------|
| MILLIMETERS | 10.3  | 4.47  | 1.40  | 1.40           | 10.30 | 0.70  | 3.91  | 2.70  | 1.40  |
| INCHES      | 0.406 | 0.176 | 0.055 | 0.055          | 0.406 | 0.028 | 0.154 | 0.106 | 0.055 |

| PIN         | 1   | 2   | 3  | 4   | 5  | 6   | 7      | 8   |
|-------------|-----|-----|----|-----|----|-----|--------|-----|
| APPLICATION | VCC | GND | NC | GND | VT | GND | RF OUT | GND |

### Notes:

1. Case material: Nickel-Silver alloy.
2. Base: Printed wiring laminate.