

PX-706

### Features

- AT-Cut Crystal
- Surface Mount FR4 based package
- Single layer
- Reflow Process Compatible
- Low Phase Noise & Jitter
- Tight Stabilities
- Frequency Range 40 - 300MHz
- Standard Frequencies 61,44; 100; 122,88; 153,6; 200; 250; 285; 300MHz

### Applications

- Industrial
- Synthesizers
- Test & Measurement
- Military

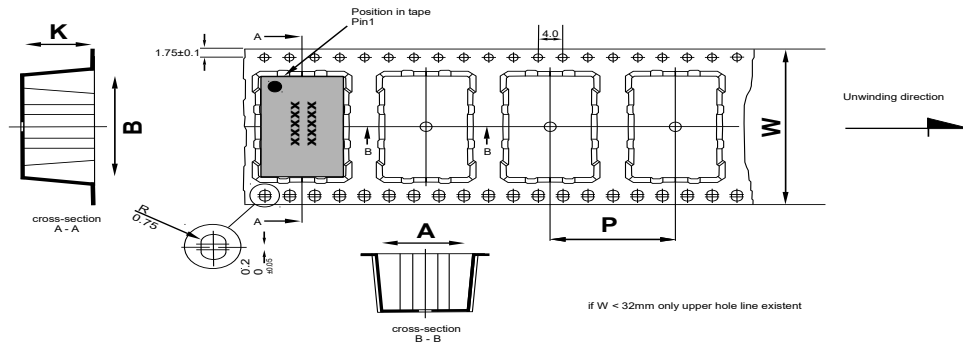
### Performance Specifications

Frequency Stabilities <sup>1</sup>					
Parameter	Min	Typical	Max	Units	Condition
vs. operating temperature range (referenced to +25°C)	-25		+25	ppm	-40 to +85°C
Initial tolerance	-15		+15	ppm	@V <sub>c</sub> =V <sub>s</sub> /2
vs. supply voltage change	-3		+3	ppm	V <sub>s</sub> ±5%
vs. load change	-2		+2	ppm	Load ±10%
vs. aging (15 years)	-7		+7	ppm	

## 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	@ HCMOS	
Current consumption			100	mA	@ PECL	
Supply voltage	4.75	5	5.25	VDC		
Current consumption			15	mA	@ HCMOS	
Current consumption			65	mA	@ PECL	
RF Output						
Signal	HCMOS					Options
Load		15		pF		
Rise and Fall time			5	ns	@ 15 pF 10 to 90%	
Duty cycle	45		55	%	@ Vs / 2	
Signal	PECL					
Load		50		Ω		
Rise and Fall time			1	ns	20 to 80%	
Duty cycle	45		55	%		
Additional Parameters						
Phase Noise		-83		dBc/Hz	10 Hz	@100 MHz LVCMOS 3.3V
		-116		dBc/Hz	100 Hz	
		-142		dBc/Hz	1 kHz	
		-157		dBc/Hz	10 kHz	
		-162		dBc/Hz	100 kHz	
		-164		dBc/Hz	1 MHz	
Jitter		0.047		ps RMS	@ 12kHz .. 20MHz	
Phase Noise		-83		dBc/Hz	10 Hz	@ 100 MHz PECL 3.3V
		-116		dBc/Hz	100 Hz	
		-142		dBc/Hz	1 kHz	
		-156		dBc/Hz	10 kHz	
		-160		dBc/Hz	100 kHz	
		-162		dBc/Hz	1 MHz	
Jitter		0.064		ps RMS	@ 12kHz .. 20MHz	
Weight			1.0 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		+95	°C		

# Standard Shipping Method



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

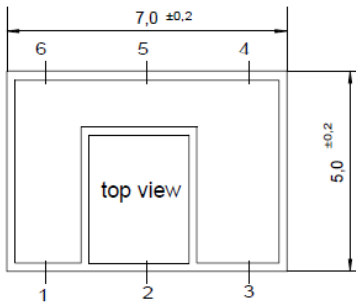
All dimensions in millimeters unless otherwise stated

Enclosure Type	Tape Width W (mm)	Quantity per meter	Quantity per reel	Dimension P
G322	12	150	750	8

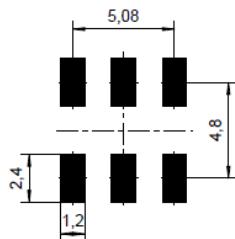
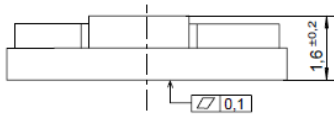
## Enclosure

### Package Codes

Type	Height "H"	Pin Length "L"
G322	1.6	NA



G 322



Padvorschlag  
 land pattern  
 recommendation

Marking
PX-706-xxxx
Frequency
● AYYWW

### Pin Connections

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

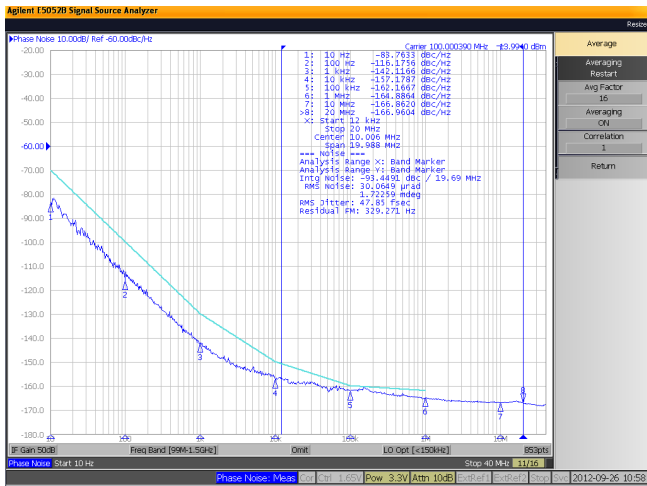
### Enable true table (optional)

	HCMOS		LVPECL	
	Pin 4	Pin 5	Pin 4	Pin 5
High	Data	N.C.	No Data	No Data
Open	Data	N.C.	Data	Compl. Data
Low	High Tristate	N.C.	Data	Compl. Data

# Typical Performance

## Phase Noise

PX-706 @ 100 MHz LVCMOS



# Recommended Reflow Profile

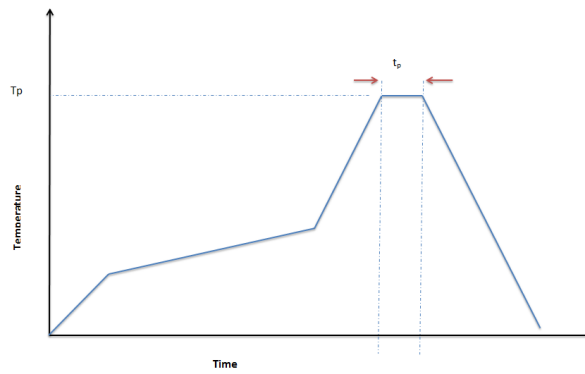
TP: max 250°C (@ solder joint, customer board level)

T<sub>p</sub>: max: 10...30 sec

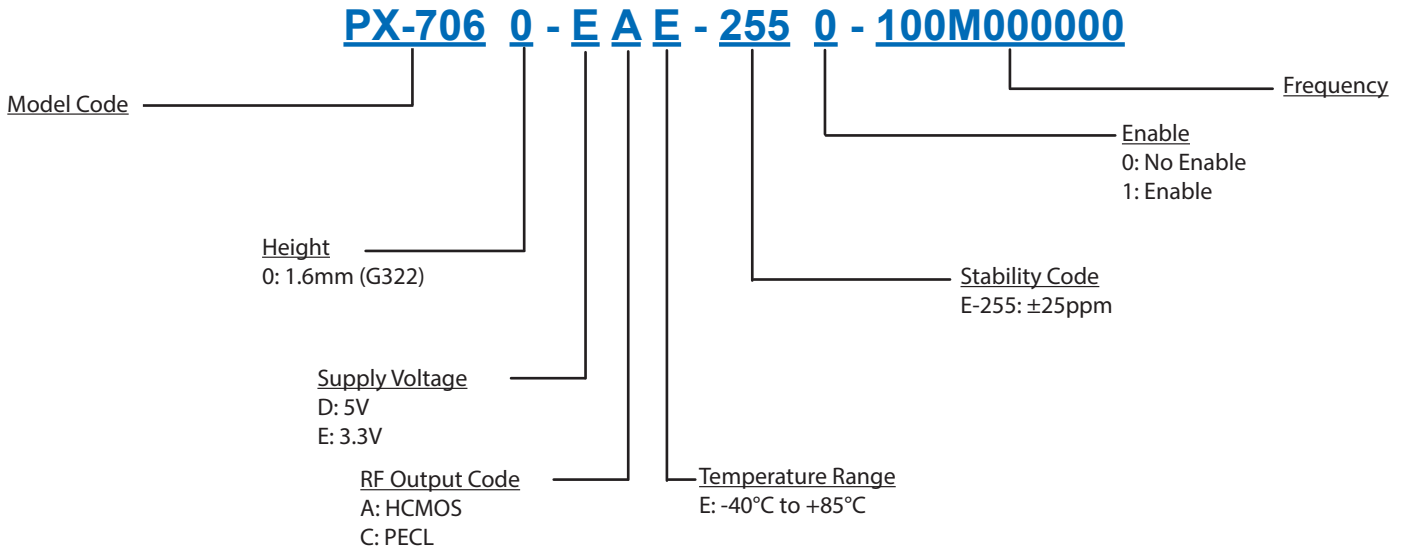
Additional Information:

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



### 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.

## Contact Information

### USA:

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