

ECN/PCN No.: M1215

For Manufacturer			
Product Description: Mini Drum Core Inductor	Abrakon Part Number / Part Series: 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)
Affected Revision: L	New Revision: M	Application:	<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	μ H	%		MHz	Ω	A		
Symbol	L	J, K, M			DCR	Isat	Idc	
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

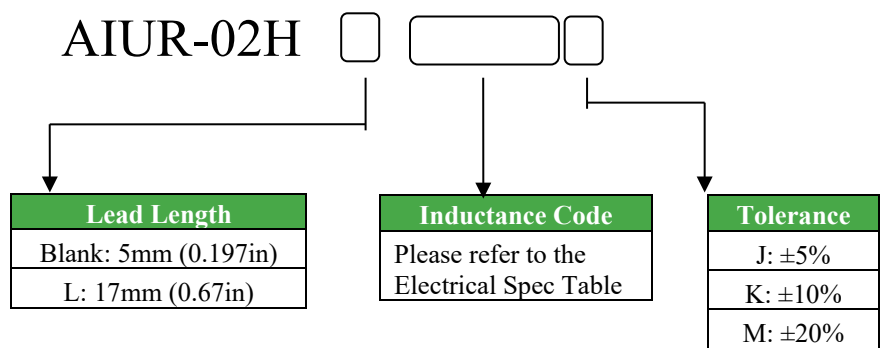
DCR: QuadTech Milliohmmeter

Isat: 10% inductance drops from initial value

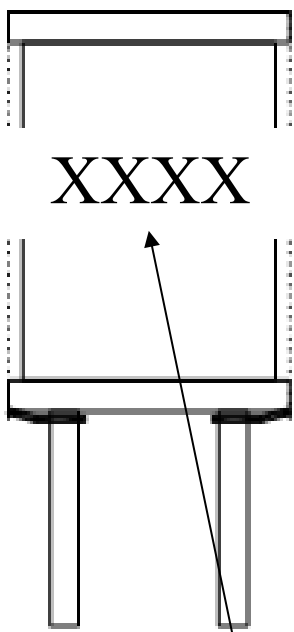
Idc: The DC current at which the temperature rise is 40°C max

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

3.0 Part Number Identification



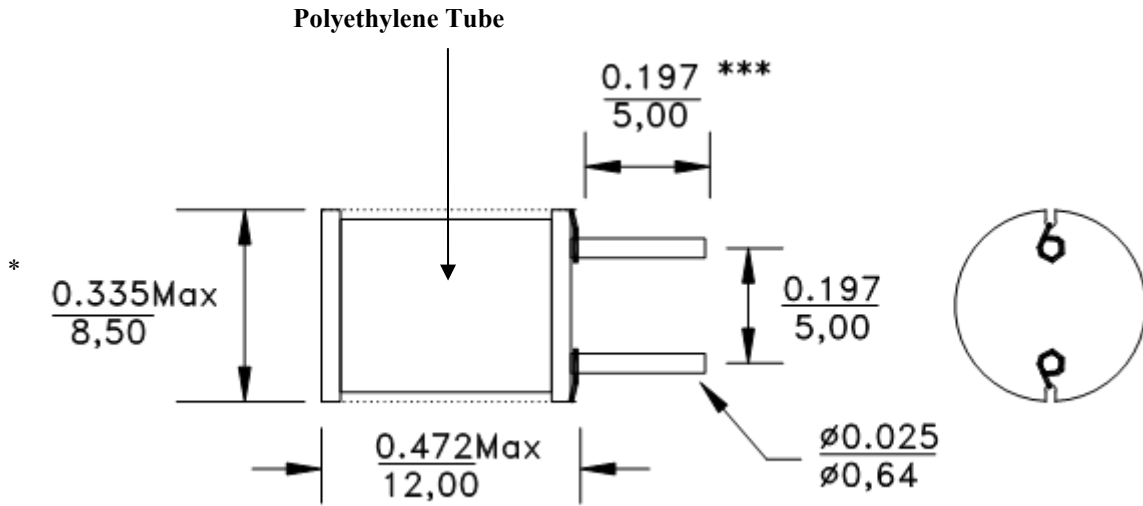
4.0 Marking



Inductance Code
e.g. 101K

4.1 Marking Method = Ink Marking

5.0 Mechanical Dimensions



*For 220μH 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 _{DC}	
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

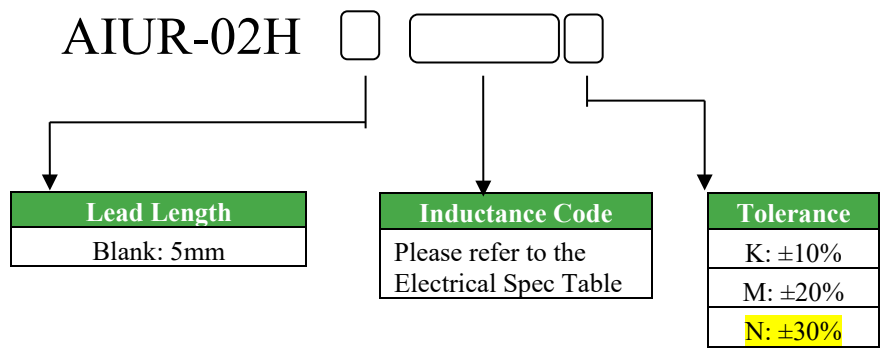
Test frequency: 1KHz, 0.25V

Isat: 30% inductance drops from initial value.

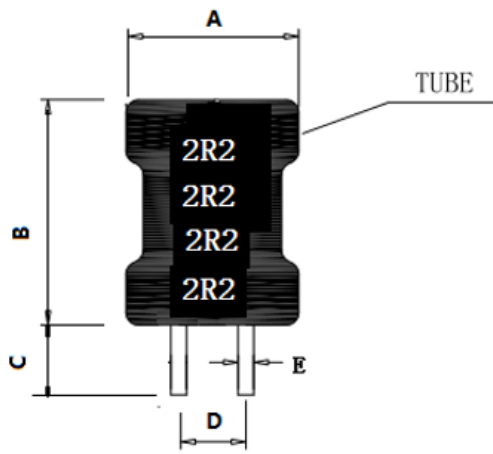
 I_{DC}: The DC current at which the temperature rise is 40°C max.

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
Effective Date:

2/9/2021

Additional Remarks:
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

Issued Date:

2/9/2021

Issued By:
Ahmed Alamin
Issued Department:

Engineering

Approval:
Syed Raza
Engineering VP

Approval:
Reuben Quintanilla
Quality Director

Approval:
Ying Huang
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:
 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: