actual size

Programmed Oscillator · JPO22 · 3.3/2.5/1.8 V

Programmed SMD CMOS Oscillator · 2.5 x 2.0 mm

- fast delivery service
- tristate or stop function available
- reflow soldering temperature: 260 °C max.
- RoHS compliant, ceramic/metal package

RoHS 2002/95/EC — RoHS compliant

Pb free: pins / pads

General Data

type		JPO22 3.3 V / 2.5 V / 1.8 V
frequency range		3.0 ~ 200.0 MHz (3.3 V, 15 pF)
		3.0 ~ 130.0 MHz (2.5 V, 15 pF)
		3.0 ~ 100.0 MHz (1.8 V, 15 pF)
		3.0 ~ 50.0 MHz (3.3 V / 2.5 V / 1.8 V, 30 pF)
frequency stability over all*		± 25 ppm ~ ± 100 ppm (see table 1)
current consumption		see table 2
supply voltage V_{DC}		3.3 V / 2.5 V / 1.8 V ± 10%
temperature	operating	-20 °C ~ +70 °C / -40 °C ~ +85 °C
	storage	-55 °C ~ +125 °C
output	rise & fall time	see table 3
	load max.	15 pF / 30 pF
	current max.	8 mA (3.3 V) / 4 mA (2.5 V) / 2 mA (1.8 V)
	low level max.	0.4 V
	high level min.	V_{DC} - 0.4 V
standby function		tristate (TRI) / stop (STP)
output enable time max.		100 ns (TRI) / 10 ms (STP)
output disable time max.		250 ns
start-up time max.		10 ms
standby current max.		10 µA (STP version only)
symmetry at 0.5 x V_{DC}		45% ~ 55% typ. (40% ~ 60% max.)

Table 1: Frequency Stability Code

stability code	A ± 100 ppm	B ± 50 ppm	G ± 30 ppm	C ± 25 ppm
-20 °C ~ +70 °C	O	O	O	O
-40 °C ~ +85 °C	O	O	O	O
O available				

* includes stability at 25 °C, operating temp. range, supply voltage change, shock and vibration, aging 1st year.

Table 2: Current Consumption max.

frequency range	V_{DC} = 3.3 V	V_{DC} = 2.5 V	V_{DC} = 1.8 V	load
3.0 ~ 50.0 MHz	18 mA	15 mA	8 mA	30 pf
3.0 ~ 100.0 MHz	17 mA	12 mA	8 mA	15 pf
100.0 ~ 130.0 MHz	20 mA	16 mA	–	15 pf
130.0 ~ 200.0 MHz	25 mA	–	–	15 pf

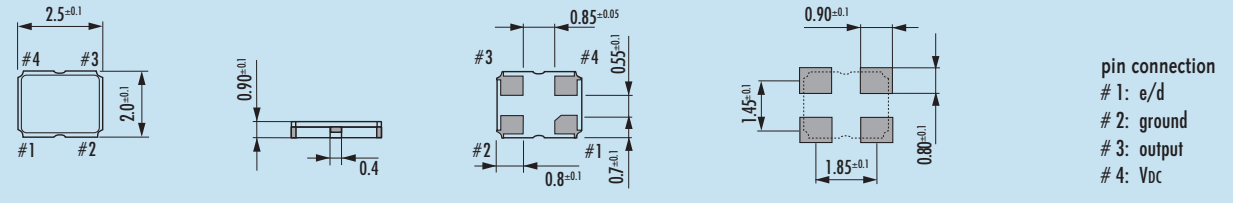
* a ceramics capacitor of 100nF between pin #2 and pin #4 with short distance wiring is strongly recommended

Table 3: Rise & fall time max.

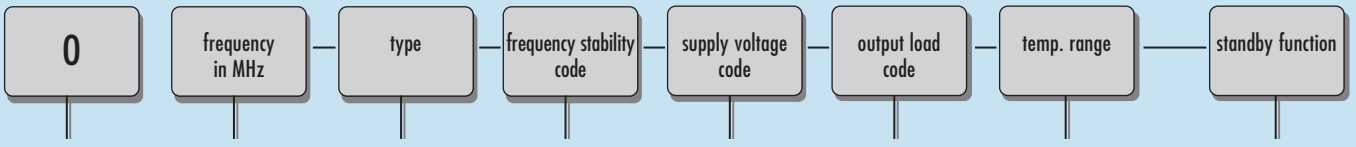
6 ns: 3.0 ~ 50.0 MHz at 30 pF / 1.8 V
5 ns: 3.0 ~ 50.0 MHz at 30 pF / 3.3 V & 2.5 V
4 ns: 3.0 ~ 100.0 MHz at 15 pF / 3.3 V & 2.5 V & 1.8 V
3 ns: 100.0 ~ 130.0 MHz at 15 pF / 2.5 V & 3.3 V
2 ns: 130.0 ~ 200.0 MHz at 15 pF / 3.3 V

note:
- specific data on request
- rise time: 0.1 V_{DC} ~ 0.9 V_{DC}
- fall time: 0.9 V_{DC} ~ 0.1 V_{DC}

Dimensions



Order Information



Example: O 125.0-JPO22-B-2.5-1-T1-STP-LF (LF = RoHS compliant / Pb free pins or pads)

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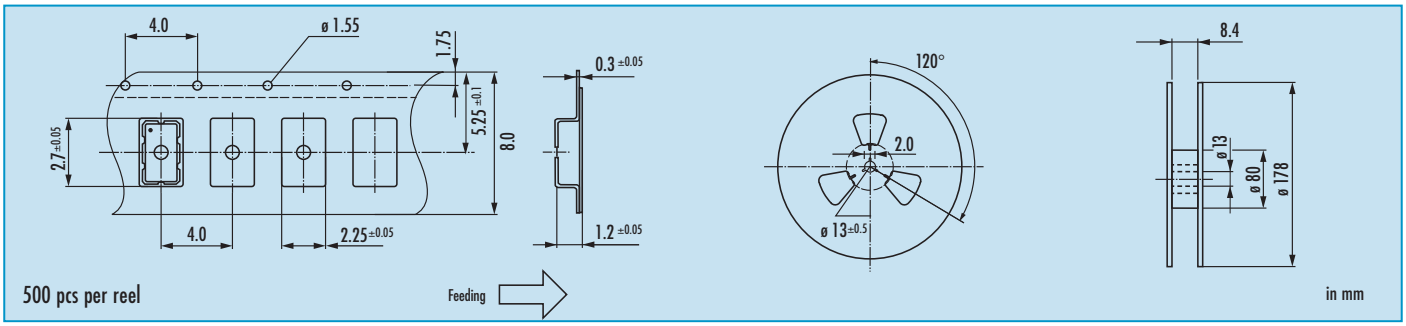
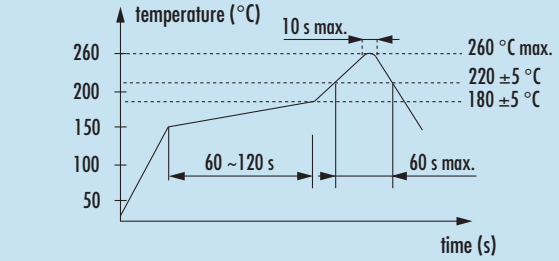
full data can be found under: www.jauch.de / www.jauch.co.uk / www.jauch.fr / www.jauchusa.com

Programmed Oscillator · JPO22 · 3.3/2.5/1.8 V

Taping specification



Reflow Soldering Profile



note: parts are also suitable for soldering systems with lead (Pb) content

Marking (optional)

JPO / year / month / internal code

date code:
A ~ M: Jan. - Dec.
1: 2011 4: 2014
2: 2012 5: 2015
3: 2013 6: 2016

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

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

Packing Note

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

Enable / Disable Function

pin #1 (e/d control)	pin #3 (output, STP)	pin #3 (output, TRI)
open	active	active
high "1" ($V_{IH} \geq 0.7\ V_{DC}$)	active	active
low "0" ($V_{IL} \leq 0.3\ V_{DC}$)	stop, high impedance	high impedance
	stop (STP) function: • oscillator stops • output high impedance	**tristate (TRI) function:** • oscillator active • output high impedance

actual size

Programmed Oscillator · JPO22 · 3.3/2.5/1.8 V

Programmed SMD CMOS Oscillator · 2.5 x 2.0 mm

- fast delivery service
- tristate or stop function available
- reflow soldering temperature: 260 °C max.
- RoHS compliant, ceramic/metal package

RoHS 2002/95/EC — RoHS compliant

Pb free: pins / pads

General Data

type		JPO22 3.3 V / 2.5 V / 1.8 V
frequency range		3.0 ~ 200.0 MHz (3.3 V, 15 pF)
		3.0 ~ 130.0 MHz (2.5 V, 15 pF)
		3.0 ~ 100.0 MHz (1.8 V, 15 pF)
		3.0 ~ 50.0 MHz (3.3 V / 2.5 V / 1.8 V, 30 pF)
frequency stability over all*		± 25 ppm ~ ± 100 ppm (see table 1)
current consumption		see table 2
supply voltage V_{DC}		3.3 V / 2.5 V / 1.8 V ± 10%
temperature	operating	-20 °C ~ +70 °C / -40 °C ~ +85 °C
	storage	-55 °C ~ +125 °C
output	rise & fall time	see table 3
	load max.	15 pF / 30 pF
	current max.	8 mA (3.3 V) / 4 mA (2.5 V) / 2 mA (1.8 V)
	low level max.	0.4 V
	high level min.	V_{DC} - 0.4 V
standby function		tristate (TRI) / stop (STP)
output enable time max.		100 ns (TRI) / 10 ms (STP)
output disable time max.		250 ns
start-up time max.		10 ms
standby current max.		10 µA (STP version only)
symmetry at 0.5 x V_{DC}		45% ~ 55% typ. (40% ~ 60% max.)

Table 1: Frequency Stability Code

stability code	A ± 100 ppm	B ± 50 ppm	G ± 30 ppm	C ± 25 ppm
-20 °C ~ +70 °C	O	O	O	O
-40 °C ~ +85 °C	O	O	O	O

O available

* includes stability at 25 °C, operating temp. range, supply voltage change, shock and vibration, aging 1st year.

Table 2: Current Consumption max.

frequency range	V_{DC} = 3.3 V	V_{DC} = 2.5 V	V_{DC} = 1.8 V	load
3.0 ~ 50.0 MHz	18 mA	15 mA	8 mA	30 pf
3.0 ~ 100.0 MHz	17 mA	12 mA	8 mA	15 pf
100.0 ~ 130.0 MHz	20 mA	16 mA	–	15 pf
130.0 ~ 200.0 MHz	25 mA	–	–	15 pf

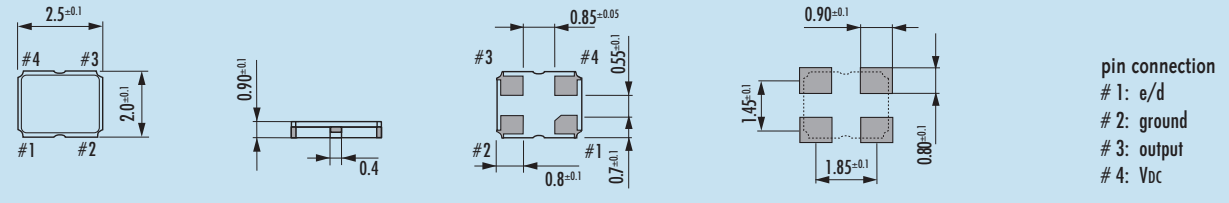
* a ceramics capacitor of 100nF between pin #2 and pin #4 with short distance wiring is strongly recommended

Table 3: Rise & fall time max.

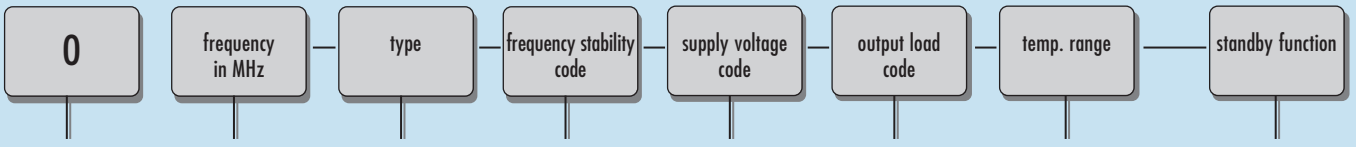
6 ns: 3.0 ~ 50.0 MHz at 30 pF / 1.8 V
5 ns: 3.0 ~ 50.0 MHz at 30 pF / 3.3 V & 2.5 V
4 ns: 3.0 ~ 100.0 MHz at 15 pF / 3.3 V & 2.5 V & 1.8 V
3 ns: 100.0 ~ 130.0 MHz at 15 pF / 2.5 V & 3.3 V
2 ns: 130.0 ~ 200.0 MHz at 15 pF / 3.3 V

note:
- specific data on request
- rise time: 0.1 V_{DC} ~ 0.9 V_{DC}
- fall time: 0.9 V_{DC} ~ 0.1 V_{DC}

Dimensions



Order Information



Example: O 125.0-JPO22-B-2.5-1-T1-STP-LF (LF = RoHS compliant / Pb free pins or pads)

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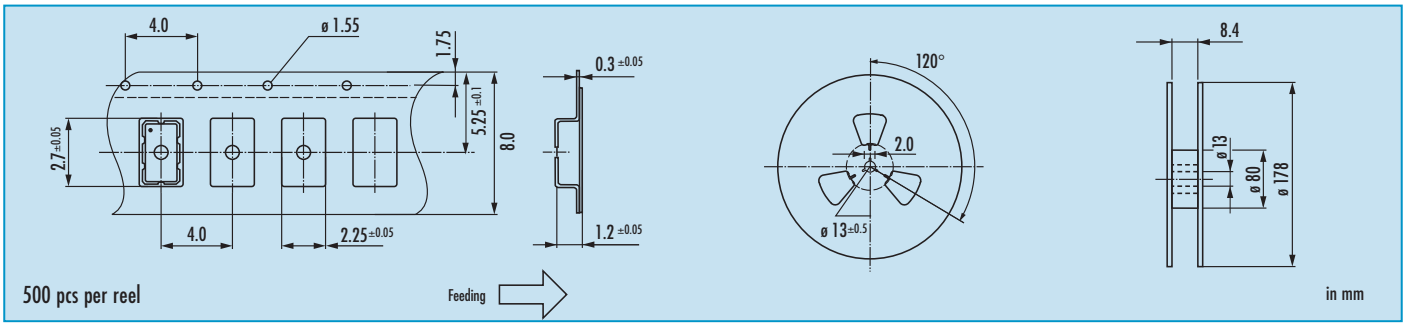
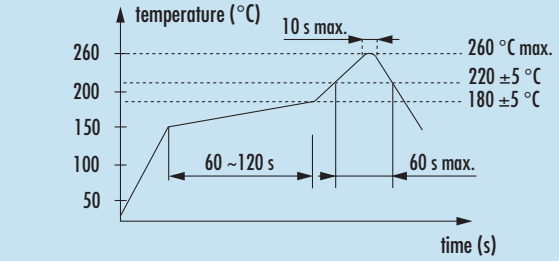
full data can be found under: www.jauch.de / www.jauch.co.uk / www.jauch.fr / www.jauchusa.com

Programmed Oscillator · JPO22 · 3.3/2.5/1.8 V

Taping specification



Reflow Soldering Profile



note: parts are also suitable for soldering systems with lead (Pb) content

Marking (optional)

JPO / year / month / internal code

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A	B	C	D	E	F

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

Packing Note

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

Enable / Disable Function

pin #1 (e/d control)	pin #3 (output, STP)	pin #3 (output, TRI)
open	active	active
high "1" ($V_{IH} \geq 0.7\ V_{DC}$)	active	active
low "0" ($V_{IL} \leq 0.3\ V_{DC}$)	stop, high impedance	high impedance
	stop (STP) function: • oscillator stops • output high impedance	**tristate (TRI) function:** • oscillator active • output high impedance

actual size

Programmed Oscillator · JPO22 · 3.3/2.5/1.8 V

Programmed SMD CMOS Oscillator · 2.5 x 2.0 mm

- fast delivery service
- tristate or stop function available
- reflow soldering temperature: 260 °C max.
- RoHS compliant, ceramic/metal package

RoHS 2002/95/EC — RoHS compliant

Pb free: pins / pads

General Data

type		JPO22 3.3 V / 2.5 V / 1.8 V
frequency range		3.0 ~ 200.0 MHz (3.3 V, 15 pF)
		3.0 ~ 130.0 MHz (2.5 V, 15 pF)
		3.0 ~ 100.0 MHz (1.8 V, 15 pF)
		3.0 ~ 50.0 MHz (3.3 V / 2.5 V / 1.8 V, 30 pF)
frequency stability over all*		± 25 ppm ~ ± 100 ppm (see table 1)
current consumption		see table 2
supply voltage V_{DC}		3.3 V / 2.5 V / 1.8 V ± 10%
temperature	operating	-20 °C ~ +70 °C / -40 °C ~ +85 °C
	storage	-55 °C ~ +125 °C
output	rise & fall time	see table 3
	load max.	15 pF / 30 pF
	current max.	8 mA (3.3 V) / 4 mA (2.5 V) / 2 mA (1.8 V)
	low level max.	0.4 V
	high level min.	V_{DC} - 0.4 V
standby function		tristate (TRI) / stop (STP)
output enable time max.		100 ns (TRI) / 10 ms (STP)
output disable time max.		250 ns
start-up time max.		10 ms
standby current max.		10 µA (STP version only)
symmetry at 0.5 x V_{DC}		45% ~ 55% typ. (40% ~ 60% max.)

Table 1: Frequency Stability Code

stability code	A ± 100 ppm	B ± 50 ppm	G ± 30 ppm	C ± 25 ppm
-20 °C ~ +70 °C	O	O	O	O
-40 °C ~ +85 °C	O	O	O	O

O available

* includes stability at 25 °C, operating temp. range, supply voltage change, shock and vibration, aging 1st year.

Table 2: Current Consumption max.

frequency range	V_{DC} = 3.3 V	V_{DC} = 2.5 V	V_{DC} = 1.8 V	load
3.0 ~ 50.0 MHz	18 mA	15 mA	8 mA	30 pf
3.0 ~ 100.0 MHz	17 mA	12 mA	8 mA	15 pf
100.0 ~ 130.0 MHz	20 mA	16 mA	–	15 pf
130.0 ~ 200.0 MHz	25 mA	–	–	15 pf

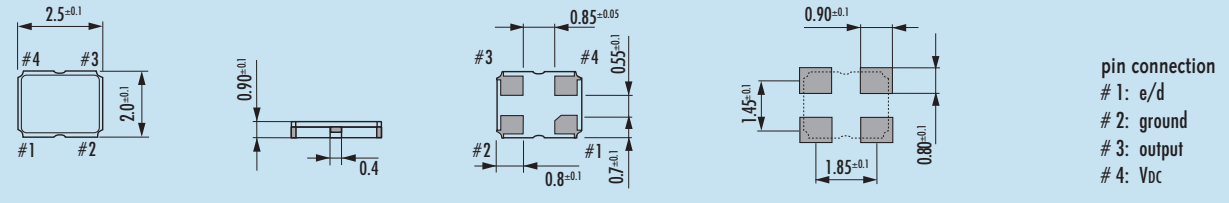
* a ceramics capacitor of 100nF between pin #2 and pin #4 with short distance wiring is strongly recommended

Table 3: Rise & fall time max.

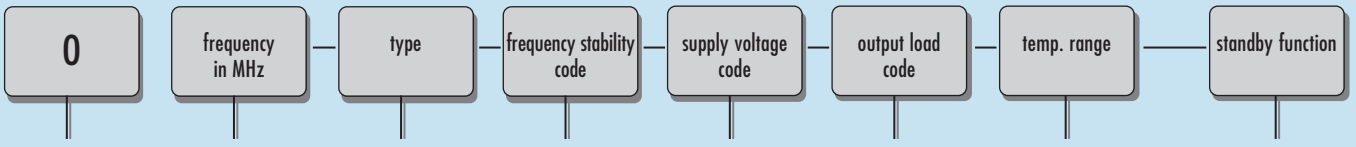
6 ns: 3.0 ~ 50.0 MHz at 30 pF / 1.8 V
5 ns: 3.0 ~ 50.0 MHz at 30 pF / 3.3 V & 2.5 V
4 ns: 3.0 ~ 100.0 MHz at 15 pF / 3.3 V & 2.5 V & 1.8 V
3 ns: 100.0 ~ 130.0 MHz at 15 pF / 2.5 V & 3.3 V
2 ns: 130.0 ~ 200.0 MHz at 15 pF / 3.3 V

note:
- specific data on request
- rise time: 0.1 V_{DC} ~ 0.9 V_{DC}
- fall time: 0.9 V_{DC} ~ 0.1 V_{DC}

Dimensions



Order Information



Example: O 125.0-JPO22-B-2.5-1-T1-STP-LF (LF = RoHS compliant / Pb free pins or pads)

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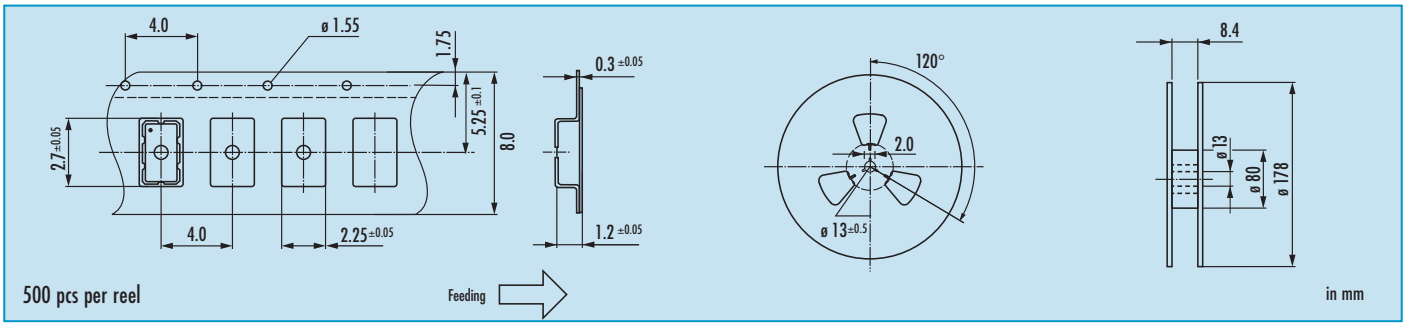
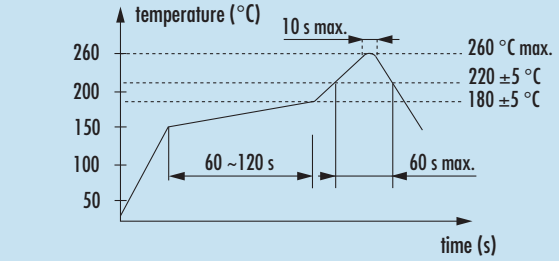
full data can be found under: www.jauch.de / www.jauch.co.uk / www.jauch.fr / www.jauchusa.com

Programmed Oscillator · JPO22 · 3.3/2.5/1.8 V

Taping specification



Reflow Soldering Profile



note: parts are also suitable for soldering systems with lead (Pb) content

Marking (optional)

JPO / year / month / internal code

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

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

Packing Note

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

Enable / Disable Function

pin #1 (e/d control)	pin #3 (output, STP)	pin #3 (output, TRI)
open	active	active
high "1" ($V_{IH} \geq 0.7\ V_{DC}$)	active	active
low "0" ($V_{IL} \leq 0.3\ V_{DC}$)	stop, high impedance	high impedance
	stop (STP) function: • oscillator stops • output high impedance	**tristate (TRI) function:** • oscillator active • output high impedance

actual size

Programmed Oscillator · JPO32 · 3.3/2.5/1.8 V

Programmed SMD CMOS Oscillator · 3.2 x 2.5 mm

- fast delivery service
- tristate or stop function available
- reflow soldering temperature: 260 °C max.
- RoHS compliant, ceramic/metal package

RoHS 2002/95/EC — RoHS compliant

Pb free: pins / pads

General Data

type		JPO32 3.3 V / 2.5 V / 1.8 V
frequency range		3.0 ~ 200.0 MHz (3.3 V, 15 pF)
		3.0 ~ 130.0 MHz (2.5 V, 15 pF)
		3.0 ~ 100.0 MHz (1.8 V, 15 pF)
		3.0 ~ 50.0 MHz (3.3 V / 2.5 V / 1.8 V, 30 pF)
frequency stability over all*		± 25 ppm ~ ± 100 ppm (see table 1)
current consumption		see table 2
supply voltage V_{DC}		3.3 V / 2.5 V / 1.8 V ± 10%
temperature	operating	-20 °C ~ +70 °C / -40 °C ~ +85 °C
	storage	-55 °C ~ +125 °C
output	rise & fall time	see table 3
	load max.	15 pF / 30 pF
	current max.	8 mA (3.3 V) / 4 mA (2.5 V) / 2 mA (1.8 V)
	low level max.	0.4 V
	high level min.	V_{DC} - 0.4 V
standby function		tristate (TRI) / stop (STP)
output enable time max.		100 ns (TRI) / 10 ms (STP)
output disable time max.		250 ns
start-up time max.		10 ms
standby current max.		10 µA (STP version only)
symmetry at 0.5 x V_{DC}		45% ~ 55% typ. (40% ~ 60% max.)

Table 1: Frequency Stability Code

stability code	A ± 100 ppm	B ± 50 ppm	G ± 30 ppm	C ± 25 ppm
-20 °C ~ +70 °C	O	O	O	O
-40 °C ~ +85 °C	O	O	O	O

O available

* includes stability at 25 °C, operating temp. range, supply voltage change, shock and vibration, aging 1st year.

Table 2: Current Consumption max.

frequency range	V_{DC} = 3.3 V	V_{DC} = 2.5 V	V_{DC} = 1.8 V	load
3.0 ~ 50.0 MHz	18 mA	15 mA	8 mA	30 pf
3.0 ~ 100.0 MHz	17 mA	12 mA	8 mA	15 pf
100.0 ~ 130.0 MHz	20 mA	16 mA	–	15 pf
130.0 ~ 200.0 MHz	25 mA	–	–	15 pf

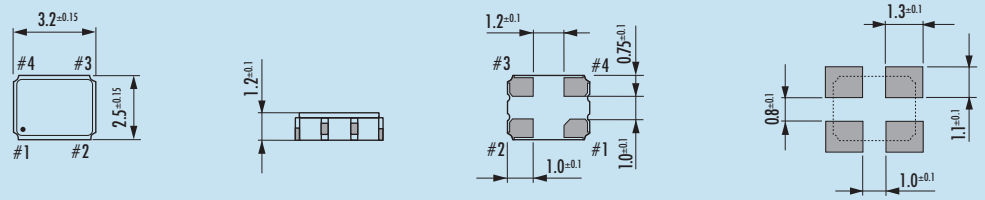
* a ceramics capacitor of 100nF between pin #2 and pin #4 with short distance wiring is strongly recommended

Table 3: Rise & fall time max.

6 ns: 3.0 ~ 50.0 MHz at 30 pF / 1.8 V
5 ns: 3.0 ~ 50.0 MHz at 30 pF / 3.3 V & 2.5 V
4 ns: 3.0 ~ 100.0 MHz at 15 pF / 3.3 V & 2.5 V & 1.8 V
3 ns: 100.0 ~ 130.0 MHz at 15 pF / 2.5 V & 3.3 V
2 ns: 130.0 ~ 200.0 MHz at 15 pF / 3.3 V

note:
- specific data on request
- rise time: 0.1 V_{DC} ~ 0.9 V_{DC}
- fall time: 0.9 V_{DC} ~ 0.1 V_{DC}

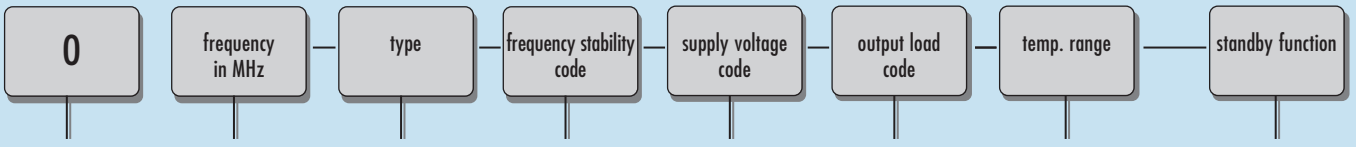
Dimensions



pin connection
1: e/d
2: ground
3: output
4: VDC

in mm

Order Information



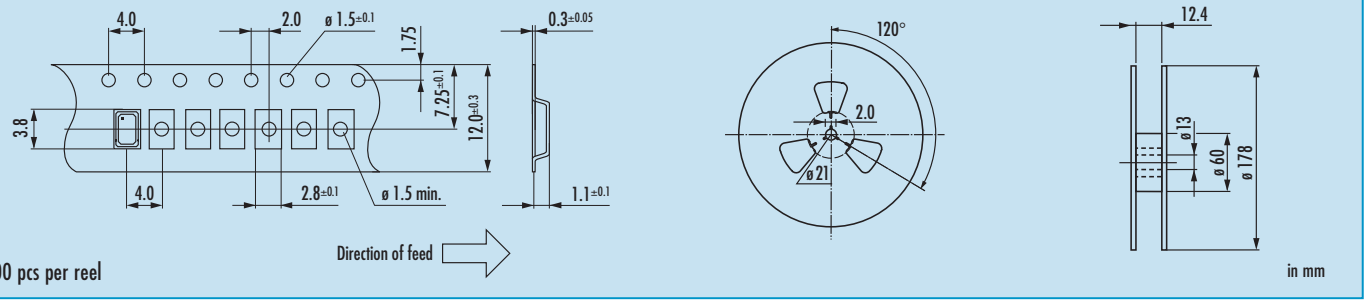
Oscillator	3.0 ~ 200.0 MHz (3.3 V) 3.0 ~ 130.0 MHz (2.5 V) 3.0 ~ 100.0 MHz (1.8 V)	JPO32	see table 1	3.3 = 3.3 V 2.5 = 2.5 V 1.8 = 1.8 V	1 = 15 pF 2 = 30 pF	blank = -20 °C ~ +70 °C T1 = -40 °C ~ +85 °C	STP = stop function TRI = tristate function

Example: O 125.0-JPO32-B-2.5-1-T1-STP-LF (LF = RoHS compliant / Pb free pins or pads)

Jauch Quartz GmbH • e-mail: info@jauch.de
full data can be found under: www.jauch.de / www.jauch.co.uk / www.jauch.fr / www.jauchusa.com

Programmed Oscillator · JPO32 · 3.3/2.5/1.8 V

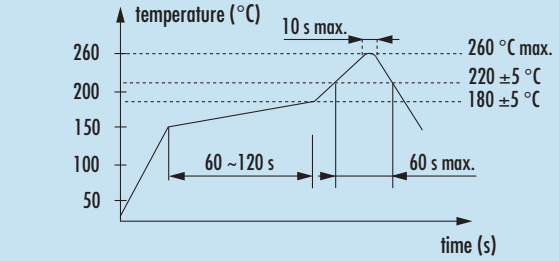
Taping specification



500 pcs per reel

in mm

Reflow Soldering Profile



note: parts are also suitable for soldering systems with lead (Pb) content

Marking (optional)

JPO / year / month / internal code

date code:

A ~ M: Jan. - Dec.

1: 2011 4: 2014

2: 2012 5: 2015

3: 2013 6: 2016

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

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

Packing Note

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

Enable / Disable Function

pin #1 (e/d control)	**pin #3 (output, STP)**	**pin #3 (output, TRI)**
open	active	active
high "1" ($V_{IH} \geq 0.7\ V_{DC}$)	active	active
low "0" ($V_{IL} \leq 0.3\ V_{DC}$)	stop, high impedance	high impedance
	stop (STP) function: • oscillator stops • output high impedance	**tristate (TRI) function:** • oscillator active • output high impedance

actual size

Programmed Oscillator · JPO32 · 3.3/2.5/1.8 V

Programmed SMD CMOS Oscillator · 3.2 x 2.5 mm

- fast delivery service
- tristate or stop function available
- reflow soldering temperature: 260 °C max.
- RoHS compliant, ceramic/metal package

RoHS 2002/95/EC — RoHS compliant

Pb free: pins / pads

General Data

type		JPO32 3.3 V / 2.5 V / 1.8 V
frequency range		3.0 ~ 200.0 MHz (3.3 V, 15 pF)
		3.0 ~ 130.0 MHz (2.5 V, 15 pF)
		3.0 ~ 100.0 MHz (1.8 V, 15 pF)
		3.0 ~ 50.0 MHz (3.3 V / 2.5 V / 1.8 V, 30 pF)
frequency stability over all*		± 25 ppm ~ ± 100 ppm (see table 1)
current consumption		see table 2
supply voltage V_{DC}		3.3 V / 2.5 V / 1.8 V ± 10%
temperature	operating	-20 °C ~ +70 °C / -40 °C ~ +85 °C
	storage	-55 °C ~ +125 °C
output	rise & fall time	see table 3
	load max.	15 pF / 30 pF
	current max.	8 mA (3.3 V) / 4 mA (2.5 V) / 2 mA (1.8 V)
	low level max.	0.4 V
	high level min.	V_{DC} - 0.4 V
standby function		tristate (TRI) / stop (STP)
output enable time max.		100 ns (TRI) / 10 ms (STP)
output disable time max.		250 ns
start-up time max.		10 ms
standby current max.		10 µA (STP version only)
symmetry at 0.5 x V_{DC}		45% ~ 55% typ. (40% ~ 60% max.)

Table 1: Frequency Stability Code

stability code	A ± 100 ppm	B ± 50 ppm	G ± 30 ppm	C ± 25 ppm
-20 °C ~ +70 °C	O	O	O	O
-40 °C ~ +85 °C	O	O	O	O

O available

* includes stability at 25 °C, operating temp. range, supply voltage change, shock and vibration, aging 1st year.

Table 2: Current Consumption max.

frequency range	V_{DC} = 3.3 V	V_{DC} = 2.5 V	V_{DC} = 1.8 V	load
3.0 ~ 50.0 MHz	18 mA	15 mA	8 mA	30 pf
3.0 ~ 100.0 MHz	17 mA	12 mA	8 mA	15 pf
100.0 ~ 130.0 MHz	20 mA	16 mA	–	15 pf
130.0 ~ 200.0 MHz	25 mA	–	–	15 pf

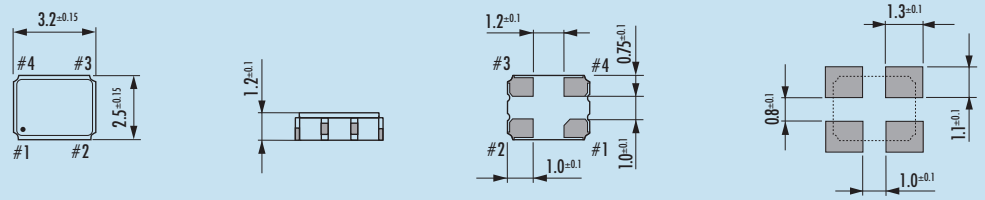
* a ceramics capacitor of 100nF between pin #2 and pin #4 with short distance wiring is strongly recommended

Table 3: Rise & fall time max.

6 ns: 3.0 ~ 50.0 MHz at 30 pF / 1.8 V
5 ns: 3.0 ~ 50.0 MHz at 30 pF / 3.3 V & 2.5 V
4 ns: 3.0 ~ 100.0 MHz at 15 pF / 3.3 V & 2.5 V & 1.8 V
3 ns: 100.0 ~ 130.0 MHz at 15 pF / 2.5 V & 3.3 V
2 ns: 130.0 ~ 200.0 MHz at 15 pF / 3.3 V

note:
- specific data on request
- rise time: 0.1 V_{DC} ~ 0.9 V_{DC}
- fall time: 0.9 V_{DC} ~ 0.1 V_{DC}

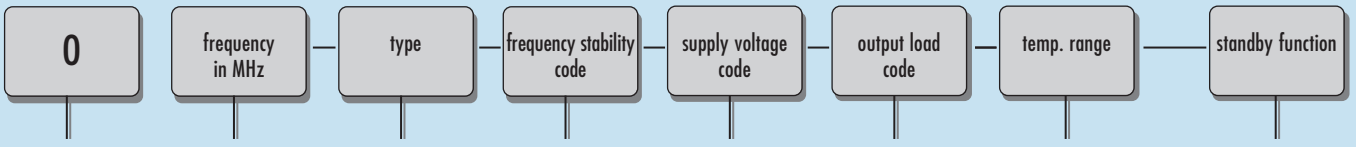
Dimensions



pin connection
1: e/d
2: ground
3: output
4: VDC

in mm

Order Information



Oscillator	3.0 ~ 200.0 MHz (3.3 V) 3.0 ~ 130.0 MHz (2.5 V) 3.0 ~ 100.0 MHz (1.8 V)	JPO32	see table 1	3.3 = 3.3 V 2.5 = 2.5 V 1.8 = 1.8 V	1 = 15 pF 2 = 30 pF	blank = -20 °C ~ +70 °C T1 = -40 °C ~ +85 °C	STP = stop function TRI = tristate function

Example: O 125.0-JPO32-B-2.5-1-T1-STP-LF (LF = RoHS compliant / Pb free pins or pads)

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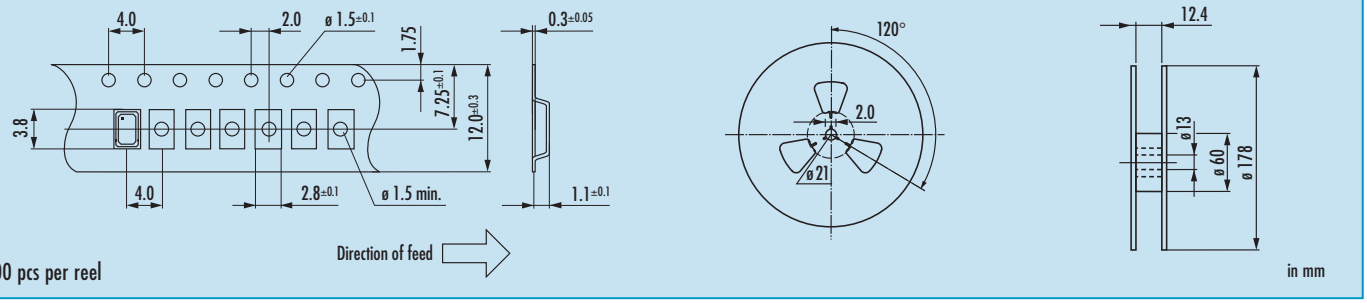
full data can be found under: www.jauch.de / www.jauch.co.uk / www.jauch.fr / www.jauchusa.com

Programmed Oscillator · JPO32 · 3.3/2.5/1.8 V

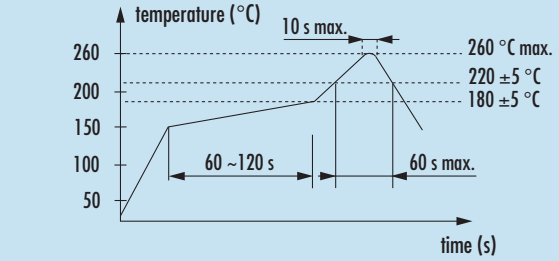
Taping specification



500 pcs per reel

in mm

Reflow Soldering Profile



note: parts are also suitable for soldering systems with lead (Pb) content

Marking (optional)

JPO / year / month / internal code

date code:

A ~ M: Jan. - Dec.

1: 2011 4: 2014

2: 2012 5: 2015

3: 2013 6: 2016

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

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

Packing Note

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

Enable / Disable Function

pin #1 (e/d control)	**pin #3 (output, STP)**	**pin #3 (output, TRI)**
open	active	active
high "1" ($V_{IH} \geq 0.7\ V_{DC}$)	active	active
low "0" ($V_{IL} \leq 0.3\ V_{DC}$)	stop, high impedance	high impedance
	stop (STP) function: • oscillator stops • output high impedance	**tristate (TRI) function:** • oscillator active • output high impedance

actual size

Programmed Oscillator · JPO32 · 3.3/2.5/1.8 V

Programmed SMD CMOS Oscillator · 3.2 x 2.5 mm

- fast delivery service
- tristate or stop function available
- reflow soldering temperature: 260 °C max.
- RoHS compliant, ceramic/metal package

RoHS 2002/95/EC — RoHS compliant

Pb free: pins / pads

General Data

type		JPO32 3.3 V / 2.5 V / 1.8 V
frequency range		3.0 ~ 200.0 MHz (3.3 V, 15 pF)
		3.0 ~ 130.0 MHz (2.5 V, 15 pF)
		3.0 ~ 100.0 MHz (1.8 V, 15 pF)
		3.0 ~ 50.0 MHz (3.3 V / 2.5 V / 1.8 V, 30 pF)
frequency stability over all*		± 25 ppm ~ ± 100 ppm (see table 1)
current consumption		see table 2
supply voltage V_{DC}		3.3 V / 2.5 V / 1.8 V ± 10%
temperature	operating	-20 °C ~ +70 °C / -40 °C ~ +85 °C
	storage	-55 °C ~ +125 °C
output	rise & fall time	see table 3
	load max.	15 pF / 30 pF
	current max.	8 mA (3.3 V) / 4 mA (2.5 V) / 2 mA (1.8 V)
	low level max.	0.4 V
	high level min.	V_{DC} - 0.4 V
standby function		tristate (TRI) / stop (STP)
output enable time max.		100 ns (TRI) / 10 ms (STP)
output disable time max.		250 ns
start-up time max.		10 ms
standby current max.		10 µA (STP version only)
symmetry at 0.5 x V_{DC}		45% ~ 55% typ. (40% ~ 60% max.)

Table 1: Frequency Stability Code

stability code	A ± 100 ppm	B ± 50 ppm	G ± 30 ppm	C ± 25 ppm
-20 °C ~ +70 °C	O	O	O	O
-40 °C ~ +85 °C	O	O	O	O

O available

* includes stability at 25 °C, operating temp. range, supply voltage change, shock and vibration, aging 1st year.

Table 2: Current Consumption max.

frequency range	V_{DC} = 3.3 V	V_{DC} = 2.5 V	V_{DC} = 1.8 V	load
3.0 ~ 50.0 MHz	18 mA	15 mA	8 mA	30 pf
3.0 ~ 100.0 MHz	17 mA	12 mA	8 mA	15 pf
100.0 ~ 130.0 MHz	20 mA	16 mA	–	15 pf
130.0 ~ 200.0 MHz	25 mA	–	–	15 pf

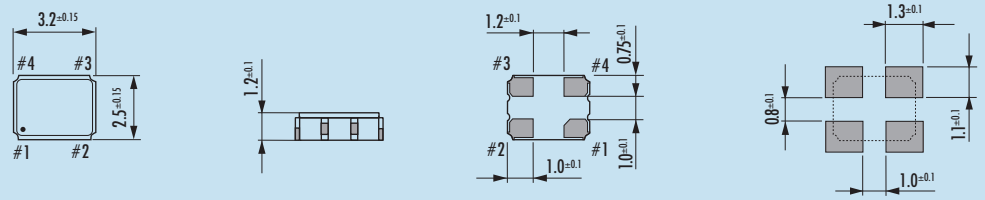
* a ceramics capacitor of 100nF between pin #2 and pin #4 with short distance wiring is strongly recommended

Table 3: Rise & fall time max.

6 ns: 3.0 ~ 50.0 MHz at 30 pF / 1.8 V
5 ns: 3.0 ~ 50.0 MHz at 30 pF / 3.3 V & 2.5 V
4 ns: 3.0 ~ 100.0 MHz at 15 pF / 3.3 V & 2.5 V & 1.8 V
3 ns: 100.0 ~ 130.0 MHz at 15 pF / 2.5 V & 3.3 V
2 ns: 130.0 ~ 200.0 MHz at 15 pF / 3.3 V

note:
- specific data on request
- rise time: 0.1 V_{DC} ~ 0.9 V_{DC}
- fall time: 0.9 V_{DC} ~ 0.1 V_{DC}

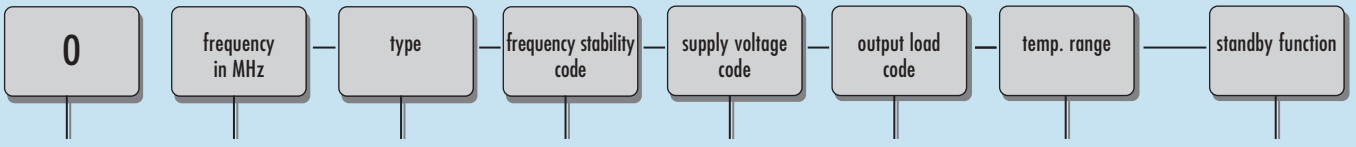
Dimensions



pin connection
1: e/d
2: ground
3: output
4: VDC

in mm

Order Information



Oscillator	3.0 ~ 200.0 MHz (3.3 V) 3.0 ~ 130.0 MHz (2.5 V) 3.0 ~ 100.0 MHz (1.8 V)	JPO32	see table 1	3.3 = 3.3 V 2.5 = 2.5 V 1.8 = 1.8 V	1 = 15 pF 2 = 30 pF	blank = -20 °C ~ +70 °C T1 = -40 °C ~ +85 °C	STP = stop function TRI = tristate function

Example: O 125.0-JPO32-B-2.5-1-T1-STP-LF (LF = RoHS compliant / Pb free pins or pads)

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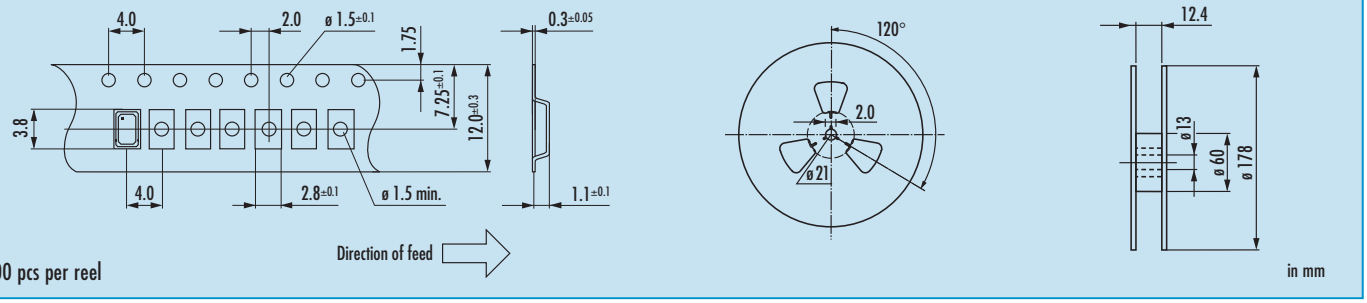
full data can be found under: www.jauch.de / www.jauch.co.uk / www.jauch.fr / www.jauchusa.com

Programmed Oscillator · JPO32 · 3.3/2.5/1.8 V

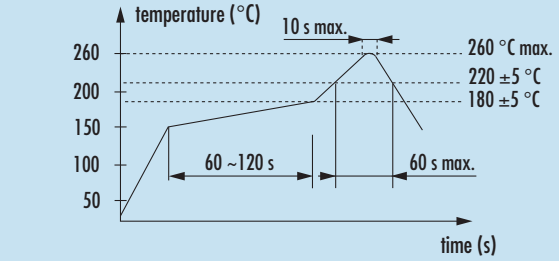
Taping specification



500 pcs per reel

in mm

Reflow Soldering Profile



note: parts are also suitable for soldering systems with lead (Pb) content

Marking (optional)

JPO / year / month / internal code

date code:

A ~ M: Jan. - Dec.

1: 2011 4: 2014

2: 2012 5: 2015

3: 2013 6: 2016

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

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

Packing Note

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

Enable / Disable Function

pin #1 (e/d control)	**pin #3 (output, STP)**	**pin #3 (output, TRI)**
open	active	active
high "1" ($V_{IH} \geq 0.7\ V_{DC}$)	active	active
low "0" ($V_{IL} \leq 0.3\ V_{DC}$)	stop, high impedance	high impedance
	stop (STP) function: • oscillator stops • output high impedance	**tristate (TRI) function:** • oscillator active • output high impedance

actual size

Programmed Oscillator · JPO53 · 3.3/2.5/1.8 V

Programmed SMD CMOS Oscillator · 5.0 x 3.2 mm

- fast delivery service
- tristate or stop function available
- reflow soldering temperature: 260 °C max.
- RoHS compliant, ceramic/metal package

RoHS 2002/95/EC — RoHS compliant

Pb free: pins / pads

General Data

type		JPO53 3.3 V / 2.5 V / 1.8 V
frequency range		3.0 ~ 200.0 MHz (3.3 V, 15 pF)
		3.0 ~ 130.0 MHz (2.5 V, 15 pF)
		3.0 ~ 100.0 MHz (1.8 V, 15 pF)
		3.0 ~ 50.0 MHz (3.3 V / 2.5 V / 1.8 V, 30 pF)
frequency stability over all*		± 25 ppm ~ ± 100 ppm (see table 1)
current consumption		see table 2
supply voltage V_{DC}		3.3 V / 2.5 V / 1.8 V ± 10%
temperature	operating	-20 °C ~ +70 °C / -40 °C ~ +85 °C
	storage	-55 °C ~ +125 °C
output	rise & fall time	see table 3
	load max.	15 pF / 30 pF
	current max.	8 mA (3.3 V) / 4 mA (2.5 V) / 2 mA (1.8 V)
	low level max.	0.4 V
	high level min.	V_{DC} - 0.4 V
standby function		tristate (TRI) / stop (STP)
output enable time max.		100 ns (TRI) / 10 ms (STP)
output disable time max.		250 ns
start-up time max.		10 ms
standby current max.		10 µA (STP version only)
symmetry at 0.5 x V_{DC}		45% ~ 55% typ. (40% ~ 60% max.)

Table 1: Frequency Stability Code

stability code	A ± 100 ppm	B ± 50 ppm	G ± 30 ppm	C ± 25 ppm
-20 °C ~ +70 °C	O	O	O	O
-40 °C ~ +85 °C	O	O	O	O

O available

* includes stability at 25 °C, operating temp. range, supply voltage change, shock and vibration, aging 1st year.

Table 2: Current Consumption max.

frequency range	V_{DC} = 3.3 V	V_{DC} = 2.5 V	V_{DC} = 1.8 V	load
3.0 ~ 50.0 MHz	18 mA	15 mA	8 mA	30 pf
3.0 ~ 100.0 MHz	17 mA	12 mA	8 mA	15 pf
100.0 ~ 130.0 MHz	20 mA	16 mA	–	15 pf
130.0 ~ 200.0 MHz	25 mA	–	–	15 pf

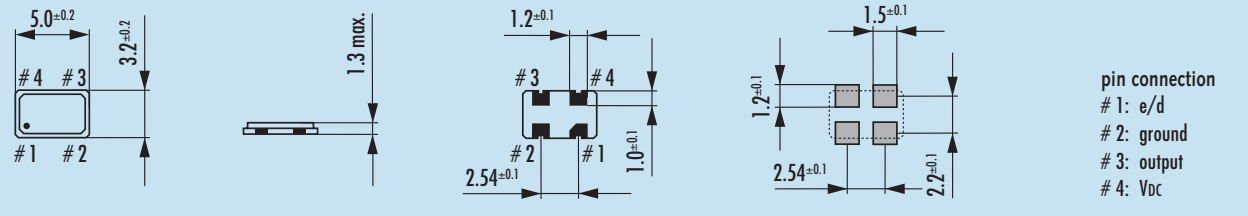
* a ceramics capacitor of 100nF between pin #2 and pin #4 with short distance wiring is strongly recommended

Table 3: Rise & fall time max.

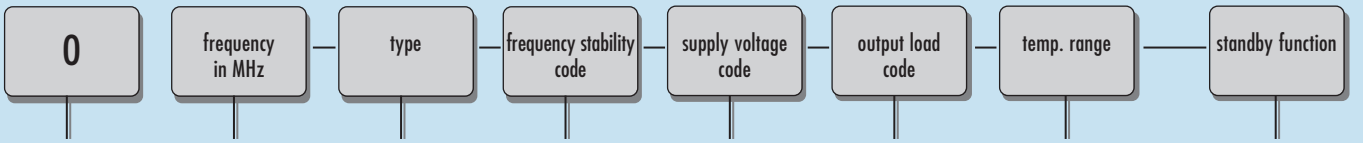
6 ns: 3.0 ~ 50.0 MHz at 30 pF / 1.8 V
5 ns: 3.0 ~ 50.0 MHz at 30 pF / 3.3 V & 2.5 V
4 ns: 3.0 ~ 100.0 MHz at 15 pF / 3.3 V & 2.5 V & 1.8 V
3 ns: 100.0 ~ 130.0 MHz at 15 pF / 2.5 V & 3.3 V
2 ns: 130.0 ~ 200.0 MHz at 15 pF / 3.3 V

note:
- specific data on request
- rise time: 0.1 V_{DC} ~ 0.9 V_{DC}
- fall time: 0.9 V_{DC} ~ 0.1 V_{DC}

Dimensions



Order Information



Example: O 125.0-JPO53-B-2.5-1-T1-TRI-LF (LF = RoHS compliant / Pb free pins or pads)

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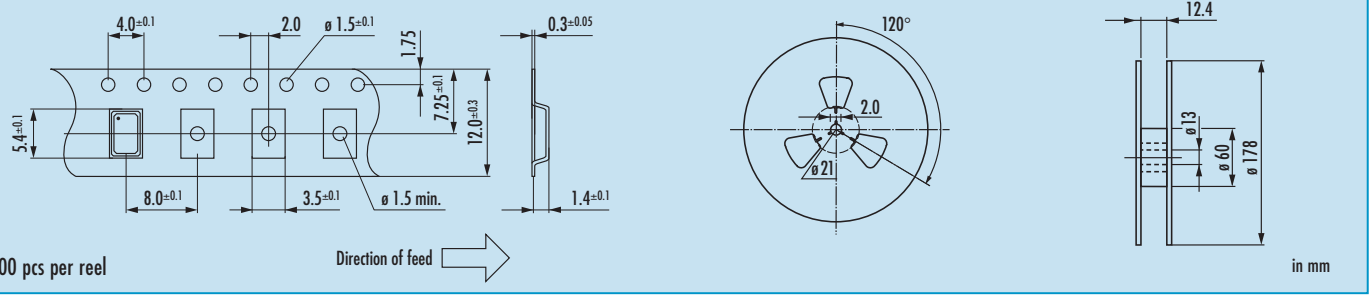
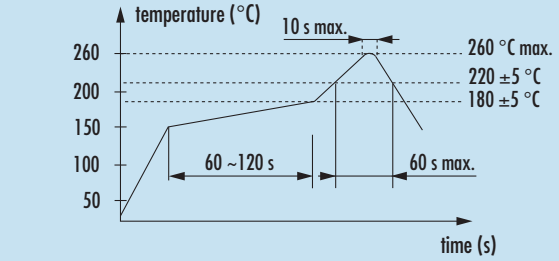
full data can be found under: www.jauch.de / www.jauch.co.uk / www.jauch.fr / www.jauchusa.com

Programmed Oscillator · JPO53 · 3.3/2.5/1.8 V

Taping specification



Reflow Soldering Profile



note: parts are also suitable for soldering systems with lead (Pb) content

Marking (optional)

JPO / year / month / internal code

date code:

A ~ M: Jan. - Dec.

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2: 2012 5: 2015

3: 2013 6: 2016

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

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

Packing Note

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

Enable / Disable Function

pin #1 (e/d control)	pin #3 (output)
open	active
high "1" ($V_{IH} \geq 0.7\ V_{DC}$)	active
low "0" ($V_{IL} \leq 0.3\ V_{DC}$)	high impedance

tristate (TRI) function:

- oscillator active
- output high impedance (weak pull up)

actual size

Programmed Oscillator · JPO53 · 3.3/2.5/1.8 V

Programmed SMD CMOS Oscillator · 5.0 x 3.2 mm

- fast delivery service
- tristate or stop function available
- reflow soldering temperature: 260 °C max.
- RoHS compliant, ceramic/metal package

RoHS 2002/95/EC — RoHS compliant

Pb free: pins / pads

General Data

type		JPO53 3.3 V / 2.5 V / 1.8 V
frequency range		3.0 ~ 200.0 MHz (3.3 V, 15 pF)
		3.0 ~ 130.0 MHz (2.5 V, 15 pF)
		3.0 ~ 100.0 MHz (1.8 V, 15 pF)
		3.0 ~ 50.0 MHz (3.3 V / 2.5 V / 1.8 V, 30 pF)
frequency stability over all*		± 25 ppm ~ ± 100 ppm (see table 1)
current consumption		see table 2
supply voltage V_{DC}		3.3 V / 2.5 V / 1.8 V ± 10%
temperature	operating	-20 °C ~ +70 °C / -40 °C ~ +85 °C
	storage	-55 °C ~ +125 °C
output	rise & fall time	see table 3
	load max.	15 pF / 30 pF
	current max.	8 mA (3.3 V) / 4 mA (2.5 V) / 2 mA (1.8 V)
	low level max.	0.4 V
	high level min.	V_{DC} - 0.4 V
standby function		tristate (TRI) / stop (STP)
output enable time max.		100 ns (TRI) / 10 ms (STP)
output disable time max.		250 ns
start-up time max.		10 ms
standby current max.		10 µA (STP version only)
symmetry at 0.5 x V_{DC}		45% ~ 55% typ. (40% ~ 60% max.)

Table 1: Frequency Stability Code

stability code	A ± 100 ppm	B ± 50 ppm	G ± 30 ppm	C ± 25 ppm
-20 °C ~ +70 °C	O	O	O	O
-40 °C ~ +85 °C	O	O	O	O

O available

* includes stability at 25 °C, operating temp. range, supply voltage change, shock and vibration, aging 1st year.

Table 2: Current Consumption max.

frequency range	V_{DC} = 3.3 V	V_{DC} = 2.5 V	V_{DC} = 1.8 V	load
3.0 ~ 50.0 MHz	18 mA	15 mA	8 mA	30 pf
3.0 ~ 100.0 MHz	17 mA	12 mA	8 mA	15 pf
100.0 ~ 130.0 MHz	20 mA	16 mA	–	15 pf
130.0 ~ 200.0 MHz	25 mA	–	–	15 pf

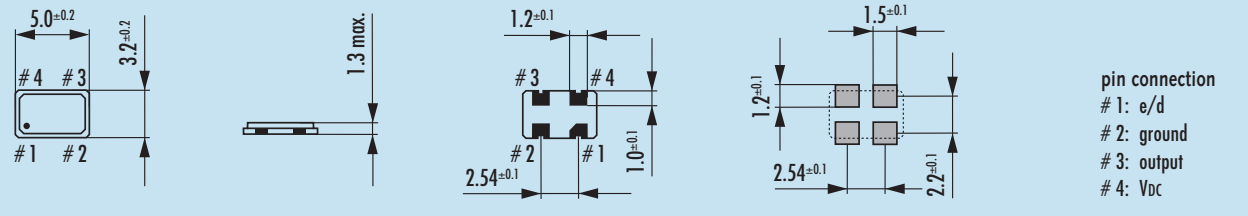
* a ceramics capacitor of 100nF between pin #2 and pin #4 with short distance wiring is strongly recommended

Table 3: Rise & fall time max.

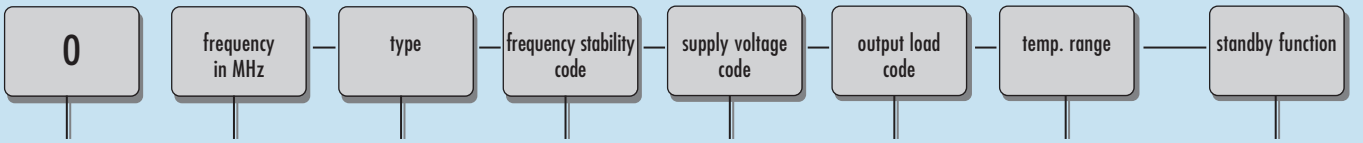
6 ns: 3.0 ~ 50.0 MHz at 30 pF / 1.8 V
5 ns: 3.0 ~ 50.0 MHz at 30 pF / 3.3 V & 2.5 V
4 ns: 3.0 ~ 100.0 MHz at 15 pF / 3.3 V & 2.5 V & 1.8 V
3 ns: 100.0 ~ 130.0 MHz at 15 pF / 2.5 V & 3.3 V
2 ns: 130.0 ~ 200.0 MHz at 15 pF / 3.3 V

note:
- specific data on request
- rise time: 0.1 V_{DC} ~ 0.9 V_{DC}
- fall time: 0.9 V_{DC} ~ 0.1 V_{DC}

Dimensions



Order Information



Example: O 125.0-JPO53-B-2.5-1-T1-TRI-LF (LF = RoHS compliant / Pb free pins or pads)

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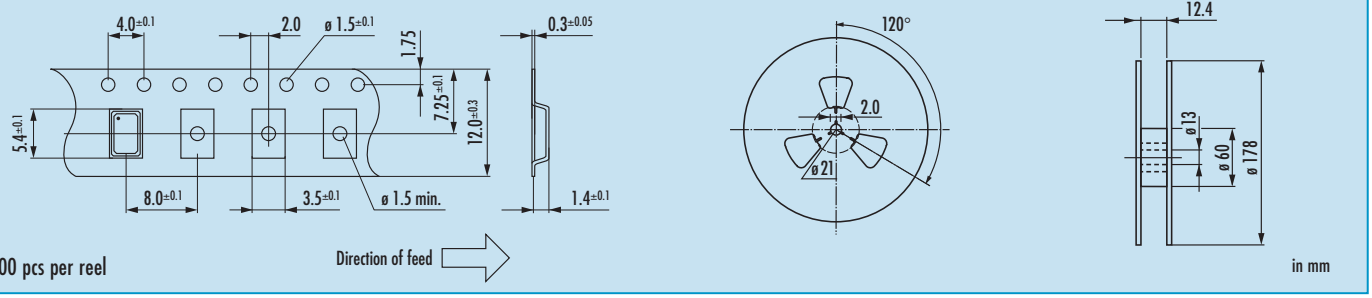
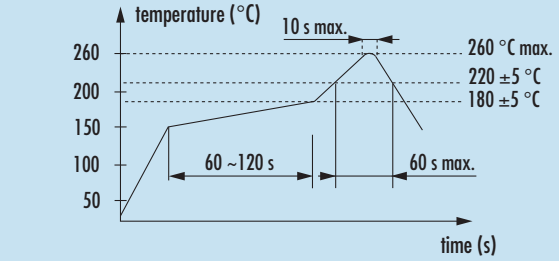
full data can be found under: www.jauch.de / www.jauch.co.uk / www.jauch.fr / www.jauchusa.com

Programmed Oscillator · JPO53 · 3.3/2.5/1.8 V

Taping specification



Reflow Soldering Profile



note: parts are also suitable for soldering systems with lead (Pb) content

Marking (optional)

JPO / year / month / internal code

date code:

A ~ M: Jan. - Dec.

1: 2011 4: 2014

2: 2012 5: 2015

3: 2013 6: 2016

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

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

Packing Note

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

Enable / Disable Function

pin #1 (e/d control)	pin #3 (output)
open	active
high "1" ($V_{IH} \geq 0.7\ V_{DC}$)	active
low "0" ($V_{IL} \leq 0.3\ V_{DC}$)	high impedance

tristate (TRI) function:

- oscillator active
- output high impedance (weak pull up)

actual size

Programmed Oscillator · JPO53 · 3.3/2.5/1.8 V

Programmed SMD CMOS Oscillator · 5.0 x 3.2 mm

- fast delivery service
- tristate or stop function available
- reflow soldering temperature: 260 °C max.
- RoHS compliant, ceramic/metal package

RoHS 2002/95/EC — RoHS compliant

Pb free: pins / pads

General Data

type		JPO53 3.3 V / 2.5 V / 1.8 V
frequency range		3.0 ~ 200.0 MHz (3.3 V, 15 pF)
		3.0 ~ 130.0 MHz (2.5 V, 15 pF)
		3.0 ~ 100.0 MHz (1.8 V, 15 pF)
		3.0 ~ 50.0 MHz (3.3 V / 2.5 V / 1.8 V, 30 pF)
frequency stability over all*		± 25 ppm ~ ± 100 ppm (see table 1)
current consumption		see table 2
supply voltage V_{DC}		3.3 V / 2.5 V / 1.8 V ± 10%
temperature	operating	-20 °C ~ +70 °C / -40 °C ~ +85 °C
	storage	-55 °C ~ +125 °C
output	rise & fall time	see table 3
	load max.	15 pF / 30 pF
	current max.	8 mA (3.3 V) / 4 mA (2.5 V) / 2 mA (1.8 V)
	low level max.	0.4 V
	high level min.	V_{DC} - 0.4 V
standby function		tristate (TRI) / stop (STP)
output enable time max.		100 ns (TRI) / 10 ms (STP)
output disable time max.		250 ns
start-up time max.		10 ms
standby current max.		10 µA (STP version only)
symmetry at 0.5 x V_{DC}		45% ~ 55% typ. (40% ~ 60% max.)

Table 1: Frequency Stability Code

stability code	A ± 100 ppm	B ± 50 ppm	G ± 30 ppm	C ± 25 ppm
-20 °C ~ +70 °C	O	O	O	O
-40 °C ~ +85 °C	O	O	O	O

O available

* includes stability at 25 °C, operating temp. range, supply voltage change, shock and vibration, aging 1st year.

Table 2: Current Consumption max.

frequency range	V_{DC} = 3.3 V	V_{DC} = 2.5 V	V_{DC} = 1.8 V	load
3.0 ~ 50.0 MHz	18 mA	15 mA	8 mA	30 pf
3.0 ~ 100.0 MHz	17 mA	12 mA	8 mA	15 pf
100.0 ~ 130.0 MHz	20 mA	16 mA	–	15 pf
130.0 ~ 200.0 MHz	25 mA	–	–	15 pf

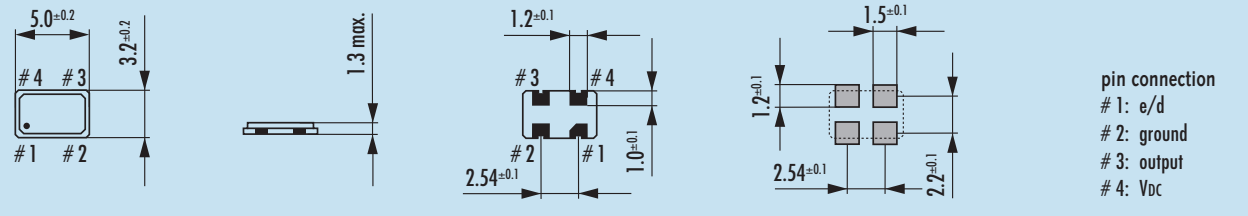
* a ceramics capacitor of 100nF between pin #2 and pin #4 with short distance wiring is strongly recommended

Table 3: Rise & fall time max.

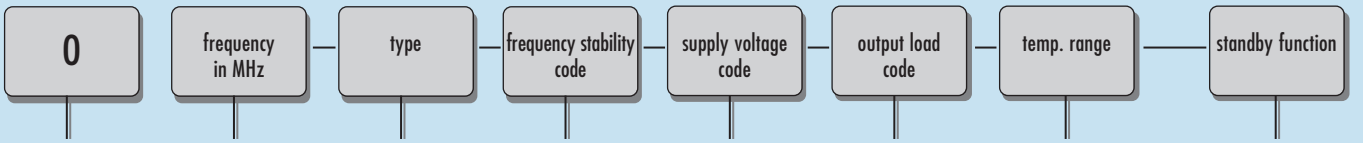
6 ns: 3.0 ~ 50.0 MHz at 30 pF / 1.8 V
5 ns: 3.0 ~ 50.0 MHz at 30 pF / 3.3 V & 2.5 V
4 ns: 3.0 ~ 100.0 MHz at 15 pF / 3.3 V & 2.5 V & 1.8 V
3 ns: 100.0 ~ 130.0 MHz at 15 pF / 2.5 V & 3.3 V
2 ns: 130.0 ~ 200.0 MHz at 15 pF / 3.3 V

note:
- specific data on request
- rise time: 0.1 V_{DC} ~ 0.9 V_{DC}
- fall time: 0.9 V_{DC} ~ 0.1 V_{DC}

Dimensions



Order Information

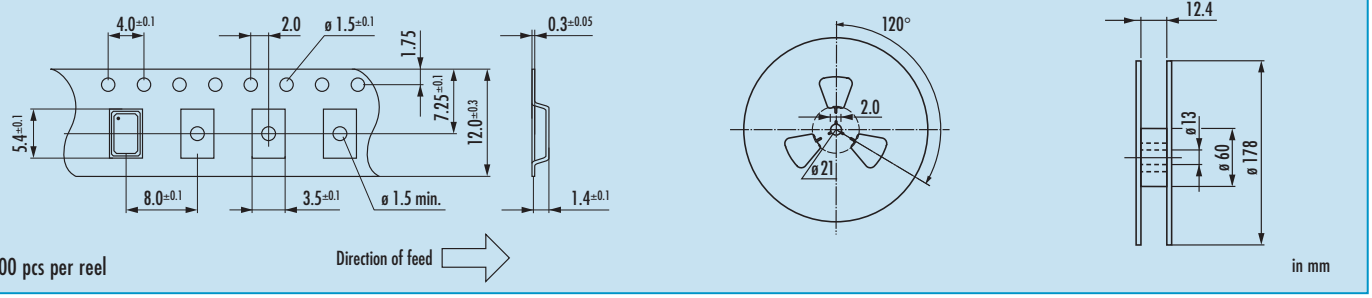


Example: O 125.0-JPO53-B-2.5-1-T1-TRI-LF (LF = RoHS compliant / Pb free pins or pads)

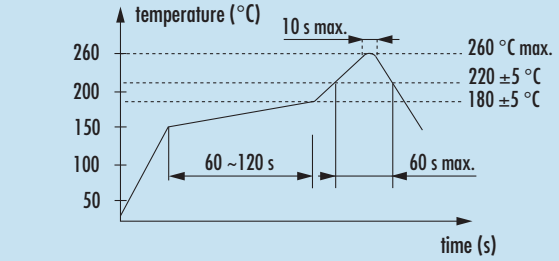
Jauch Quartz GmbH • e-mail: info@jauch.de
full data can be found under: www.jauch.de / www.jauch.co.uk / www.jauch.fr / www.jauchusa.com

Programmed Oscillator · JPO53 · 3.3/2.5/1.8 V

Taping specification



Reflow Soldering Profile



note: parts are also suitable for soldering systems with lead (Pb) content

Marking (optional)

JPO / year / month / internal code

date code:

A ~ M: Jan. - Dec.

1: 2011 4: 2014

2: 2012 5: 2015

3: 2013 6: 2016

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

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

Packing Note

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

Enable / Disable Function

pin #1 (e/d control)	pin #3 (output)
open	active
high "1" ($V_{IH} \geq 0.7\ V_{DC}$)	active
low "0" ($V_{IL} \leq 0.3\ V_{DC}$)	high impedance

tristate (TRI) function:

- oscillator active
- output high impedance (weak pull up)

actual size

Programmed Oscillator · JPO75 · 3.3/2.5/1.8 V

Programmed SMD CMOS Oscillator · 7.0 x 5.0 mm

- fast delivery service
- tristate or stop function available
- reflow soldering temperature: 260 °C max.
- RoHS compliant, ceramic/metal package

RoHS 2002/95/EC — RoHS compliant

Pb free: pins / pads

General Data

type		JPO75 3.3 V / 2.5 V / 1.8 V
frequency range		3.0 ~ 200.0 MHz (3.3 V, 15 pF)
		3.0 ~ 130.0 MHz (2.5 V, 15 pF)
		3.0 ~ 100.0 MHz (1.8 V, 15 pF)
		3.0 ~ 50.0 MHz (3.3 V / 2.5 V / 1.8 V, 30 pF)
frequency stability over all*		± 25 ppm ~ ± 100 ppm (see table 1)
current consumption		see table 2
supply voltage V_{DC}		3.3 V / 2.5 V / 1.8 V ± 10%
temperature	operating	-20 °C ~ +70 °C / -40 °C ~ +85 °C
	storage	-55 °C ~ +125 °C
output	rise & fall time	see table 3
	load max.	15 pF / 30 pF
	current max.	8 mA (3.3 V) / 4 mA (2.5 V) / 2 mA (1.8 V)
	low level max.	0.4 V
	high level min.	V_{DC} - 0.4 V
standby function		tristate (TRI) / stop (STP)
output enable time max.		100 ns (TRI) / 10 ms (STP)
output disable time max.		250 ns
start-up time max.		10 ms
standby current max.		10 µA (STP version only)
symmetry at 0.5 x V_{DC}		45% ~ 55% typ. (40% ~ 60% max.)

Table 1: Frequency Stability Code

stability code	A ± 100 ppm	B ± 50 ppm	G ± 30 ppm	C ± 25 ppm
-20 °C ~ +70 °C	O	O	O	O
-40 °C ~ +85 °C	O	O	O	O

O available

* includes stability at 25 °C, operating temp. range, supply voltage change, shock and vibration, aging 1st year.

Table 2: Current Consumption max.

frequency range	V_{DC} = 3.3 V	V_{DC} = 2.5 V	V_{DC} = 1.8 V	load
3.0 ~ 50.0 MHz	18 mA	15 mA	8 mA	30 pf
3.0 ~ 100.0 MHz	17 mA	12 mA	8 mA	15 pf
100.0 ~ 130.0 MHz	20 mA	16 mA	–	15 pf
130.0 ~ 200.0 MHz	25 mA	–	–	15 pf

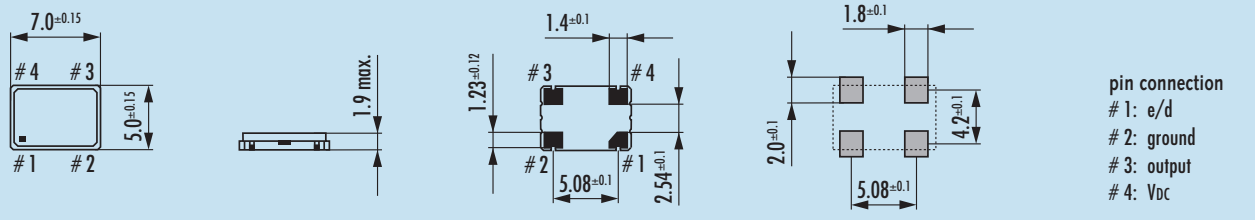
* a ceramics capacitor of 100nF between pin #2 and pin #4 with short distance wiring is strongly recommended

Table 3: Rise & fall time max.

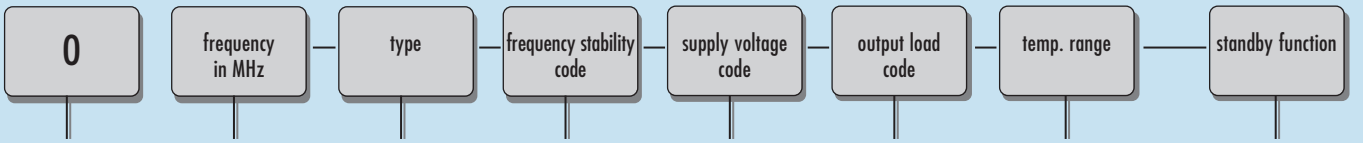
6 ns: 3.0 ~ 50.0 MHz at 30 pF / 1.8 V
5 ns: 3.0 ~ 50.0 MHz at 30 pF / 3.3 V & 2.5 V
4 ns: 3.0 ~ 100.0 MHz at 15 pF / 3.3 V & 2.5 V & 1.8 V
3 ns: 100.0 ~ 130.0 MHz at 15 pF / 2.5 V & 3.3 V
2 ns: 130.0 ~ 200.0 MHz at 15 pF / 3.3 V

note:
- specific data on request
- rise time: 0.1 V_{DC} ~ 0.9 V_{DC}
- fall time: 0.9 V_{DC} ~ 0.1 V_{DC}

Dimensions



Order Information



Example: O 125.0-JPO75-B-2.5-1-T1-TRI-LF (LF = RoHS compliant / Pb free pins or pads)

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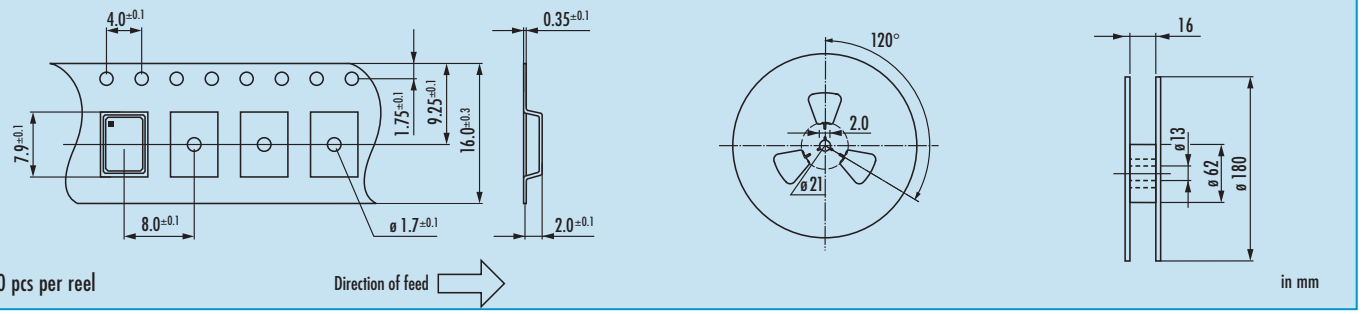
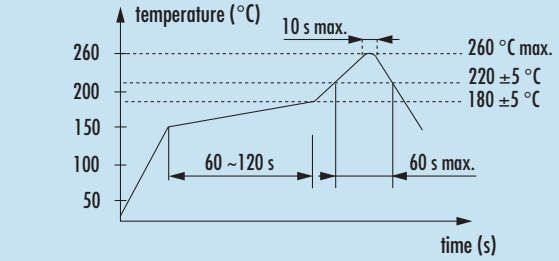
full data can be found under: www.jauch.de / www.jauch.co.uk / www.jauch.fr / www.jauchusa.com

Programmed Oscillator · JPO75 · 3.3/2.5/1.8 V

Taping specification



Reflow Soldering Profile



note: parts are also suitable for soldering systems with lead (Pb) content

Marking (optional)

JPO / year / month / internal code

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

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

Packing Note

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

Enable / Disable Function

pin #1 (e/d control)	**pin #3 (output)**
open	active
high "1" ($V_{IH} \geq 0.7\ V_{DC}$)	active
low "0" ($V_{IL} \leq 0.3\ V_{DC}$)	high impedance

tristate (TRI) function:
- oscillator active
- output high impedance (weak pull up)

actual size

Programmed Oscillator · JPO75 · 3.3/2.5/1.8 V

Programmed SMD CMOS Oscillator · 7.0 x 5.0 mm

- fast delivery service
- tristate or stop function available
- reflow soldering temperature: 260 °C max.
- RoHS compliant, ceramic/metal package

RoHS 2002/95/EC — RoHS compliant

Pb free: pins / pads

General Data

type		JPO75 3.3 V / 2.5 V / 1.8 V
frequency range		3.0 ~ 200.0 MHz (3.3 V, 15 pF)
		3.0 ~ 130.0 MHz (2.5 V, 15 pF)
		3.0 ~ 100.0 MHz (1.8 V, 15 pF)
		3.0 ~ 50.0 MHz (3.3 V / 2.5 V / 1.8 V, 30 pF)
frequency stability over all*		± 25 ppm ~ ± 100 ppm (see table 1)
current consumption		see table 2
supply voltage V_{DC}		3.3 V / 2.5 V / 1.8 V ± 10%
temperature	operating	-20 °C ~ +70 °C / -40 °C ~ +85 °C
	storage	-55 °C ~ +125 °C
output	rise & fall time	see table 3
	load max.	15 pF / 30 pF
	current max.	8 mA (3.3 V) / 4 mA (2.5 V) / 2 mA (1.8 V)
	low level max.	0.4 V
	high level min.	V_{DC} - 0.4 V
standby function		tristate (TRI) / stop (STP)
output enable time max.		100 ns (TRI) / 10 ms (STP)
output disable time max.		250 ns
start-up time max.		10 ms
standby current max.		10 µA (STP version only)
symmetry at 0.5 x V_{DC}		45% ~ 55% typ. (40% ~ 60% max.)

Table 1: Frequency Stability Code

stability code	A ± 100 ppm	B ± 50 ppm	G ± 30 ppm	C ± 25 ppm
-20 °C ~ +70 °C	O	O	O	O
-40 °C ~ +85 °C	O	O	O	O

O available

* includes stability at 25 °C, operating temp. range, supply voltage change, shock and vibration, aging 1st year.

Table 2: Current Consumption max.

frequency range	V_{DC} = 3.3 V	V_{DC} = 2.5 V	V_{DC} = 1.8 V	load
3.0 ~ 50.0 MHz	18 mA	15 mA	8 mA	30 pf
3.0 ~ 100.0 MHz	17 mA	12 mA	8 mA	15 pf
100.0 ~ 130.0 MHz	20 mA	16 mA	–	15 pf
130.0 ~ 200.0 MHz	25 mA	–	–	15 pf

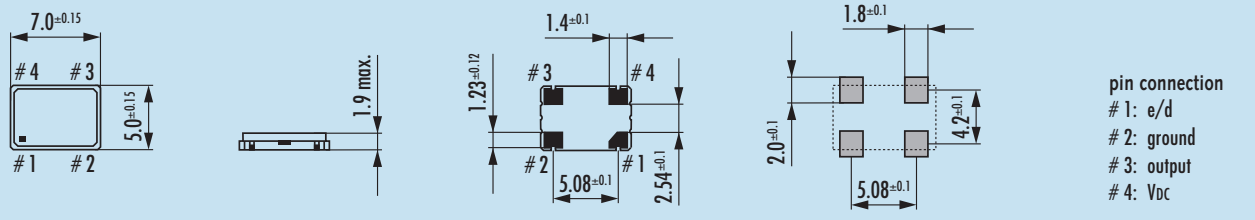
* a ceramics capacitor of 100nF between pin #2 and pin #4 with short distance wiring is strongly recommended

Table 3: Rise & fall time max.

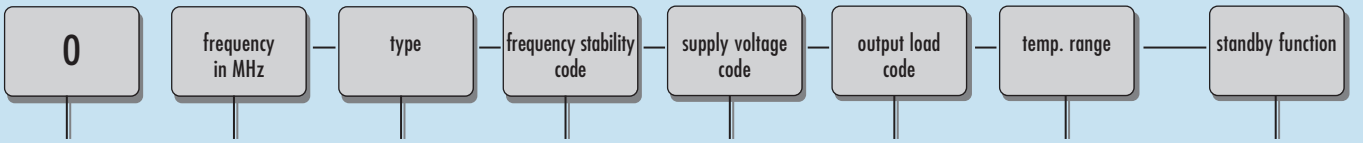
6 ns: 3.0 ~ 50.0 MHz at 30 pF / 1.8 V
5 ns: 3.0 ~ 50.0 MHz at 30 pF / 3.3 V & 2.5 V
4 ns: 3.0 ~ 100.0 MHz at 15 pF / 3.3 V & 2.5 V & 1.8 V
3 ns: 100.0 ~ 130.0 MHz at 15 pF / 2.5 V & 3.3 V
2 ns: 130.0 ~ 200.0 MHz at 15 pF / 3.3 V

note:
- specific data on request
- rise time: 0.1 V_{DC} ~ 0.9 V_{DC}
- fall time: 0.9 V_{DC} ~ 0.1 V_{DC}

Dimensions



Order Information



Example: O 125.0-JPO75-B-2.5-1-T1-TRI-LF (LF = RoHS compliant / Pb free pins or pads)

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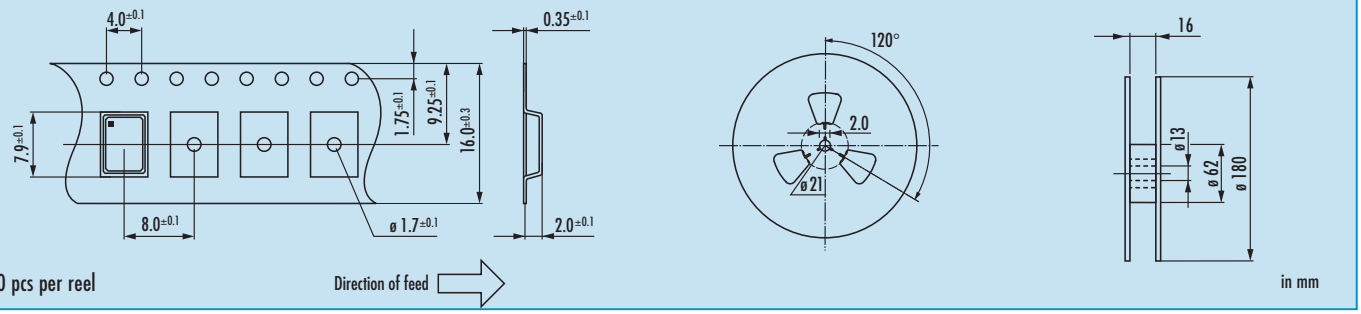
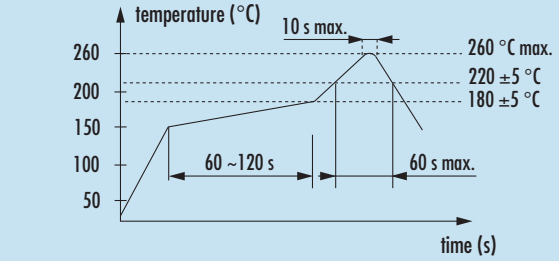
full data can be found under: www.jauch.de / www.jauch.co.uk / www.jauch.fr / www.jauchusa.com

Programmed Oscillator · JPO75 · 3.3/2.5/1.8 V

Taping specification



Reflow Soldering Profile



note: parts are also suitable for soldering systems with lead (Pb) content

Marking (optional)

JPO / year / month / internal code

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

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

Packing Note

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

Enable / Disable Function

pin #1 (e/d control)	**pin #3 (output)**
open	active
high "1" ($V_{IH} \geq 0.7\ V_{DC}$)	active
low "0" ($V_{IL} \leq 0.3\ V_{DC}$)	high impedance

tristate (TRI) function:
- oscillator active
- output high impedance (weak pull up)

actual size

Programmed Oscillator · JPO75 · 3.3/2.5/1.8 V

Programmed SMD CMOS Oscillator · 7.0 x 5.0 mm

- fast delivery service
- tristate or stop function available
- reflow soldering temperature: 260 °C max.
- RoHS compliant, ceramic/metal package

RoHS 2002/95/EC — RoHS compliant

Pb free: pins / pads

General Data

type		JPO75 3.3 V / 2.5 V / 1.8 V
frequency range		3.0 ~ 200.0 MHz (3.3 V, 15 pF)
		3.0 ~ 130.0 MHz (2.5 V, 15 pF)
		3.0 ~ 100.0 MHz (1.8 V, 15 pF)
		3.0 ~ 50.0 MHz (3.3 V / 2.5 V / 1.8 V, 30 pF)
frequency stability over all*		± 25 ppm ~ ± 100 ppm (see table 1)
current consumption		see table 2
supply voltage V_{DC}		3.3 V / 2.5 V / 1.8 V ± 10%
temperature	operating	-20 °C ~ +70 °C / -40 °C ~ +85 °C
	storage	-55 °C ~ +125 °C
output	rise & fall time	see table 3
	load max.	15 pF / 30 pF
	current max.	8 mA (3.3 V) / 4 mA (2.5 V) / 2 mA (1.8 V)
	low level max.	0.4 V
	high level min.	V_{DC} - 0.4 V
standby function		tristate (TRI) / stop (STP)
output enable time max.		100 ns (TRI) / 10 ms (STP)
output disable time max.		250 ns
start-up time max.		10 ms
standby current max.		10 µA (STP version only)
symmetry at 0.5 x V_{DC}		45% ~ 55% typ. (40% ~ 60% max.)

Table 1: Frequency Stability Code

stability code	A ± 100 ppm	B ± 50 ppm	G ± 30 ppm	C ± 25 ppm
-20 °C ~ +70 °C	O	O	O	O
-40 °C ~ +85 °C	O	O	O	O

O available

* includes stability at 25 °C, operating temp. range, supply voltage change, shock and vibration, aging 1st year.

Table 2: Current Consumption max.

frequency range	V_{DC} = 3.3 V	V_{DC} = 2.5 V	V_{DC} = 1.8 V	load
3.0 ~ 50.0 MHz	18 mA	15 mA	8 mA	30 pf
3.0 ~ 100.0 MHz	17 mA	12 mA	8 mA	15 pf
100.0 ~ 130.0 MHz	20 mA	16 mA	–	15 pf
130.0 ~ 200.0 MHz	25 mA	–	–	15 pf

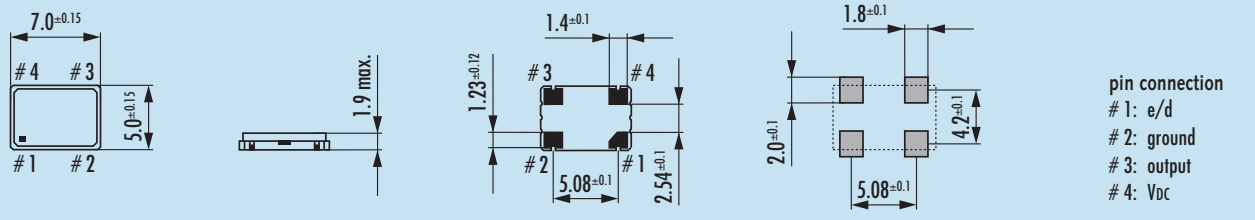
* a ceramics capacitor of 100nF between pin #2 and pin #4 with short distance wiring is strongly recommended

Table 3: Rise & fall time max.

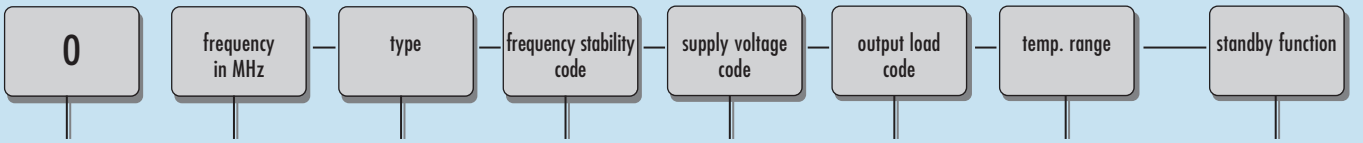
6 ns: 3.0 ~ 50.0 MHz at 30 pF / 1.8 V
5 ns: 3.0 ~ 50.0 MHz at 30 pF / 3.3 V & 2.5 V
4 ns: 3.0 ~ 100.0 MHz at 15 pF / 3.3 V & 2.5 V & 1.8 V
3 ns: 100.0 ~ 130.0 MHz at 15 pF / 2.5 V & 3.3 V
2 ns: 130.0 ~ 200.0 MHz at 15 pF / 3.3 V

note:
- specific data on request
- rise time: 0.1 V_{DC} ~ 0.9 V_{DC}
- fall time: 0.9 V_{DC} ~ 0.1 V_{DC}

Dimensions



Order Information



Example: O 125.0-JPO75-B-2.5-1-T1-TRI-LF (LF = RoHS compliant / Pb free pins or pads)

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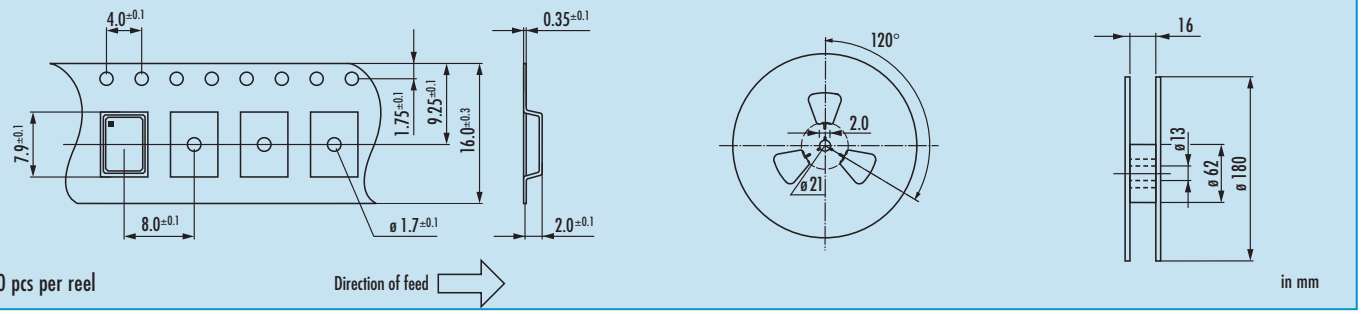
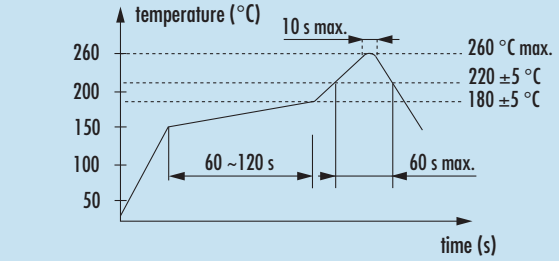
full data can be found under: www.jauch.de / www.jauch.co.uk / www.jauch.fr / www.jauchusa.com

Programmed Oscillator · JPO75 · 3.3/2.5/1.8 V

Taping specification



Reflow Soldering Profile



note: parts are also suitable for soldering systems with lead (Pb) content

Marking (optional)

JPO / year / month / internal code

date code:
A ~ M: Jan. - Dec.
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Jan.	Febr.	Mar.	Apr.	May	June
A	B	C	D	E	F

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

Packing Note

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

Enable / Disable Function

pin #1 (e/d control)	**pin #3 (output)**
open	active
high "1" ($V_{IH} \geq 0.7\ V_{DC}$)	active
low "0" ($V_{IL} \leq 0.3\ V_{DC}$)	high impedance

tristate (TRI) function:
- oscillator active
- output high impedance (weak pull up)