

# HCMOS/TTL COMPATIBLE SURFACE-MOUNT PROGRAMMABLE CRYSTAL CLOCK OSCILLATOR

AP5S



RoHS  
Compliant



5.0 x 3.2 x 1.2mm

## FEATURES:

- Performance comparable to fixed frequency oscillator
- Lowest peak-to-peak jitter
- Low supply current
- Alternative to long lead-time XO's

For Small  
Quantities,  
Delivery Time  
is 1-5 days

## ELECTRICAL SPECIFICATIONS:

3.3V, 2.5V OPERATION		Unit	Minimum	Typical	Maximum
Characteristics	Frequency Range 3.3V	MHz	10	--	200
	2.5V	MHz	10	--	166
Operation Temp. Range (See Options)		°C	0	--	+70
Storage Temp. Range (See Options)		°C	-55	--	125
Overall Frequency Stability * (See Options)		ppm	-100	--	100
Input Voltage (Operating Vdd)		V	2.97	3.3	3.63
		V	2.25	2.5	2.75
Input Current	3.3V	mA	--	--	30
	2.5V	mA	--	--	20
Symmetry at 1/2 Vdd		%	45	50	55.0
Rise and fall time (Tr/Tf)**		nSec	--	2.5	3.5
Output Voltage					
VOH		V	--	--	Vdd-0.4min
VOL		V	0.4V max	--	--
Start-up Time		msec	--	--	10
Tri-state Function (Input to pin 1)			pin 1 : High or Open , pin 3 : Enable pin 1 : Low , pin 3 : Disable		
Jitter peak-to-peak		pSec	--	70	--
Phase Jitter (RMS, 12kHz to 20MHz)		pSec	--	2.5	--
Output Type		--	CMOS		

\* Inclusive of calibration @25°C, operating temperature range, input voltage variation, load variation, aging, shock, and vibration.

\*\* Transition times are measured between 10% and 90% of Vdd with an output load of 15 pf.

## OPTIONS & PART IDENTIFICATION:

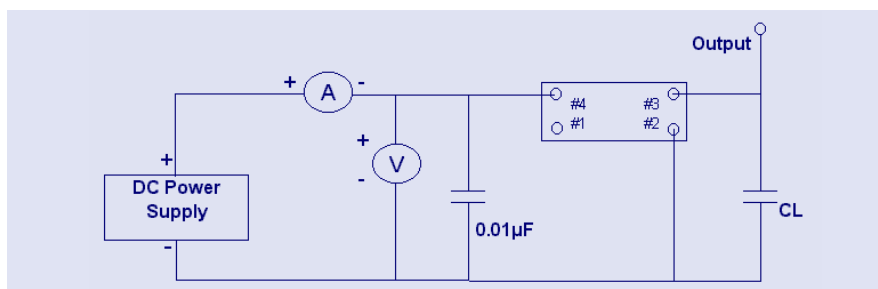
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AP5S□-Frequency-□-□-□

Supply Voltage		Operating Temp.		Freq. Stability		Packaging	
Blank*	3.3 V	I	0°C to +50°C	J(**)	±20ppm	Blank	Bulk
1	2.5 V	D	-10°C to +60°C	R	±25ppm	T	Tape and Reel
*3.3V : Standard		E	-20°C to +70°C	K	±30ppm		
		F	-30°C to +70°C	H	±35ppm		
		N	-30°C to +85°C	B	±40ppm		
		L	-40°C to +85°C	C	±50ppm		

(\* \*) Available for I, D, or E temp options only.  
Contact ABRACON for EJ or LR options. (Availability limited)

## TEST CIRCUIT:



Revised: 1.04.08

ABRACON IS  
ISO 9001 / QS 9000  
CERTIFIED



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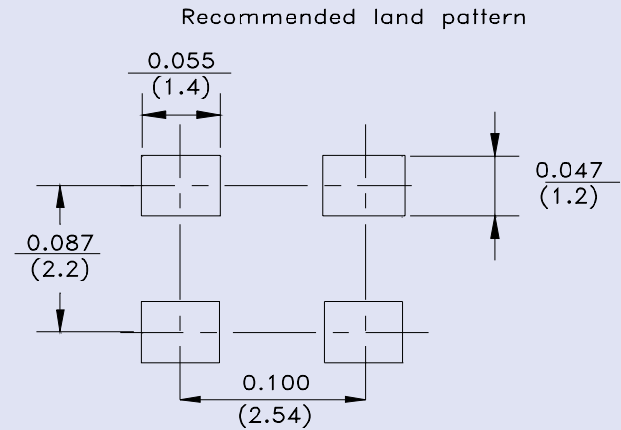
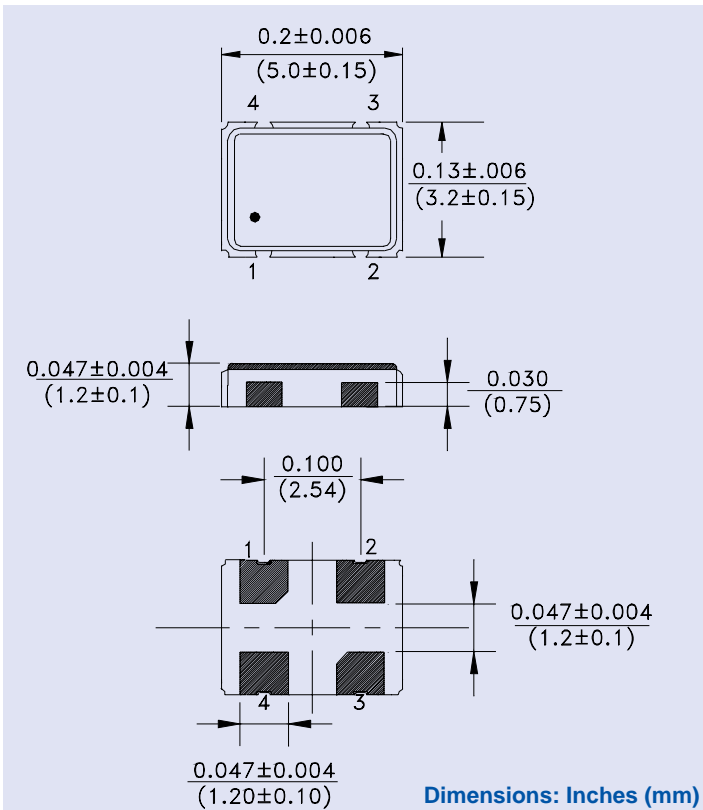


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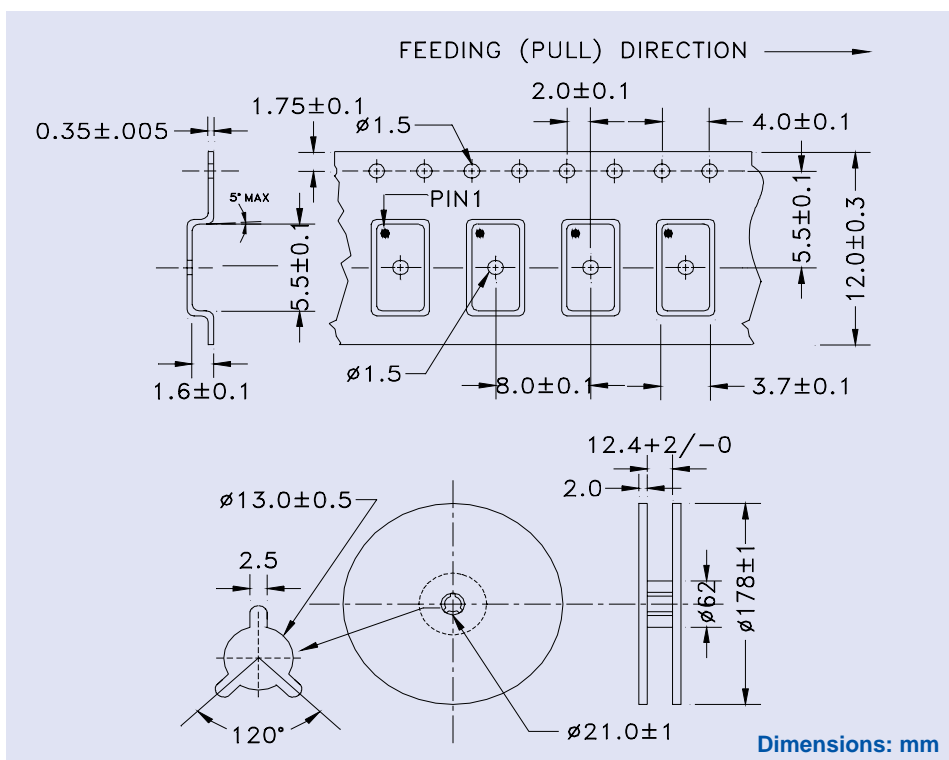
## OUTLINE DRAWING:



PIN	CONNECTION
# 1	OE
# 2	GND/CASE
# 3	OUTPUT
# 4	VDD

**Note:** It is recommended to use an approximately 0.01uF bypass capacitor between PIN 2 and 4.

## TAPE & REEL:



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