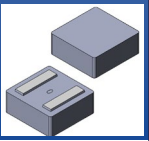


Flat Wire / Hot Pressed Molded Power Inductor



AMELH6030S

Request Samples



Check Inventory



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	Tolerance	DC Resistance		Saturation Current		Temperature Rise Current		Self-Resonant Frequency
	0.1MHz/ 1.0V		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.

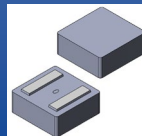


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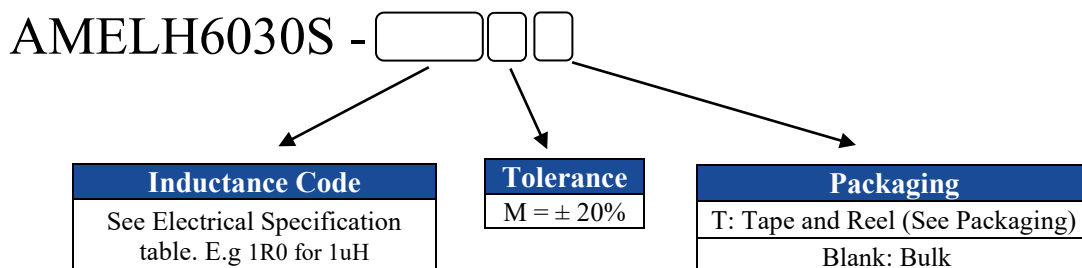


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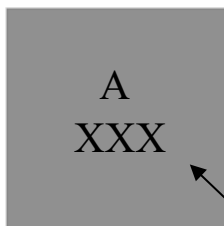


6.8 x 6.6 x 2.9 mm
RoHS/RoHS II Compliant
MSL Level = 1

Part Identification



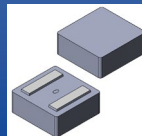
Marking



Inductance Code
e.g. 2R2

Marking Method = Ink Marking

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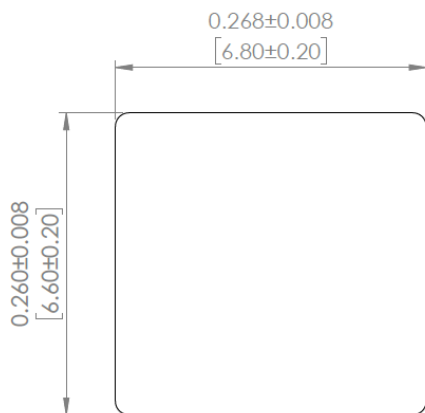


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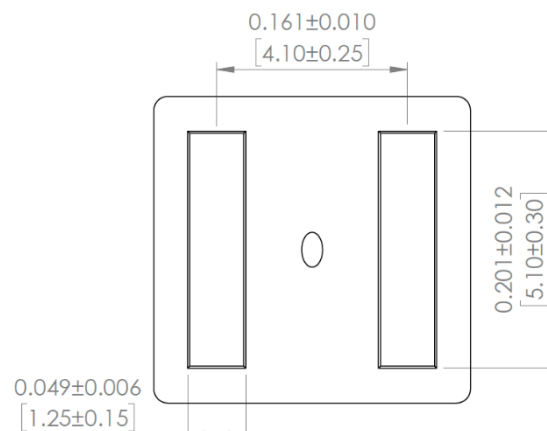


6.8 x 6.6 x 2.9 mm
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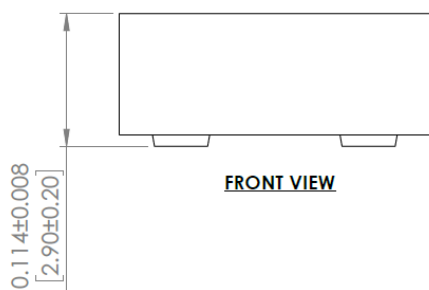
Mechanical Specifications



TOP VIEW

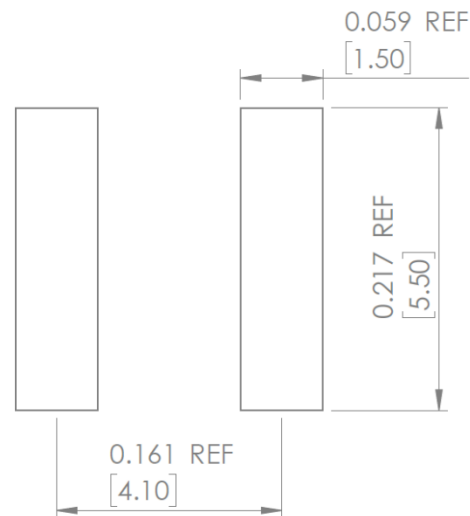


BOTTOM VIEW



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]

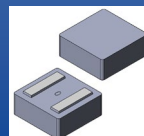


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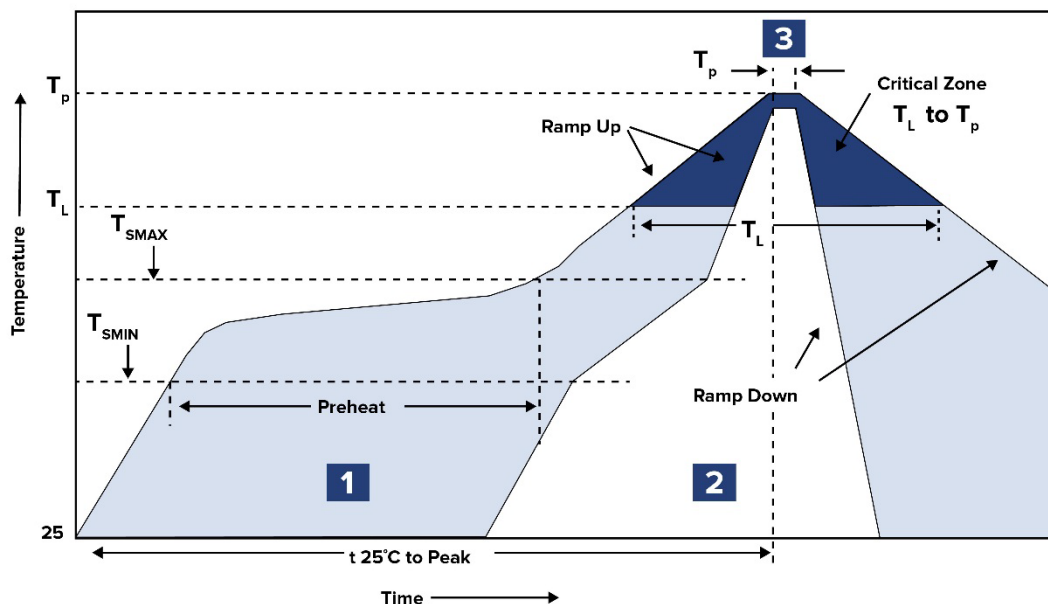


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Reflow Profile



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

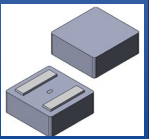


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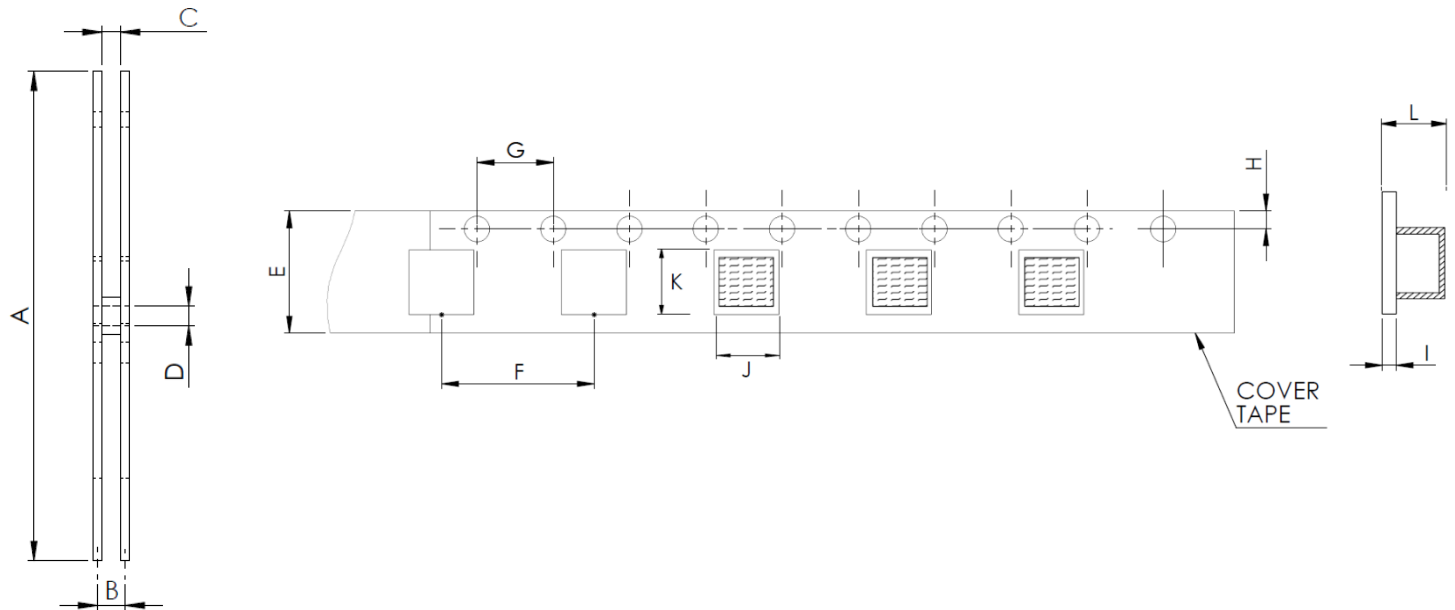
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MSL Level = 1

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

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<u>AMELH6030S-8R2MT</u>	<u>AMELH6030S-1R2MT</u>	<u>AMELH6030S-3R3MT</u>	<u>AMELH6030S-R33MT</u>	<u>AMELH6030S-R68MT</u>
<u>AMELH6030S-1R8MT</u>	<u>AMELH6030S-R18MT</u>	<u>AMELH6030S-R36MT</u>	<u>AMELH6030S-R40MT</u>	<u>AMELH6030S-2R2MT</u>
<u>AMELH6030S-4R7MT</u>	<u>AMELH6030S-5R6MT</u>	<u>AMELH6030S-1R0MT</u>	<u>AMELH6030S-R47MT</u>	<u>AMELH6030S-R82MT</u>
<u>AMELH6030S-R42MT</u>	<u>AMELH6030S-R56MT</u>			