Engineering/Process Change Notice

ECN/PCN No.: 4528

For Manufacturer			
Product Description: Low Frequency SMD Microprocessor Crystal	**Abracon Part Number / Part Series:** ABC2	☐ Documentation only ☒ ECN ☐ EOL	☒ Series ☐ Part Number
Affected Revision: P	**New Revision:** Q	**Application**:	☐ Safety ☒ Non-Safety

Prior to Change:

ABC2 Rev P

Frequency Range

3.5MHz to 36MHz Fundamental, AT

27MHz to 70MHz 3rd Overtone, AT

Table 1

Frequency Ranges	Operation mode	ESR (max)
3.200MHz ~ 3.499MHz	Fundamental	200 Ω
3.500MHz ~ 3.999MHz	Fundamental	140 Ω
4.000MHz ~ 4.399MHz	Fundamental	120 Ω
4.400MHz ~ 4.899MHz	Fundamental	100 Ω
4.900MHz ~ 5.999MHz	Fundamental	80 Ω
6.000MHz ~ 6.999MHz	Fundamental	60 Ω
7.000MHz ~ 7.999MHz	Fundamental	50 Ω
8.000MHz ~ 10.999MHz	Fundamental	45 Ω
11.000MHz ~ 11.999MHz	Fundamental	40 Ω
12.000MHz ~ 14.999MHz	Fundamental	35 Ω
15.000MHz ~ 36.000MHz	Fundamental	30 Ω
27.000MHz ~ 70.000MHz	3rd OT	100 Ω

Part Numbering Guide

Operating Temp.
Blank: -10°C ~ +60°C
B: -20°C ~ +70°C
D**: -40°C ~ +85°C

Freq. Tolerance
Blank: ± 50 ppm
2: ± 20 ppm
4: ± 30 ppm

Freq. Stability
Blank: Standard
G*: ± 15 ppm
W*: ± 25 ppm
Y: ± 30 ppm
H: ± 35 ppm
Z: ± 50 ppm
Q: ± 100 ppm

* Option B and -10 ~60°C only

** Option Y, H, Z and Q only for F≥6.0MHz; Option Z and Q only for F<6.0MHz

After Change:

ABC2 Rev Q

Frequency Range

3.2MHz to 30MHz Fundamental Mode, AT

Removal of 3rd Overtone, AT

Limit frequency range to 30MHz

Table 1

Frequency Ranges	Operation mode	ESR (max)
3.200MHz ~ 3.499MHz	Fundamental	200 Ω
3.500MHz ~ 3.999MHz	Fundamental	140 Ω
4.000MHz ~ 4.399MHz	Fundamental	120 Ω
4.400MHz ~ 4.899MHz	Fundamental	100 Ω
4.900MHz ~ 5.999MHz	Fundamental	80 Ω
6.000MHz ~ 6.999MHz	Fundamental	60 Ω
7.000MHz ~ 7.999MHz	Fundamental	50 Ω
8.000MHz ~ 10.999MHz	Fundamental	45 Ω
11.000MHz ~ 11.999MHz	Fundamental	40 Ω
12.000MHz ~ 14.999MHz	Fundamental	35 Ω
15.000MHz ~ 30.000MHz	Fundamental	30 Ω

Removal of 3rd Overtone Frequency Range, Limit frequency Range to 30MHz

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Part Numbering Guide

Operating Temp.
Blank: -10°C ~ +60°C
B: -20°C ~ +70°C
D**: -40°C ~ +85°C

Freq. Tolerance
Blank: ± 50 ppm
2: ± 20 ppm
4: ± 30 ppm

Freq. Stability
Blank: Standard
Y: ± 30 ppm
Z: ± 50 ppm
Q: ± 100 ppm

**Option Q only for F≥6.0MHz; Option Z and Q only for F<6.0MHz

Removal of Frequency Stability Options G, W, and H
Update note (**) on Operating Temperature Option D

Cause/Reason for Change:
Updated electrical specifications to reflect current production capabilities.

Change Plan

Effective Date:	**Additional Remarks:**
1/6/2022	

Change Declaration:

Issued Date:	**Issued By:**	**Issued Department:**
1/6/2022	*Stephanie Lopez*	Engineering

Approval:	**Approval:**	**Approval:**
Thomas Culhane Engineering Director	*Reuben Quintanilla* Quality Director	*Ying Huang* Purchasing Director

For Abracon EOL only

Last Time Buy (if applicable):	**Alternate Part Number / Part Series:**
N/A	N/A

Additional Approval:	**Additional Approval:**	**Additional Approval:**

Customer Approval (If Applicable)

Qualification Status:

☐ Approved ☐ Not accepted

Note: It is considered approved if there is no feedback from the customer 1 month after ECN/PCN is released.

Customer Part Number:	**Customer Project:**

Company Name:	**Company Representative:**	**Representative Signature:**

Customer Remarks: