

ECN/PCN No.: 3682

**For Manufacturer**

|  |   |  |
|--|---|--|
| <b>Product Description:</b><br>LOW ESR, LOW CL CERAMIC SMD CRYSTAL | <b>Abracon Part Number / Part Series:</b><br>ABM10W | <input checked="" type="checkbox"/> Series<br><input type="checkbox"/> Part Number                       |
| <b>Affected Revision:</b><br>D                                     | <b>New Revision:</b><br>E                           | <b>Application:</b><br><input type="checkbox"/> Safety<br><input checked="" type="checkbox"/> Non-Safety |

**Prior to Change:**

**Electrical Specifications**

| Parameters  | Minimum | Typical | Maximum | Units | Notes                |
|---|---------|---------|---------|-------|----------------------|
| Equivalent series resistance (R1)<br>(over -40°C to +125°C) |         | < 70    | 100     | Ω     | 16.0000 – 19.9999MHz |
|   |         | < 50    | 80      |       | 20.0000 – 29.9999MHz |
|   |         | < 40    | 60      |       | 30.0000 – 39.9999MHz |
|   |         | < 25    | 40      |       | 40.0000 – 50.0000MHz |

**After Change:**

**Electrical Specifications**

| Parameters  | Minimum | Typical | Maximum | Units | Notes                |
|---|---------|---------|---------|-------|----------------------|
| Equivalent series resistance “R1”<br>(over Operating Temperature Range)<br>(CL=4pF)           |         | < 70    | 100     | Ω     | 16.0000 – 19.9999MHz |
|   |         | < 50    | 80      |       | 20.0000 – 29.9999MHz |
|   |         | < 40    | 60      |       | 30.0000 – 39.9999MHz |
|   |         | < 25    | 40      |       | 40.0000 – 50.0000MHz |
| Equivalent series resistance “R1”<br>(over Operating Temperature Range)<br>(CL=6pF, 7pF, 8pF) |         | < 50    | 70      | Ω     | 16.0000 – 19.9999MHz |
|   |         | < 35    | 50      |       | 20.0000 – 29.9999MHz |
|   |         | < 30    | 40      |       | 30.0000 – 39.9999MHz |
|   |         | < 25    | 30      |       | 40.0000 – 50.0000MHz |

**Cause/Reason for Change:**

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

**Change Plan**

|                                      |                            |
|--------------------------------------|----------------------------|
| <b>Effective Date:</b><br>10/05/2020 | <b>Additional Remarks:</b> |
|--------------------------------------|----------------------------|

**Change Declaration:**

- All previous (initial release through revision D) Abracon shipments comply with revision E of the ABM10W datasheet.
- All product delivered after the below published effectivity date shall comply with revision E of the ABM10W datasheet.

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

## For Abracon EOL only

| Last Time Buy (if applicable):  |                         | Alternate Part Number / Part Series: |  |
|---|-------------------------|--------------------------------------|--|
| Additional Approval:  | Additional Approval:    | Additional Approval:                 |  |
| Customer Approval (If Applicable)   |                         |                                      |  |
| Qualification Status:<br><input type="checkbox"/> Approved <input type="checkbox"/> Not accepted<br><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:   |                         |                                      |  |