RFPT500

rakon

SMD Temperature Compensated Crystal Oscillator

SMD Temperature Compensated Crystal Oscillator for Stratum 3 applications.

Product description

The RFPT500 is based on Rakon's patented Pluto™ TCXO technology delivering industry leading performance. Tailored specifically to the requirements of Stratum 3 telecommunication applications the RFPT500 is a low cost solution which allows the system to be compliant with Belcore standards GR-253 and GR-1244. The standard package has 10 pads but 4 or 8 pad versions are available on request.

Applications

- IP timing
- Stratum 3
- Communications
- Other

Features

- Excellent holdover stability
- Exceptional free-running accuracy
- Very wide operating temperature range

Specifications

1.0   SPECIFICATION RFERENCES

Line	Parameter	Description
1.1	Part number	ExxxxLF
1.2	Description	RFPT500
1.3	Version	A (2014-05-20)
1.4	RoHS compliant	Yes

2.0   FREQUENCY CHARACTERISTICS

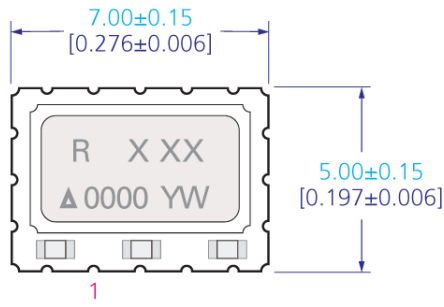| Line	Parameter	Test Condition	Value	Unit
2.1	Nominal frequency		10 to 30	MHz
2.2	Holdover stability, temperature	Reference (Fmax+Fmin)/2	±0.14 to 0.28	ppm
2.3	Holdover stability, 24 hour drift	24 hours, at constant temperature after 48 hours operation	±40 max	ppb/day
2.4	Max. slope (ΔF/ΔT) over temperature	Available upon request		
2.5	Temperature range		-40 to 85	°C
2.6	Free-run accuracy	Inclusive of calibration tolerance at 25°C, temperature, supply voltage 3.3V±5%, load 15pF±5pF, reflow soldering and ageing 20 years	±4.6 max	ppm
2.7	Supply voltage stability	±5% variation in supply voltage at 25°C	±0.1 max	ppm

3.0   POWER SUPPLY

Line	Parameter	Test Condition	Value	Unit
3.1	Supply voltage, Vs	±5%	2.5 to 6	V
3.2	Current		3 to 8	mA

4.0   VOLTAGE CONTROL

Line	Parameter	Description
4.1	Voltage Control	Fixed frequency is standard for the RFPT500 series but voltage control is available

MODEL DRAWING

7.00±0.15
[0.276±0.006]
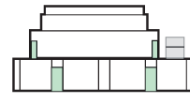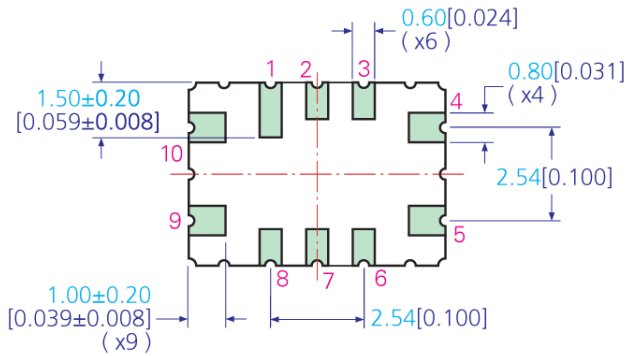
R X XX
△ 0000 YW

5.00±0.15
[0.197±0.006]

1

TOP VIEW

2.25
[0.089]Max.

0.60[0.024]

SIDE VIEW

END VIEW

0.60[0.024]
(x6)

0.80[0.031]
(x4)

1.50±0.20
[0.059±0.008]

1 2 3
4

10

2.54[0.100]
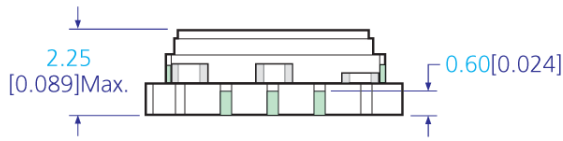
NOTE: Pin connections are detailed
in the specification

9
5

1.00±0.20
[0.039±0.008]
(x9)

8 7 6

2.54[0.100]

BOTTOM VIEW

RECOMMENDED PAD LAYOUT - TOP VIEW

7.11[0.280]

2.03[0.080]

8 7 6

0.81[0.032]

9

5.08
[0.200]

5

2.54
[0.100]

10
4

2.03[0.080]

2.54[0.100]

1 2 3

0.63[0.025]

2.54
[0.100]
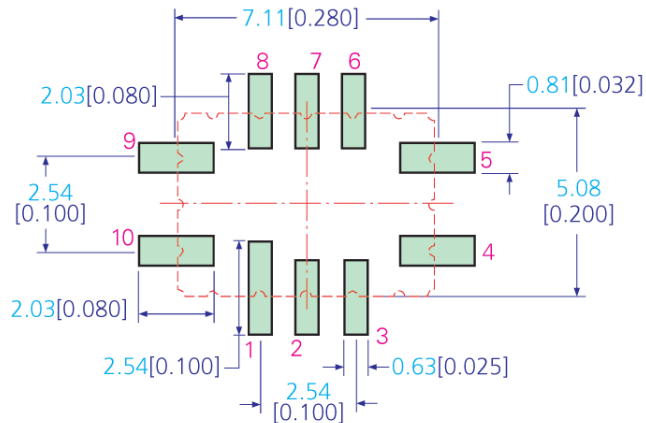
TITLE: RFPT500 MODEL OUTLINE DRAWING		Tolerance:
FILENAME: RFPT500_MD	REVISION: A	XX = ±0.5
		X.X = ±0.2
RELATED DRAWINGS:	DATE: 22-Jul-10	X.XX = ±0.05
	SCALE: 5:1	X.XXX = ±0.05
		X° = ±1.0°
	Millimeters [inch]	Hole = ±0.10

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