

ECN/PCN No.: 3680

**For Manufacturer**

<b>Product Description:</b> LOW ESR, LOW CL CERAMIC SMD CRYSTAL	<b>Abracon Part Number / Part Series:</b> ABM12W	<input checked="" type="checkbox"/> Series <input type="checkbox"/> Part Number
<b>Affected Revision:</b> E	<b>New Revision:</b> F	<b>Application:</b> <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)		< 90	150	Ω	24.0000 – 31.9999MHz
		< 80	100		32.0000 – 36.9999MHz
		< 60	80		37.0000 – 52.0000MHz

**After Change:**  
**Electrical Specifications**

Parameters	Minimum	Typical	Maximum	Units	Notes
Equivalent series resistance “R1” (over Operating Temperature Range) (CL=4pF)		< 90	150	Ω	24.0000 – 31.9999MHz
		< 80	100		32.0000 – 36.9999MHz
		< 60	80		37.0000 – 52.0000MHz
Equivalent series resistance “R1” (over Operating Temperature Range) (CL=6pF, 7pF, 8pF)		< 80	100	Ω	24.0000 – 31.9999MHz
		< 60	80		32.0000 – 36.9999MHz
		< 35	50		37.0000 – 52.0000MHz

**Cause/Reason for Change:**  
Abracon improved product electrical performance for the crystal Equivalent Series Resistance (R1) parameter.

**Change Plan**

<b>Effective Date:</b> 10/05/2020	<b>Additional Remarks:</b>
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**Change Declaration:**

- All previous (initial release through revision E) Abracon shipments comply with revision F of the ABM12W datasheet.
- All product delivered after the below published effectivity date shall comply with revision F of the ABM12W datasheet.

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

**For Abracon EOL only**

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