

Helping Customers Innovate, Improve &amp; Grow


**PX-400**
**Features**

- Low Profile
- 3 Point Mount Crystal
- Frequency Range: 1 HZ to 200 MHZ
- Previous Model: CO-401/402, CO-441/442, CO-431/451, CO-432/452

**Applications**
**Performance Specifications**

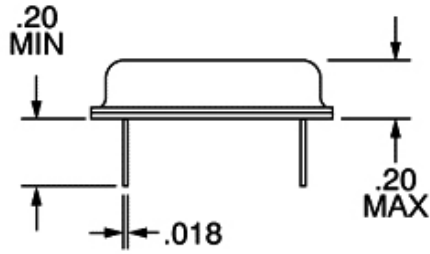
Parameter	Min	Typ	Max	Units	Condition
<b>Frequency Stabilities<sup>1</sup></b>					
vs. operating temperature range (referenced to +25°C)	-5		+5	ppm	0... +50°C
	-10		+10	ppm	0... +50°C
	-25		+25	ppm	0... +70°C (standard)
	-50		+50	ppm	-55... +85°C
	-50		+50	ppm	-55... +125°C
	-100		+100	ppm	-55... +125°C
	-300		+300	ppm	-55... +200°C (custom number required)
Initial tolerance	-50		+50	ppm	@ +25°C
	-25		+25	ppm	@ +25°C
	-15		+15	ppm	@ +25°C
	-10		+10	ppm	@ +25°C
	-1		+1	ppm	Set via external capacitor (custom number required)
vs. aging / 1 year	-3		+3	ppm	after 30 days of operation
vs. aging / year (following years)	-2		+2	ppm	
<b>Supply Voltage (Vs)</b>					
Supply voltage (Standard)	4.75	5.0	5.25	VDC	
Supply voltage (Option)	3.135	3.3	3.465	VDC	below 20 MHz
Supply voltage		-5.2			@ < 45 mA to 110 MHz, @ < 70 mA above 110 MHz
Supply voltage		-4.5			@ < 60 mA

## Performance Specifications

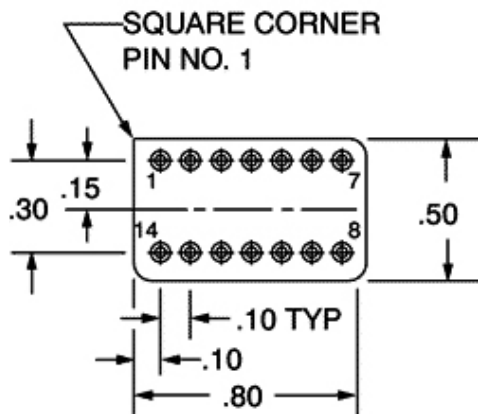
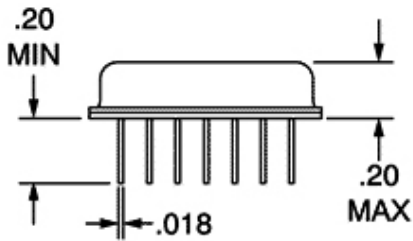
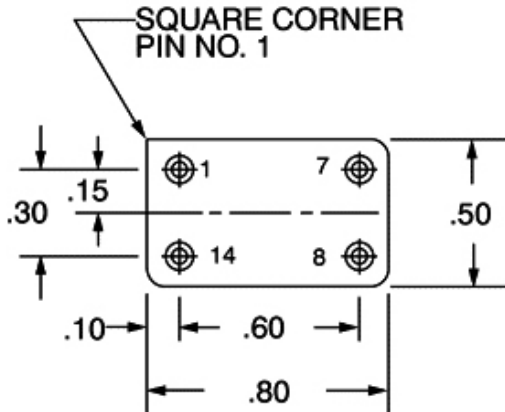
Parameter	Min	Typ	Max	Units	Condition
<b>RF Output</b>					
Signal	ACMOS, HCMOS				
Signal	TTL				
"0" Level			0.4	V	
"1" Level	2.4			V	
Rise/Fall Time			15 5	ns ns	@ (0.5-2.4V), <= 20 MHZ @ (0.5-2.4V), > 20 MHZ
Symmetry	45 40		55 60	% %	@+1.5 V, < 4 MHZ @+1.5 V, >= 4 MHZ

<b>Screen Testing of Above Models</b>				
SCREEN TEST	MIL-STD-883 METHOD	Standard	Options	
		CLASS X	CLASS B	CLASS S
Stabilization Bake (150°C)	—	X	X	Class S screen test requirements include 24 hour additional bake-out, 80 hour additional burn-in, thermal shock, PIND test and radiographic inspection in addition to Class B Screening. Has major cost impact.
Seal Test (Gross and Fine)	1014, Cond A2	X	X	
Temperature Cycling (Thermal Shock)	1010, Cond B		X	
Burn-in, operating 160 hours @125°C	—		X	
Acceleration (5000g in Y1 axis)	2001, Cond A		X	

# Outline Drawing / Enclosure



Dimensions in inches



## Type A (4 pin)

Code	Height "H"	Pin Length "L"
0	0.2	0.2

## Type A (14 pin)

Code	Height "H"	Pin Length "L"
1	0.2	0.2

## Pin Connections (TTL, CMOS)

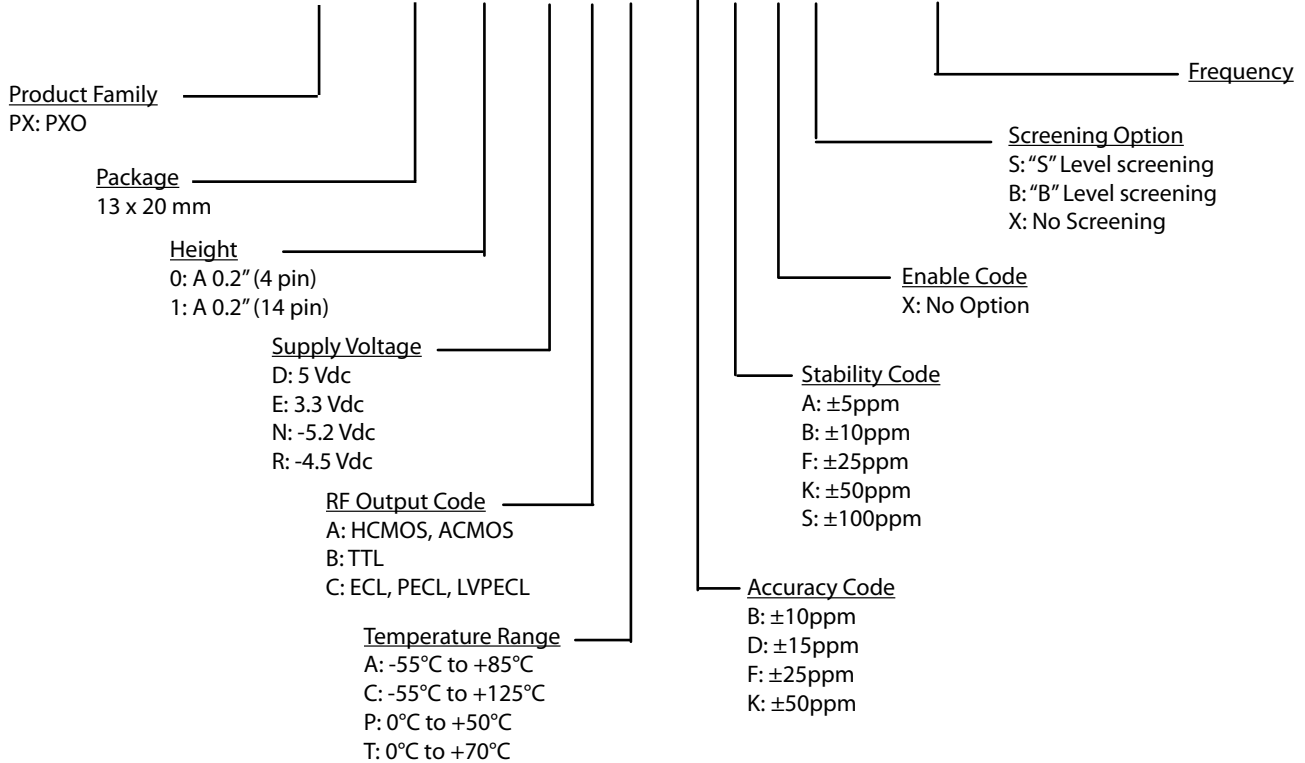
1	No Connect
7	Ground
8	Output
14	Supply

## Pin Connections (ECL, PECL)

1	No Connect
7	Supply
8	Output
14	Ground

## Ordering Information

### PX - 400 0 - A A T - F K X S - 10M0000000



**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.

## For Additional Information, Please Contact

**USA:**

Vectron International  
267 Lowell Road  
Hudson, NH 03051  
Tel: 1.888.328.7661  
Fax: 1.888.329.8328

**Europe:**

Vectron International  
Landstrasse, D-74924  
Neckarbischofsheim, Germany  
Tel: +49 (0) 3328.4784.17  
Fax: +49 (0) 3328.4784.30

**Asia:**

Vectron International  
1F-2F, No 8 Workshop, No 308 Fenju Road  
WaiGaoQiao Free Trade Zone  
Pudong, Shanghai, China 200131  
Tel: 86.21.5048.0777  
Fax: 86.21.5048.1881

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