

ECN/PCN No.: M1400

For Manufacturer

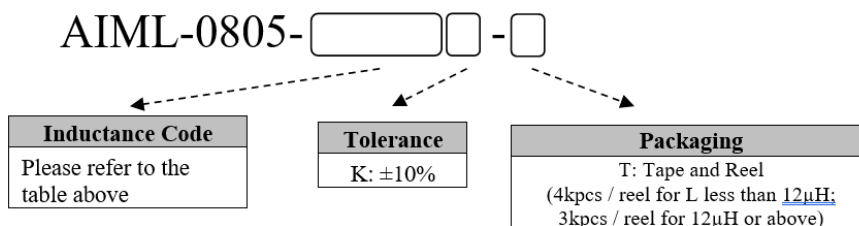
Product Description: Multilayer Ferrite Chip Inductor	Abrakon Part Number / Part Series: AIML-0805 Series	☐ Documentation only ☒ ECN ☒ EOL	☒ Series ☐ Part Number(s)
Affected Revision: E	New Revision: F	Application:	☐ Safety ☒ Non-Safety

Prior to Change:

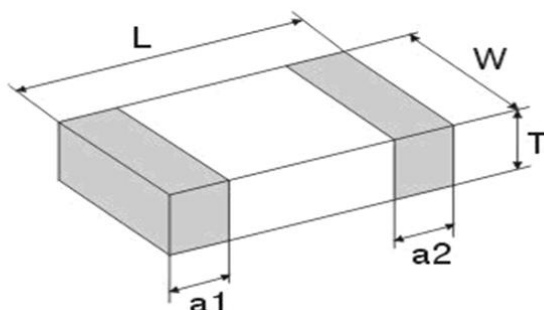
1.0 Key Electrical Specifications

Part No. AIML-0805- Inductance Code	L(μH)	Tolerance	Q (min)	Test Freq.	SRF(MHz)	DCR(Ω)	Ir(mA)
		(%)		(MHz)	(min)	(max)	(max)
AIML-0805-R047	0.047	K	15	50	350	0.20	300
AIML-0805-R056	0.056	K	15	50	350	0.20	300
AIML-0805-R068	0.068	K	15	50	280	0.20	300
AIML-0805-R082	0.082	K	15	50	255	0.20	300
AIML-0805-R10	0.100	K	20	25	235	0.30	250
AIML-0805-R12	0.120	K	20	25	220	0.30	250
AIML-0805-R15	0.150	K	20	25	200	0.40	250
AIML-0805-R18	0.180	K	20	25	185	0.40	250
AIML-0805-R22	0.220	K	20	25	170	0.50	250
AIML-0805-R27	0.270	K	20	25	150	0.50	250
AIML-0805-R33	0.330	K	20	25	145	0.55	250
AIML-0805-R39	0.390	K	25	25	135	0.65	200
AIML-0805-R47	0.470	K	25	25	125	0.65	200
AIML-0805-R56	0.560	K	25	25	115	0.75	150
AIML-0805-R68	0.680	K	25	25	105	0.80	150
AIML-0805-R82	0.820	K	25	25	100	1.00	150
AIML-0805-1R0	1.000	K	45	10	75	0.40	50
AIML-0805-1R2	1.200	K	45	10	65	0.50	50
AIML-0805-1R5	1.500	K	45	10	60	0.50	50
AIML-0805-1R8	1.800	K	45	10	55	0.60	50
AIML-0805-2R2	2.200	K	45	10	50	0.65	30
AIML-0805-2R7	2.700	K	45	10	45	0.75	30
AIML-0805-3R3	3.300	K	45	10	41	0.80	30
AIML-0805-3R9	3.900	K	45	10	38	0.90	30
AIML-0805-4R7	4.700	K	45	10	35	1.00	30
AIML-0805-5R6	5.600	K	55	4	32	0.90	15
AIML-0805-6R8	6.800	K	55	4	29	1.00	15
AIML-0805-8R2	8.200	K	55	4	26	1.10	15
AIML-0805-100	10.000	K	55	2	24	1.15	15
AIML-0805-120	12.000	K	55	2	22	1.25	15
AIML-0805-150	15.000	K	40	1	19	0.80	5
AIML-0805-180	18.000	K	40	1	18	0.90	5
AIML-0805-220	22.000	K	40	1	16	1.10	5
AIML-0805-270	27.000	K	25	1	14	1.15	5
AIML-0805-330	33.000	K	25	1	13	1.25	5
AIML-0805-390	39.000	K	25	1	13	1.50	4

4.0 Part Number Identification

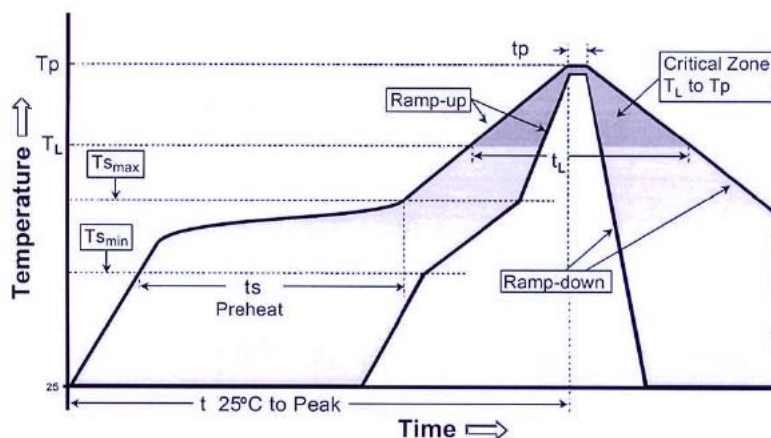


5.0 Mechanical Dimensions



L	W	T	a1,a2
2.00 ± 0.20 [0.079 $\pm$ 0.008]	1.25 ± 0.20 [0.049 $\pm$ 0.008]	0.85 ± 0.20 [0.033 $\pm$ 0.008] for L less than $12\mu\text{H}$; 1.25 ± 0.20 [0.049 $\pm$ 0.008] for $12\mu\text{H}$ or above	0.50 ± 0.30 [0.02 $\pm$ 0.012]

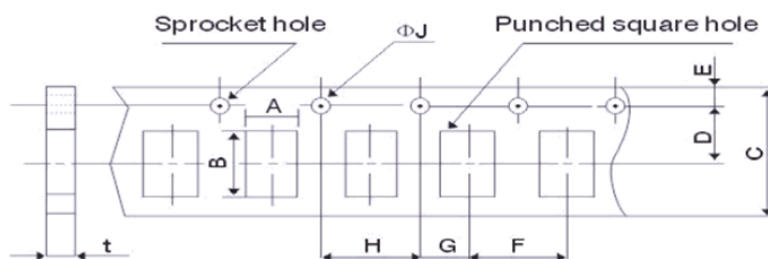
5.1 Reflow Profile



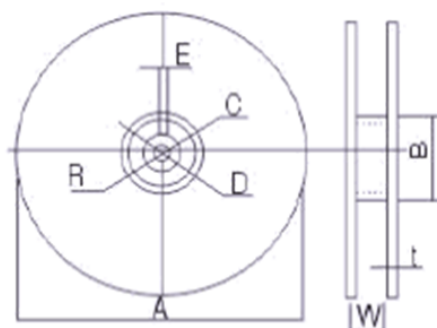
Profile Feature	Lead-Free Assembly
Average Ramp-Up Rate (T _{smax} to T _p)	3°C /second max.
Preheat - Temperature Min (T_{smmin}) - Temperature Max (T_{smmax}) - Time (t_{smmin} to t_{smmax}) min to t_{smmax})	150 °C 200 °C 60-180 seconds
Time maintained above: - Temperature (T_L) - Time (t_L)	217 °C 60-150 seconds
Peak/Classification Temperature (T _p) Peak/Classification Time (T _p)	260 °C 3-4 seconds
Time within 5 °C of actual Peak Temperature (t _p)	20-40 seconds
Ramp-Down Rate	6°C/second max.
Time 25 °C to Peak Temperature	8 minutes max.

6.0 Packing

T: 4,000pcs / reel for L less than 12μH (paper tape); 3,000pcs / reel for 12μH or above (embossed tape)



A	B	C	D	E	F	G	H	ΦJ	t(max)
1.5 ± 0.15	2.5 ± 0.2	8.0 ± 0.3	3.5 ± 0.05	1.75 ± 0.1	4.0 ± 0.1	2.0 ± 0.05	4.0 ± 0.1	1.5 ± 0.1/-0	1.1 ± 0.05 for L less than 12μH; 1.0 ± 0.05 for 12μH or above



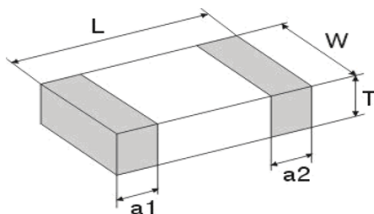
A	178 ± 2
B	60 ± 2
C	13.0 ± 0.5
D	21.0 ± 0.8
E	2.0 ± 0.5
W	10.0 ± 1.15
t	1.2 ± 0.2
R	1.0 ± 0.25

After Change:

Electrical Specifications

Part No.	L(μH)	Tolerance	Q	Test Freq.	SRF (MHz)	DCR (Ω)	Ir (mA)
		(%)	(min)	(MHz)	(min)	±30%	(max)
AIML-0805-R047	0.047	K	15	50	320	0.20	300
AIML-0805-R068	0.068	K	15	50	280	0.20	300
AIML-0805-R082	0.082	K	15	50	255	0.20	300
AIML-0805-R10	0.100	K	20	25	235	0.30	250
AIML-0805-R12	0.120	K	20	25	220	0.30	250
AIML-0805-R15	0.150	K	20	25	200	0.40	250
AIML-0805-R18	0.180	K	20	25	185	0.40	250
AIML-0805-R22	0.220	K	20	25	170	0.50	250
AIML-0805-R27	0.270	K	20	25	150	0.50	250
AIML-0805-R33	0.330	K	20	25	145	0.55	250
AIML-0805-R39	0.390	K	25	25	135	0.65	200
AIML-0805-R47	0.470	K	25	25	125	0.65	200
AIML-0805-R56	0.560	K	25	25	115	0.75	150
AIML-0805-R68	0.680	K	25	25	105	0.80	150
AIML-0805-R82	0.820	K	25	25	100	1.00	150
AIML-0805-1R0	1.000	K	45	10	95	0.40	50
AIML-0805-1R2	1.200	K	45	10	85	0.50	50
AIML-0805-1R5	1.500	K	45	10	80	0.50	50
AIML-0805-1R8	1.800	K	45	10	75	0.60	50
AIML-0805-2R2	2.200	K	45	10	70	0.65	30
AIML-0805-2R7	2.700	K	45	10	45	0.75	30
AIML-0805-3R3	3.300	K	45	10	41	0.80	30
AIML-0805-3R9	3.900	K	45	10	38	0.90	30
AIML-0805-4R7	4.700	K	45	10	35	1.00	30
AIML-0805-5R6	5.600	K	50	4	32	0.90	15
AIML-0805-6R8	6.800	K	50	4	29	1.00	15
AIML-0805-8R2	8.200	K	50	4	26	1.10	15
AIML-0805-100	10.000	K	50	2	24	1.15	15
AIML-0805-120	12.000	K	50	2	22	1.25	15
AIML-0805-150	15.000	K	30	1	19	0.80	5
AIML-0805-180	18.000	K	30	1	18	0.90	5
AIML-0805-220	22.000	K	30	1.0	16	1.10	5
AIML-0805-270	27.000	K	30	1.0	14	1.15	5
AIML-0805-330	33.000	K	30	0.4	13	1.25	5
AIML-0805-390	39.000	K	35	2.0	8	2.90	4
AIML-0805-470	47.000	K	25	2.0	7.5	3.00	4

Mechanical Specifications



L	W	T	a1, a2
2.00 +0.3/-0.1 [0.079 + 0.012/-0.004]	1.25±0.20 [0.049±0.008]	0.85±0.20 [0.033±0.008] for L less than 27µH; 1.25±0.20 [0.049±0.008] for 27µH or above	0.50±0.30 [0.02±0.012]

Dimensions: mm[inches]

Part Identification

AIML-0805--

Inductance Code

Please refer to the table above

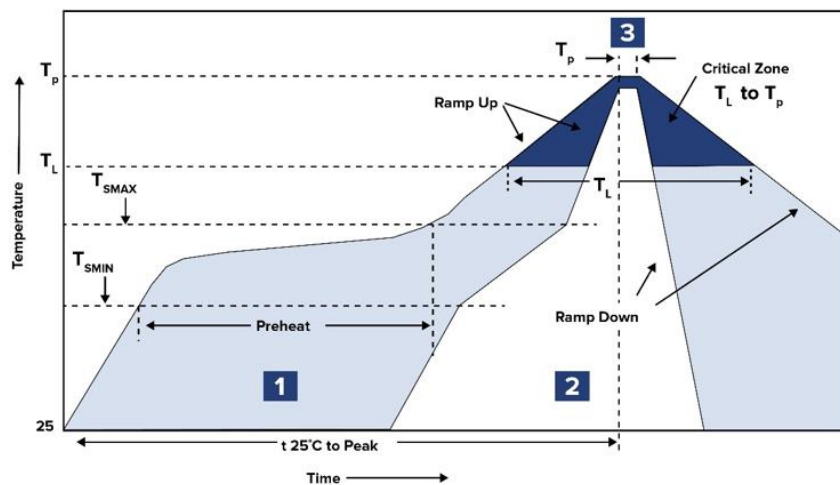
Tolerance

K: ±10%

Packaging

T: Tape and Reel
4kpcs / reel for L<27µH
3kpcs / reel for 27µH and above.

Reflow Profile

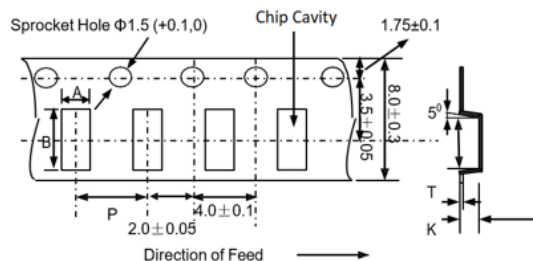


Zone	Description	Temperature	Times
1	Preheat	T _{SMIN} ~ T _{SMAX} 150°C ~ 200°C	60 ~ 120 sec.
2	Reflow	T _L 217°C	60 ~ 90 sec.
3	Peak heat	T _P 260°C	10 sec. MAX
T(25°C) to Peak: 8 minutes max.			

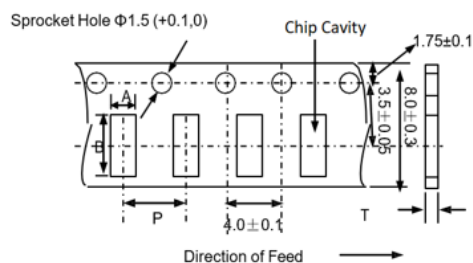
Packaging

T: 4,000pcs / reel for L less than 27 μ H (paper tape); 3,000pcs / reel for 27 μ H or above (embossed tape)

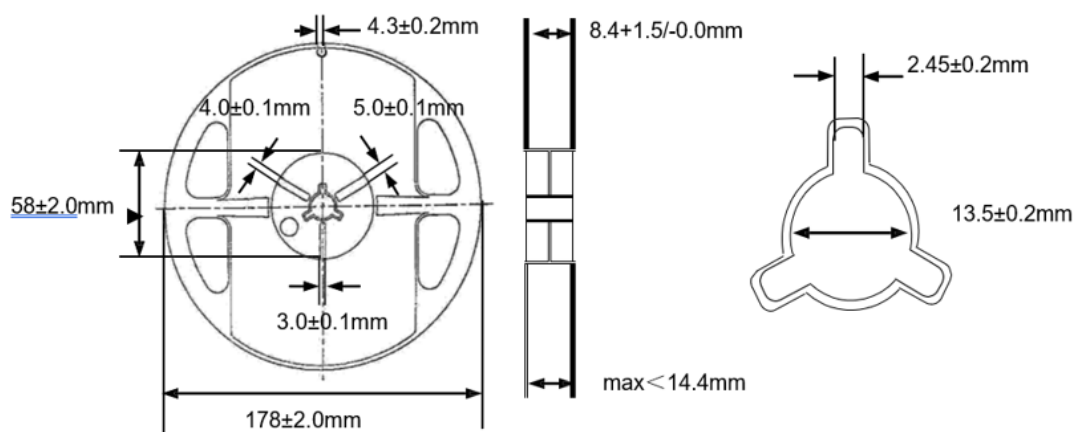
Embossed Tape



Paper Tape



Tape Type	A	B	P	K _{max}	T _{max}
Embossed	1.55±0.2	2.25±0.2	4.0±0.1	1.45	0.3
Paper	1.50±0.2	2.3±0.2	4.0±0.1	N/A	1.1±0.05



Cause/Reason for Change:

Adding new production line. Updating to new Datasheet format.

Removing (EOL):

AIML-0805-R056-T

Adding:

AIML-0805-470-T

Change Plan

Effective Date:

7/6/2023

Additional Remarks:
Change Declaration:

Abrakon recommends design engineers to review the changes to electrical parameters. There are no changes to form and fit.

Issued Date:

7/6/2023

Issued By:
Issued Department:

Engineering

Approval:

Engineering VP

Approval:

Quality Director

Approval:

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: