Crystal Clock Oscillator

NDK
Crystal Bridge to the Future

2725 Series — Wide Operating Temperature Range Type

■ Model name

2725T Frequency stability of ±50 x 10^{-6} (Wide Operating Temperature Range Type)
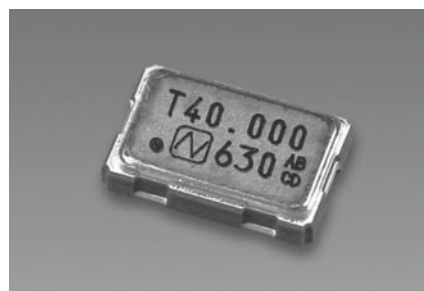
■ Application

- For notebook PC, mobile information terminal, and PC card

■ Features

- Supports a wide temperature range from −40 to +85 °C.
- Automatic mounting by taping and IR reflow (lead-free) are possible.
- Lead-free.
- Compact and light. Dimensions and weight: 5.0 x 3.2 mm, 1.0 mm, and 0.06 g.

Pb Free
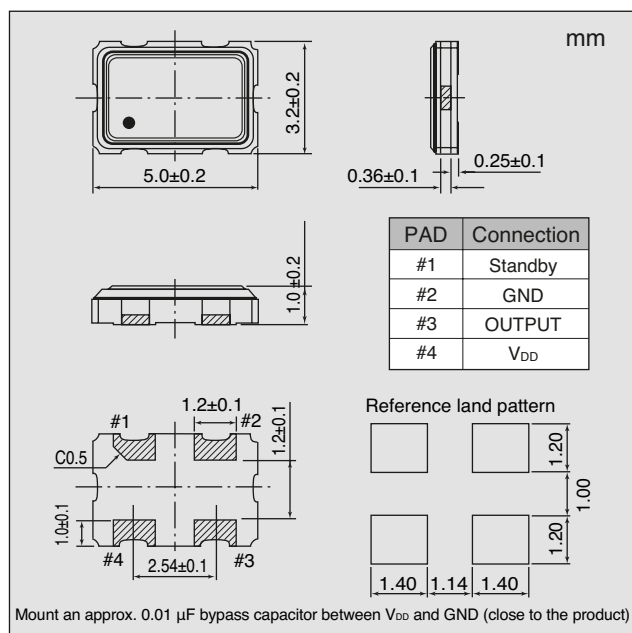
RoHS Compliant
Directive 2002/95/EC

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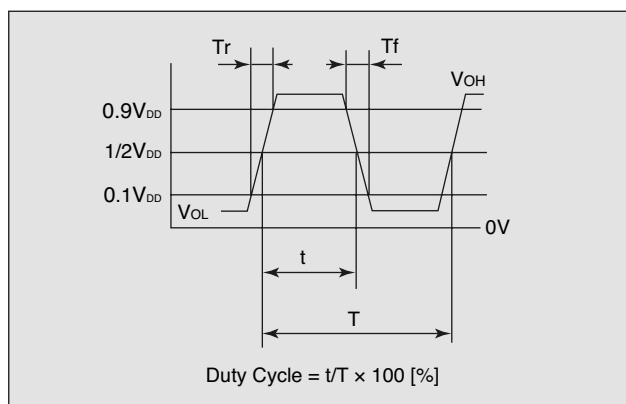Storage temperature range -55 to +125 °C

■ Specifications

Item	Model		2725T		
Output level		C-MOS			
Frequency range *1	(MHz)	2.5 ≤ F < 20	20 ≤ F < 40	40 ≤ F < 60	60 ≤ F ≤ 75
Operating temperature range *2	(°C)	−40 to +85			
Frequency stability	(×10^{-6})	±50			
Power supply voltage [V_{DD}]	(V)	+3.3±0.1			
Current consumption (+3.3 V, 25 °C) max — During operation	(mA)	8	15	22	25
Current consumption (+3.3 V, 25 °C) max — During standby	(μA)	10			
V_{OL} max/V_{OH} min	(V)	0.1 V_{DD}/0.9 V_{DD}			
Tr max/Tf max	(ns)	5/5 (0.1 V_{DD} to 0.9 V_{DD})			
Duty Cycle min. to max.	(%)	45 to 55 (at 1/2 V_{DD})			
Load (C_L) max	(pF)	15			
Oscillation start time max	(ms)	4		10	
Standby function		Available (tristate)			
Number for specifying an order		NSA6293E			

*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

mm

3.2±0.2
5.0±0.2
0.36±0.1
0.25±0.1
1.0±0.2

PAD	Connection
#1	Standby
#2	GND
#3	OUTPUT
#4	V_{DD}

1.2±0.1
1.2±0.1
C0.5
1.0±0.1
#1   #2
#4   #3
2.54±0.1

Reference land pattern
1.20
1.00
1.20
1.40   1.14   1.40

Mount an approx. 0.01 μF bypass capacitor between V_{DD} and GND (close to the product)

■ Output Waveform <C-MOS>

Tr   Tf
V_{OH}
0.9V_{DD}
1/2V_{DD}
0.1V_{DD}
V_{OL} 0V
t
T

Duty Cycle = t/T × 100 [%]

■ Standby Function

#1 Input	#3 Output
Level H (0.7 V_{DD} ≤ V_{IH} ≤ V_{DD}) or OPEN is selected.	Oscillation output ON
Level L (V_{IL} ≤ 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: 2725T, frequency: 20 MHz, frequency stability: ±50 x 10^{-6}, and power supply voltage: 3.3 V
Ordering Code: 2725T – 20.000000M – NSA6293E