

**ECN/PCN No.: 4434**
**For Manufacturer**

<b>Product Description:</b> CMOS Output Programmable	<b>Abracon Part Number / Part Series:</b> AP3S	<input type="checkbox"/> Documentation only <input checked="" type="checkbox"/> ECN <input type="checkbox"/> EOL	<input checked="" type="checkbox"/> Series <input type="checkbox"/> Part Number
<b>Affected Revision:</b> P	<b>New Revision:</b> Q	<b>Application:</b>	<input type="checkbox"/> Safety <input checked="" type="checkbox"/> Non-Safety

**Prior to Change:**
**Input Current:**

Input Current	V <sub>dd</sub> = 3.3V			35	mA
	V <sub>dd</sub> = 2.5V			30	
	V <sub>dd</sub> = 1.8V			20	

**Rise & Fall Time:**

Rise and Fall Time (Tr/Tf)**	V <sub>dd</sub> = 3.3V			2	ns
	V <sub>dd</sub> = 2.5V			3	
	V <sub>dd</sub> = 1.8V			4	

**VOH/VOL:**

Output Voltage	V <sub>OL</sub>			10% of V <sub>dd</sub>	V <sub>dC</sub>
	V <sub>OH</sub>	90% of V <sub>dd</sub>			

**Standby Current:**

Standby current (Power Down option)			400	uA	V <sub>dd</sub> = 1.8, 2.5, 3.3V
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**RMS Phase Jitter:**

RMS Phase Jitter @25°C±3°C (10 - 39MHz: 12kHz to 5MHz) (>39MHz: 12kHz to 20MHz)		1	2	ps	V <sub>dd</sub> =3.3V
		1.1	2	ps	V <sub>dd</sub> =2.5V
		1.5	2	ps	V <sub>dd</sub> =1.8V

**Notes:**

\* Inclusive of calibration @25°C, operating temperature range, input voltage variation, load variation, first year aging, shock, and vibration. For ±20ppm Overall Frequency Stability: Inclusive of calibration @25°C, operating temperature range, load variation, shock, and vibration.

\*\* Transition times are measured between 10% and 90% of V<sub>dd</sub> with an output load of 15 pF.

**Operating Temperature:**

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

**After Change:**
**Input Current:**

Input Current	V <sub>dd</sub> = 3.3V			40	mA
	V <sub>dd</sub> = 2.5V			35	
	V <sub>dd</sub> = 1.8V			30	

**Rise & Fall Time:**

Rise and Fall Time (Tr/Tf)***	V <sub>dd</sub> = 3.3V			4	ns
	V <sub>dd</sub> = 2.5V			5	
	V <sub>dd</sub> = 1.8V			6	

**VOH/VOL:**

Output Voltage	V <sub>OL</sub>			0.4	V
	V <sub>OH</sub>	V <sub>dd</sub> - 0.4			

**Standby Current:**

Standby current (Power Down option)			<400	uA	V <sub>dd</sub> = 1.8, 2.5, 3.3V
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**RMS Phase Jitter:**

RMS Phase Jitter**** @25°C±3°C (10 - 39MHz: 12kHz to 5MHz) (>39MHz: 12kHz to 20MHz)		1	2	ps	V <sub>dd</sub> =3.3V
		1.1	2	ps	V <sub>dd</sub> =2.5V
		1.5	2.2	ps	V <sub>dd</sub> =1.8V

**Notes:**

\* Inclusive of calibration tolerance @25°C, operating temperature range, input voltage variation, load variation, and first year aging. For ±20ppm Overall Frequency Stability: Inclusive of calibration tolerance @25°C, operating temperature range, and load variation.

\*\* Only 40/60% is available for certain frequencies. Please contact [Abracon](#) when ordering.

\*\*\* Transition times are measured between 10% and 90% of  $V_{dd}$  with an output load of 15 pF.

\*\*\*\* Frequency dependent, contact factory.

**Operating Temperature:**

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

**Cause/Reason for Change:**

Updated electrical specifications due to introduction of next generation IC.

**Change Plan**

<b>Effective Date:</b> 9/14/2022	<b>Additional Remarks:</b>
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<b>Change Declaration:</b>
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<b>Issued Date:</b> 9/14/2022	<b>Issued By:</b>	<b>Issued Department:</b>
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<b>Approval:</b>	<b>Approval:</b>	<b>Approval:</b>
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**For Abracon EOL only**

<b>Last Time Buy (if applicable):</b> N/A	<b>Alternate Part Number / Part Series:</b> N/A
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<b>Additional Approval:</b>	<b>Additional Approval:</b>	<b>Additional Approval:</b>
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**Customer Approval (If Applicable)**

<b>Qualification Status:</b> <input type="checkbox"/> Approved <input type="checkbox"/> Not accepted <i>Note: It is considered approved if there is no feedback from the customer 1 month after ECN/PCN is released.</i>
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<b>Customer Part Number:</b>	<b>Customer Project:</b>
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<b>Company Name:</b>	<b>Company Representative:</b>	<b>Representative Signature:</b>
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<b>Customer Remarks:</b>
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## Affected PN

AP3S-1.000MHZ-LC-T  
AP3S-1.024MHZ-LC  
AP3S-1.024MHZ-LCB  
AP3S-1.024MHZ-LCB-T  
AP3S-1.024MHZ-LR  
AP3S-1.1430MHZ-NCB  
AP3S-10.000MHZ-IJ  
AP3S-10.519MHZ-LR  
AP3S-10.519MHZ-LR-T  
AP3S-100.000MHZ-EC-T  
AP3S-100.000MHz-LRB-T  
AP3S-125.000MHZ-LR-B  
AP3S-125.000MHz-LRB-T  
AP3S-13.500MHZ-LR-T  
AP3S-133.000MHZ-LR  
AP3S-133.300MHZ-EC-T  
AP3S-14.7456MHZ-L-C  
AP3S-14.7456MHZ-LC-T  
AP3S-14.7456MHZ-LCB-T  
AP3S-14.7456MHZ-LR  
AP3S-14.7456MHZ-LR-T  
AP3S-14.7456MHZ-LRB-T  
AP3S-148.352MHZ-EJ  
AP3S-156.250MHZ-LR-B  
AP3S-158.7375MHZ-ERB  
AP3S-16.000MHZ-LC-T  
AP3S-19.200MHZ-ER  
AP3S-2.600MHZ-IJ  
AP3S-20.750MHZ-LR  
AP3S-21.0339MHZ-LR  
AP3S-21.0339MHZ-LR-T  
AP3S-21.0339MHZ-LRB-T  
AP3S-24.000MHZ-E-R  
AP3S-24.000MHZ-ER-T  
AP3S-24.5454MHZ-LC  
AP3S-25.000MHZ-LC-T  
AP3S-25.000MHZ-LCB-T  
AP3S-25.000MHZ-LR  
AP3S-25.000MHZ-LR-T  
AP3S-25.000MHz-LRB-T  
AP3S-26.000MHZ-EC  
AP3S-26.000MHZ-EC-T  
AP3S-26.000MHZ-ERB  
AP3S-26.000MHZ-ERB-T  
AP3S-26.000MHZ-FC

AP3S-26.000MHZ-IK-T  
AP3S-26.000MHZ-LC-T  
AP3S-26.600MHZ-EC-T  
AP3S-26.600MHZ-I-K  
AP3S-26.670MHZ-LR  
AP3S-27.000MHZ-EJ  
AP3S-27.000MHZ-LR  
AP3S-28.375MHZ-IJ  
AP3S-28.63636MHZ-IJ  
AP3S-28.636MHZ-L-C  
AP3S-29.4912MHZ-LCB  
AP3S-29.4912MHZ-LR  
AP3S-3.000MHZ-LRB  
AP3S-3.000MHZ-LRB-T  
AP3S-30.000MHZ-NC-T  
AP3S-37.875MHZ-IJ  
AP3S-38.13986MHZ-IJ  
AP3S-40.000MHZ-EJ  
AP3S-40.000MHZ-NC  
AP3S-41.666MHZ-EC-T  
AP3S-41.666MHZ-ECB-T  
AP3S-45.000MHZ-LC-T  
AP3S-45.000MHZ-NC  
AP3S-48.000MHZ-EJ  
AP3S-48.000MHz-LRB-T  
AP3S-5.000MHZ-LC-T  
AP3S-5.000MHZ-LCB-T  
AP3S-50.000MHZ-LC-T  
AP3S-50.000MHZ-LR  
AP3S-50.000MHZ-LR-T  
AP3S-50.000MHZ-NC-T  
AP3S-52.0833MHZ-LRB  
AP3S-54.000MHZ-LR  
AP3S-66.666MHZ-LC-T  
AP3S-74.250MHZ-LC-T  
AP3S-8.000MHZ-EC  
AP3S-8.000MHz-LRB-T  
AP3S1-100.000MHZ-EJ  
AP3S1-100.000MHZ-EJ-T  
AP3S1-108.000MHZ-ER  
AP3S1-108.000MHZ-ER-T  
AP3S1-12.2727MHZ-LC-T  
AP3S1-12.500MHZ-LR  
AP3S1-125.000MHZ-ECB  
AP3S1-166.000MHZ-LR  
AP3S1-166.000MHZ-LR-T

AP3S1-19.200MHZ-EJ  
AP3S1-19.200MHZ-EJ-T  
AP3S1-25.000MHZ-LR-T  
AP3S1-25.000MHZ-LRB-T  
AP3S1-30.000MHZ-LCB-T  
AP3S1-40.000MHZ-EC  
AP3S1-40.000MHZ-EC-T  
AP3S1-40.000MHZ-EJ  
AP3S1-40.000MHZ-LR  
AP3S1-49.152MHZ-LCB  
AP3S1-7.3728MHZ  
AP3S1-74.2500MHZ-LC  
AP3S1-78.125MHZ-LR  
AP3S2-100.000MHz-LRB-T  
AP3S2-12.000MHZ-LK-T  
AP3S2-125.000MHZ-LR-B  
AP3S2-125.000MHZ-LR-B-T  
AP3S2-18.432MHZ-LC-T  
AP3S2-20.750MHZ-LR  
AP3S2-24.000MHZ-LC-T  
AP3S2-25.000MHZ-LR  
AP3S2-25.000MHz-LRB-T  
AP3S2-26.000MHZ-ER-T  
AP3S2-26.000MHZ-ERB  
AP3S2-26.000MHZ-ERB-T  
AP3S2-26.000MHZ-LR-B-T  
AP3S2-26.000MHZ-LR-T  
AP3S2-26.000MHZ-LRB  
AP3S2-26.000MHZ-NRB-T  
AP3S2-27.000MHZ-LRB-T  
AP3S2-28.63636MHZ-LC-T  
AP3S2-28.6363MHZ-LC-T  
AP3S2-30.000MHZ-LC-T  
AP3S2-33.000MHZ-LR  
AP3S2-48.000MHz-LRB-T  
AP3S2-51.923076MHZ-LR  
AP3S2-51.975MHZ-LR  
AP3S2-60.000MHZ-ER-T  
AP3S2-64.000MHZ-ER  
AP3S2-64.000MHZ-ER-T  
AP3S2-74.250MHZ-EC  
AP3S2-74.250MHZ-EC-T  
AP3S2-74.250MHZ-EJ  
AP3S2-75.000MHZ-E-C-T  
AP3S2-75.000MHZ-EC  
AP3S2-8.000MHz-LRB-T

AP3S2-9.8304MHZ-EJ  
AP3S2-9.8304MHZ-EJ-T  
AP3S2-9.8304MHZ-EJB  
AP3S-1.000MHZ-L-C  
AP3S-1.000MHZ-LR  
AP3S-1.000MHZ-LR-T  
AP3S-1.024MHZ-LC-T  
AP3S-1.13586MHZ-NC-B  
AP3S-10.000MHZ  
AP3S-10.000MHZ-E-R  
AP3S-10.000MHZ-EC  
AP3S-10.519MHZ-LC  
AP3S-100.000MHZ  
AP3S-100.000MHZ-EC  
AP3S-100.000MHZ-LC  
AP3S-100.000MHZ-LR  
AP3S-100.000MHZ-NC  
AP3S-105.680MHZ-EJ  
AP3S-12.000MHZ-LC  
AP3S-12.000MHZ-LR  
AP3S-12.000MHZ-NC  
AP3S-12.288MHZ-E-J  
AP3S-12.288MHZ-F-J  
AP3S-12.288MHZ-FRB-T  
AP3S-120.000MHZ-LC  
AP3S-120.000MHZ-LR  
AP3S-120.000MHZ-NC  
AP3S-120.000MHZ-R  
AP3S-121.500MHZ-EC  
AP3S-125.000MHZ-NC  
AP3S-13.000MHZ-DC  
AP3S-13.000MHZ-EK  
AP3S-13.50765MHZ-IR  
AP3S-13.57375MHZ  
AP3S-13.80352MHZ-LC  
AP3S-133.000MHZ-EC  
AP3S-135.545MHZ-EJ  
AP3S-14.31818MHZ-J  
AP3S-14.7456MHZ-LCB  
AP3S-14.7456MHZ-LK  
AP3S-15.099MHZ-LR-B  
AP3S-150.000MHZ-EC  
AP3S-16.000MHZ-L-C  
AP3S-16.000MHZ-LR  
AP3S-16.7760MHZ-LC  
AP3S-165.250MHZ-LR-B

AP3S-17.7344MHZ-J  
AP3S-18-28.63636MHZ-L-C  
AP3S-18.9375MHZ  
AP3S-19.06993MHZ-J  
AP3S-19.200MHZ-R  
AP3S-19.6608MHZ-LC  
AP3S-20.000MHZ-ERB  
AP3S-20.000MHZ-LR  
AP3S-200.000MHZ-EC  
AP3S-21.000MHZ-LR  
AP3S-21.7728MHZ-LC  
AP3S-22.2222MHZ-EC  
AP3S-23.990MHZ-ER  
AP3S-24.000MHZ-EJ  
AP3S-24.000MHZ-Y  
AP3S-24.545452MHZ-ECB  
AP3S-24.576MHZ-E-J  
AP3S-24.576MHZ-ER  
AP3S-24.576MHZ-F-J  
AP3S-24.576MHZ-LR  
AP3S-25.000MHZ-B  
AP3S-25.000MHZ-EC-T  
AP3S-25.000MHZ-L-C  
AP3S-25.000MHZ-NC  
AP3S-25.000MHZ-R  
AP3S-26.000MHZ-EJ  
AP3S-26.000MHZ-LC  
AP3S-26.600MHZ-EC  
AP3S-26.63636-LC  
AP3S-26.670MHZ-LR-T  
AP3S-27.000MHZ  
AP3S-27.000MHZ-E-Y  
AP3S-27.000MHZ-LC  
AP3S-28.375MHZ  
AP3S-28.375MHZ-LC  
AP3S-28.63636MHZ  
AP3S-28.63636MHZ-J  
AP3S-28.63636MHZ-LC  
AP3S-28.6363MHZ-LC  
AP3S-29.480MHZ-LK  
AP3S-29.4912MHZ-LC  
AP3S-29.492-LCB-T  
AP3S-29.500MHZ-LR  
AP3S-3.000MHZ-LR  
AP3S-30.000MHZ-EC-B  
AP3S-32.768MHZ-IC

AP3S-33.300MHZ-LC  
AP3S-35.328MHZ-LK  
AP3S-36.000MHZ-LC  
AP3S-36.000MHZ-NC  
AP3S-37.125MHZ-LR  
AP3S-37.875MHZ  
AP3S-37.875MHZ-IJ  
AP3S-38.13986MHZ  
AP3S-38.400MHZ-ER  
AP3S-4.000MHZ-NC  
AP3S-4.000MHZ-NR  
AP3S-4.19328MHZ-ER  
AP3S-4.9152MHZ-LC  
AP3S-40.000MHZ-LC  
AP3S-40.000MHZ-LR  
AP3S-42.500MHZ-LC  
AP3S-42.500MHZ-LR  
AP3S-44.2368MHZ-E  
AP3S-45.000MHZ-LC  
AP3S-45.1584MHZ-IC  
AP3S-45.7867MHZ-EC  
AP3S-49.0908MHZ-LR  
AP3S-49.450549MHZ-LR  
AP3S-49.500MHZ-LR  
AP3S-5.000MHZ-L-R  
AP3S-5.000MHZ-LC  
AP3S-5.274MHZ-EK  
AP3S-5.76576MHZ-ER  
AP3S-50.000MHZ-EC-T  
AP3S-50.000MHZ-ERB  
AP3S-50.000MHZ-LC  
AP3S-50.000MHZ-LC-B-T  
AP3S-50.000MHZ-NC  
AP3S-53.946054MHZ-LR  
AP3S-54.000MHZ-EC  
AP3S-54.000MHZ-EJ  
AP3S-54.240MHZ-EJ  
AP3S-54.519MHZ-LR  
AP3S-6.000MHZ  
AP3S-6.140MHZ-E  
AP3S-60.000MHZ-LC  
AP3S-60.000MHZ-LR  
AP3S-60.000MHZ-NC  
AP3S-65.000MHZ-LR  
AP3S-66.000MHZ-LC  
AP3S-66.000MHZ-LR



AP3S-66.500MHZ-LR  
AP3S-66.600MHZ-EC  
AP3S-66.666MHZ-LC  
AP3S-66.666MHZ-LR  
AP3S-67.108864MHZ-LC  
AP3S-67.108865MHZ-LC  
AP3S-74.250MHZ-J  
AP3S-74.250MHZ-LR  
AP3S-8.000MHZ-EC  
AP3S-8.000MHZ-L-R  
AP3S-80.000MHZ-LR  
AP3S-80.000MHZ-R  
AP3S-82.000MHZ-J  
AP3S-9.2160MHZ-LC  
AP3S1-100.000MHZ-LR  
AP3S1-12.2727MHZ-LC  
AP3S1-125.000MHZ-LR  
AP3S1-2.800MHZ-LR  
AP3S1-24.000MHZ-LR  
AP3S1-24.5454MHZ-LC  
AP3S1-25.000MHZ-LC  
AP3S1-25.000MHZ-LR  
AP3S1-27.648MHZ  
AP3S1-27.648MHZ-ER  
AP3S1-28.6363MHZ-LC  
AP3S1-28.800MHZ-ER  
AP3S1-29.4912MHZ-LR  
AP3S1-33.2655MHZ-IC  
AP3S1-33.3333MHZ-LC  
AP3S1-37.125MHZ-EJ  
AP3S1-38.400MHZ-LR  
AP3S1-39.3216MHZ-LR  
AP3S1-4.000MHZ-LC  
AP3S1-48.000MHZ-LC  
AP3S1-50.000MHZ-EC  
AP3S1-50.000MHZ-LR  
AP3S1-54.000MHZ-EJ  
AP3S1-54.000MHZ-EJ-B  
AP3S1-62.000MHZ-EJ  
AP3S1-7.3728MHZ-FB  
AP3S1-7.8396MHZ-FB  
AP3S1-7.8396MHZ-LK-B  
AP3S1-74.250MHZ-IJ  
AP3S1-74.250MHZ-LR  
AP3S1-80.000MHZ-LC-B  
AP3S1-98.304MHZ-LR-B

AP3S2-10.000MHZ-E-C-T  
AP3S2-10.500MHZ-LR  
AP3S2-100.000MHZ-LR  
AP3S2-12.000MHZ-LK  
AP3S2-12.288MHZ-I  
AP3S2-12.288MHZ-LK  
AP3S2-125.000MHZ-LJ-B  
AP3S2-125.000MHZ-LR  
AP3S2-16.000MHZ-E-R  
AP3S2-16.000MHZ-LR  
AP3S2-18.432MHZ-C  
AP3S2-18.432MHZ-LC  
AP3S2-19.200MHZ-EJ-T  
AP3S2-20.000MHZ-ER  
AP3S2-20.000MHZ-ERB  
AP3S2-20.000MHZ-LR  
AP3S2-21.000MHZ-LR  
AP3S2-24.000MHZ-EC  
AP3S2-24.000MHZ-LC  
AP3S2-24.545MHZ-LC  
AP3S2-24.576MHZ-LC  
AP3S2-25.000MHZ-EJ  
AP3S2-25.000MHZ-EK  
AP3S2-25.000MHZ-L  
AP3S2-25.000MHZ-LC  
AP3S2-25.000MHZ-LK  
AP3S2-26.000MHZ-EB  
AP3S2-26.000MHZ-EK  
AP3S2-26.000MHZ-ER  
AP3S2-26.000MHZ-LK  
AP3S2-26.000MHZ-LKB  
AP3S2-26.000MHZ-LKB-T  
AP3S2-26.000MHZ-LR  
AP3S2-26.000MHZ-NRB  
AP3S2-26.950MHZ-LC  
AP3S2-27.000MHZ-EKB-T  
AP3S2-27.000MHZ-LC  
AP3S2-27.000MHZ-LR  
AP3S2-28.63636MHZ-LC  
AP3S2-28.6363MHZ-LC  
AP3S2-28.636MHZ-LC  
AP3S2-29.4912MHZ-R  
AP3S2-30.000MHZ-E-R  
AP3S2-30.000MHZ-LC  
AP3S2-30.000MHZ-LC-B-T  
AP3S2-30.000MHZ-LR

AP3S2-33.333MHZ-LC  
AP3S2-33.333MHZ-LR  
AP3S2-34.905MHZ  
AP3S2-36.000MHZ-ER  
AP3S2-37.0879MHZ-LR  
AP3S2-37.1250MHZ-LR  
AP3S2-38.400MHZ-E-J  
AP3S2-40.000MHZ-ER  
AP3S2-40.000MHZ-LR  
AP3S2-41.026MHZ-LB-B-B  
AP3S2-44.000MHZ-ER  
AP3S2-44.545MHZ-ER  
AP3S2-45.000MHZ-ER  
AP3S2-48.000MHZ-EC  
AP3S2-48.000MHZ-ER  
AP3S2-48.000MHZ-LK  
AP3S2-48.000MHZ-LR  
AP3S2-49.450549MHZ-LR  
AP3S2-49.500MHZ-LR  
AP3S2-50.000MHZ-ER  
AP3S2-50.000MHZ-ERB  
AP3S2-50.000MHZ-L-C  
AP3S2-50.000MHZ-LR  
AP3S2-51.923MHZ-LC  
AP3S2-52.000MHZ-ER  
AP3S2-54.000MHZ-LR  
AP3S2-56.000MHZ-ER  
AP3S2-58.000MHZ-LR  
AP3S2-60.000MHZ-ER  
AP3S2-60.000MHZ-L-C  
AP3S2-60.000MHZ-LR  
AP3S2-64.000MHZ-LR  
AP3S2-65.000MHZ-EC  
AP3S2-66.000MHZ-LC  
AP3S2-66.666MHZ-LC-T  
AP3S2-76.5MHZ-ER  
AP3SP-60.000MHZ-EJS