

Issued Date : 20,Jul,2007

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**Messrs : e-Ride**

**Temperature Compensated Crystal Oscillator**

**( VC-TCXO / TCXO )**

**KT3225F27456ZAW28TA0  
(KT21F-ZAW28A-27.456M-T)**

**Technical Specification**

**Preliminary**

**KYOCERA KINSEKI Corporation**

**KAGOSHIMA KOKUBU Plant**

**TCXO Engineering Department**



**TCXO KT3225F Parts Number****KT3225F27456ZAW28TA0**

F : Product Specification Code

27456 : Nominal Frequency

Z : Freq. Stability vs Temp. +/-5.0 ppm

A : Bottom Temperature Limit -40 deg.C

W : Upper Temperature Limit +85 deg.C

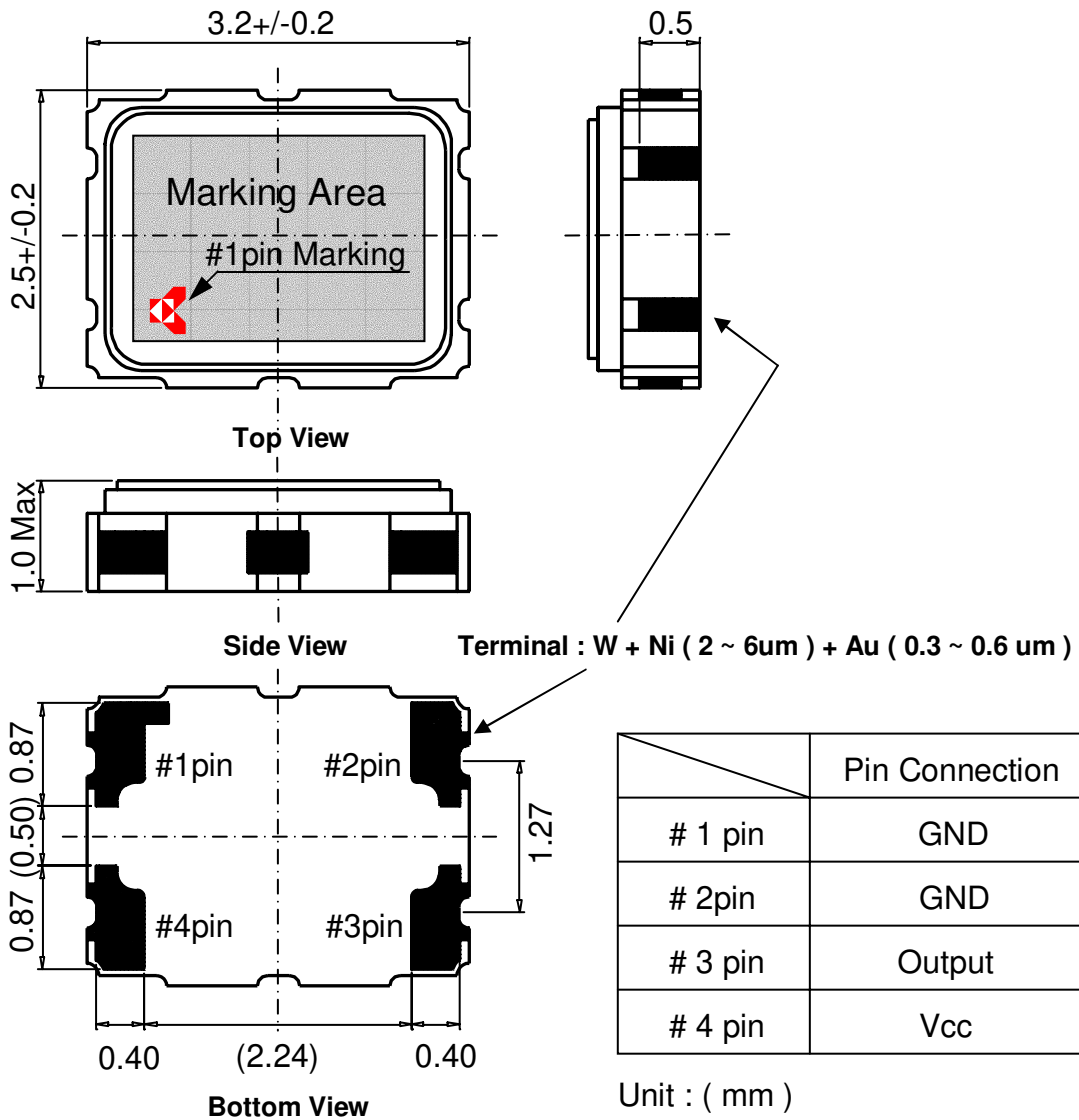
28 : Power Supply Voltage 2.8V (exp.)

T : Specification Number

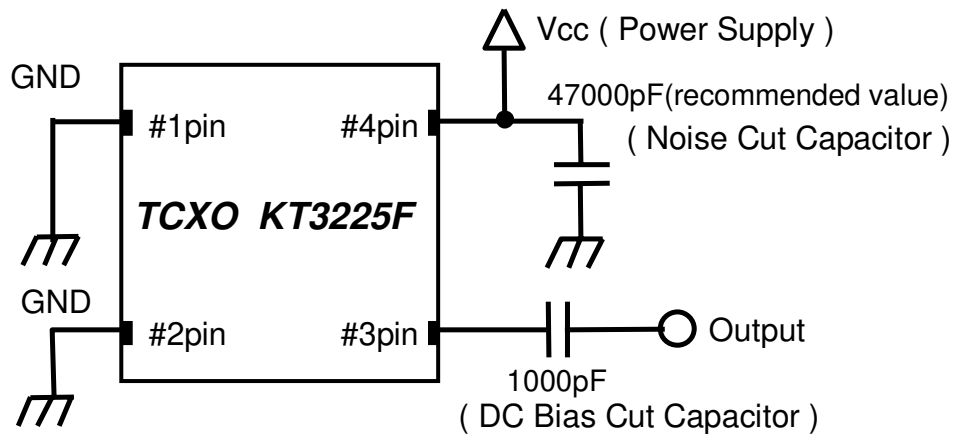
**TCXO KT3225F Electrical Characteristics**

| Symbol | Item                       | Condition  | Specification | Unit   | Remarks            |
|--------|----------------------------|--|---------------|--------|--------------------|
| ---    | Power Supply Voltage Range |  | 2.3 to 3.6    | V      |                    |
| Vcc    | Power Supply Voltage       |  | Vcc+/-5%      | V      |                    |
| F0     | Nominal Frequency          |  | 27.456000     | MHz    |                    |
| Topr   | Operating Temperature      |  | -40 to +85    | deg.C  |                    |
| Tstg   | Storage Temperature        |  | -40 to +85    | deg.C  |                    |
| Vout   | Output Voltage             | Load:10pF/10kohm                                   | 0.8(min)      | Vp-p   | Ta=-40 to +85deg.C |
| Icc    | Power Supply Current       |  | 1.5(max)      | mA     |                    |
| f0     | Frequency Tolerance        | Preset Frequency and after 2times reflow soldering | +/-2.0(max)   | ppm    | Ta=25+/-2deg.C     |
| df/F   | Frequency Stability        | vs Temp -30 to +85deg.C                            | +/-0.5(max)   | ppm    | ref.:Ta=25deg.C    |
|        |                            | vs Temp -40 to -30deg.C                            | +/-5.0(max)   | ppm    | ref.:Ta=25deg.C    |
|        |                            | vs Load 10pF+/-10%<br>10kohm+/-10%                 | +/-0.2(max)   | ppm    |                    |
|        |                            | vs Voltage Vcc+/-5%                                | +/-0.1(max)   | ppm    |                    |
| ---    | Static Tem. hysteresis     |  | +/-0.6(max)   | ppm    |                    |
| dfag   | Frequency Aging Rate       | Ta=25+/-2deg.C                                     | +/-1.0(max)   | ppm/Y  | One Year           |
| ---    | Harmonics                  |  | -8.0(max)     | dBc    |                    |
| ---    | SSB Carrier Noise          | @1Hz offset  | -50(max)      | dBc/Hz | Ta=25+/-2deg.C     |
|        |                            | @10Hz offset                                       | -80(max)      | dBc/Hz |                    |
|        |                            | @100Hz offset                                      | -105(max)     | dBc/Hz |                    |
|        |                            | @1KHz offset                                       | -125(max)     | dBc/Hz |                    |
|        |                            | @10KHz offset                                      | -140(max)     | dBc/Hz |                    |

### TCXO KT3225F Dimension & Pin Connections



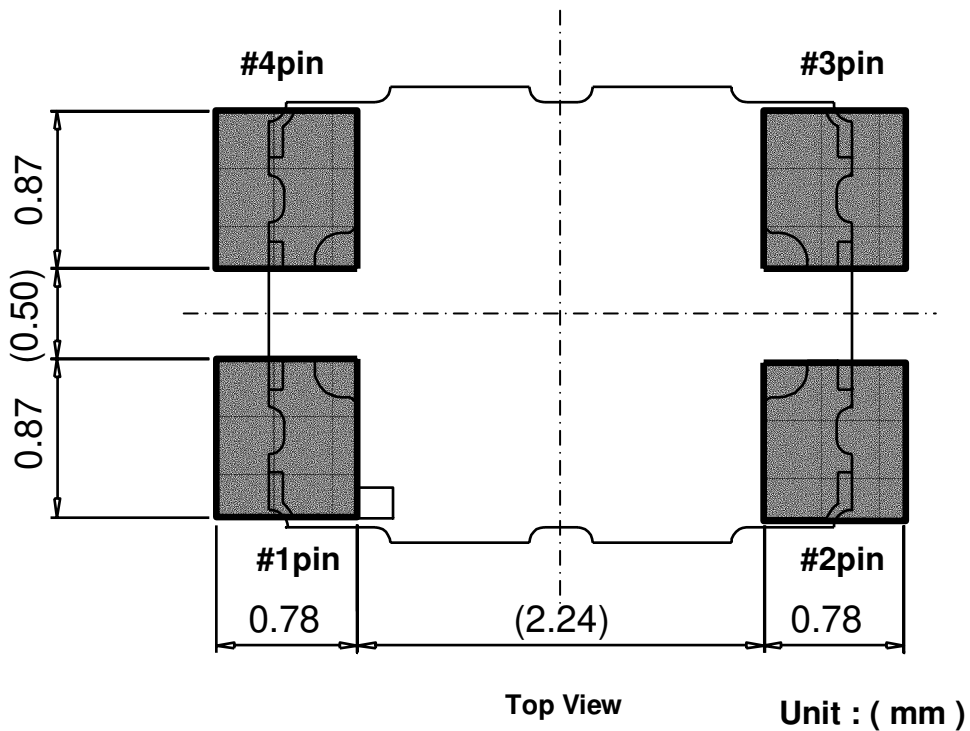
### TCXO KT3225F Recommended Circuit



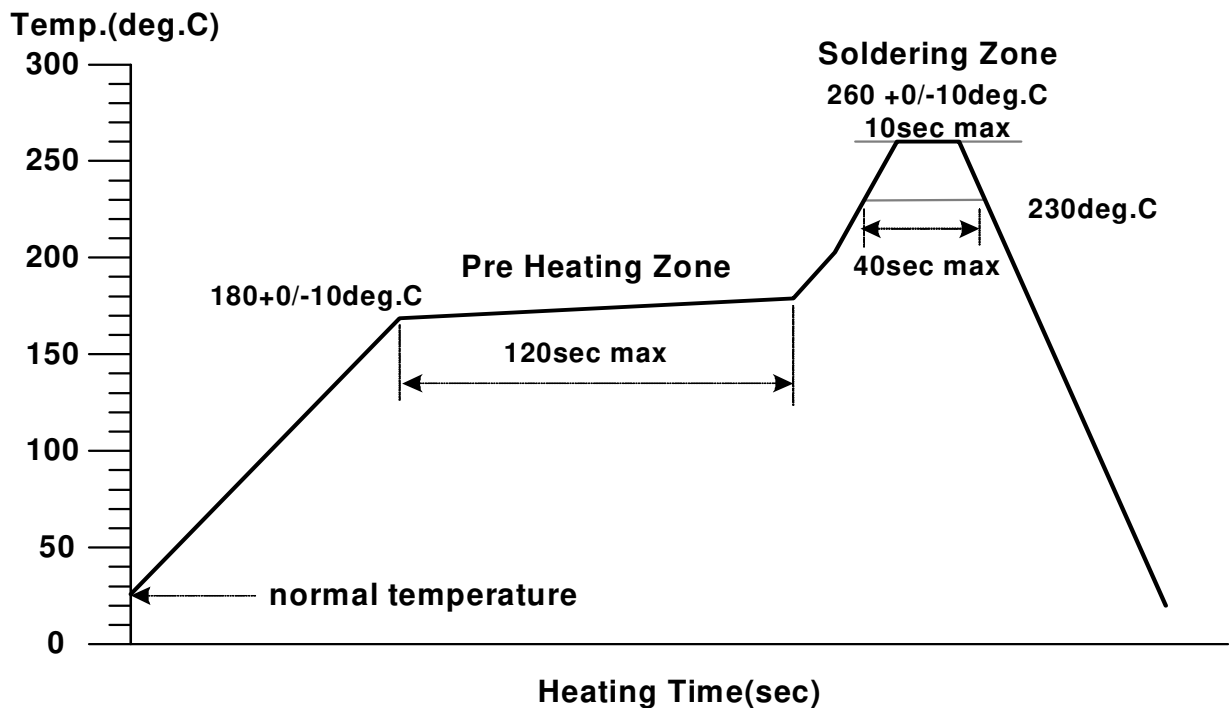
Note

Because Noise Cut Capacitor change by the set, please confirm it

### TCXO KT3225F Recommended Land Pattern

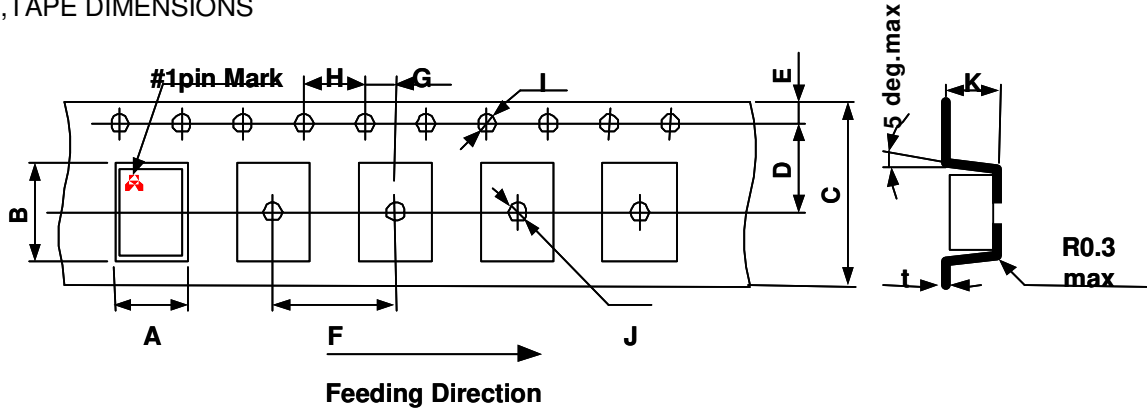


### TCXO KT3225F Recommended Reflow Soldering Condition ( Lead Free Version )



# TCXO KT3225F TAPE&REEL SPEC

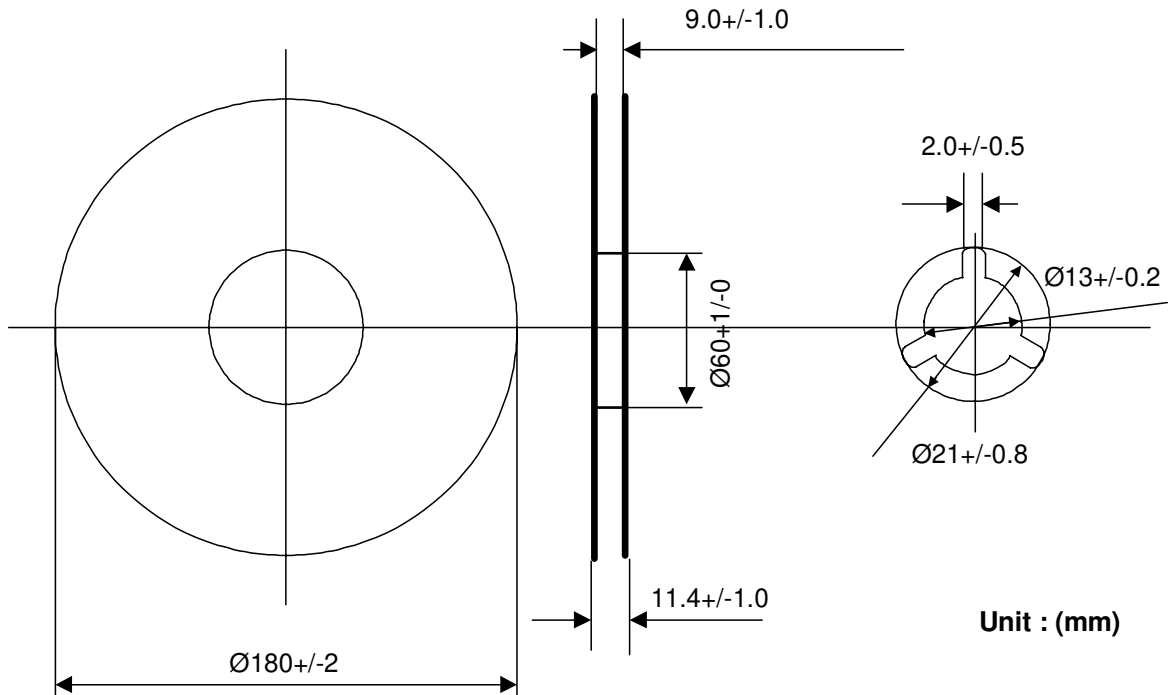
## 1, TAPE DIMENSIONS



|           |           |             |           |             |             |
|-----------|-----------|-------------|-----------|-------------|-------------|
| Symbol    | A         | B           | C         | D           | E           |
| Dimension | 2.8+/-0.1 | 3.5+/-0.1   | 8.0+/-0.3 | 3.5+/-0.05  | 1.75+/-0.1  |
| Symbol    | F         | G           | H         | I           | J           |
| Dimension | 4.0+/-0.1 | 2.0+/-0.05  | 4.0+/-0.1 | F1.5+0.1/-0 | F1.5+0.1/-0 |
| Symbol    | K         | t           |           |             |             |
| Dimension | 1.1+/-0.1 | 0.25+/-0.05 |           |             |             |

Unit : (mm)

## 2. REELS DIMENSIONS



Unit : (mm)

REEL UNIT : 2000pcs / 1reel ( MIN 500pcs / 1reel )