PX-504

Low G-Sensitivity & Phase Noise
Clock Oscillator

Features

- AT-Cut Crystal
- Surface Mount FR4 based package
- Low Phase Noise & Jitter
- Low G-Sensitivity
- Tight Stabilities
- Frequency Range 30 - 180MHz
- Standard Frequencies 50; 80; 100; 120; 122,88; 160MHz

Applications

- Communication
- Industrial
- Test & Measurement
- Harsh Environment
- Military

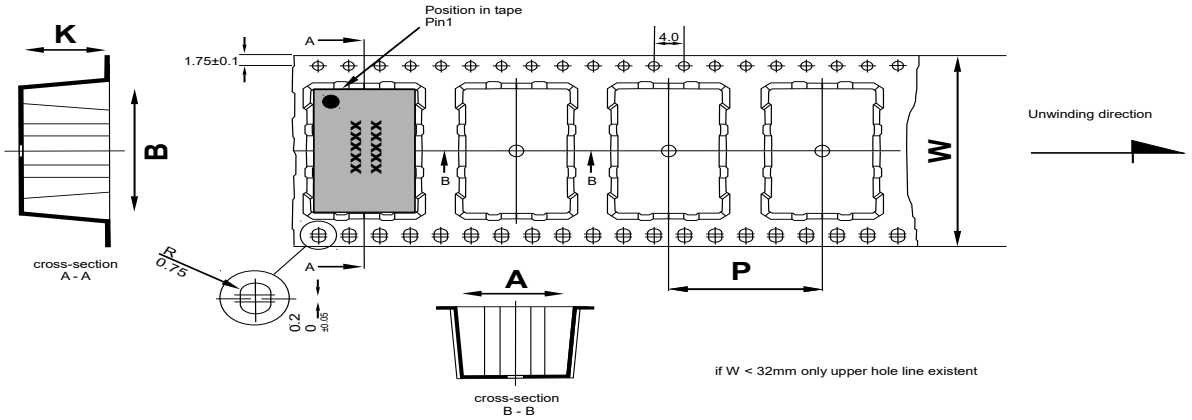
Performance Specifications

Frequency Stabilities[1]					
Parameter	Min	Typical	Max	Units	Condition
vs. operating temperature range (referenced to +25°C)	-25		+25	ppm	-40 to +85°C
Initial tolerance vs. supply voltage change vs. load change vs. aging (15 years)	-10 -3 -1 -7		+10 +3 +1 +7	ppm ppm ppm ppm	@Vc=Vs/2 V_S ±5% Load ±10%

Performance Specifications

Supply Voltage (Vs)						
Parameter	Min	Typical	Max	Units	Condition	
Supply voltage (standard)	3.135	3.3	3.465	VDC		Options
Current consumption			20	mA	@ LVCMOS	
Supply voltage	4.75	5	5.25	VDC		
Current consumption			15	mA	@ HCMOS	
RF Output						
Signal	HCMOS					
Load		15		pF		
Rise and Fall time			5	ns	@ 15 pF 10 to 90%	
Duty cycle	45		55	%	@ Vs / 2	
Additional Parameters						
Phase Noise Jitter		-90 -121 -147 -158 -165 -168 -168 32		dBc/Hz dBc/Hz dBc/Hz dBc/Hz dBc/Hz dBc/Hz dBc/Hz fs RMS	10 Hz 100 Hz 1 kHz 10 kHz 100 kHz 1 MHz 10 MHz @ 12kHz .. 20MHz	@120 MHz LVCMOS 3.3V
G-Sensitivity		0.3		ppb/g	@0.06g^2/Hz	
Weight			2.0	g		
Processing & Packing	Handling & Processing Note					
Absolute Maximum Ratings						
Supply voltage (Vs)			6.0	V		
Operable Temperature Range	-40		+85	°C		
Storage Temperature Range	-40		+105	°C		

Standard Shipping Method



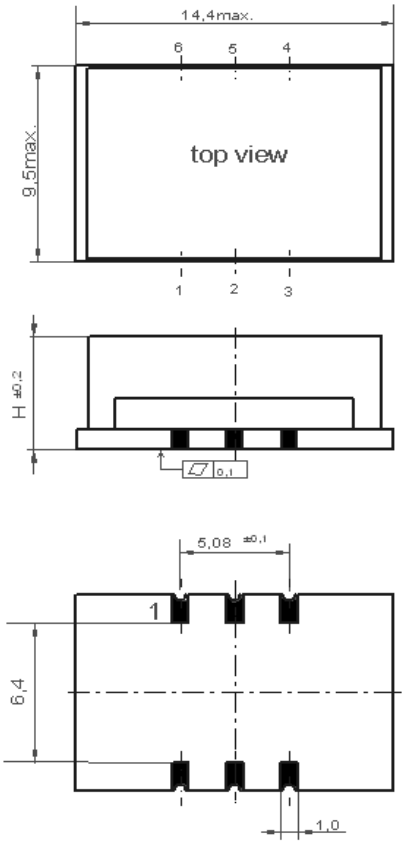
Dimension in mm:
A, B and K are dependent uppon component dimensions
production tolerance complying DIN IEC 286-3

All dimensions in millimeters unless otherwise stated

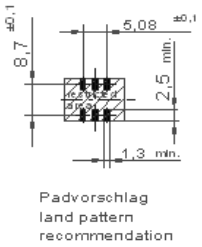
Enclosure Type	Tape Width W (mm)	Quantity per meter	Quantity per reel	Dimension P
G218C	24	83.3	1700	12

Enclosure

Package Codes		
Type	Height "H"	Pin Length "L"
G218C	2.8	NA



G 218



Padvorschlag
land pattern
recommendation

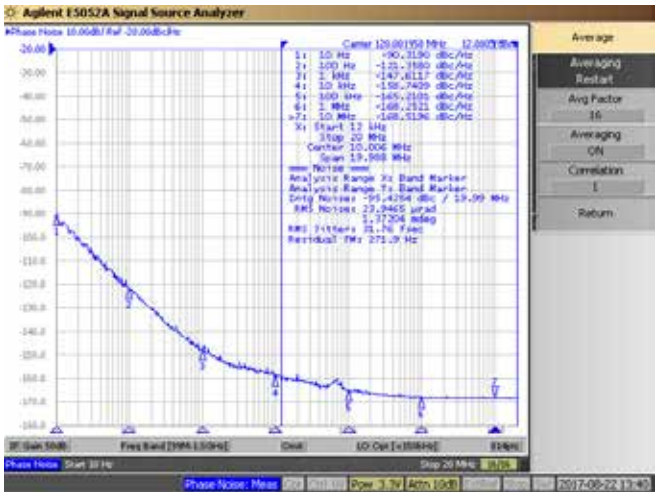
Pin Connections	
1	N.C.
2	N.C. / Enable (Option)
3	Ground
4	RF Output
5	N.C.
6	Supply Voltage Input (Vs)

Enable true table (optional)		
	HCMOS	
Pin 2	Pin 4	Pin 5
High	Data	N.C.
Open	Data	N.C.
Low	High Tristate	N.C.

Marking
PX-504-xxxx
Frequency
● AYYWW

Typical Performance

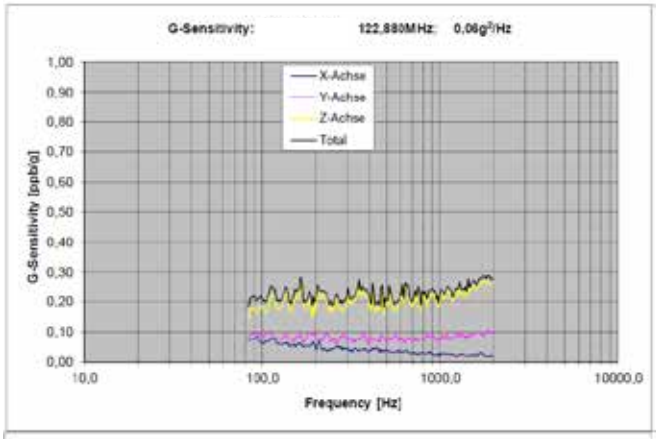
Phase Noise
PX-504 @ 120 MHz LVCMOS

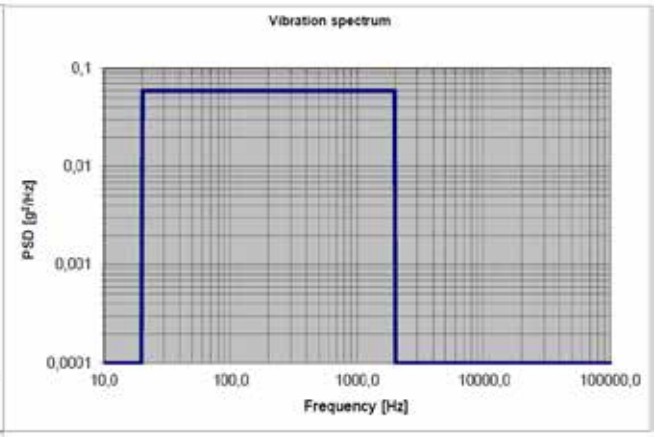


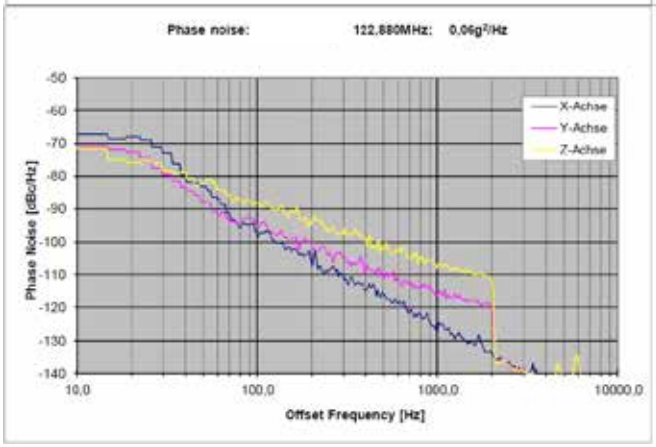
Typical Performance

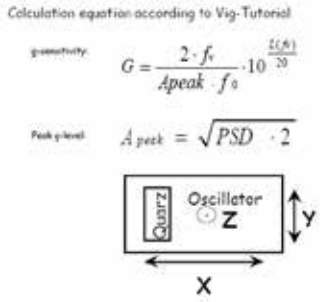
G-Sensitivity

PX-504 @ 122.88 MHz LVCMOS









Recommended Reflow Profile

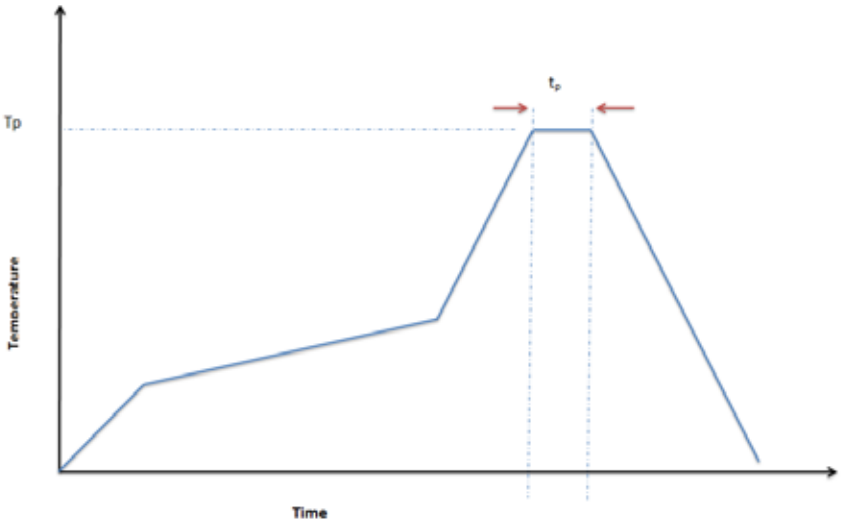
TP: max 250°C (@ solder joint, customer board level)

T_p: max: 10…30 sec

Additional Information:

This SMD oscillator has been designed for pick and place reflow soldering

SMD oscillators must be on the top side of the PCB during the reflow process.



Ordering Information

PX-504 0 - E A E - 255 0 - 100M000000

- Model Code: PX-504
- Height: 0
  - 0: 2.8mm (G218C)
- Supply Voltage: E
  - D: 5V
  - E: 3.3V
- RF Output Code: A
  - A: HCMOS
- Temperature Range: E
  - E: -40°C to +85°C
- Stability Code: 255
  - E-255: ±25ppm
- Enable: 0
  - 0: No Enable
  - 1: Enable
- Frequency: 100M000000

Notes:

1. Contact factory for improved stabilities or additional product options. Not all options and codes are available at all frequencies.
2. Unless other stated all values are valid after warm-up time and refer to typical conditions for supply voltage, frequency control voltage, load, temperature (25°C).
3. Phase noise degrades with increasing output frequency.
4. Subject to technical modification.
5. Contact factory for availability.

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