

High Current Power Inductors AWS-1040 Series



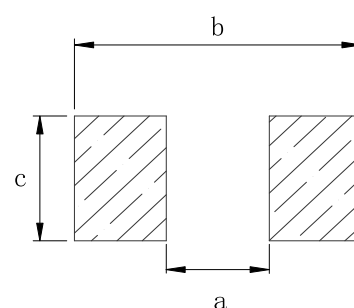
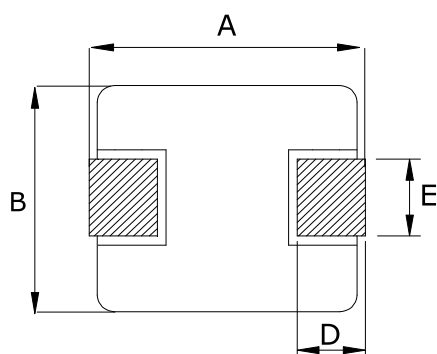
Product features

- DC-DC converter work frequency up to 5MHz
- Soft saturation. Low EMI.
- High current, low DCR, high efficiency.
- Current range from 1.5A to 90A
- Inductance range from 0.15μH to 82μH.
- 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) AWS-1040



Recommend Land Pattern

A	B	C	D	E	a typ	b typ	c typ
11.5 MAX	10.0±0.3	4.0 MAX	2.0±0.50	3.0/3.5±0.5	5.4	13.6	4.1

Specifications AWS-1040

Part Number	Inductance ² ±20% (μH)	I _{rms} ³ (A)	I _{sat} ⁴ (A)	DCR MAX (mΩ)
AWS-1040-R10S1MTF	0.10	54.00	90.00	0.50
AWS-1040-R19S1MTF	0.19	40.00	80.00	0.81
AWS-1040-R22S1MTF	0.22	35.00	80.00	1.00
AWS-1040-R36S1MTF	0.36	31.00	60.00	1.20
AWS-1040-R45S1MTF	0.45	29.00	45.00	1.20
AWS-1040-R56S1MTF	0.56	30.00	50.00	1.60
AWS-1040-1R0S1MTF	1.00	20.00	36.00	3.00
AWS-1040-1R5S1MTF	1.50	15.00	33.00	4.20
AWS-1040-2R2S1MTF	2.20	12.00	27.00	7.00
AWS-1040-3R3S1MTF	3.30	10.00	18.70	11.80
AWS-1040-4R7S1MTF	4.70	9.50	17.00	16.50
AWS-1040-6R8S1MTF	6.80	8.50	13.50	23.30
AWS-1040-100S1MTF	10.00	6.80	12.00	30.00
AWS-1040-150S1MTF	15.00	6.25	10.00	45.00
AWS-1040-220S1MTF	22.00	5.00	7.00	74.00
AWS-1040-330S1MTF	33.00	3.50	5.00	112.00
AWS-1040-470S1MTF	47.00	3.00	4.50	145.00
AWS-1040-680S1MTF	68.00	2.00	4.00	240.00
AWS-1040-820S1MTF	82.00	1.50	3.00	300.00

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.