

actual size

# Oscillator · JO75

## Low Voltage Crystal Oscillator

### Features

- RoHS compliant
- low current consumption types

- ceramic / metal package

### General Data

type	JO75 2.8 V	JO75 2.5 V	JO75 1.8 V	
frequency range	1.8 ~ 160.0 MHz	1.8 ~ 160.0 MHz	1.8 ~ 160.0 MHz	
frequency stability over all*	± 25 ppm ~ ± 100 ppm	± 25 ppm ~ ± 100 ppm	± 25 ppm ~ ± 100 ppm	
current consumption	see table 1	see table 1	see table 1	
supply voltage	2.8 V ± 5 %	2.5 V ± 5 %	1.8 V ± 5 %	
output	rise & fall time	see table 3	see table 3	
	load	15 pF	15 pF	15 pF
		30 pF on request	30 pF on request	30 pF on request
	current max.	4 mA	4 mA	2 mA
	low level max.	$V_{DC} \times 0.1$	$V_{DC} \times 0.1$	$V_{DC} \times 0.1$
high level min.	$V_{DC} \times 0.9$	$V_{DC} \times 0.9$	$V_{DC} \times 0.9$	
temperature	operating	-10 °C ~ +70 °C	-10 °C ~ +70 °C	-10 °C ~ +70 °C
	extended	-40 °C ~ +85 °C	-40 °C ~ +85 °C	-40 °C ~ +85 °C
	storage	-55 °C ~ +125 °C	-55 °C ~ +125 °C	-55 °C ~ +125 °C
phase jitter 12 kHz ~ 20.0 MHz	< 1.0 ps RMS	< 1.0 ps RMS	< 1.0 ps RMS	
symmetry at 1/2 $V_{DC}$	< 45 / 55 % typical	< 45 / 55 % typical	< 45 / 55 % typical	

\* inclusive stability at 25°C, operating temperature range, input voltage change, aging, shock and vibration.

Table 1: current consumption max.

<b>2.8 V version:</b>	
1.80 ~ 31.99 MHz	12 mA
32.00 ~ 79.99 MHz	20 mA
80.00 ~ 124.99 MHz	30 mA
125.00 ~ 160.00 MHz	40 mA
<b>2.5 V version:</b>	
1.80 ~ 31.99 MHz	10 mA
32.00 ~ 79.99 MHz	18 mA
80.00 ~ 124.99 MHz	28 mA
125.00 ~ 160.00 MHz	38 mA
<b>1.8 V version:</b>	
1.80 ~ 31.99 MHz	7 mA
32.00 ~ 79.99 MHz	15 mA
80.00 ~ 124.99 MHz	25 mA
125.00 ~ 160.00 MHz	35 mA
<b>note:</b>	
- specific data on request	

Table 2: frequency stability code

stability code	A	B	G	C		
	± 100 ppm	± 50 ppm	± 30 ppm	± 25 ppm		
-10 °C ~ +70 °C		●	○	○		
-40 °C ~ +85 °C	●	○	○	○		
● standard ○ on request						

Table 3: rise & fall time max.

	2.8 V	2.5 V	1.8 V
1.800 ~ 32.0 MHz	5 ns	5 ns	5 ns
32.001 ~ 80.0 MHz	5 ns	5 ns	3.5 ns
80.001 ~ 125.0 MHz	4 ns	4 ns	3.5 ns
125.001 ~ 160.0 MHz	3 ns	3 ns	3 ns

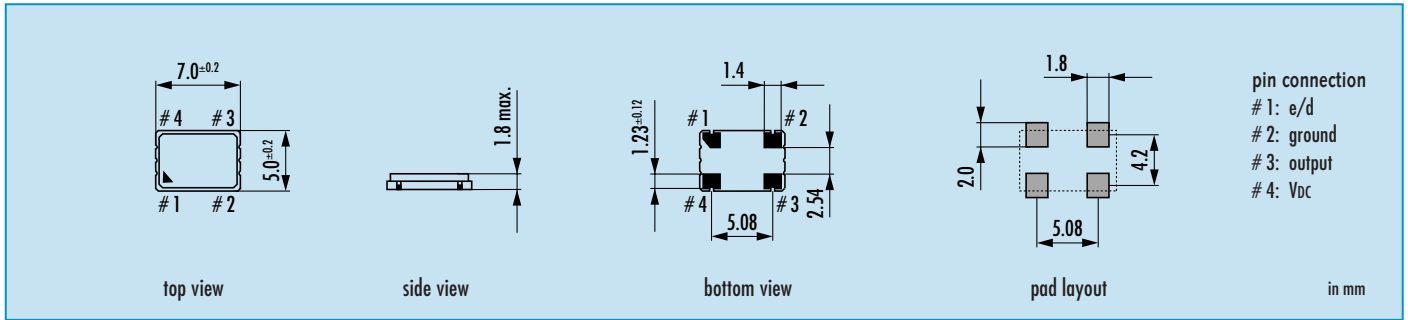
### Order Information

0	frequency in MHz	type	frequency stability	supply voltage	output load	option
Oscillator	1.8 ~ 160.0 MHz	JO75	A ~ C see table 2	2.8 = 2.8 V 2.5 = 2.5 V 1.8 = 1.8 V	1 = 15 pF 2 = 30 pF on request	blank = -10 °C ~ +70 °C std. T1 = -40 °C ~ +85 °C
<b>Example: O 20.0-JO75-B-2.5-1</b> (LF = RoHS compliant / Pb free pins or pads)						

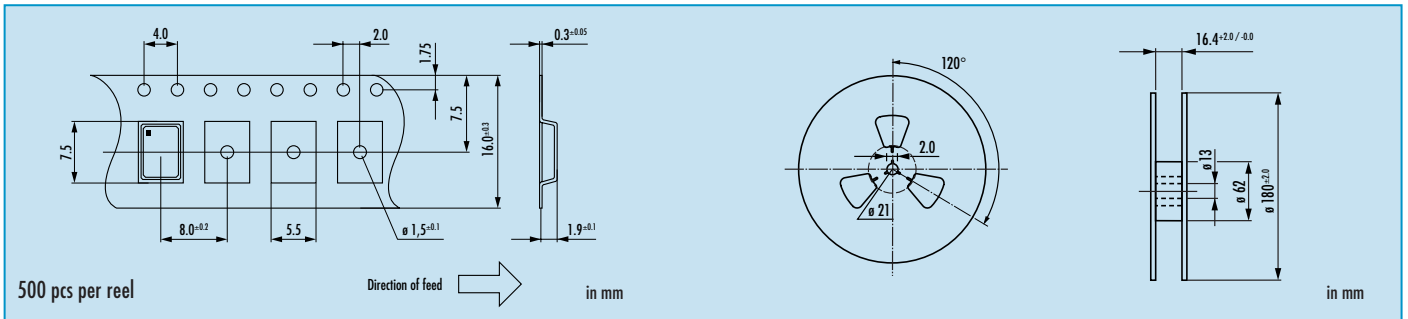


# Oscillator · JO75 · 2.8 V · 2.5 V · 1.8 V

## Dimensions



## Taping Specification



## Enable / Disable Function

<b>pin #1</b>	<b>pin #3</b>
open or high	oscillation
gnd or low	high impedance

start-up time: < 5 ms (1.8 ~ 32.0 MHz)  
 < 10 ms (32.001 ~ 160.0 MHz)  
 standby current: 10 µA max.

## Marking

frequency type / date code

date code:

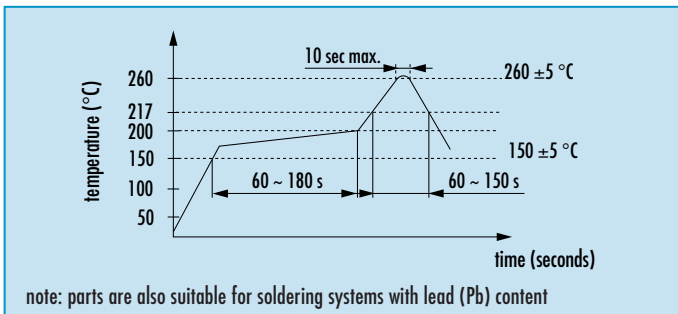
Jan.	Febr.	Mar.	Apr.	May	June
A	B	C	D	E	F

A ~ M: Jan.- Dec.

July	Aug.	Sept.	Oct.	Nov.	Dec.
G	H	J	K	L	M

4: 2004  
 5: 2005  
 6: 2006

## Reflow Soldering Profile



## Packing Note

- standard packing units are 500 pieces per reel
- non-multiple packing units are only supplied taped / bulk