

# Specifications

|              |                   |       |
|--------------|-------------------|-------|
| Drawing No.  | USY1P-H1-14463-00 | 1 / 6 |
| Issued Date. | Dec,25,2014       |       |

**Messrs: KED USA**

**Note: Part Number will be revised in case of specification change.**

|   |                               |
|---|-------------------------------|
| Product Type  | Crystal Units with Thermistor |
| Series  | CT2520DB                      |
| Frequency   | 19200kHz                      |
| Customer Part Number                                | -                             |
| Customer Specification Number                       | -                             |
| KYOCERA Part Number                                 | CT2520DB19200C0FLHAF          |
| Remarks Pb-Free, RoHS Compliant, MSL 1 GPS Quality. |                               |

**Customer Approval**

|                    |                  |  |
|--------------------|------------------|--|
| Approval Signature | Approved Date    |  |
|                    | Department       |  |
|                    | Person in charge |  |

**Seller**

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|  |                   |             |            |           |
|--|-------------------|-------------|------------|-----------|
| Design Department  | Quality Assurance | Approved by | Checked by | Issued by |
| KYOCERA Crystal Device Corporation<br>Crystal Unit Application Engineering Section<br>Crystal Units Division | S.Itoh            | T.Soda      | A.Muraoka  | Y.Nozaki  |

### Revision History

| Rev.No. | Description of revision | Date        | Approved by | Checked by | Issued by |
|---------|-------------------------|-------------|-------------|------------|-----------|
| 1       | First Edition           | Dec,25,2014 | T.Soda      | A.Muraoka  | Y.Nozaki  |
|         |                         |             |             |            |           |
|         |                         |             |             |            |           |

**1. APPLICATION**

This specification sheet is applied to Crystal Units with Thermistor “CT2520” for GPS Quality.

**2. KYOCERA PART NUMBER**

CT2520DB19200C0FLHAF

**3. RATINGS**

| Items                       | SYMB. | Rating   | Unit | Remarks |
|-----------------------------|-------|----------|------|---------|
| Operating Temperature range | Topr  | -30~+85  | °C   |         |
| Storage Temperature range   | Tstg  | -40~+105 | °C   |         |

**4. CHARACTERISTICS**

**4-1 ELECTRICAL CHARACTERISTICS**

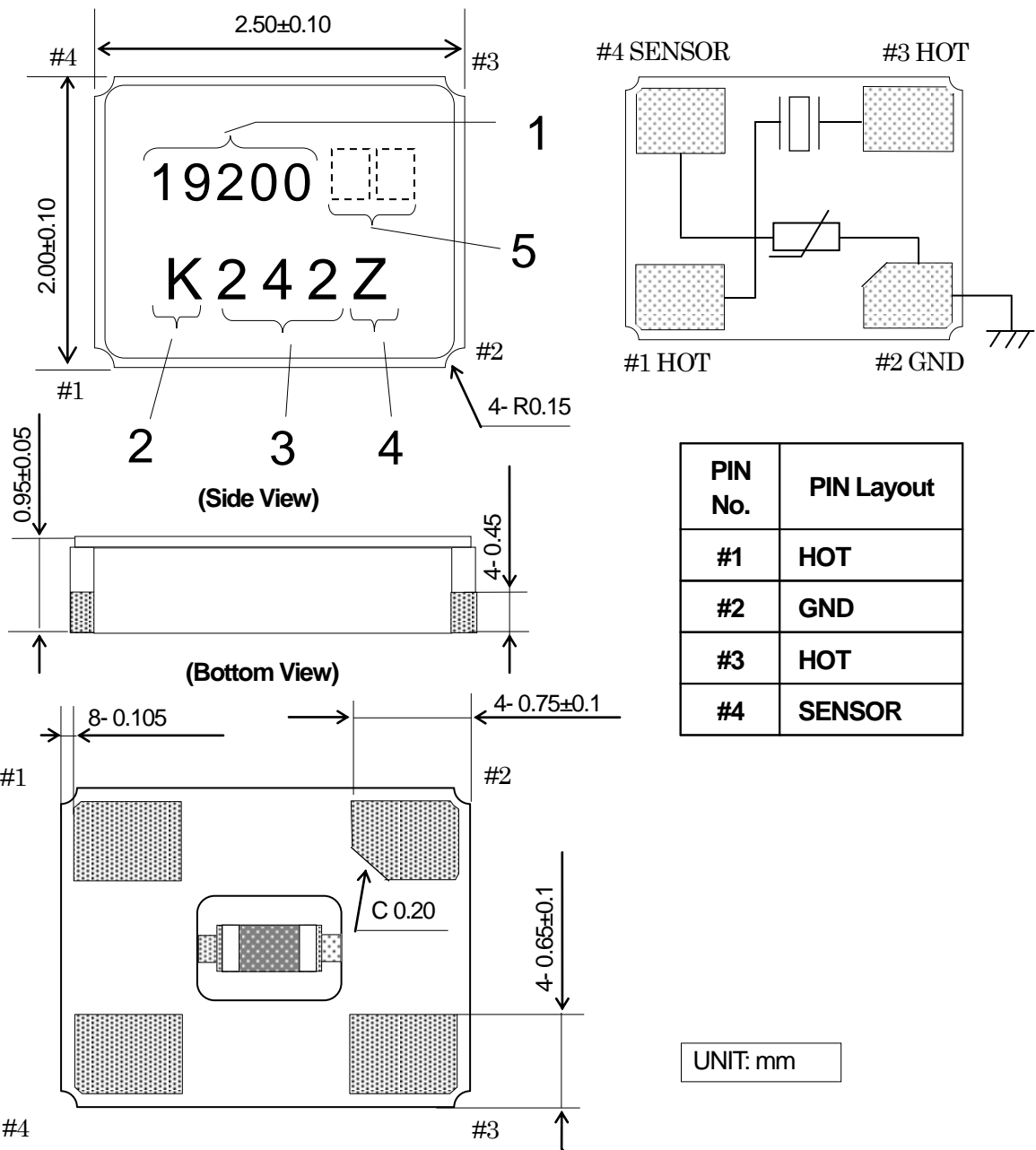
| Items                                 | Electrical Specification |             |      |       |      | Test Condition | Remarks |
|---------------------------------------|--------------------------|-------------|------|-------|------|----------------|---------|
|                                       | SYMB.                    | Min         | Typ. | Max   | Unit |                |         |
| Mode of Vibration                     |                          | Fundamental |      |       |      |                |         |
| Nominal Frequency                     | F0                       |             | 19.2 |       | MHz  |                |         |
| Nominal Temperature                   | T <sub>NOM</sub>         |             | 30   |       | °C   |                |         |
| Load Capacitance                      | CL                       |             | 7.0  |       | pF   |                |         |
| Frequency Tolerance                   | dF                       | -10.0       |      | +10.0 | ppm  | +25±3°C        |         |
| Frequency Temperature Characteristics | dF <sub>T</sub>          | -12.0       |      | +12.0 |      | -30~+85°C      |         |
| Equivalent Series Resistance          | ESR                      |             |      | 80    | Ω    |                |         |
| Drive Level                           | Pd                       | 0.01        |      | 0.1   | mW   |                |         |

**4-2 ELECTRICAL CHARACTERISTICS (Thermistor)**

| Items      | Electrical Specification |      |      |     |      | Remarks     |
|------------|--------------------------|------|------|-----|------|-------------|
|            | SYMB.                    | Min  | Typ. | Max | Unit |             |
| Resistance |                          |      | 100k |     | Ω    | 25°C        |
| B-Constant |                          |      | 4250 |     | K    | 25°C - 50°C |
| Tolerance  |                          | -1.0 |      | 1.0 | %    |             |

### 5. APPEARANCES, DIMENSION

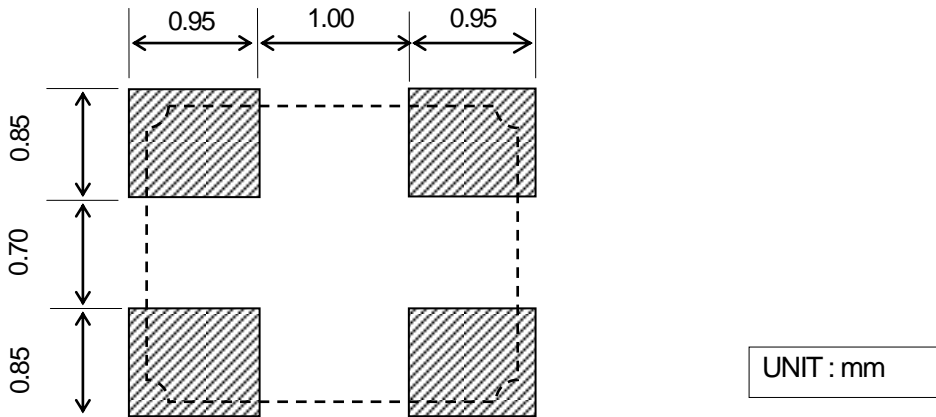
#### 5-1 OUTLINE DIMENSION (not to scale) (Top View)



#### MARKING

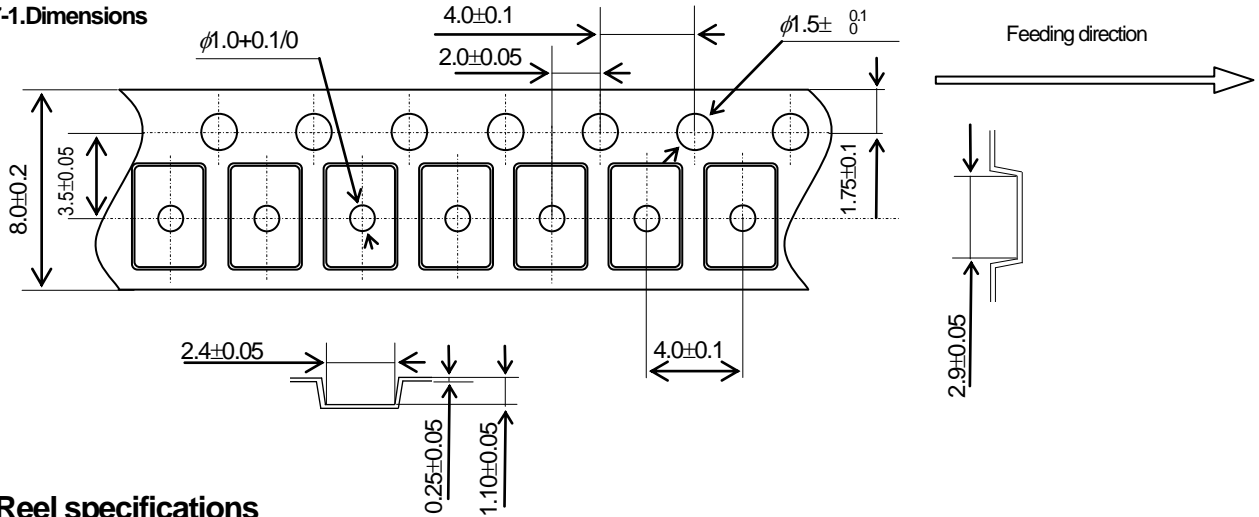
- |                            |   |
|----------------------------|---|
| (1) Nominal Frequency      | First 5 digits of the frequency are indicated.          |
| (2) Identification         | [K] is to indicate 1Pin direction                       |
| (3) Date Code              | Last 1 Digit of YEAR and WEEK<br>(Ex) 2014,Jan,01 → 401 |
| (4) Manufacturing Location | Y → Japan(Yamagata) Z → Japan(Shiga Yohkaichi)          |
| (5) Option Code            | Alphabet & Number 2digits or blank.(For T-Sensor)       |

### 6. RECOMMENDED LAND PATTERN (not to scale)

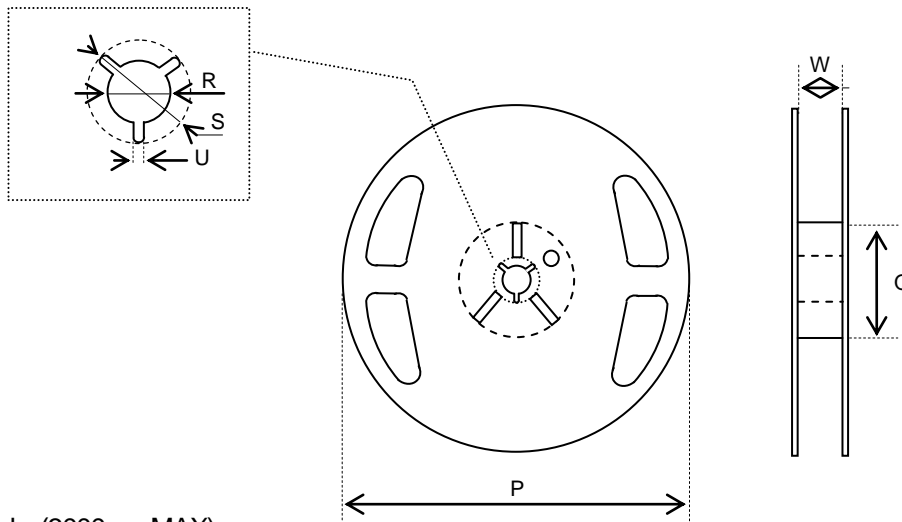


### 7. TAPING & REEL

#### 7-1. Dimensions



#### Reel specifications



φ330 Reel (3000pcs MAX)

|           |          |          |         |
|-----------|----------|----------|---------|
| Symbol    | P        | Q        | R       |
| Dimension | φ330±2.0 | φ100±1.0 | φ13±0.2 |
| Symbol    | S        | U        | W       |
| Dimension | φ21±0.8  | 2.0±0.5  | 9.4±0.5 |

(Unit : mm)

## 8. Cautions for use

(1) Soldering upon mounting

There is a possibility to influence product characteristics when Solder paste or conductive glue comes in contact with product lid or surface.

(2) When using mounting machine

Please minimize the shock when using Mounting Machine to avoid any excess stress to the product.

(3) Conformity of a circuit

We strongly recommend to make sure that Negative resistance (Gain) of IC is designed to be 3 times the ESR (Equivalent Series Resistance) of Crystal unit.

## 9. Storage conditions

Please store product in below conditions, and use within 6months.

Temperature +18 to +30°C, and the humidity of 20 to 70 % in the packaging condition.

## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

- ⊖ [View CT2520DB19200C0FLHAF on WIN SOURCE](#)
- ⊖ [AVX Corp/Kyocera Corp Information](#)

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