HCMOS/TTL COMPATIBLE SURFACE-MOUNT PROGRAMMABLE CRYSTAL CLOCK OSCILLATOR

AP7S

7.0 x 5.0 x 1.6mm

Pb RoHS Compliant

FEATURES:

- Comparable performance to fixed frequency oscillator
- Low jitter with PLL technology

APPLICATIONS:

- Micro controller
- FPGA
- CPLG
- Prototype evaluation
- Portable computers (Laptop, tablet PC)

For Small Quantites, Delivery Time is 1-5 days

ELECTRICAL SPECIFICATIONS:

Parameters		Minimum	Typical	Maximum	Units	Notes
Frequency Range:	V_{dd} = 3.3V	10	-----	200	MHz	
	V_{dd} = 2.5V	10	-----	166	MHz	
Operating Temperature:		0	-----	+70	°C	See options
Storage Temperature:		-55	-----	+155	°C	
Overall Frequency Stability*:		-100	-----	+100	ppm	See options
Supply Voltage (Vdd):	V_{dd} = 3.3V	2.97	3.3	3.63	V	Standard
	V_{dd} = 2.5V	2.25	2.5	2.75	V	Option 1
Input Current:	V_{dd} = 3.3V	-----	-----	30	mA	
	V_{dd} = 2.5V	-----	-----	20	mA	
Symmetry:		45	50	55	%	@ 1/2Vdd
Rise and Fall Time (Tr/Tf)**:		-----	2.5	3.5	ns	
Output Load:				15	pF	CMOS
Output Voltage:	VOH	Vdd-0.4	-----	-----	V	
	VOL	-----	-----	0.4	V	
Start-up Time:		-----	-----	10.0	ms	
Enable/Disable Function :		"1" (V_{IH}≥0.7*Vdd) or Open: Oscillation "0" (V_{IL}<0.3*Vdd) : No output				
Period jitter RMS (Reference only. Please contact Abracon for each frequencies.):	25MHz	-----	2.0	4.0	ps	
	50MHz	-----	5.0	10.0	ps	
	100MHz	-----	7.0	14.0	ps	
Period jitter Peak to Peak (Reference only. Please contact Abracon for each frequencies.):	25MHz	-----	14.0	25.0	ps	
	50MHz	-----	25.0	35.0	ps	
	100MHz	-----	35.0	50.0	ps	
Phase jitter RMS	20MHz	-----	0.6	1.0	ps	12kHz to 10MHz
	25MHz	-----	5.6	7.0	ps	12kHz to 10MHz
	50MHz	-----	16.0 ~ 25.0	40.0	ps	12kHz to 20MHz
	100MHz	-----	18.0	25.0	ps	12kHz to 20MHz
Aging:		-3.0	-----	+3.0	ppm	First year

* 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.

30332 Esperanza, Rancho Santa Margarita, California 92688
tel 949-546-8000 | fax 949-546-8001 | www.abracon.com

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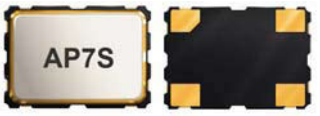


7.0 x 5.0 x 1.6mm

OPTIONS & PART IDENTIFICATION:

AP7S☐ - ☐☐☐☐☐☐ MHz - ☐☐ - ☐

Supply Voltage
Blank: 3.3V
1: 2.5V

Frequency in MHz
Please specify the frequency in MHz. e.g. 14.31818MHz

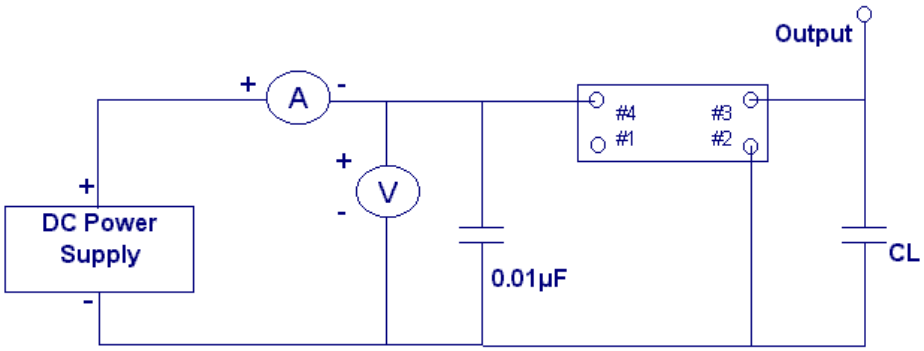
Operating Temp.
I: 0°C ~ +50°C
D: -10°C ~ +60°C
E: -20°C ~ +70°C
F: -30°C ~ +70°C
N: -30°C ~ +85°C
L: -40°C ~ +85°C

Overall Freq. Stability
J(**): ±20ppm
R: ±25ppm
K: ±30ppm
C: ±50ppm

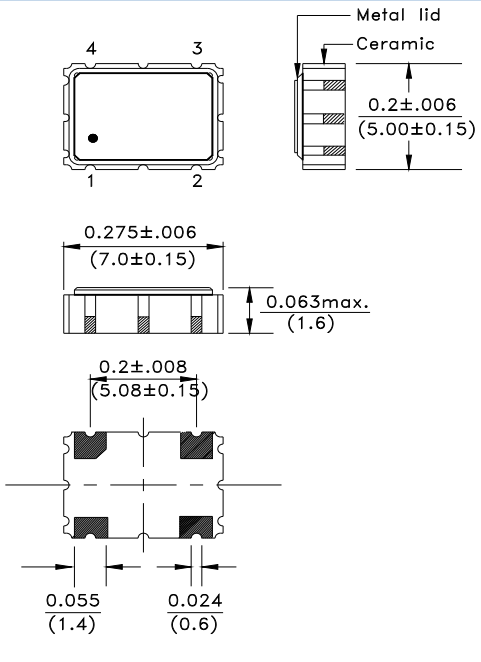
Packaging
Blank: Bulk
T: Tape & Reel

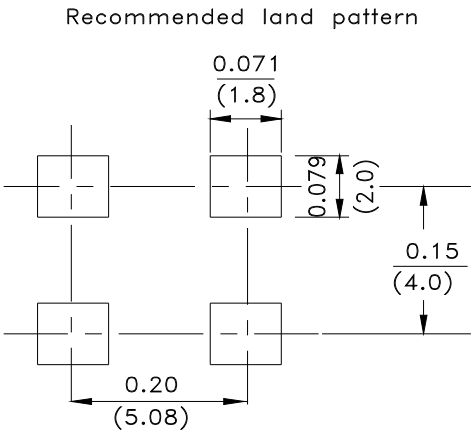
* Temp. option I, D, E and 0°C ~ +70°C only
Contact ABRACON for EJ or LR options. (Availability limited)

TEST CIRCUIT:



OUTLINE DRAWING:





Pin	Function
1	Tri-State
2	GND/Case
3	Output
4	Vdd

Note: Recommend using an approximately 0.01uF bypass capacitor between PIN 2 and 4.

Dimension: inch (mm)

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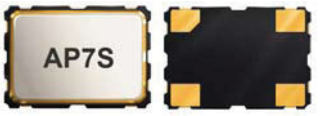

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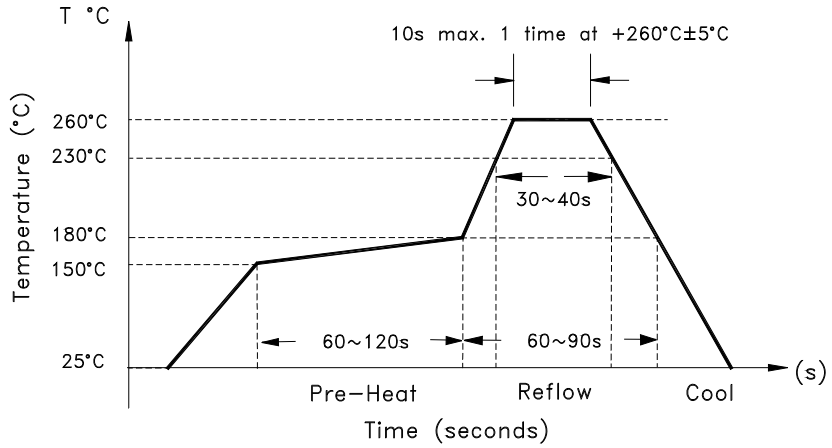
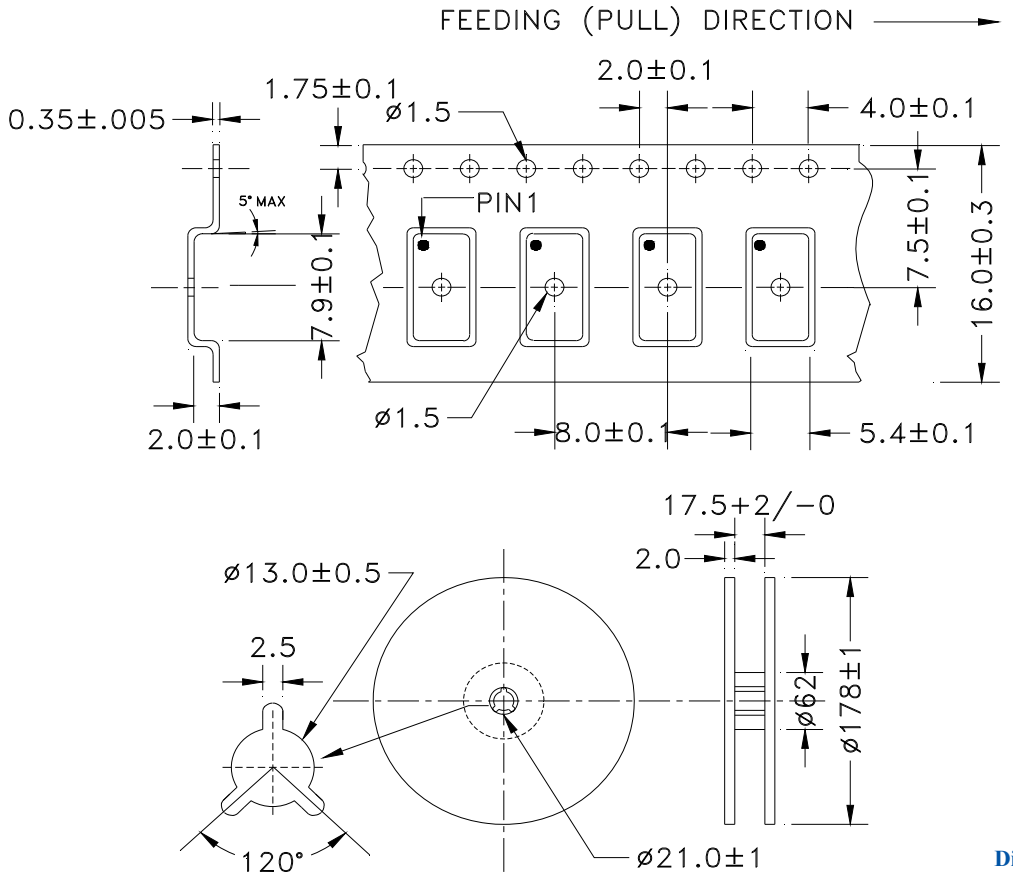
REFLOW PROFILE:



TAPE & REEL:

T= Tape and reel (1,000pcs/reel)



Dimensions: mm

Need a test socket for the AP7S Series? To view compatible PRECISION TEST SOCKETS for these parts, click here. P/N AXS-7050-04-01

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Authorized Distributor

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