

**ECN/PCN No.: M1215**

For Manufacturer			
<b>Product Description:</b> Mini Drum Core Inductor	<b>Abracon Part Number / Part Series:</b> AIUR-02H Series	<input type="checkbox"/> Documentation only <input checked="" type="checkbox"/> ECN <input type="checkbox"/> EOL	<input checked="" type="checkbox"/> Series <input type="checkbox"/> Part Number(s)
<b>Affected Revision:</b> L	<b>New Revision:</b> M	<b>Application:</b>	<input type="checkbox"/> Safety <input checked="" type="checkbox"/> Non-Safety

**Prior to Change:**
**1.0 Key Electrical Specifications**

Part Number	Inductance	Tolerance	Q (Min)	Test Frequency	DCR (Max)	Saturation Current (Max)	Temperature Rise Current (Max)	Inductance Code
Units	μH	%		MHz	Ω	A		
Symbol	L	J, K, M			DCR	Isat	I <sub>bc</sub>	
AIUR-02H-1R0	1.0	M	15	7.96	0.021	8.60	3.5	1R0M
AIUR-02H-2R2	2.2	M	15	7.96	0.026	6.30	3.2	2R2M
AIUR-02H-3R3	3.3	M	15	7.96	0.030	5.40	2.7	3R3M
AIUR-02H-4R7	4.7	M	15	7.96	0.034	4.60	2.5	4R7M
AIUR-02H-6R8	6.8	M	15	7.96	0.037	4.10	2.3	6R8M
AIUR-02H-100	10	J, K	20	2.52	0.044	3.40	2.0	100J/100K
AIUR-02H-120	12	J, K	20	2.52	0.049	3.10	1.9	120J/120K
AIUR-02H-150	15	J, K	20	2.52	0.054	2.90	1.8	150J/150K
AIUR-02H-180	18	J, K	20	2.52	0.058	2.66	1.6	180J/180K
AIUR-02H-220	22	J, K	20	2.52	0.065	2.40	1.4	220J/220K
AIUR-02H-270	27	J, K	20	2.52	0.072	2.20	1.3	270J/270K
AIUR-02H-330	33	J, K	20	2.52	0.080	2.05	1.1	330J/330K
AIUR-02H-390	39	J, K	20	2.52	0.101	1.85	1.1	390J/390K
AIUR-02H-470	47	J, K	20	2.52	0.121	1.77	0.99	470J/470K
AIUR-02H-560	56	J, K	20	2.52	0.145	1.48	0.90	560J/560K
AIUR-02H-680	68	J, K	20	2.52	0.161	1.36	0.81	680J/680K
AIUR-02H-820	82	J, K	20	2.52	0.174	1.30	0.76	820J/820K
AIUR-02H-101	100	J, K	20	0.79	0.21	1.40	0.72	101J/101K
AIUR-02H-121	120	J, K	20	0.79	0.24	1.25	0.67	121J/121K
AIUR-02H-151	150	J, K	20	0.79	0.27	1.15	0.61	151J/151K
AIUR-02H-181	180	J, K	20	0.79	0.30	1.08	0.54	181J/181K
AIUR-02H-221	220	J, K	20	0.79	0.34	1.00	0.50	221J/221K
AIUR-02H-271	270	J, K	20	0.79	0.39	0.90	0.41	271J/271K
AIUR-02H-331	330	J, K	20	0.79	0.62	0.78	0.39	331J/331K
AIUR-02H-391	390	J, K	20	0.79	0.69	0.74	0.37	391J/391K
AIUR-02H-471	470	J, K	20	0.79	0.77	0.68	0.32	471J/471K
AIUR-02H-561	560	J, K	20	0.79	0.83	0.64	0.30	561J/561K
AIUR-02H-681	680	J, K	15	0.79	0.94	0.59	0.27	681J/681K
AIUR-02H-821	820	J, K	15	0.79	1.03	0.56	0.24	821J/821K
AIUR-02H-102	1000	J, K	15	0.25	1.30	0.51	0.22	102J/102K
AIUR-02H-222	2200	J, K	15	0.25	3.00	0.20	0.10	222J/222K

**2.1 Test Conditions and equipments**

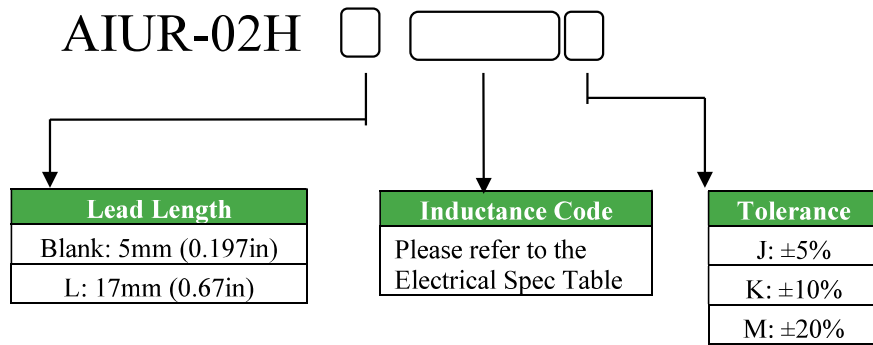
DCR: QuadTech Milliohmeter

Isat: 10% inductance drops from initial value

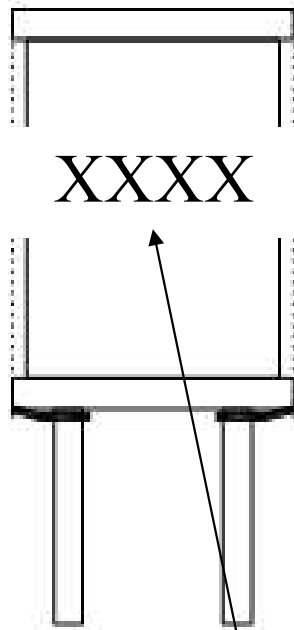
I<sub>bc</sub>: The DC current at which the temperature rise is 40°C max

**2.2 Operating Temperature: -25°C ~ +85°C**
**2.3 Storage Temperature: -25°C ~ +85°C**

**3.0 Part Number Identification**



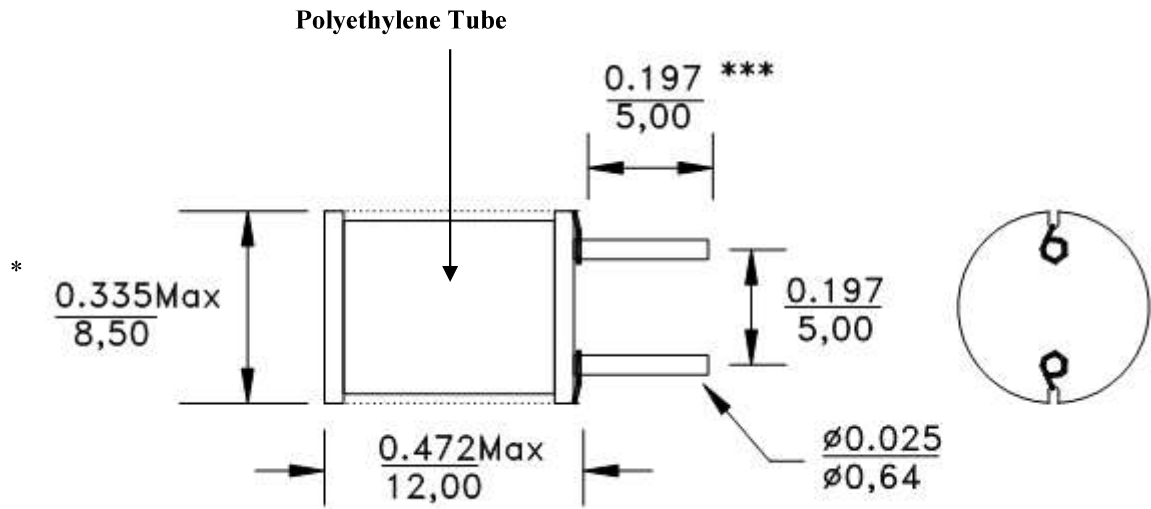
**4.0 Marking**



Inductance Code  
e.g. 101K

**4.1 Marking Method = Ink Marking**

**5.0 Mechanical Dimensions**



\*For 220 $\mu$ H and up, diameter = 0.354/9.0 Max

\*\*\* Optional lead length: L: 0.67/17

**Dimension: inch/mm**

**After Change:**
**2.0 Key Electrical Specifications**

Part Number	Inductance	Tolerance	DCR (Max)	Saturation Current (Max)	Temperature Rise Current (Max)	Inductance Code
Units	μH	%	Ω	A		
Symbol	L	K, M, N	DCR	Isat	I <sub>DC</sub>	
AIUR-02H-1R0	1.0	N	0.021	8.60	3.5	1R0N
AIUR-02H-2R2	2.2	M	0.026	6.30	3.2	2R2M
AIUR-02H-3R3	3.3	M	0.030	5.40	2.7	3R3M
AIUR-02H-4R7	4.7	M	0.034	4.60	2.5	4R7M
AIUR-02H-6R8	6.8	M	0.037	4.10	2.3	6R8M
AIUR-02H-100	10	K	0.044	3.40	2.0	100K
AIUR-02H-120	12	K	0.049	3.10	1.9	120K
AIUR-02H-150	15	K	0.054	2.90	1.8	150K
AIUR-02H-180	18	K	0.058	2.66	1.6	180K
AIUR-02H-220	22	K	0.065	2.40	1.4	220K
AIUR-02H-270	27	K	0.072	2.20	1.3	270K
AIUR-02H-330	33	K	0.080	2.05	1.1	330K
AIUR-02H-390	39	K	0.101	1.85	1.1	390K
AIUR-02H-470	47	K	0.121	1.77	0.99	470K
AIUR-02H-560	56	K	0.145	1.48	0.90	560K
AIUR-02H-680	68	K	0.161	1.36	0.81	680K
AIUR-02H-820	82	K	0.174	1.30	0.76	820K
AIUR-02H-101	100	K	0.21	1.40	0.72	101K
AIUR-02H-121	120	K	0.24	1.25	0.67	121K
AIUR-02H-151	150	K	0.27	1.15	0.61	151K
AIUR-02H-181	180	K	0.30	1.08	0.54	181K
AIUR-02H-221	220	K	0.34	1.00	0.50	221K
AIUR-02H-271	270	K	0.39	0.90	0.41	271K
AIUR-02H-331	330	K	0.62	0.78	0.39	331K
AIUR-02H-391	390	K	0.69	0.74	0.37	391K
AIUR-02H-471	470	K	0.77	0.68	0.32	471K
AIUR-02H-561	560	K	0.83	0.64	0.30	561K
AIUR-02H-681	680	K	0.94	0.59	0.27	681K
AIUR-02H-821	820	K	1.03	0.56	0.24	821K
AIUR-02H-102	1000	K	1.30	0.51	0.22	102K
AIUR-02H-222	2200	K	3.00	0.20	0.10	222K

**5.1 Test Conditions**

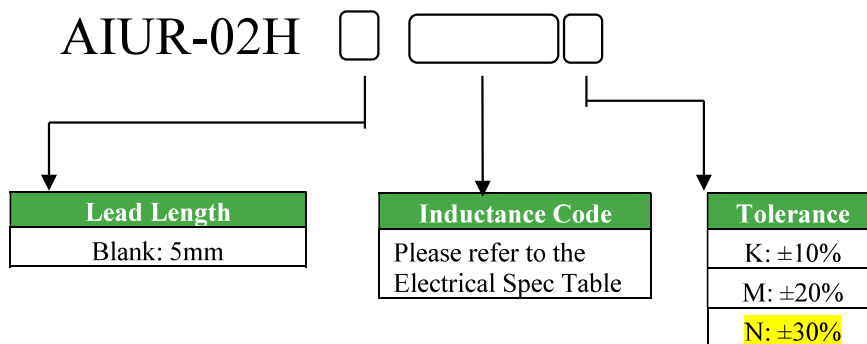
Test frequency: 1KHz, 0.25V

Isat: 30% inductance drops from initial value.

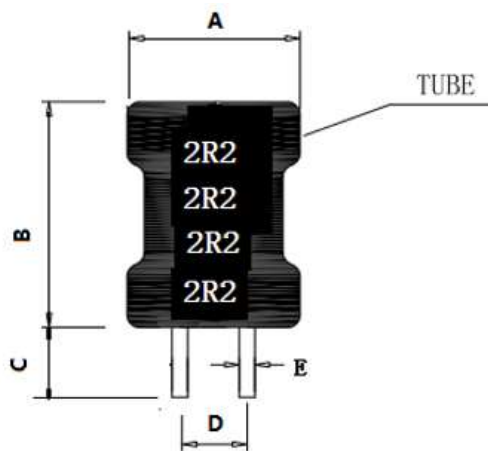
 I<sub>DC</sub>: The DC current at which the temperature rise is 40°C max.

**5.2 Operating Temperature: -40°C ~ +125°C (Including Self-heating)**
**5.3 Storage Temperature: -40°C ~ +125°C**

**6.0 Part Number Identification**



**7.0 Mechanical Dimensions**



A	B	C	D	E
9.0 (max)	12.0 (max)	5.0±1	5Ref	0.6

**Cause/Reason for Change:**

Moving the series to a new production line, relaxed tolerance on some parts, change in operating temperature range, testing conditions, dimensions graphics. There is a partial EOL associated with this ECN. (Refer to Partial ECN-EOL #M1215 AIUR-02H Series: <https://abracon.com/downloads/ECN-PCN/Partial-ECN-EOL-M1215-AIUR-02H-Series.pdf>.)

**Change Plan**

<b>Effective Date:</b> 2/9/2021	<b>Additional Remarks:</b>
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**Change Declaration:**

The change does not affect form fit or function of the series. Wider operating temperature, update to the testing conditions.

There is a partial EOL on the PNs with the old tolerances. (Refer to Partial ECN-EOL #M1215 AIUR-02H Series: <https://abracon.com/downloads/ECN-PCN/Partial-ECN-EOL-M1215-AIUR-02H-Series.pdf>.)

The tolerance was relaxed from 'M' to 'N' on the following parts:

AIUR-02H-1R0

Devices from 10uH to 2200uH: only J tolerance have been EoL'd

<b>Issued Date:</b> 2/9/2021	<b>Issued By:</b> <i>Ahmed Alamin</i>	<b>Issued Department:</b> Engineering
<b>Approval:</b> <i>Syed Raza</i> Engineering VP	<b>Approval:</b> <i>Reuben Quintanilla</i> Quality Director	<b>Approval:</b> <i>Ying Huang</i> Purchasing Director

**For Abracon EOL only**

<b>Last Time Buy (if applicable):</b>	<b>Alternate Part Number / Part Series:</b>
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<b>Additional Approval:</b>	<b>Additional Approval:</b>	<b>Additional Approval:</b>
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**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.*

<b>Customer Part Number:</b>	<b>Customer Project:</b>
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<b>Company Name:</b>	<b>Company Representative:</b>	<b>Representative Signature:</b>
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**Customer Remarks:**