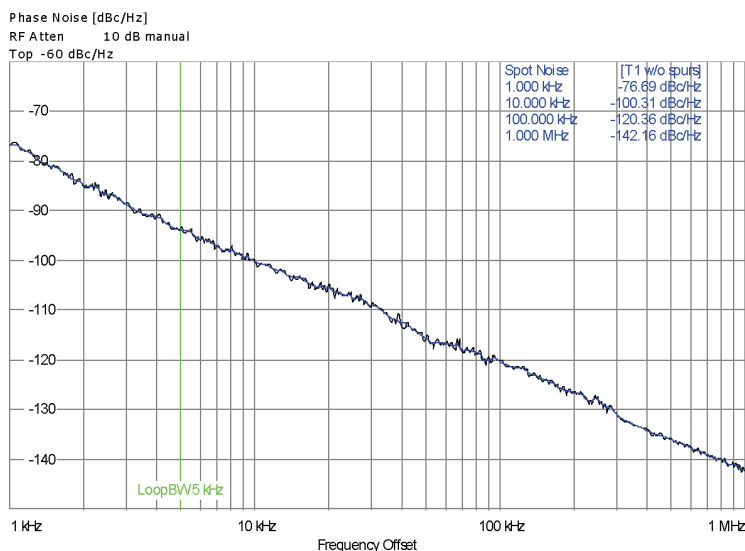
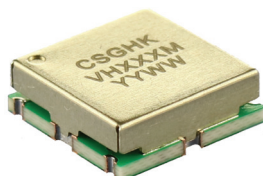


## SURFACE MOUNT MODEL VOLTAGE CONTROLLED OSCILLATOR

Frequency 1220-1510MHz

VS1510A



### FEATURES

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

Electrical Specifications,  $T_A = +25^\circ\text{C}$ ,  $V_{CC} = +4.5\text{V}$  (unless otherwise stated)

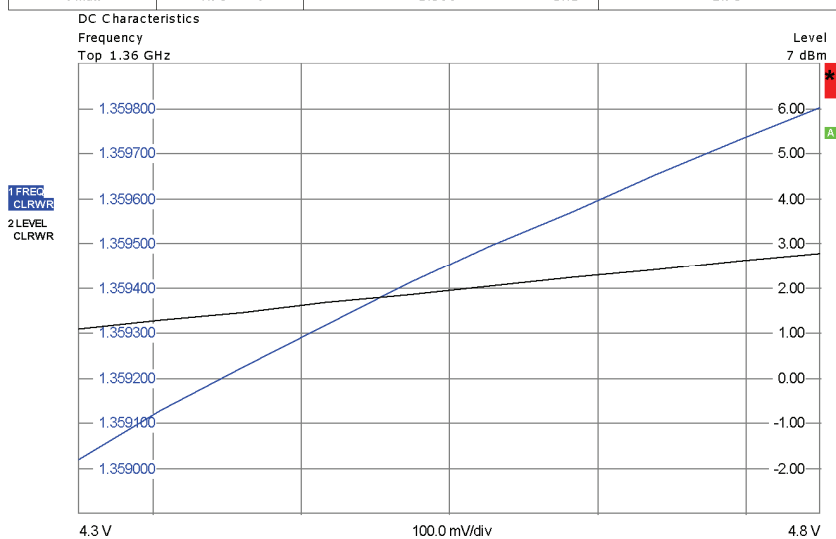
| Parameter                  | Test Conditions         | Min  | Typ   | Max  | Units    |
|----------------------------|-------------------------|------|-------|------|----------|
| Frequency Rangs            |                         | 1220 |       | 1510 | MHz      |
| Tuning Voltage (V)         |                         | 1.0  |       | 4.2  | V        |
| RF Output Power            | 1220~1510MHz            | -1.0 |       | 3.0  | dBm      |
| Supply Voltage (Vcc)       |                         | 4.25 | 4.5   | 4.75 | V        |
| Supply Current (Icc)       |                         |      | 9     | 12   | mA       |
| Phase Noise :              |                         |      |       |      |          |
|                            | @10kHz Offset:          |      | -100  | -97  | dBc/Hz   |
|                            | @100kHz Offset:         |      | -120  | -117 | dBc/Hz   |
| Average Tuning Sensitivity | 1220~1510MHz            |      | 112.1 |      | MHz/V    |
| Harmonic Outputs           |                         |      | -15   |      | dBc      |
| OperatingTemperature Range |                         | -55  |       | +85  | °C       |
| Tune Input Capacitance     |                         |      | -     |      | 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)  |       |       |
|-----------|----------------------------|----------------|--------|--------|-------------------|------|------|----------------|-------|-------|
|           |                            |                |        |        |                   |      |      | 2 <sup>n</sup> |       |       |
|           |                            | -55℃           | +25℃   | +85℃   | -55℃              | +25℃ | +85℃ | -55℃           | +25℃  | +85℃  |
| 1.0       | 110.5                      | 1204.8         | 1188.1 | 1174.2 | 1.1               | 1.9  | 1.7  | -11.8          | -13.2 | -14.4 |
| 1.5       | 108.6                      | 1258.8         | 1240.3 | 1226.8 | 0.7               | 1.9  | 2.0  | -11.7          | -14.1 | -14.9 |
| 2.0       | 108.8                      | 1313.8         | 1297.0 | 1284.0 | 0.9               | 1.6  | 1.3  | -12.4          | -13.5 | -14.9 |
| 2.5       | 113.3                      | 1370.6         | 1351.8 | 1338.2 | 0.3               | 1.5  | 1.6  | -13.6          | -16.3 | -18.0 |
| 3.0       | 116.1                      | 1429.8         | 1411.5 | 1397.8 | 0.0               | 0.9  | 0.8  | -14.3          | -16.9 | -18.7 |
| 3.5       | 114.9                      | 1486.6         | 1467.3 | 1454.2 | -0.3              | 0.8  | 0.9  | -15.6          | -18.4 | -19.4 |
| 4.0       | 107.6                      | 1544.0         | 1524.4 | 1510.0 | -0.5              | 0.5  | 0.6  | -18.4          | -20.4 | -23.3 |
| 4.2       | 102.7                      | 1567.6         | 1548.5 | 1534.1 | -0.5              | 0.6  | 0.6  | -18.0          | -19.1 | -21.9 |

| B6 | R&S FSUP Signal Source Analyzer |         |   |           |     |          |
|----|---------------------------------|---------|---|-----------|-----|----------|
|    | Settings                        |         |   | Results   |     |          |
|    | Supply                          | Voltage |   | Frequency |     | Level    |
|    | Vmin                            | 4.25    | V | 1.359     | GHz | 1.08 dBm |
|    | Vcurrent                        | 4.50    | V | 1.359     | GHz | 1.94 dBm |
|    | Vmax                            | 4.75    | V | 1.360     | GHz | 2.78 dBm |



Measurement Aborted

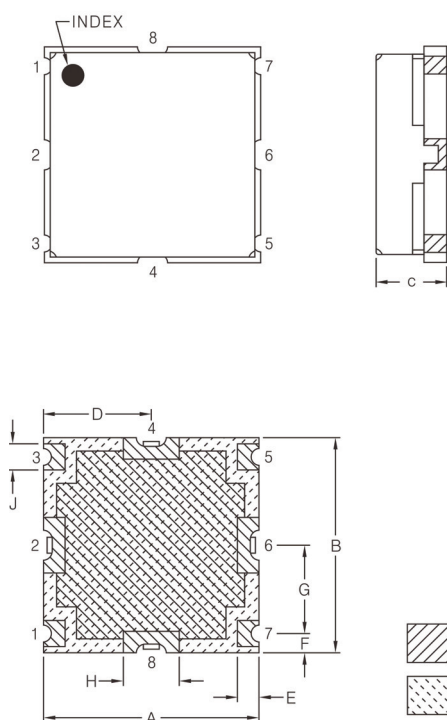
Date: 5.DEC.2014 07:25:47

# Case Style

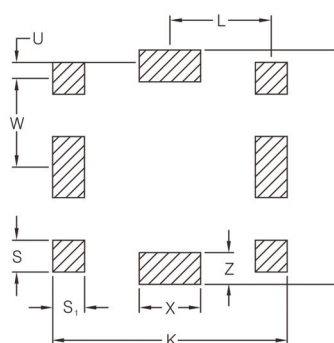
SK625

A

## Outline Dimensions



## PCB Land Pattern



| SK625A      | 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 |

| SK625A      | 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.