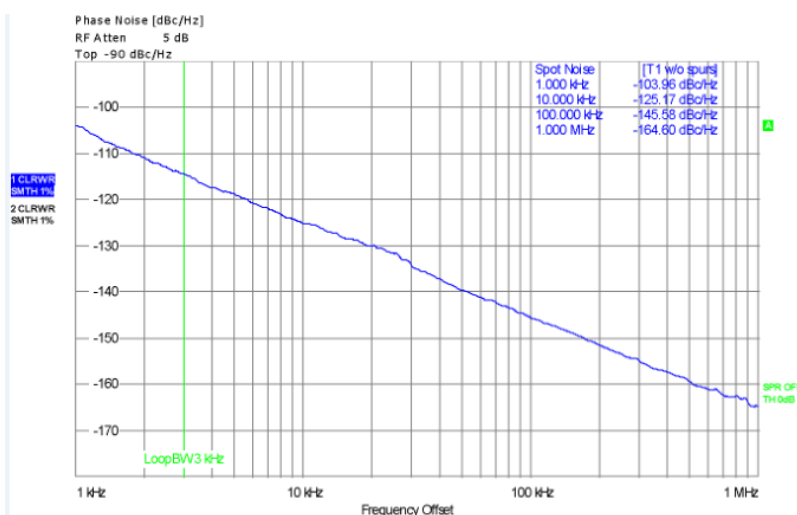
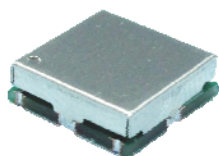


## SURFACE MOUNT MODEL VOLTAGE CONTROLLED OSCILLATOR

Frequency

100MHz

VH100MR1



### FEATURES

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

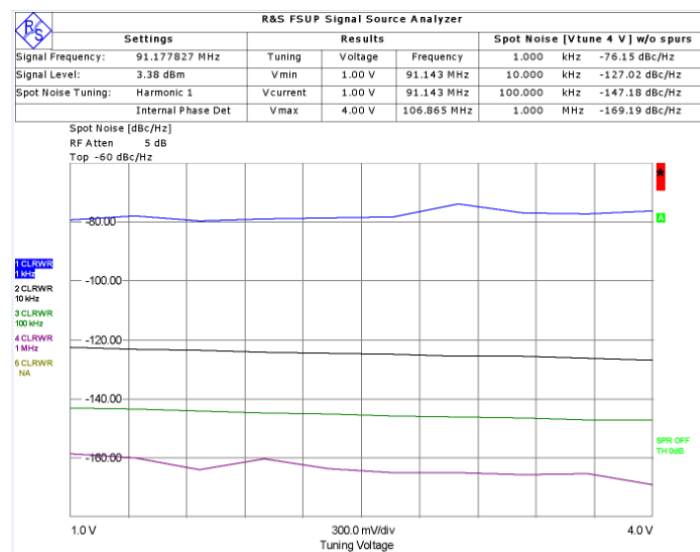
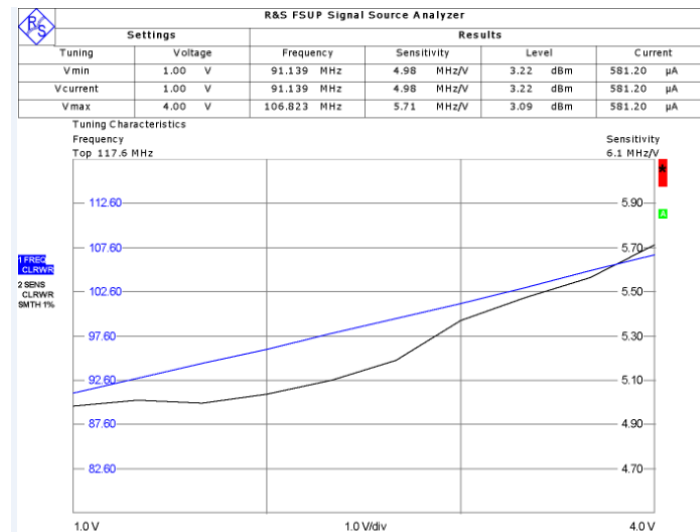
Electrical Specifications,  $T_A = +25^\circ\text{C}$ ,  $V_{CC} = +5.0\text{V}$  (unless otherwise stated)

| Parameter                  | Test Conditions         | Min  | Typ  | Max  | Units    |
|----------------------------|-------------------------|------|------|------|----------|
| Frequency Rangs            |                         |      | 100  |      | MHz      |
| Tuning Voltage (V)         |                         | 1    |      | 4    | V        |
| RF Output Power            | 100MHz                  | 2.8  | 3.0  | 3.1  | dBm      |
| Supply Voltage (Vcc)       |                         | 4.75 | 5    | 5.25 | V        |
| Supply Current (Icc)       |                         |      | 12   | 14   | mA       |
| Phase Noise :              |                         |      |      |      |          |
|                            | @10kHz Offset:          |      | -124 | -123 | dBc/Hz   |
|                            | @100kHz Offset:         |      | -144 | -143 | dBc/Hz   |
| Average Tuning Sensitivity | 91--105MHz              |      | 5    |      | MHz/V    |
| Modulation deviation       |                         |      |      |      | KHz      |
| Harmonic Outputs           |                         | -33  |      | -27  | dBc      |
| OperatingTemperature Range |                         | -55  |      | +85  | °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) |      |      |
|-----------|----------------------------|----------------|-------|-------|-------------------|------|------|---------------|------|------|
|           |                            | -55℃           | +25℃  | +85℃  | -55℃              | +25℃ | +85℃ | -55℃          | +25℃ | +85℃ |
| 1.0       | 5.0                        | 92.1           | 91.2  | 90.7  | 3.1               | 3.3  | 3.1  | -27           | -27  | -27  |
| 1.5       | 4.9                        | 94.7           | 93.7  | 93.2  | 3.0               | 3.2  | 3.0  | -28           | -28  | -28  |
| 2.0       | 5.0                        | 97.2           | 96.7  | 96.2  | 3.0               | 3.1  | 2.9  | -30           | -30  | -30  |
| 2.5       | 5.1                        | 99.7           | 99.2  | 98.7  | 3.1               | 3.1  | 2.8  | -32           | -32  | -32  |
| 3.0       | 5.3                        | 102.7          | 101.7 | 101.2 | 3.1               | 3.1  | 2.8  | -34           | -34  | -34  |
| 3.5       | 5.5                        | 105.2          | 104.7 | 103.7 | 3.1               | 3.1  | 2.8  | -37           | -36  | -36  |
| 4.0       | 5.7                        | 108.2          | 107.2 | 106.7 | 3.2               | 3.2  | 2.9  | -39           | -38  | -38  |

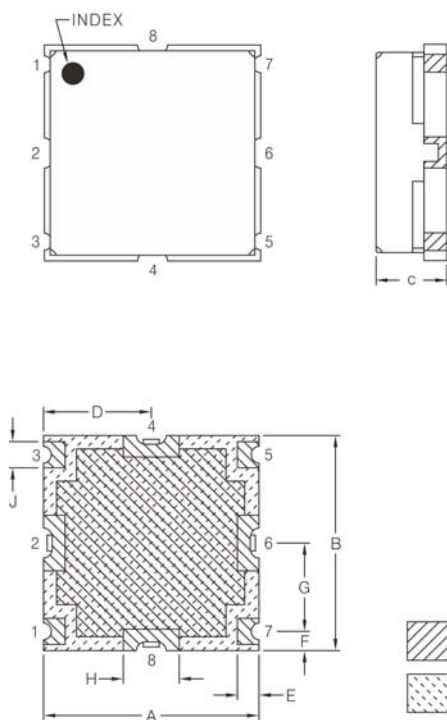


# Case Style

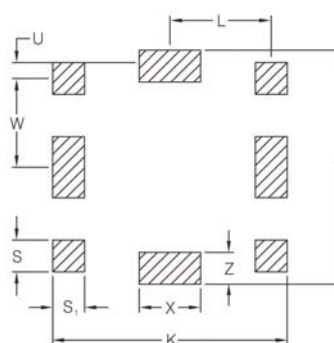
SK625

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.