

High Current Power Inductors AWIM06XX Series



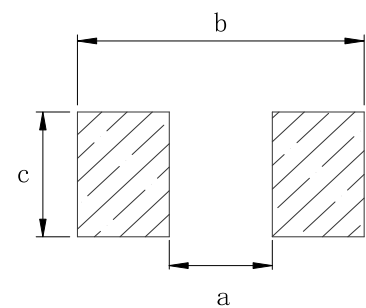
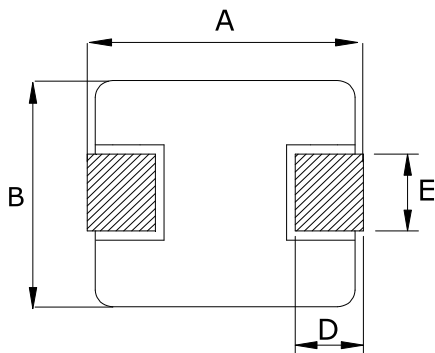
Product features

- DC-DC converter work frequency up to 1MHz
- Soft saturation. Low EMI.
- High current, low DCR, high efficiency.
- Current range from 1.3A to 60A
- Inductance range from 0.10μH to 47μH.
- High reliability.
- 100% Lead (Pb)-Free and RoHS compliant.
- Operating temperature -55~+125°C (Including self - temperature rise)

Applications

- Note PC power system, server VRMs and EVRDs.
- DC/DC converter, Electric pumps, motor control and auxiliaries.
- Data networking and storage system.
- LED lighting/Battery management systems/Powertrain control module

Dimensions (mm) AWIM0612



Recommend Land Pattern

A	B	C	D	E	a typ	b typ	c typ
7.4 MAX	6.6±0.20	1.2 MAX	1.6±0.3	3.0±0.3	3.7	8.4	3.5

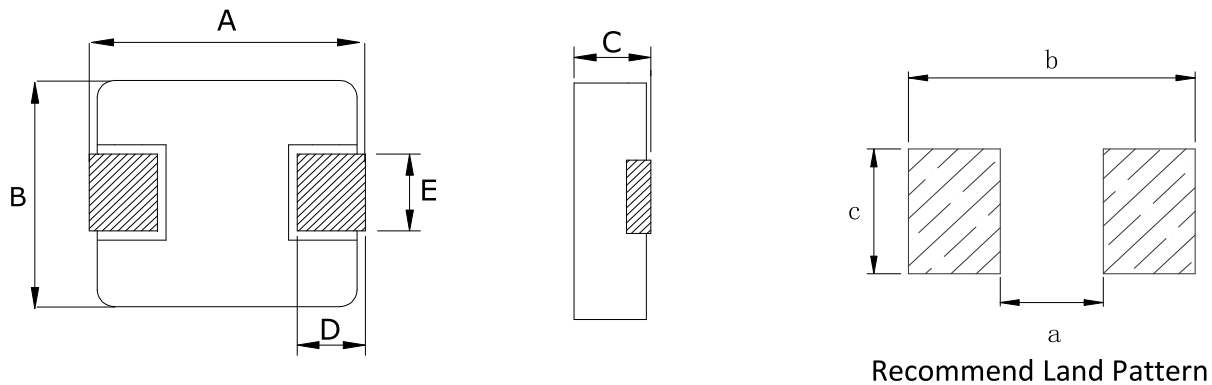
Specifications AWIM0612

Part Number	Inductance ² ±20% (μH)	I _{rms} ³ (A)	I _{sat} ⁴ (A)	DCR MAX (mΩ)
AWIM0612-R56MTF	0.56	7.00	11.0	15.50
AWIM0612-R68MTF	0.68	6.50	9.00	17.50
AWIM0612-R82MTF	0.82	6.00	8.00	24.50
AWIM0612-1R0MTF	1.00	6.00	7.00	29.00
AWIM0612-2R2MTF	2.20	3.50	5.00	59.00
AWIM0612-3R3MTF	3.30	3.00	4.00	92.00
AWIM0612-4R7MTF	4.70	2.50	3.50	122.00
AWIM0612-100MTF	10.00	2.00	2.20	290.00

Notes:

1. All test data is reference to 25°C ambient.
2. Test Condition:100KHz,1.0Vrms.
3. I_{dc}: DC current (A) that will cause an approximate ΔT of 40°C
4. I_{sat} : DC current (A) that will cause L0 to drop approximately 30%
5. Operate between temperature range -55°C to +125°C
6. The part temperature (ambient + temp rise) should not exceed 125°C under worst case operating conditions. Circuit design, component. PWB trace size and thickness, airflow and other cooling procession all affect the part temperature. Part temperature should be verified in the den application.

Dimensions (mm) AWIM-YTA0615

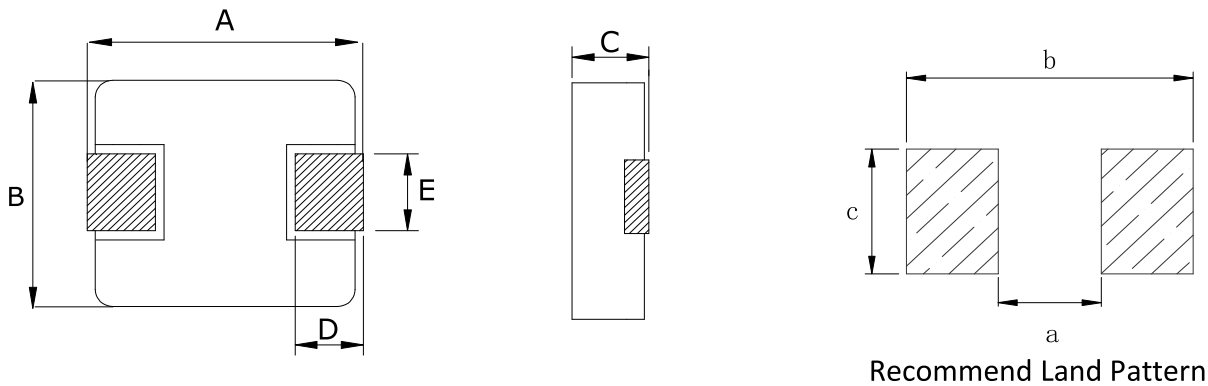


A	B	C	D	E	a typ	b typ	c typ
7.0±0.3	6.6±0.20	1.3±0.20	1.6±0.3	3.0±0.3	3.7	8.4	3.5

Specifications

Part Number	Inductance ² ±20% (μH)	I _{rms} ³ (A)	I _{sat} ⁴ (A)	DCR MAX (mΩ)
AWIM-YTA0615-R47M	0.47	10	16	8.5
AWIM-YTA0615-R56M	0.56	9	14	11
AWIM-YTA0615-R68M	0.68	8.5	12	12
AWIM-YTA0615-R82M	0.82	8	10	17
AWIM-YTA0615-1R0M	1.0	6	9	21
AWIM-YTA0615-2R2M	2.2	3.8	7	54
AWIM-YTA0615-3R3M	3.3	3.5	5.5	63
AWIM-YTA0615-4R7M	4.7	3.2	5	85
AWIM-YTA0615-6R8M	6.8	2.5	4	135
AWIM-YTA0615-100M	10	2	3	175

Dimensions (mm) AWIM-YTA0618

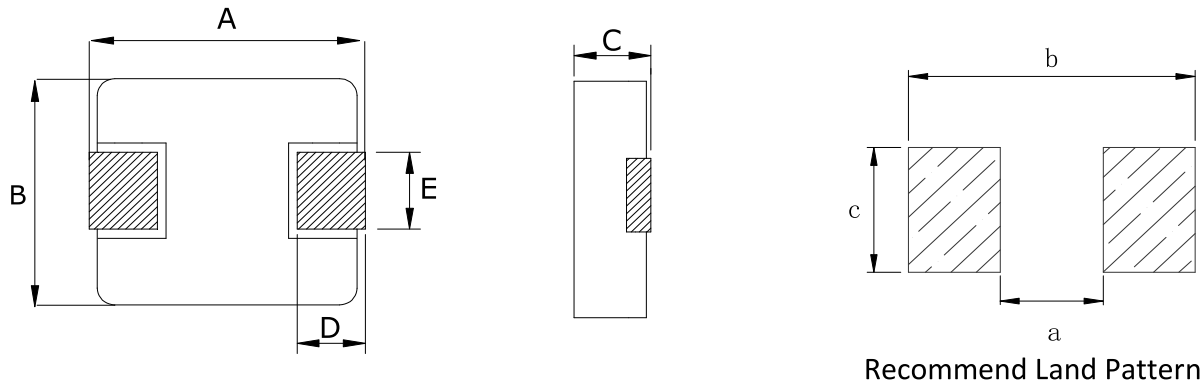


A	B	C	D	E	a typ	b typ	c typ
7.0±0.3	6.6±0.20	1.6±0.20	1.6±0.3	3.0±0.3	3.7	8.4	3.5

Specifications

Part Number	Inductance ² ±20% (μH)	I _{rms} ³ (A)	I _{sat} ⁴ (A)	DCR MAX (mΩ)
AWIM-YTA0618-R10M	0.1	25	38	2.3
AWIM-YTA0618-R22M	0.22	22	24	3.5
AWIM-YTA0618-R47M	0.47	11.5	18	8.4
AWIM-YTA0618-R68M	0.68	9.5	16.5	12
AWIM-YTA0618-1R0M	1.0	8.5	12	16
AWIM-YTA0618-1R5M	1.5	8	9.2	26
AWIM-YTA0618-2R2M	2.2	7	8	35
AWIM-YTA0618-3R3M	3.3	4.5	6	50
AWIM-YTA0618-4R7M	4.7	4	5	62
AWIM-YTA0618-6R8M	6.8	3	4.5	110
AWIM-YTA0618-100M	10	2.3	4	155
AWIM-YTA0618-220M	22	1.8	2.3	350

Dimensions (mm) AWIM0620

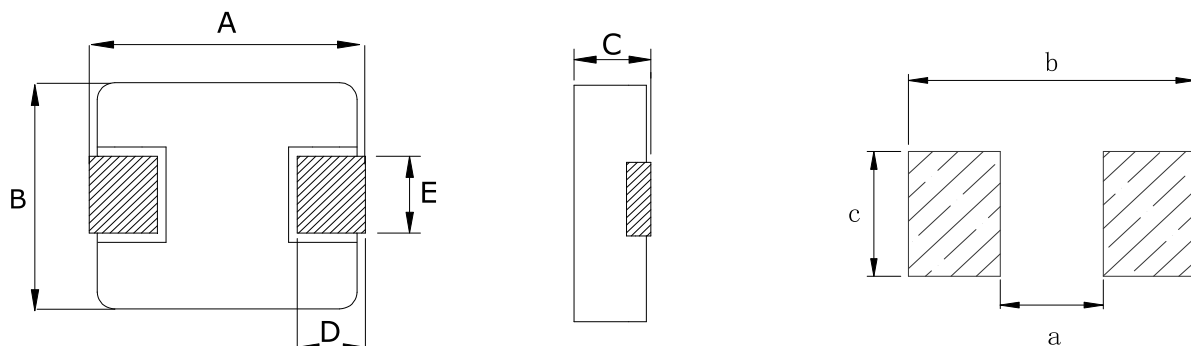


A	B	C	D	E	a typ	b typ	c typ
7.4 MAX	6.6±0.20	2.0 MAX	1.6±0.30	3.0±0.3	3.7	8.4	3.5

Specifications

Part Number	Inductance ² ±20% (μH)	I _{rms} ³ (A)	I _{sat} ⁴ (A)	DCR MAX (mΩ)
AWIM0620-R22MTF	0.22	21.00	25.00	3.50
AWIM0620-R33MTF	0.33	14.00	20.00	5.00
AWIM0620-R47MTF	0.47	11.70	18.00	8.30
AWIM0620-R68MTF	0.68	10.50	16.00	10.00
AWIM0620-1R0MTF	1.00	7.50	12.00	18.00
AWIM0620-1R5MTF	1.50	6.50	11.00	27.00
AWIM0620-2R2MTF	2.20	5.00	10.00	37.00
AWIM0620-3R3MTF	3.30	4.00	8.00	46.00
AWIM0620-4R7MTF	4.70	3.50	5.00	60.00
AWIM0620-6R8MTF	6.80	2.80	3.50	110.00
AWIM0620-100MTF	10.00	2.50	3.00	155.00

Dimensions (mm) AWIM0624



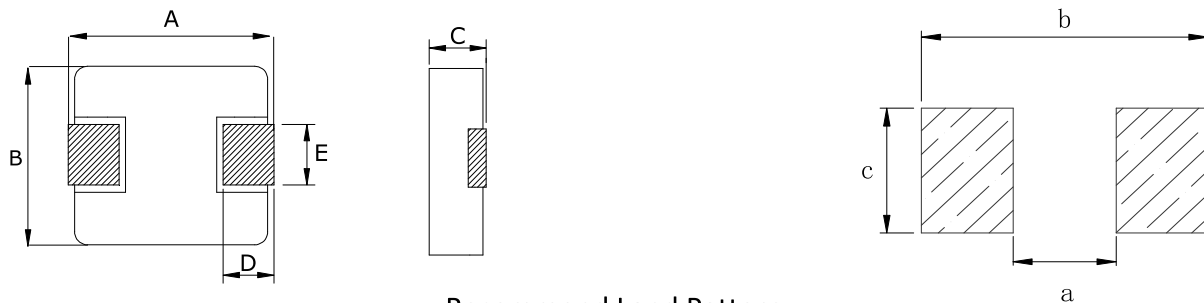
Recommend Land Pattern

A	B	C	D	E	a typ	b typ	c typ
7.4 MAX	6.6±0.20	2.4 MAX	1.6±0.30	3.0±0.3	3.7	8.4	3.5

Specifications

Part Number	Inductance ² ±20% (μH)	I _{rms} ³ (A)	I _{sat} ⁴ (A)	DCR MAX (mΩ)
AWIM0624-R10MTF	0.10	22.50	60.00	1.85
AWIM0624-R20MTF	0.20	17.00	33.00	3.20
AWIM0624-R22MTF	0.22	16.00	33.00	3.20
AWIM0624-R33MTF	0.33	15.00	24.00	4.10
AWIM0624-R47MTF	0.47	13.00	21.00	5.10
AWIM0624-R56MTF	0.56	12.00	17.00	6.50
AWIM0624-R82MTF	0.82	10.00	15.50	9.50
AWIM0624-1R0MTF	1.00	9.00	15.00	13.50
AWIM0624-1R5MTF	1.50	8.00	11.00	20.00
AWIM0624-2R2MTF	2.20	6.00	9.00	28.00
AWIM0624-3R3MTF	3.30	5.00	7.00	39.00
AWIM0624-4R7MTF	4.70	4.50	6.00	50.00
AWIM0624-6R8MTF	6.80	4.00	5.00	70.00
AWIM0624-8R2MTF	8.20	3.50	5.00	86.00
AWIM0624-100MTF	10.00	3.10	4.00	101.00
AWIM0624-150MTF	15.00	2.50	3.30	160.00
AWIM-YTA624-220MTF	22.00	2.00	2.50	230.00

Dimensions (mm) AWIM0630



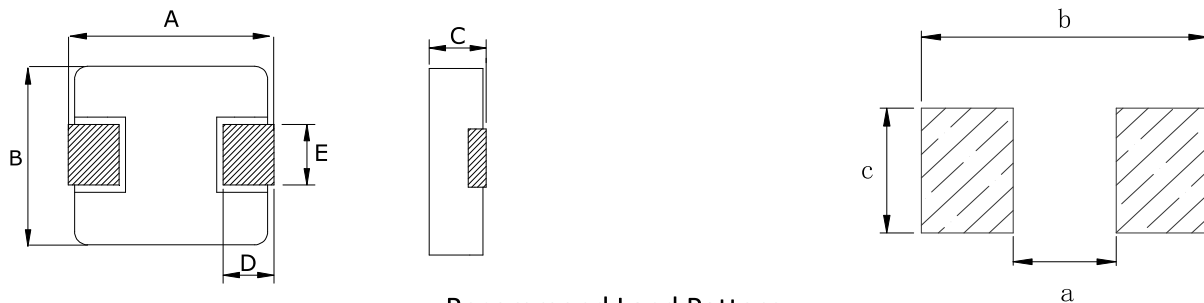
Recommend Land Pattern

A	B	C	D	E	a typ	b typ	c typ
7.4 MAX	6.6±0.20	3.0 MAX	1.6±0.30	3.0±0.3	3.7	8.4	3.5

Specifications

Part Number	Inductance ² ±20% (μH)	I _{rms} ³ (A)	I _{sat} ⁴ (A)	DCR MAX (mΩ)
AWIM0630-R10MTF	0.10	32.50	60.00	1.70
AWIM0630-R20MTF	0.20	21.00	34.00	2.40
AWIM0630-R22MTF	0.22	21.00	34.00	2.40
AWIM0630-R33MTF	0.33	21.00	25.00	3.50
AWIM0630-R47MTF	0.47	18.00	24.00	4.10
AWIM0630-R56MTF	0.56	15.00	18.00	4.90
AWIM0630-R68MTF	0.68	14.00	17.00	5.70
AWIM0630-R82MTF	0.82	12.00	16.00	6.90
AWIM0630-1R0MTF	1.00	12.00	15.00	7.50
AWIM0630-1R5MTF	1.50	9.00	14.00	12.10
AWIM0630-2R2MTF	2.20	8.50	10.00	15.00
AWIM0630-3R3MTF	3.30	6.50	9.50	26.00
AWIM0630-4R7MTF	4.70	5.50	6.50	30.00
AWIM0630-6R8MTF	6.80	4.50	6.00	54.00
AWIM0630-8R2MTF	8.20	4.00	6.00	65.00
AWIM0630-100MTF	10.00	4.00	5.00	76.00
AWIM0630-150MTF	15.00	3.00	3.80	115.00
AWIM0630-220MTF	22.00	2.50	3.10	140.00
AWIM0630-330MTF	33.00	1.50	2.90	257.00
AWIM0630-470MTF	47.00	1.00	2.60	320.00

Dimensions (mm) AWIM0640



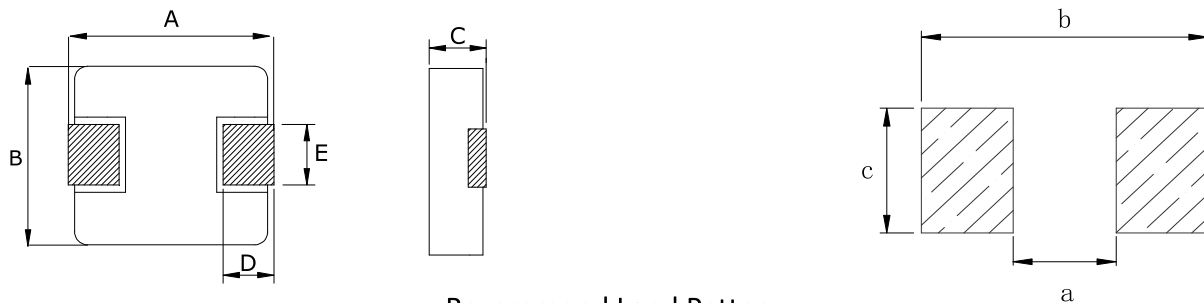
Recommend Land Pattern

A	B	C	D	E	a typ	b typ	c typ
7.4 MAX	6.6±0.20	4.0 MAX	1.6±0.30	3.0±0.3	3.7	8.4	3.5

Specifications

Part Number	Inductance ² ±20% (μH)	I _{rms} ³ (A)	I _{sat} ⁴ (A)	DCR MAX (mΩ)
AWIM-YT0640-R15M-RD6607	0.15	36.00	45.00	0.66
AWIM-YT0640-R22M-RD9807	0.22	32.00	28.00	0.98
AWIM0640-R68MTF	0.68	16.00	18.00	4.20
AWIM0640-1R0MTF	1.00	12.00	13.00	6.50
AWIM0640-1R5MTF	1.50	10.00	12.00	10.50
AWIM0640-2R2MTF	2.20	9.50	10.50	12.50
AWIM0640-3R3MTF	3.30	7.00	9.00	19.00
AWIM0640-4R7MTF	4.70	6.50	7.00	24.00
AWIM0640-100MTF	10.00	4.50	5.50	65.00
AWIM0640-150MTF	15.00	3.00	4.00	95.00
AWIM0640-220MTF	22.00	2.70	3.50	140.00
AWIM0640-330MTF	33.00	1.80	3.00	180.00
AWIM0640-470MTF	47.00	1.50	2.80	290.00

Dimensions (mm) AWIM0650



Recommend Land Pattern

A	B	C	D	E	a typ	b typ	c typ
7.4 MAX	6.6±0.20	5.0 MAX	1.6±0.30	3.0±0.3	3.7	8.4	3.5

Specifications

Part Number	Inductance ² ±20% (μH)	I _{rms} ³ (A)	I _{sat} ⁴ (A)	DCR MAX (mΩ)
AWIM0650-R13MTF	0.13	42.00	48.00	1.20
AWIM0650-R22MTF	0.22	30.00	35.00	1.30
AWIM0650-R36MTF	0.36	21.00	25.00	3.10
AWIM0650-R47MTF	0.47	20.00	21.00	3.75
AWIM0650-R56MTF	0.56	20.00	18.00	3.90
AWIM0650-R68MTF	0.68	18.00	16.00	4.20
AWIM0650-1R0MTF	1.00	12.00	13.00	6.50
AWIM0650-1R5MTF	1.50	10.00	12.00	9.00
AWIM0650-2R2MTF	2.20	9.50	10.00	12.50
AWIM0650-3R3MTF	3.30	8.50	9.00	20.90
AWIM0650-4R7MTF	4.70	6.00	8.00	29.00
AWIM0650-5R6MTF	5.60	6.00	7.00	34.40
AWIM0650-6R8MTF	6.80	5.50	7.00	40.00
AWIM0650-8R2MTF	8.20	5.50	6.50	43.00
AWIM0650-100MTF	10.00	5.00	6.00	48.00
AWIM0650-150MTF	15.00	3.10	4.00	85.00
AWIM0650-220MTF	22.00	3.00	4.00	120.00
AWIM0650-330MTF	33.00	2.80	3.00	180.00
AWIM0650-470MTF	47.00	2.50	2.80	210.00