

# Crystal Clock Oscillator

## 2725 Series

## Power-saving Type

### Model name

2725Z Overall frequency tolerance of  $\pm 30 \times 10^{-6}$ .

### Application

- For compact mobile information equipment, such as DVC, DSC, notebook PC, and PDA

### Features

- A power saving-type crystal oscillator, capable of being driven by a 1.8 V power supply.
- Consumption current during standby is 3  $\mu$ A or less.
- Automatic mounting by taping and IR reflow (lead-free) are possible.
- Lead-free
- Compact and light. Dimensions : 5.0 x 3.2 x 1.0 mm, weight : 0.06 g.

Pb Free

RoHS Compliant  
Directive 2002/95/EC

Absolute maximum rating  
Supply voltage ( $V_{DD}$ ) -0.5 to +7.0 V  
Storage temperature range -55 to +125 °C

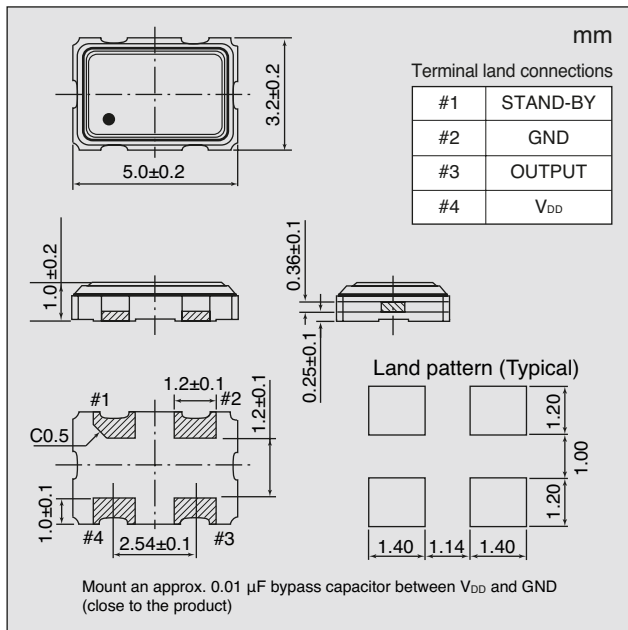


### Specifications

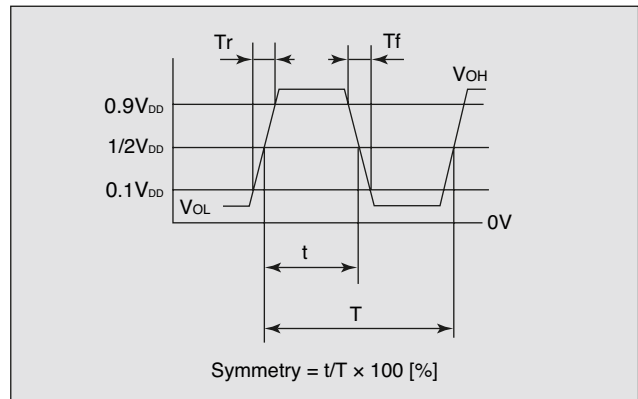
| Item                                       | Model                | 2725Z                               |
|--|----------------------|-------------------------------------|
| Output level                               |                      | CMOS                                |
| Nominal frequency range <sup>*1</sup>      | (MHz)                | $2.5 \leq F < 40$                   |
| Operating temperature range <sup>*2</sup>  | (°C)                 | -10 to +70                          |
| Overall frequency tolerance                | ( $\times 10^{-6}$ ) | $\pm 30$                            |
| Supply voltage [ $V_{DD}$ ]                | (V)                  | +1.8 $\pm$ 0.1                      |
| Current consumption<br>(+1.8 V, 25 °C) max | During operation     | 2 (1mA TYP.)                        |
|  | During standby       | 3                                   |
| $V_{OL}$ max/ $V_{OH}$ min                 | (V)                  | 0.1 $V_{DD}$ /0.9 $V_{DD}$          |
| $T_r$ max/ $T_f$ max                       | (ns)                 | 6/6 (0.1 $V_{DD}$ to 0.9 $V_{DD}$ ) |
| Symmetry min. to max.                      | (%)                  | 40 to 60 (at 1/2 $V_{DD}$ )         |
| Load ( $C_L$ ) max                         | (pF)                 | 5                                   |
| Start-up time max                          | (ms)                 | 4                                   |
| Standby function                           |                      | Available (tristate)                |
| Number for specifying an order             |                      | NSA6297C                            |

\*1: If you require a product with a frequency not given above, please contact us. \*2: If you require a product with an operating temperature range not given above, please contact us.

### Dimensions



### Output Waveform <CMOS>



### Standby Function

| #1 Input   | #3 Output             |
|--|-----------------------|
| Level H ( $0.7 V_{DD} \leq V_{IH} \leq V_{DD}$ )<br>or OPEN is selected. | Oscillation output ON |
| Level L ( $V_{IL} \leq 0.3 V_{DD}$ ) is selected.                        | High impedance        |

### How to Specify an Order

When ordering our products, specify them with an "Ordering Code" that consists of the following:

[Model name] - [Frequency (up to 9 digits)]M - [Number for specifying an order]

If you have any queries concerning our standard frequencies and numbers for specifying orders, please contact our sales representatives or visit our homepage (<http://www.ndk.com/>).

Example 1: When ordering a product with model name: 2725Z, frequency: 20 MHz, overall frequency tolerance:  $\pm 30 \times 10^{-6}$ , and supply voltage: 1.8 V  
Ordering Code: 2725Z - 20.000000M - NSA6297C