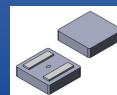


Flat Wire / Hot Pressed Molded Power Inductor



AMELH6020S

Request Samples



Check Inventory



6.8 x 6.6 x 1.9 mm
RoHS/RoHS II Compliant
MSL Level = 1

Features

- Excellent current capacity – up to 40A
- Exceptionally low DCR – down to only 1.3mΩ
- 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
Symbol	L	M	DCR		Isat		Irms		SRF
AMELH6020S-R18MT	0.18	20	1.3	1.6	40.0	36.0	34.0	32.0	140
AMELH6020S-R20MT	0.20	20	1.5	1.8	37.0	33.0	32.0	30.0	130
AMELH6020S-R22MT	0.22	20	1.7	2.1	35.0	31.0	30.0	28.0	115
AMELH6020S-R33MT	0.33	20	2.0	2.5	30.0	27.0	28.0	25.0	90
AMELH6020S-R36MT	0.36	20	2.5	3.0	28.0	26.0	25.0	23.0	85
AMELH6020S-R47MT	0.47	20	3.4	4.1	26.0	24.0	22.0	20.0	65
AMELH6020S-R56MT	0.56	20	3.7	4.4	20.0	18.0	20.0	18.0	60
AMELH6020S-R68MT	0.68	20	4.0	4.8	17.0	15.0	19.0	17.0	50
AMELH6020S-R82MT	0.82	20	4.8	5.8	15.0	13.0	17.0	15.0	46
AMELH6020S-1R0MT	1.0	20	5.8	7.0	14.0	12.0	15.0	13.0	38
AMELH6020S-1R2MT	1.2	20	7.0	8.4	13.0	11.0	14.0	12.0	36
AMELH6020S-1R5MT	1.5	20	7.9	9.5	12.5	10.5	13.0	11.5	30
AMELH6020S-1R8MT	1.8	20	9.0	10.8	11.0	10.0	12.5	11.0	28
AMELH6020S-2R2MT	2.2	20	12.5	14.4	10.0	9.0	11.5	10.5	26
AMELH6020S-3R3MT	3.3	20	16.5	19.8	8.5	7.5	9.5	8.5	20
AMELH6020S-4R7MT	4.7	20	23.5	28.2	7.5	6.5	8.0	7.0	15
AMELH6020S-5R6MT	5.6	20	27.5	33.0	6.5	5.7	7.2	6.5	14
AMELH6020S-6R2MT	6.2	20	32.0	38.4	5.8	5.3	6.7	6.2	12
AMELH6020S-6R8MT	6.8	20	38.0	45.6	5.3	4.7	6.5	5.8	11

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.

AMELH6020S Series is RoHS Compliant and Pb free.

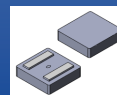


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AMELH6020S

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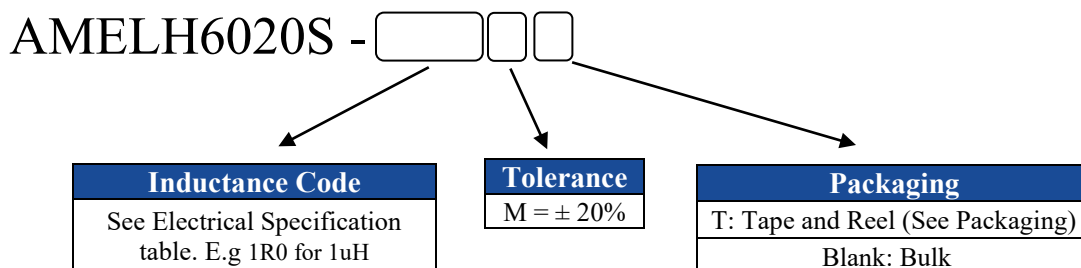


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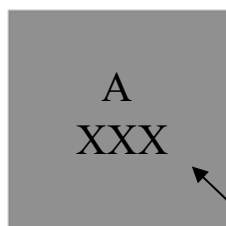


6.8 x 6.6 x 1.9 mm
RoHS/RoHS II Compliant
MSL Level = 1

Part Identification



Marking



Inductance Code
e.g. 2R2

Marking Method = Ink Marking

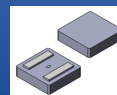


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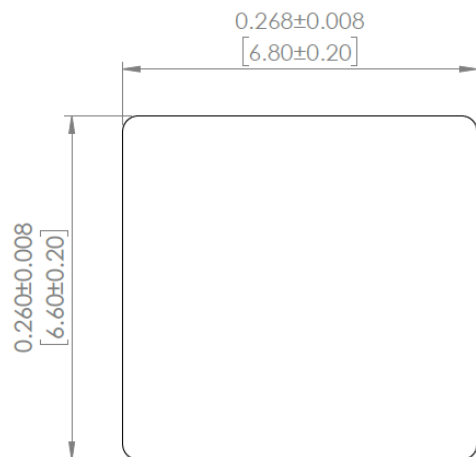


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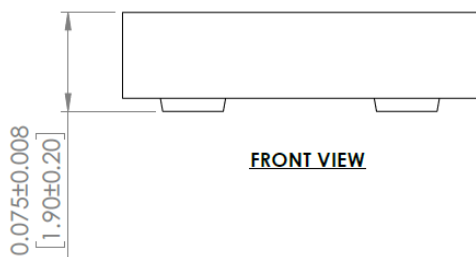


6.8 x 6.6 x 1.9 mm
RoHS/RoHS II Compliant
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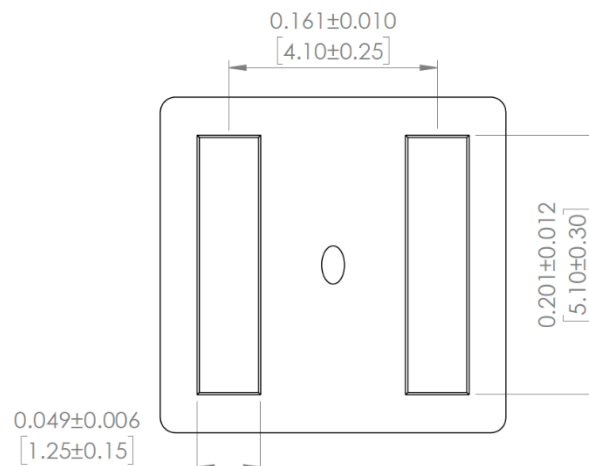
Mechanical Specifications



TOP VIEW

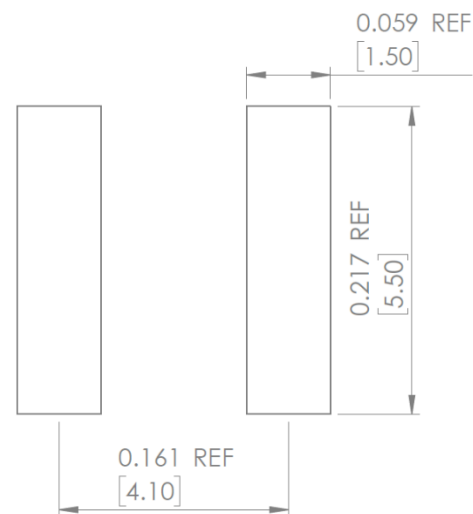


FRONT VIEW



BOTTOM 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]

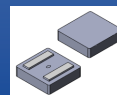


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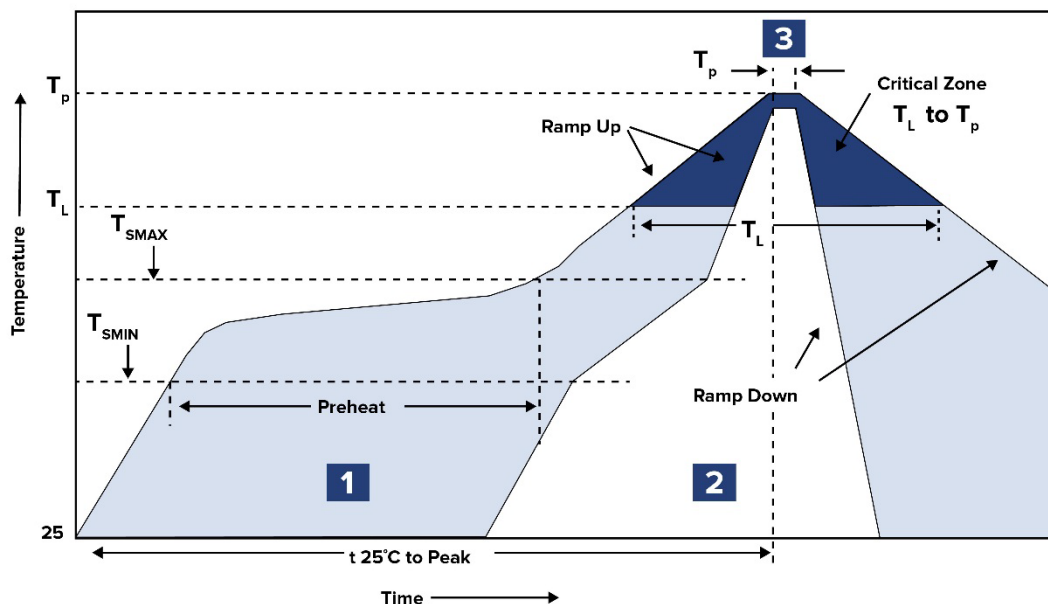


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MSL Level = 1

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

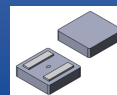


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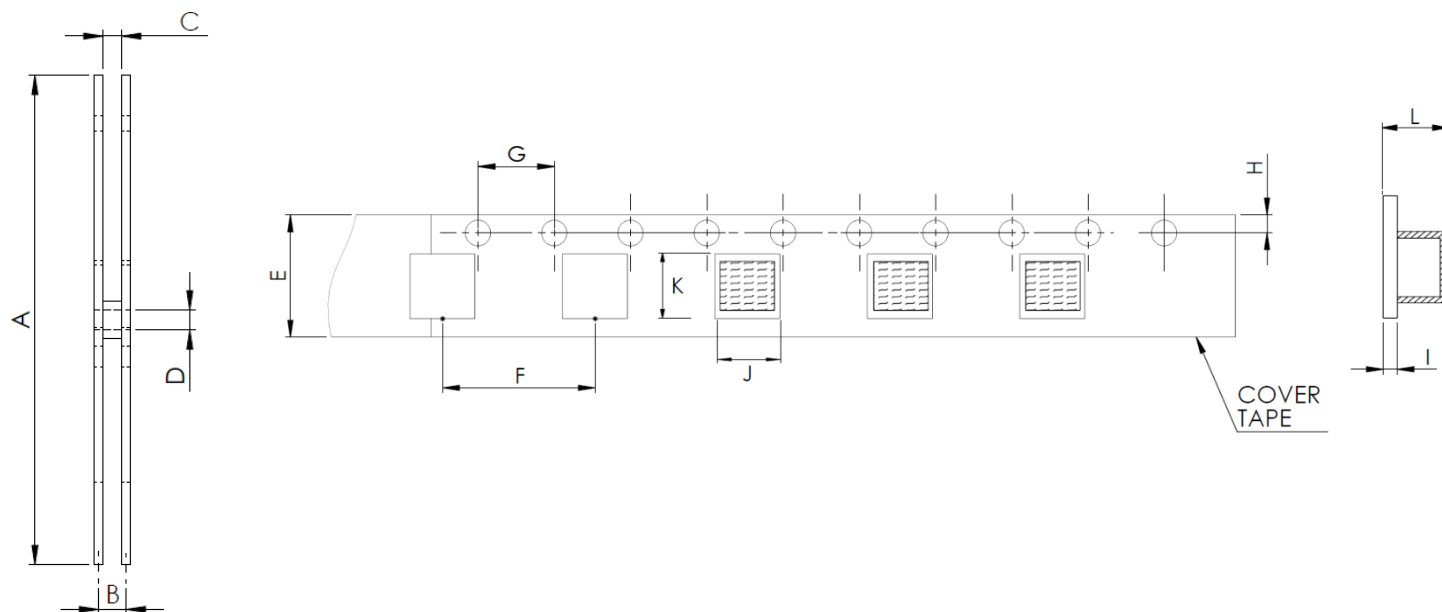
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MSL Level = 1

Packaging

T: Tape & Reel, 2000 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.	2.30 Ref.

Dimensions: mm

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<u>AMELH6020S-1R5MT</u>	<u>AMELH6020S-R68MT</u>	<u>AMELH6020S-6R2MT</u>	<u>AMELH6020S-1R2MT</u>	<u>AMELH6020S-6R8MT</u>
<u>AMELH6020S-1R0MT</u>	<u>AMELH6020S-5R6MT</u>	<u>AMELH6020S-R36MT</u>	<u>AMELH6020S-R18MT</u>	<u>AMELH6020S-R20MT</u>
<u>AMELH6020S-R56MT</u>	<u>AMELH6020S-R22MT</u>	<u>AMELH6020S-1R8MT</u>	<u>AMELH6020S-R82MT</u>	<u>AMELH6020S-3R3MT</u>
<u>AMELH6020S-4R7MT</u>	<u>AMELH6020S-R33MT</u>	<u>AMELH6020S-R47MT</u>	<u>AMELH6020S-2R2MT</u>	