

**ECN/PCN No.: 4433**

### For Manufacturer

<b>Product Description:</b> CMOS Output Programmable	<b>Abracón Part Number / Part Series:</b> AP2S	<input type="checkbox"/> Documentation only	<input checked="" type="checkbox"/> Series
		<input checked="" type="checkbox"/> ECN	<input type="checkbox"/> Part Number
		<input type="checkbox"/> EOL	
<b>Affected Revision:</b> O	<b>New Revision:</b> P	<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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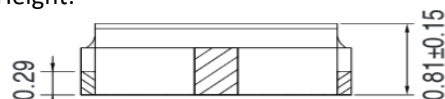
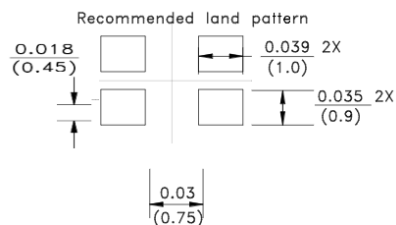
**RMS Phase Jitter:**

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.

**Height:**

**Land Pattern:**

**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

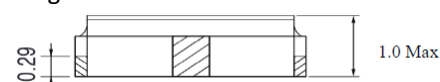
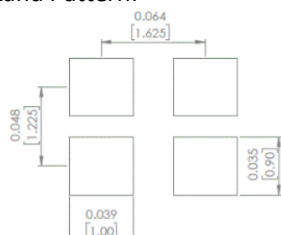
**Notes:**

\* 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<sub>dd</sub> with an output load of 15 pF.

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

**Height:**

**Land Pattern:**

**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>	
<b>Change Declaration:</b>		
<b>Issued Date:</b> 9/14/2022	<b>Issued By:</b> Arturo Longoria	<b>Issued Department:</b> Engineering
<b>Approval:</b> Thomas Culhane Engineering Director	<b>Approval:</b> Reuben Quintanilla Quality Director	<b>Approval:</b> Ying Huang Purchasing Director

For Abracon EOL only		
<b>Last Time Buy (if applicable):</b> <div style="text-align: right; margin-top: 5px;">N/A</div>	<b>Alternate Part Number / Part Series:</b> <div style="text-align: right; margin-top: 5px;">N/A</div>	
<b>Additional Approval:</b>	<b>Additional Approval:</b>	<b>Additional Approval:</b>
Customer Approval (If Applicable)		
<b>Qualification Status:</b> <div style="text-align: center; margin-top: 5px;"> <input type="checkbox"/> Approved <input type="checkbox"/> Not accepted         </div> <p style="font-size: small; margin-top: 5px;"><i>Note: It is considered approved if there is no feedback from the customer 1 month after ECN/PCN is released.</i></p>		
<b>Customer Part Number:</b>	<b>Customer Project:</b>	
<b>Company Name:</b>	<b>Company Representative:</b>	<b>Representative Signature:</b>
<b>Customer Remarks:</b>		