

HCMOS/TTL COMPATIBLE SURFACE-MOUNT PROGRAMMABLE CRYSTAL CLOCK OSCILLATOR

AP7S



RoHS
Compliant



7.0 x 5.0 x 1.6mm

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
Quantities,
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 (V _{dd}):	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	%	@ 1/2V _{dd}
Rise and Fall Time (Tr/Tf)**:		-----	2.5	3.5	ns	
Output Load:				15	pF	CMOS
Output Voltage:	VOH	V _{dd} -0.4	-----	-----	V	
	VOL	-----	-----	0.4	V	
Start-up Time:		-----	-----	10.0	ms	
Enable/Disable Function :		"1" (V _{IH} ≥ 0.7*V _{dd}) or Open: Oscillation "0" (V _{IL} < 0.3*V _{dd}) : 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 V_{dd} with an output load of 15 pF.

ABRACON IS
ISO 9001:2008
CERTIFIED



ABRACON
CORPORATION

Visit www.abracon.com for Terms & Conditions of Sale

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

Revised: 07.03.11

HCMOS/TTL COMPATIBLE SURFACE-MOUNT PROGRAMMABLE CRYSTAL CLOCK OSCILLATOR

AP7S



RoHS
Compliant



7.0 x 5.0 x 1.6mm

OPTIONS & PART IDENTIFICATION:

AP7S - MHz - -

Supply Voltage
Blank: 3.3V
I: 2.5V

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

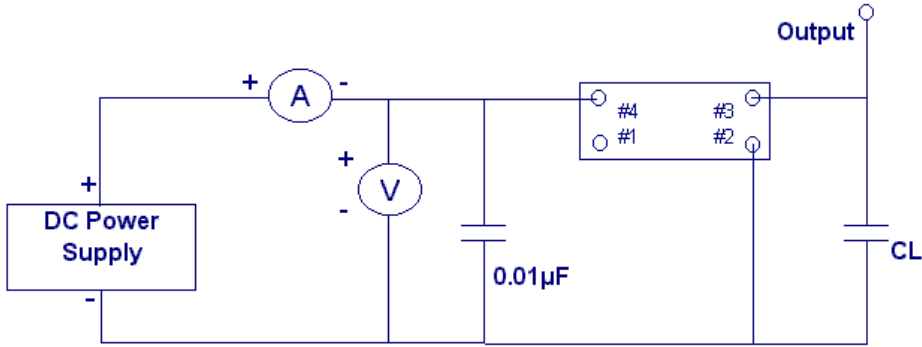
Operating Temp.
I: 0°C ~ +50°C
D: -10°C ~ +60°C
E: -20°C ~ +70°C
F: -30°C ~ +70°C
N: -30°C ~ +85°C
L: -40°C ~ +85°C

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

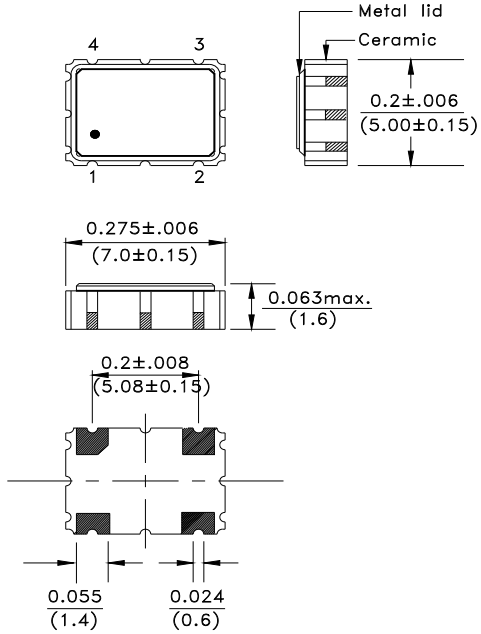
Packaging
Blank: Bulk
T: Tape & Reel

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

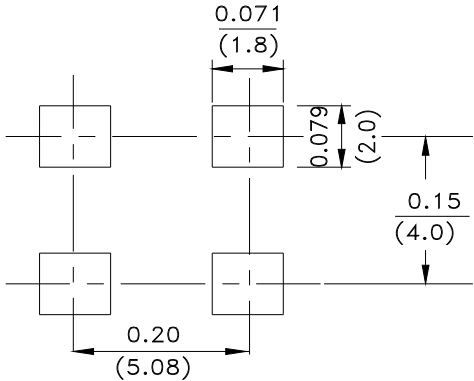
TEST CIRCUIT:



OUTLINE DRAWING:



Recommended land pattern



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

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

Dimension: inch (mm)

ABRACON IS
ISO 9001:2008
CERTIFIED



Visit www.abracon.com for Terms & Conditions of Sale
30332 Esperanza, Rancho Santa Margarita, California 92688
tel 949-546-8000 | fax 949-546-8001 | www.abracon.com

Revised: 07.03.11

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

ABRACON:

[AP7S-10.000-I-R](#) [AP7S-44.736-I-R](#) [AP7S-54.000MHZ-D-C](#) [AP7S-27.12-D-J](#) [AP7S1-25.000-NK](#) [AP7S-54.24000-FR](#)
[AP7S-108.00-I-R](#) [AP7S-72.374MHz-LR](#) [AP7S-148.5000-EJ](#) [AP7S2-FREQ-EC-B](#) [AP7S-FREQ-LR-B](#) [AP7S2-FREQ-](#)
[EJ-B](#) [AP7S-FREQ-ER-B](#) [AP7S2-FREQ-ER-B](#) [AP7S1-FREQ-EC-B](#) [AP7S1-FREQ-EJ-B](#) [AP7S2-FREQ-LC-B](#) [AP7S1-](#)
[FREQ-LR-B](#) [AP7S2-FREQ-LR-B](#) [AP7S1-FREQ-ER-B](#) [AP7S1-FREQ-LC-B](#) [AP7S-FREQ-EC-B](#) [AP7S-FREQ-LC-B](#)
[AP7S-FREQ-EJ-B](#) [AP7S-125.000-I-R](#) [AP7S1-FREQ-EB-B](#) [AP7S2-FREQ-LB-B](#) [AP7S-FREQ-IJ-B](#) [AP7S2-FREQ-EK-](#)
[B](#) [AP7S2-FREQ-NK-B](#) [AP7S1-FREQ-IK-B](#) [AP7S1-FREQ-DC-B](#) [AP7S1-FREQ-IB-B](#) [AP7S-FREQ-DC-B](#) [AP7S2-](#)
[FREQ-FB-B](#) [AP7S1-FREQ-LB-B](#) [AP7S2-FREQ-DR-B](#) [AP7S-FREQ-DB-B](#) [AP7S2-FREQ-IC-B](#) [AP7S-FREQ-DK-B](#)
[AP7S-FREQ-FR-B](#) [AP7S1-FREQ-EI-B](#) [AP7S1-FREQ-IC-B](#) [AP7S1-FREQ-IJ-B](#) [AP7S2-FREQ-IB-B](#) [AP7S-FREQ-EK-B](#)
[AP7S1-FREQ-DR-B](#) [AP7S1-FREQ-FR-B](#) [AP7S1-FREQ-IR-B](#) [AP7S1-FREQ-NC-B](#) [AP7S2-FREQ-EB-B](#) [AP7S-](#)
[FREQ-IK-B](#) [AP7S2-FREQ-DC-B](#) [AP7S1-FREQ-LK-B](#) [AP7S-FREQ-NR-B](#) [AP7S2-FREQ-FC-B](#) [AP7S-FREQ-IB-B](#)
[AP7S2-FREQ-DJ-B](#) [AP7S1-FREQ-FC-B](#) [AP7S-FREQ-IC-B](#) [AP7S2-FREQ-DK-B](#) [AP7S-FREQ-NC-B](#) [AP7S-FREQ-LK-](#)
[B](#) [AP7S1-FREQ-EK-B](#) [AP7S-FREQ-NB-B](#) [AP7S2-FREQ-NR-B](#) [AP7S2-FREQ-LK-B](#) [AP7S1-FREQ-DJ-B](#) [AP7S-](#)
[FREQ-DR-B](#) [AP7S-FREQ-FB-B](#) [AP7S-FREQ-DJ-B](#) [AP7S2-FREQ-EI-B](#) [AP7S-FREQ-EI-B](#) [AP7S-FREQ-NK-B](#)
[AP7S1-FREQ-DK-B](#) [AP7S2-FREQ-FK-B](#) [AP7S1-FREQ-NK-B](#) [AP7S-FREQ-EB-B](#) [AP7S2-FREQ-IR-B](#) [AP7S2-FREQ-](#)
[NC-B](#) [AP7S2-FREQ-IJ-B](#) [AP7S2-FREQ-DB-B](#) [AP7S2-FREQ-IK-B](#) [AP7S-FREQ-LB-B](#) [AP7S-FREQ-FC-B](#) [AP7S1-](#)
[FREQ-FB-B](#) [AP7S-FREQ-FK-B](#) [AP7S1-FREQ-FK-B](#) [AP7S2-FREQ-FR-B](#) [AP7S2-FREQ-NB-B](#) [AP7S1-FREQ-NB-B](#)
[AP7S1-FREQ-DB-B](#) [AP7S-FREQ-IR-B](#) [AP7S1-FREQ-NR-B](#) [AP7S-52.000-EK](#) [AP7S-55.000-EK](#) [AP7S-11.2896-EJ](#)
[AP7S-12.880-EJ](#) [AP7S-12.2880-EJ](#) [AP7S1-20.0000M-EK](#)