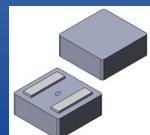


Flat Wire / Hot Pressed Molded Power Inductor



AMELH6030S

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6.8 x 6.6 x 2.9 mm
RoHS/RoHS II Compliant
MSL Level = 1

Features

- Excellent current capacity – up to 50A
- Exceptionally low DCR – down to only 1.0mΩ
- Soft saturation
- Compact size for high-density designs
- Shielded constructions for low EMI

Applications

- Body electronics
- Lighting
- Motor control
- Solar inverters and solar power
- DC/DC converters in distributed power systems
- Battery powered device

Electrical Specifications

Part Number	Inductance 0.1MHz/ 1.0V	Tolerance	DC Resistance		Saturation Current		Temperature Rise Current		Self-Resonant Frequency
			Typ	Max	Typ	Max	Typ	Max	Min
Units	µH	%	mΩ		A		A		MHz
SRF	L	M	DCR		Isat		Irms		SRF
AMELH6030S-R18MT	0.18	20	1.0	1.2	50.0	45.0	35.0	30.0	153
AMELH6030S-R22MT	0.22	20	1.1	1.4	43.0	39.0	32.0	27.0	125
AMELH6030S-R33MT	0.33	20	1.5	1.9	40.0	35.0	32.0	27.0	86
AMELH6030S-R36MT	0.36	20	1.6	2.0	39.0	34.0	30.0	25.0	86
AMELH6030S-R38MT	0.38	20	1.7	2.1	36.0	32.0	29.0	25.0	85
AMELH6030S-R40MT	0.40	20	1.8	2.2	35.0	32.0	28.0	24.0	85
AMELH6030S-R42MT	0.42	20	2.1	2.5	33.0	30.0	28.0	24.0	70
AMELH6030S-R47MT	0.47	20	2.2	2.6	32.0	29.0	27.0	24.0	70
AMELH6030S-R56MT	0.56	20	2.4	2.9	30.0	27.0	25.0	22.0	65
AMELH6030S-R68MT	0.68	20	2.8	3.4	27.0	24.0	23.0	20.0	52
AMELH6030S-R82MT	0.82	20	3.6	4.0	25.0	22.0	21.0	19.0	50
AMELH6030S-1R0MT	1.0	20	4.2	4.9	22.0	19.0	19.0	17.0	44
AMELH6030S-1R2MT	1.2	20	4.6	5.4	19.0	17.0	18.0	16.0	40
AMELH6030S-1R5MT	1.5	20	5.6	6.7	17.0	15.0	17.0	15.0	33
AMELH6030S-1R8MT	1.8	20	6.8	8.2	15.0	13.0	15.0	13.0	30
AMELH6030S-2R2MT	2.2	20	8.5	10.2	13.0	12.0	13.0	12.0	25
AMELH6030S-3R3MT	3.3	20	12.0	14.4	11.0	10.0	11.0	10.0	20
AMELH6030S-4R7MT	4.7	20	17.5	21.0	10.0	9.0	10.0	9.0	18
AMELH6030S-5R6MT	5.6	20	20.5	24.1	9.0	8.3	9.0	8.3	15
AMELH6030S-6R8MT	6.8	20	26.1	29.5	8.0	7.5	8.5	7.7	14
AMELH6030S-8R2MT	8.2	20	32.0	36.8	7.0	6.5	7.5	7.0	13
AMELH6030S-100MT	10.0	20	38.0	44.0	6.5	6.0	7.0	6.5	12

Test Conditions:

Isat: DC current at which the inductance drops 30% from its nominal value.

Irms: DC current that causes the temperature rise (ΔT , approximate 40 °C) from 25°C ambient.

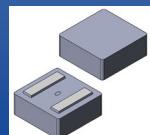
Operating Voltage: 40V

Operating Temperature: -40°C ~ +125°C. (including self-temperature rise)

Storage Condition: -40°C ~ +125°C (on board), -10°C ~ +40°C (with packaging) and R.H. 85% max.

AMELH6030S Series is RoHS Compliant and Pb free.

Flat Wire / Hot Pressed Molded Power Inductor



AMELH6030S

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6.8 x 6.6 x 2.9 mm
RoHS/RoHS II Compliant
MSL Level = 1

Part Identification

AMELH6030S -



Inductance Code

See Electrical Specification
table. E.g 1R0 for 1uH

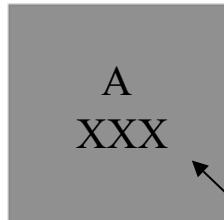
Tolerance

M = $\pm 20\%$

Packaging

T: Tape and Reel (See Packaging)
Blank: Bulk

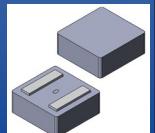
Marking



Inductance Code
e.g. 2R2

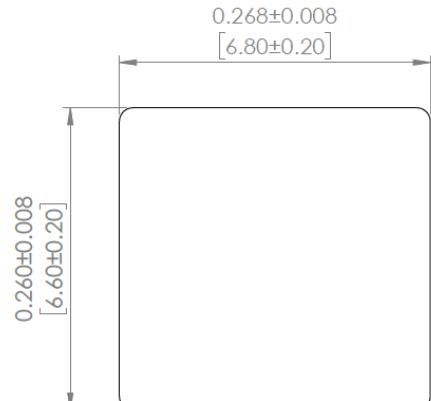
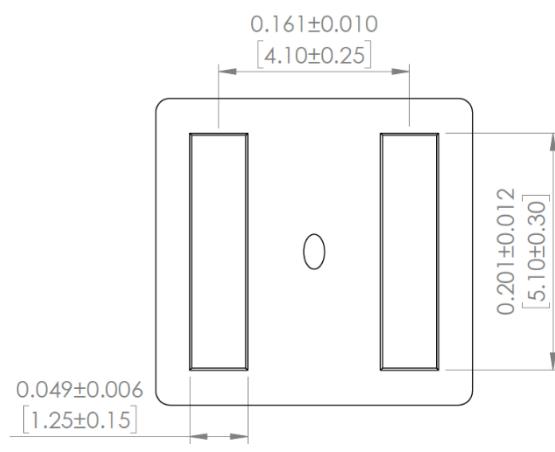
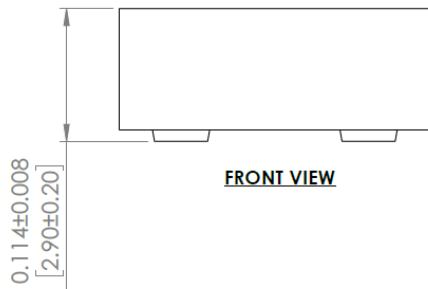
Marking Method = Ink Marking

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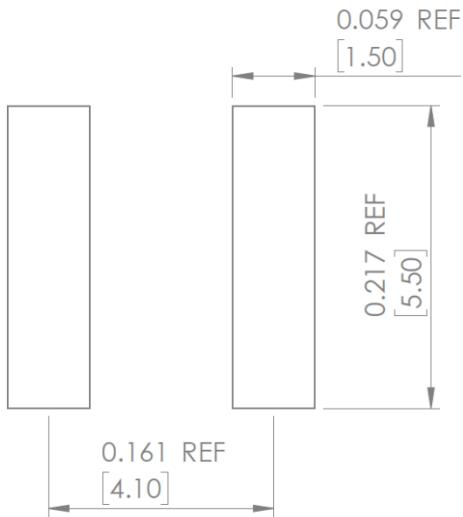
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6.8 x 6.6 x 2.9 mm
RoHS/RoHS II Compliant
MSL Level = 1

Mechanical Specifications

**TOP VIEW****BOTTOM VIEW****FRONT VIEW**

RECOMMENDED LAND PATTERN



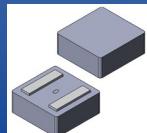
NOTES:

The above PCB layout reference only.

Recommending solder paste thickness at .005[0.15] and above.
Inductance code markings, black.

DIMENSIONS: INCHES[mm]

Flat Wire / Hot Pressed Molded Power Inductor



AMELH6030S

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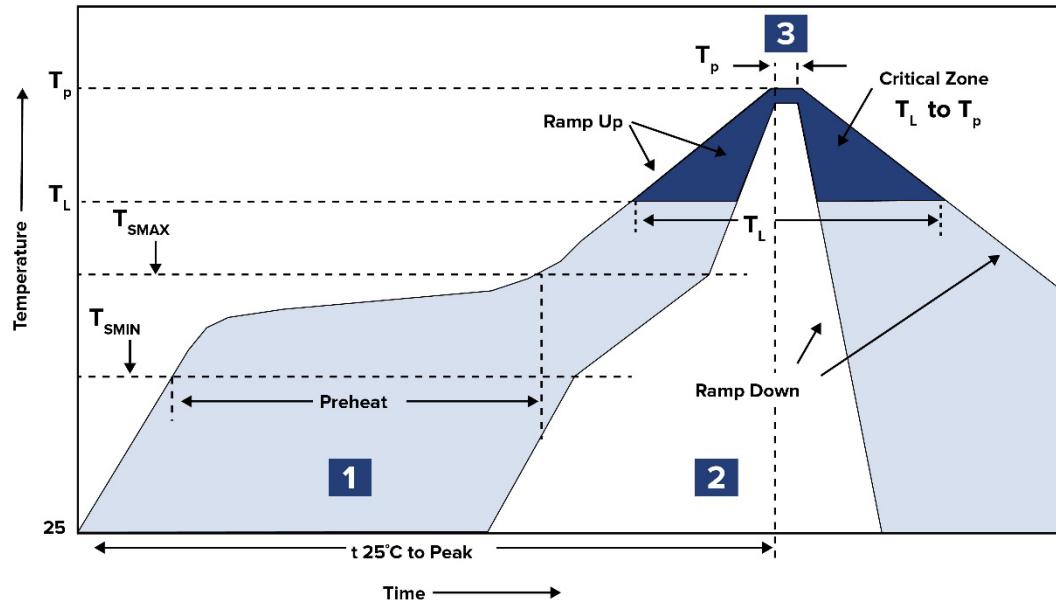


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6.8 x 6.6 x 2.9 mm
RoHS/RoHS II Compliant
MSL Level = 1

Reflow Profile



Zone	Description	Temperature	Times
1	Preheat	$T_{SMIN} \sim T_{SMAX}$ 150°C ~ 200°C	60 ~ 120 sec.
2	Reflow	T_l 217°C	60 ~ 150 sec.
3	Peak heat	T_p 250°C ± 5°C	10 sec. MAX

Ref. Solder paste: Sn/3.0Ag/0.5Cu (Pb-free assembly)

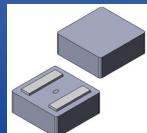
Ramp up rate: 3°C/s Max.

Ramp down rate: 6°C/s Max.

Time from 25C to T_p : 8mins Max

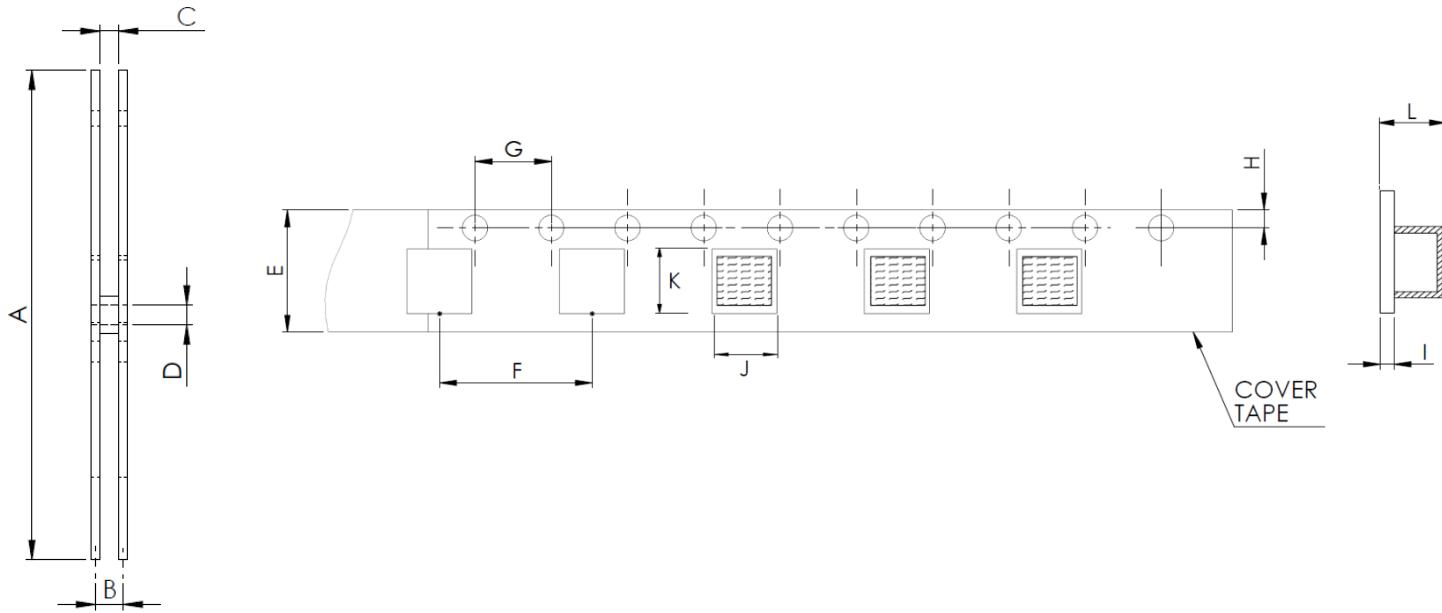
Refer to standard IPC/JEDEC J-STD-020E for more information

Flat Wire / Hot Pressed Molded Power Inductor

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Packaging

T: Tape & Reel, 1000 pcs/reel

A	B	D	E	F	G	H	I	J	K	L
330.0	16.4±2	13.0±0.5	16.0±0.3	12.0±0.1	4.0±0.1	1.75±0.1	0.35±0.1	7.00 Ref.	6.80 Ref.	3.30 Ref.

Dimensions: mm

ATTENTION: Abracon LLC's products are Commercial-Off-The-Shelf (COTS, which are designed, intended and validated for use in commercial, industrial and automotive applications. The customer is responsible for testing and verifying the performance of an Abracon solution to meet their system-level requirements.

**ABRACON**

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[AMELH6030S-8R2MT](#) [AMELH6030S-1R2MT](#) [AMELH6030S-3R3MT](#) [AMELH6030S-R33MT](#) [AMELH6030S-R68MT](#)
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[AMELH6030S-R42MT](#) [AMELH6030S-R56MT](#)