

ECN/PCN No.: 3681

For Manufacturer

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| Product Description: LOW ESR, LOW CL CERAMIC SMD CRYSTAL | Abracon Part Number / Part Series: ABM11W | <input checked="" type="checkbox"/> Series <input type="checkbox"/> Part Number |
| Affected Revision: D | New Revision: E | Application: <input type="checkbox"/> Safety <input checked="" type="checkbox"/> Non-Safety |

Prior to Change:

Electrical Specifications

| Parameters | Minimum | Typical | Maximum | Units | Notes |
|---|---------|---------|---------|-------|----------------------|
| Equivalent series resistance (R1) (over -40°C to +125°C) | | < 150 | 200 | Ω | 16.0000 – 17.9999MHz |
| | | < 80 | 120 | | 18.0000 – 20.9999MHz |
| | | < 60 | 100 | | 21.0000 – 29.9999MHz |
| | | < 50 | 80 | | 30.0000 – 37.9999MHz |
| | | < 30 | 60 | | 38.0000 – 50.0000MHz |

After Change:

Electrical Specifications

| Parameters | Minimum | Typical | Maximum | Units | Notes |
|---|---------|---------|----------------------|-------|----------------------|
| Equivalent series resistance “R1” (over Operating Temperature Range) (CL=4pF) | | < 150 | 200 | Ω | 16.0000 – 17.9999MHz |
| | | < 80 | 120 | | 18.0000 – 20.9999MHz |
| | | < 60 | 100 | | 21.0000 – 29.9999MHz |
| | | < 50 | 80 | | 30.0000 – 37.9999MHz |
| | | < 30 | 60 | | 38.0000 – 50.0000MHz |
| Equivalent series resistance “R1” (over Operating Temperature Range) (CL=6pF, 7pF, 8pF) | | < 120 | 150 | Ω | 16.0000 – 17.9999MHz |
| | | < 80 | 120 | | 18.0000 – 20.9999MHz |
| | | < 60 | 100 | | 21.0000 – 23.9999MHz |
| | | < 30 | 50 | | 24.0000 – 29.9999MHz |
| | | < 30 | 50 | | 30.0000 – 37.9999MHz |
| | < 30 | 40 | 38.0000 – 50.0000MHz | | |

Cause/Reason for Change:

Abracon improved product electrical performance for the crystal Equivalent Series Resistance (R1) parameter.

Change Plan

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| Effective Date: 10/05/2020 | Additional Remarks: |
|--------------------------------------|----------------------------|

Change Declaration:

- All previous (initial release through revision D) Abracon shipments comply with revision E of the ABM11W datasheet.
- All product delivered after the below published effectivity date shall comply with revision E of the ABM11W datasheet.

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| Issued Date: 10/05/2020 | Issued By: <i>Brooke Cushman</i> | Issued Department: Engineering |
| Approval: <i>Thomas Culhane</i> Engineering Director | Approval: <i>Reuben Quintanilla</i> Quality Director | Approval: <i>Ying Huang</i> Purchasing Director |

For Abracon EOL only

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|---|-------------------------|--------------------------------------|--|
| Last Time Buy (if applicable): | | Alternate Part Number / Part Series: | |
| Additional Approval: | Additional Approval: | Additional Approval: | |
| Customer Approval (If Applicable) | | | |
| Qualification Status: <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> | | | |
| Customer Part Number: | | Customer Project: | |
| Company Name: | Company Representative: | Representative Signature: | |
| Customer Remarks: | | | |