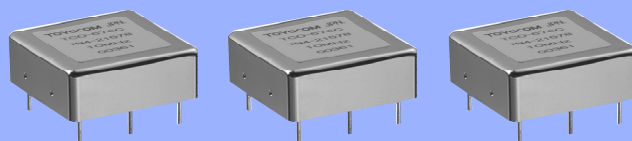


## Oven Controlled Crystal Oscillator (OCXO)

## TCO-676

- Features : Compact and low profile  
: Very fast warm-up  
: SC-Cut Crystal unit
- Lead(Pb)-free : Contains Pb in this product exempted by RoHS directive.

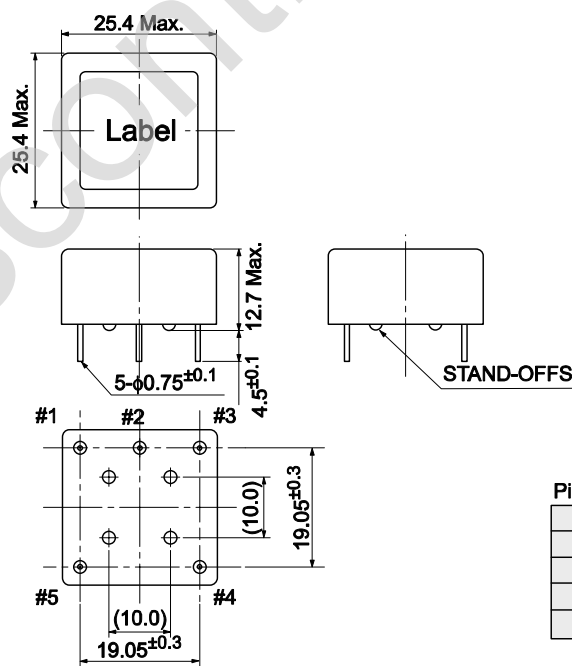


## Specifications (characteristics)

| Item                              |                        | Symbol             | Specifications                                                      |                                                            |                                                            |
|-----------------------------------|------------------------|--------------------|---------------------------------------------------------------------|------------------------------------------------------------|------------------------------------------------------------|
| Output frequency range            |                        | f <sub>o</sub>     | 10 MHz to 20 MHz                                                    |                                                            |                                                            |
| Standard frequency                |                        |                    | 10 MHz                                                              |                                                            |                                                            |
| Supply voltage                    |                        | V <sub>cc</sub>    | 3.3 V ±0.165 V                                                      | 5 V ±0.25 V                                                | 12 V ±0.6 V                                                |
| Storage temperature range         |                        | T <sub>stg</sub>   | -20 °C to +80 °C                                                    |                                                            |                                                            |
| Operating temperature range       |                        | T <sub>use</sub>   | -10 °C to +70 °C                                                    |                                                            |                                                            |
| Frequency/temperature coefficient |                        | Fo-Tc              | ±2 × 10 <sup>-8</sup> Max. / -10 °C to +70 °C                       |                                                            |                                                            |
| Frequency/voltage coefficient     |                        | Fo-V <sub>cc</sub> | ±5 × 10 <sup>-9</sup> Max.<br>V <sub>cc</sub> =3.3 V ±0.165 V       | ±5 × 10 <sup>-9</sup> Max.<br>V <sub>cc</sub> =5 V ±0.25 V | ±5 × 10 <sup>-9</sup> Max.<br>V <sub>cc</sub> =12 V ±0.6 V |
| Frequency aging                   |                        | F <sub>aging</sub> | ±1 × 10 <sup>-8</sup> / day Max., ±1 × 10 <sup>-7</sup> / year Max. |                                                            |                                                            |
| Warm-up                           |                        | —                  | ±5 × 10 <sup>-8</sup> / 5 min Max. (+25 °C)                         |                                                            |                                                            |
| Output load condition             |                        | Load <sub>R</sub>  | 10 kΩ                                                               |                                                            |                                                            |
|                                   |                        | Load <sub>C</sub>  | 15 pF Max.                                                          |                                                            |                                                            |
| Current consumption               | Warm-up                | I <sub>cc</sub>    | 1150 mA Max.                                                        | 700 mA Max.                                                | 300 mA Max.                                                |
|                                   | Steady state at +25 °C |                    | 650 mA Max.                                                         | 300 mA Max.                                                | 130 mA Max.                                                |
| Frequency control range           |                        | F <sub>cont</sub>  | ±1 × 10 <sup>-6</sup> Min.<br>V <sub>C</sub> =1.65 V ±1.65 V        | ±1 × 10 <sup>-6</sup> Min.<br>V <sub>C</sub> =2.5 V ±2.5 V |                                                            |
| Weight                            |                        | —                  | 20 g Max.                                                           |                                                            |                                                            |

## External dimensions

(Unit:mm)



Pin map

| #  | Output          |
|----|-----------------|
| #1 | GND/case        |
| #2 | V <sub>c</sub>  |
| #3 | N.C.            |
| #4 | V <sub>cc</sub> |
| #5 | V <sub>cc</sub> |