

# SX5ST

## CLIPPED SINE WAVE SURFACE MOUNT TCXO

### FEATURES

- Miniature package
- Tight stability
- Many options available
- Applications: GPS, Mobile phone, WLAN, ...

5.0 x 3.2 x 1.3 mm



| Item                                                  | Specification                                      |               |                       |               |            |                   |          |
|-------------------------------------------------------|----------------------------------------------------|---------------|-----------------------|---------------|------------|-------------------|----------|
| Frequency Range                                       | 6.4 MHz to 52.0 MHz                                |               |                       |               |            |                   |          |
| Output Logic                                          | Clipped Sine Wave                                  |               |                       |               |            |                   |          |
| Supply Voltage Vdd (see options)                      | +1.8 V ±5%                                         | +2.5 V ±5%    | +2.8 V ±5%            | +3.0 V ±5%    | +3.3 V ±5% | +5.0 V ±5%        |          |
| Supply Current Idd                                    | ≤ 26 MHz                                           | 1.5 mA max.   |                       |               |            |                   |          |
|                                                       | > 26 MHz                                           | 2.0 mA max.   |                       |               |            |                   |          |
| Frequency Tolerance                                   | ±2.0 ppm max. at 25°C ±2°C (one hour after reflow) |               |                       |               |            |                   |          |
| Frequency Stability vs Temperature<br>( see options ) |                                                    | ±0.5 ppm      | ±1.0 ppm              | ±1.5 ppm      | ±2.0 ppm   | ±2.5 ppm          | ±3.0 ppm |
|                                                       | -10° to +60°C                                      | o             | o                     | o             | o          | o                 | o        |
|                                                       | -20° to +70°C                                      | o             | o                     | o             | o          | o                 | o        |
|                                                       | -30° to +75°C                                      | o             | o                     | o             | o          | o                 | o        |
|                                                       | -30° to +85°C                                      | ◊             | o                     | o             | o          | o                 | o        |
|                                                       | -40° to +85°C                                      | x             | ◊                     | o             | o          | o                 | o        |
|                                                       | o = availabe                                       |               | ◊ = please contact us |               |            | x = not available |          |
| Frequency Stability vs Aging                          | ±1.0 ppm max. per year at 25°C                     |               |                       |               |            |                   |          |
| Frequency Stability vs Voltage Change                 | ±0.2 ppm max., for a ±5% input voltage change      |               |                       |               |            |                   |          |
| Frequency Stability vs Load Change                    | ±0.2 ppm max., for a ±10% load condition change    |               |                       |               |            |                   |          |
| Output Level                                          | ≥0.8 V p-p                                         |               |                       |               |            |                   |          |
| Output Load                                           | 10 kΩ // 10 pF                                     |               |                       |               |            |                   |          |
| Phase Noise                                           | Offset / dBc / Hz                                  | 100 Hz        | 1 kHz                 | 10 kHz        |            |                   |          |
|                                                       | (typical)                                          |               |                       |               |            |                   |          |
|                                                       | 13.0 MHz                                           | -115 dBc / Hz | -135 dBc / Hz         | -148 dBc / Hz |            |                   |          |
| Start-up Time                                         | 3 ms max.                                          |               |                       |               |            |                   |          |
| Packing Unit                                          | 1000 pcs / reel                                    |               |                       |               |            |                   |          |
| Soldering Condition                                   | 260°C, 10 sec x2 max                               |               |                       |               |            |                   |          |
|                                                       | Customer specifications on request                 |               |                       |               |            |                   |          |

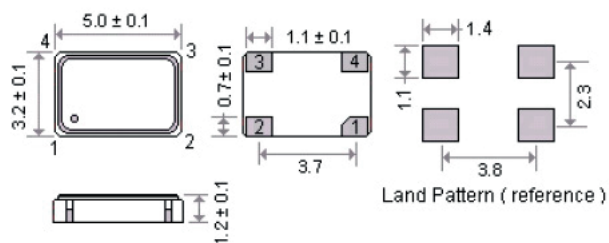
## OPTIONS & ORDERING INFORMATION

### SX5ST

| .....          | .....             | ~ ..... ~               | .....              | ..... ~            | ..... MHz                           |
|----------------|-------------------|-------------------------|--------------------|--------------------|-------------------------------------|
| Supply Voltage | Operating Temp. * | Temperature Stability * | Tri-state Function | Package type       | Frequency in MHz                    |
| 18 = +1.8V     | D = -10° / +60°C  | 0.5 = ±0.5 ppm          | F = No Tri-state   | 4P = 4-pad version | Please specify the frequency in MHz |
| 25 = +2.5V     | F = -20° / +70°C  | 1.0 = ±1.0 ppm          |                    |                    |                                     |
| 28 = +2.8V     | G = -30° / +75°C  | 1.5 = ±1.5 ppm          |                    |                    |                                     |
| 30 = +3.0V     | H = -30° / +85°C  | 2.0 = ±2.0 ppm          |                    |                    |                                     |
| 33 = +3.3V     | K = -40° / +85°C  | 2.5 = ±2.5 ppm          |                    |                    |                                     |
| 50 = +5.0V     |                   | 3.0 = ±3.0 ppm          |                    |                    |                                     |

(\*) Note : Not all combinations are possible, please consult us.

## OUTLINE DIMENSIONS



### Pin Connections

#1 : NC

#2 : GND

#3: Output

#4 : Vdd