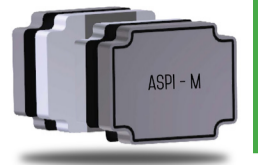


# MINIATURE LOW PROFILE HIGH CURRENT INDUCTORS



ASPI-M

2.5 x 2.0 x 1.2 mm  
3.0 x 3.0 x 1.5 mm  
MSL = 1

RoHS/RoHS II Compliant

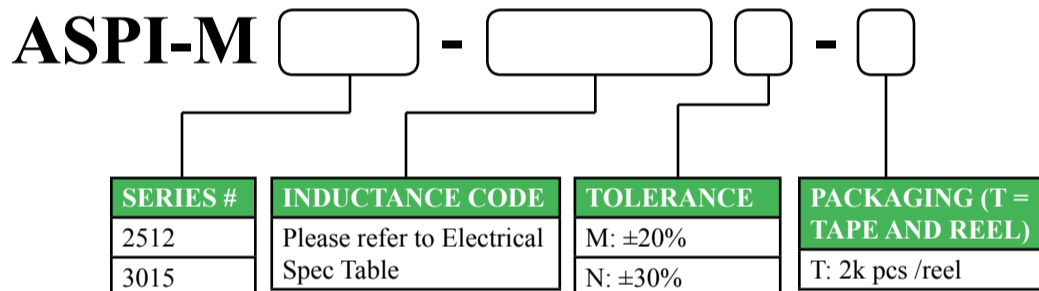
## FEATURES

- Space saving small footprint
  - ASPI-M2512—2.0x2.5mm (5mm<sup>2</sup>)
  - ASPI-M3015—3.0x3.0mm (9mm<sup>2</sup>)
- Low profile design
  - ASPI-M2512—1.2mm MAX
  - ASPI-M3015—1.5mm MAX
- High RMS current carrying
  - ASPI-M2512—up to 4.1A
  - ASPI-M3015—up to 5A
- High saturation current
  - ASPI-M2512—up to 6.8A
  - ASPI-M3015—up to 8A
- Low DCR minimizes heat dissipation
  - ASPI-M2512—as low as 23mΩ
  - ASPI-M3015—as low as 27mΩ
- Wide inductance range
  - ASPI-M2512—0.47 to 10μH
  - ASPI-M3015—0.24 to 10μH
- Wide -40°C to 125°C operating temperature range

## APPLICATIONS

- IoT/Industrial IoT
- Battery operated devices
- Drones and robotics
- Energy efficient lighting
- Audio and video
- Motor control
- Switch mode power supplies (SMPS)
- Instrumentation
- Medical and medical monitoring
- Class D amplifiers
- Handheld/ mobile devices
- DC/DC converter
- Set-top Boxes
- LED drivers and lighting
- POL Converters

## OPTIONS AND PART IDENTIFICATION



## ELECTRICAL SPECIFICATIONS: ASPI-M2512

OPERATING TEMPERATURE	STORAGE CONDITION
-40°C - 125°C (including self-temperature rise)	-40°C - +85°C and R.H. 70%max

PART NUMBER	INDUCTANCE	TOLERANCE	DC RESISTANCE	SATURATION CURRENT	TEMPERATURE RISE CURRENT
	0.1MHz/0.1V				
UNITS	μH	%	mΩ	A	A
SYMBOL	L	M, N	DCR	Isat	Irms
ASPI-M2512-R24	0.24	20%, 30%	23	6.8	4.1
ASPI-M2512-R33	0.33	20%, 30%	28	5.8	3.8
ASPI-M2512-R47	0.47	20%, 30%	35	5.0	3.5
ASPI-M2512-R68	0.68	20%, 30%	43	4.2	3.2
ASPI-M2512-1R0	1.00	20%, 30%	48	3.7	3.0
ASPI-M2512-1R5	1.50	20%, 30%	72	3.1	2.5
ASPI-M2512-2R2	2.20	20%, 30%	100	2.5	2.1
ASPI-M2512-3R3	3.30	20%, 30%	150	2.1	1.9
ASPI-M2512-4R7	4.70	20%, 30%	230	2.0	1.5
ASPI-M2512-100	10.0	20%, 30%	480	1.3	1.0

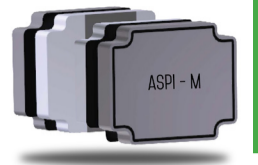
REVISED: 10.6.2017



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# MINIATURE LOW PROFILE HIGH CURRENT INDUCTORS



ASPI-M

2.5 x 2.0 x 1.2 mm  
3.0 x 3.0 x 1.5 mm  
MSL = 1

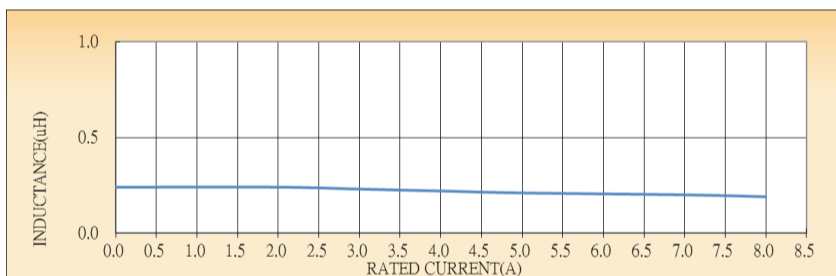
RoHS/RoHS II Compliant

## ELECTRICAL SPECIFICATIONS: ASPI-M3015

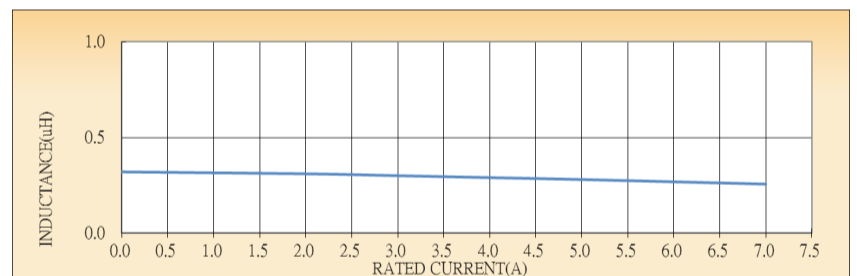
PART NUMBER	INDUCTANCE	TOLERANCE	DC RESISTANCE	SATURATION CURRENT	TEMPERATURE RISE CURRENT
	0.1MHz/0.1V		max	max	max
UNITS	$\mu\text{H}$	%	$\text{m}\Omega$	A	A
SYMBOL	L	M	DCR	$I_{\text{sat}}$	$I_{\text{rms}}$
ASPI-M3015-R47	0.47	20%	27	8.0	5.0
ASPI-M3015-R68	0.68	20%	35	8.0	4.1
ASPI-M3015-1R0	1.00	20%	42	5.8	3.8
ASPI-M3015-1R5	1.50	20%	46	4.4	3.5
ASPI-M3015-2R2	2.20	20%	85	3.6	2.4
ASPI-M3015-3R3	3.30	20%	120	3.3	2.1
ASPI-M3015-4R7	4.70	20%	150	3.0	1.8
ASPI-M3015-6R8	6.80	20%	200	2.5	1.6
ASPI-M3015-100	10.0	20%	270	2.2	1.5

## CHARACTERISTICS

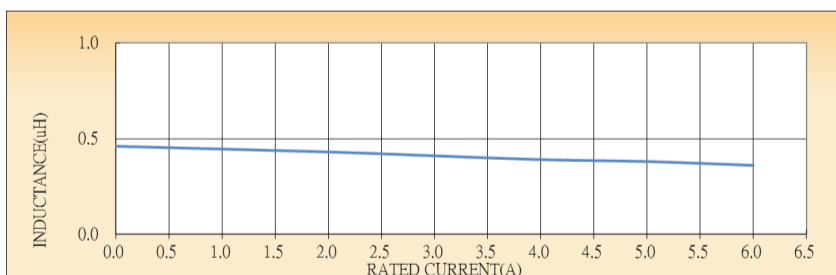
ASPI-M2512-R24



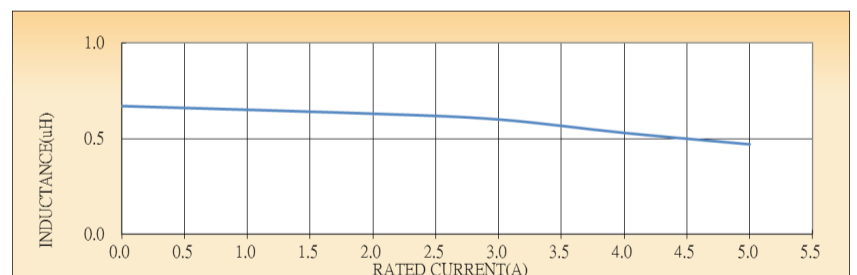
ASPI-M2512-R33



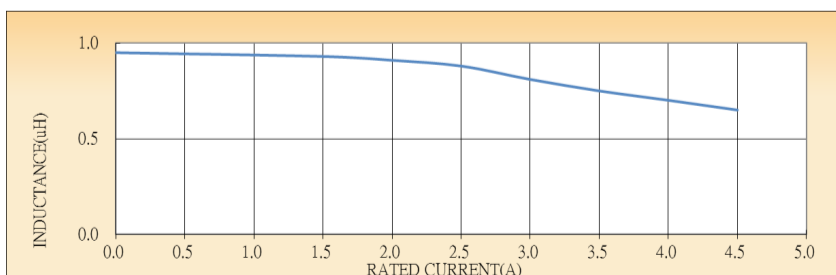
ASPI-M2512-R47



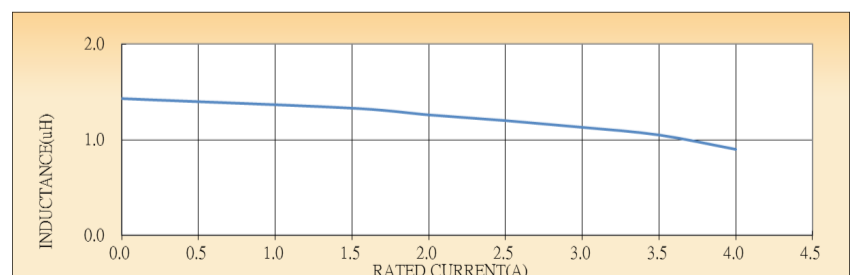
ASPI-M2512-R68



ASPI-M2512-1R0

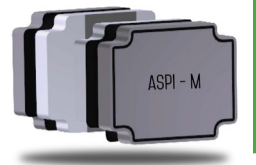


ASPI-M2512-1R5



REVISED: 10.6.2017

# MINIATURE LOW PROFILE HIGH CURRENT INDUCTORS



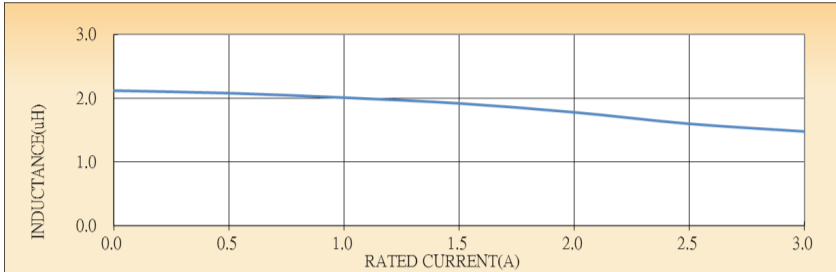
ASPI-M

2.5 x 2.0 x 1.2 mm  
3.0 x 3.0 x 1.5 mm  
MSL = 1

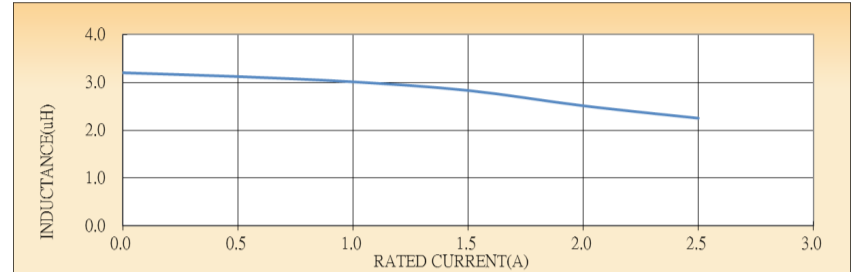
RoHS/RoHS II Compliant

## CHARACTERISTICS

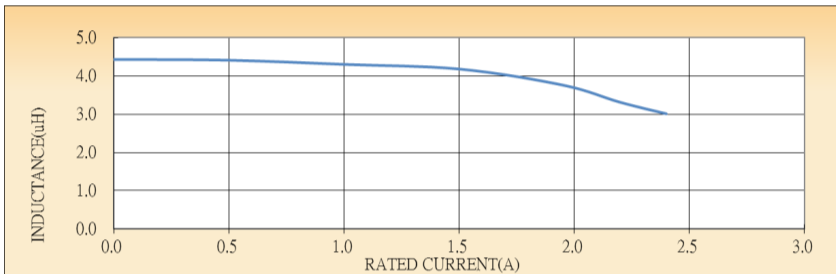
ASPI-M2512-2R2



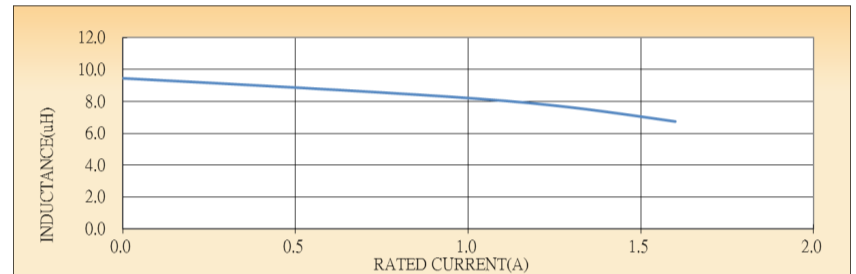
ASPI-M2512-3R3



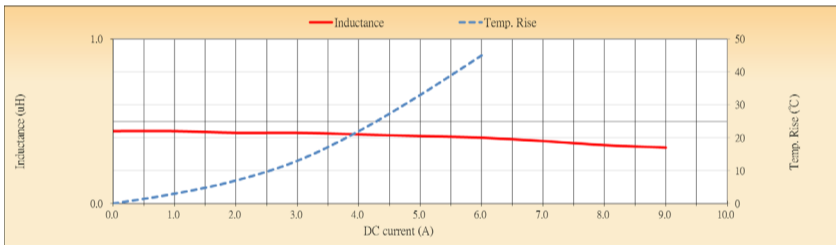
ASPI-M2512-4R7



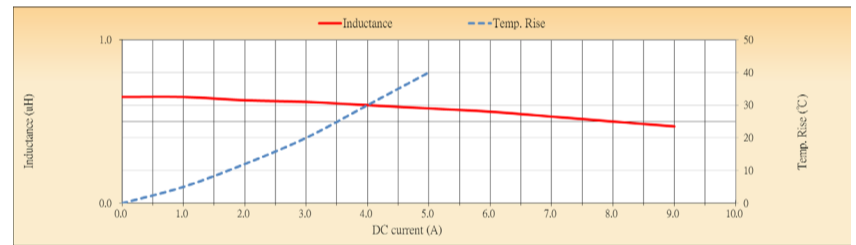
ASPI-M2512-100



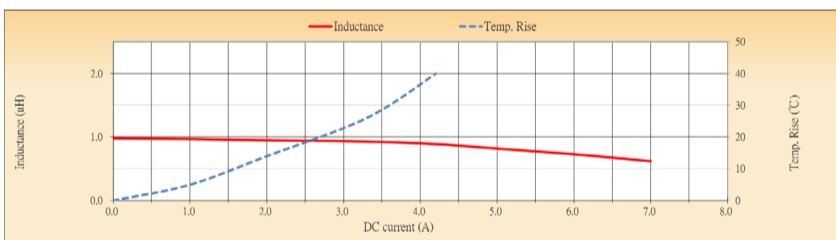
ASPI-M3015-R47



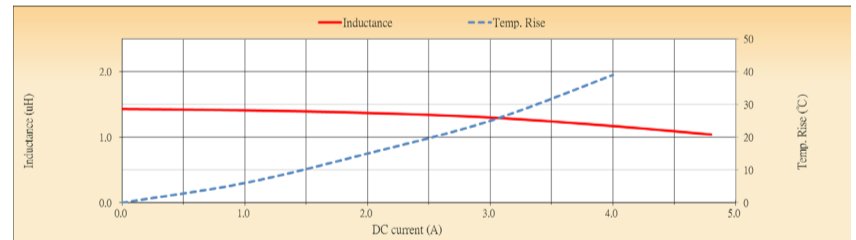
ASPI-M3015-R68



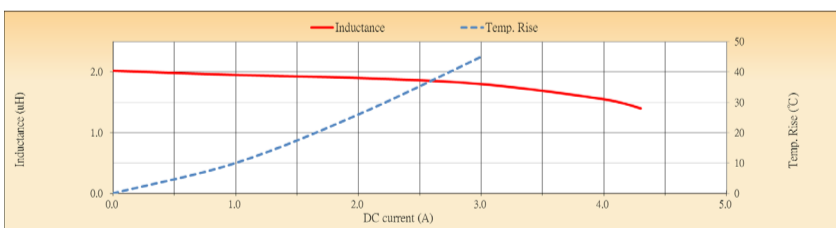
ASPI-M3015-1R0



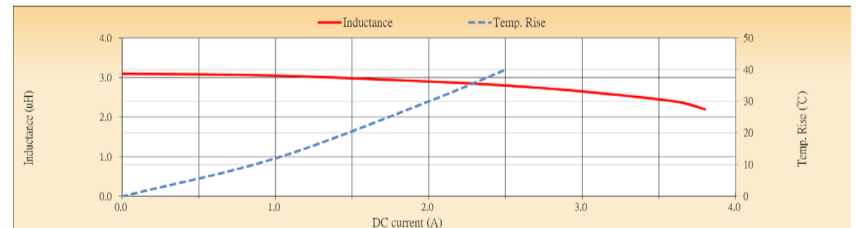
ASPI-M3015-1R5



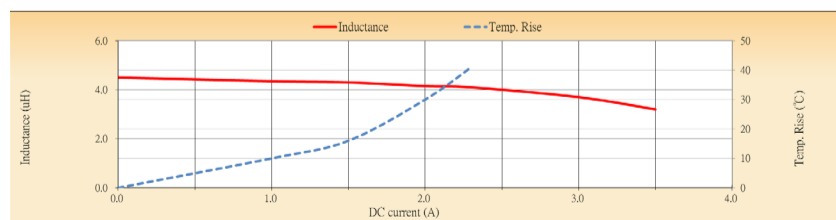
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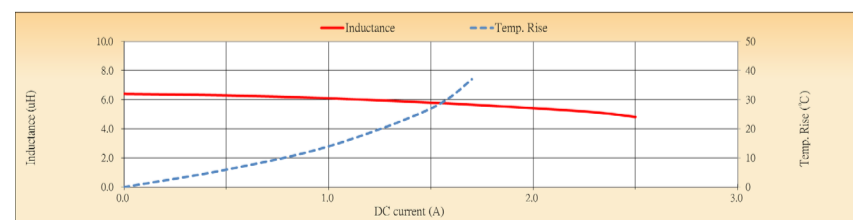
ASPI-M3015-3R3



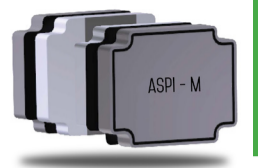
ASPI-M3015-4R7



ASPI-M3015-6R8



# MINIATURE LOW PROFILE HIGH CURRENT INDUCTORS



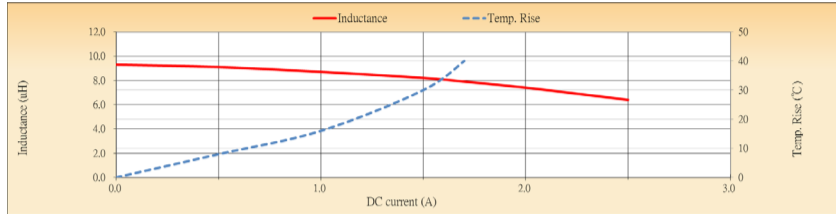
ASPI-M

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3.0 x 3.0 x 1.5 mm  
MSL = 1

RoHS/RoHS II Compliant

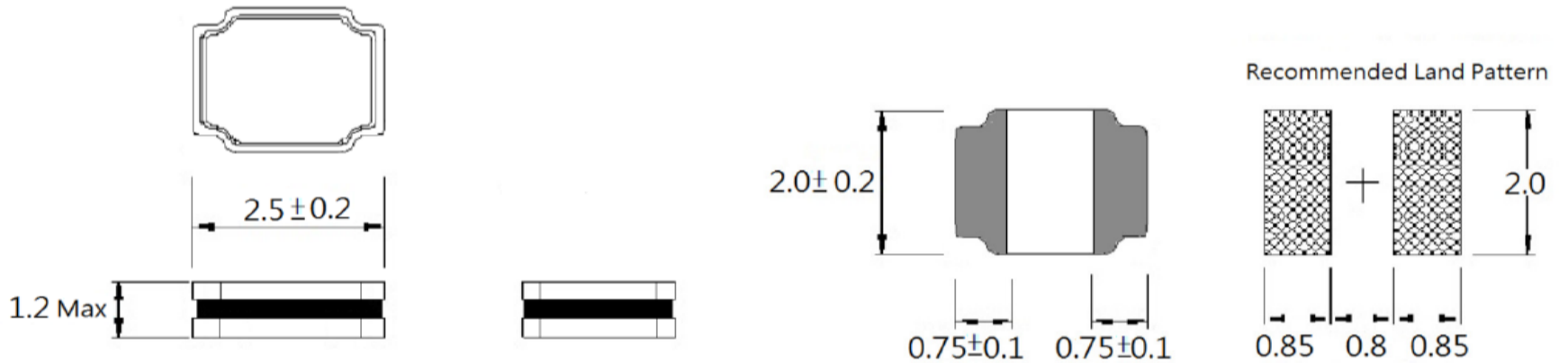
## CHARACTERISTICS

### ASPI-M3015-100

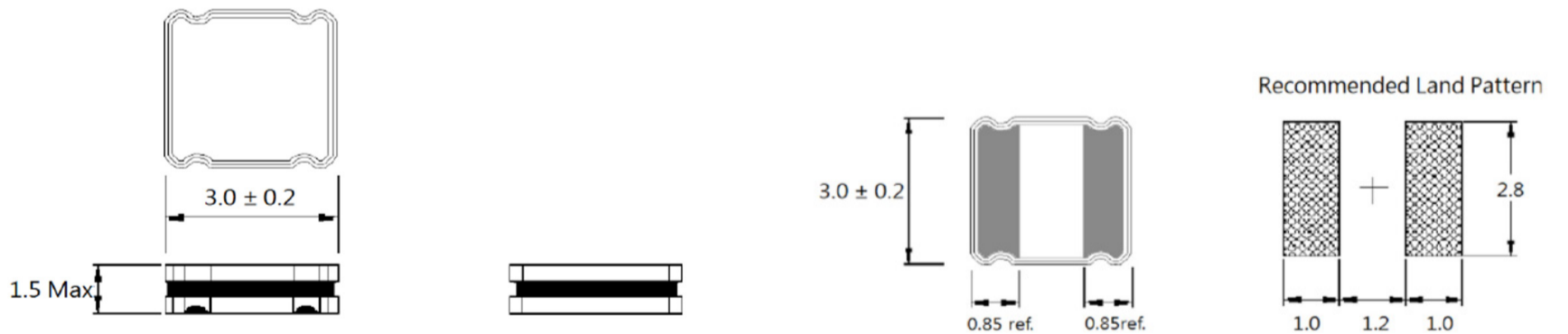


## MECHANICAL DIMENSIONS

### ASPI-M2512



### ASPI-M3015



Dimension: mm

# MINIATURE LOW PROFILE HIGH CURRENT INDUCTORS

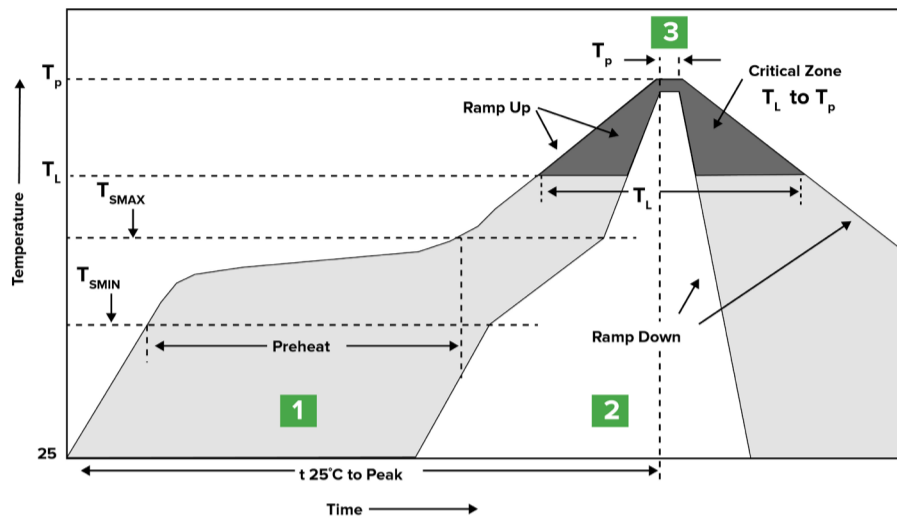


ASPI-M

2.5 x 2.0 x 1.2 mm  
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MSL = 1

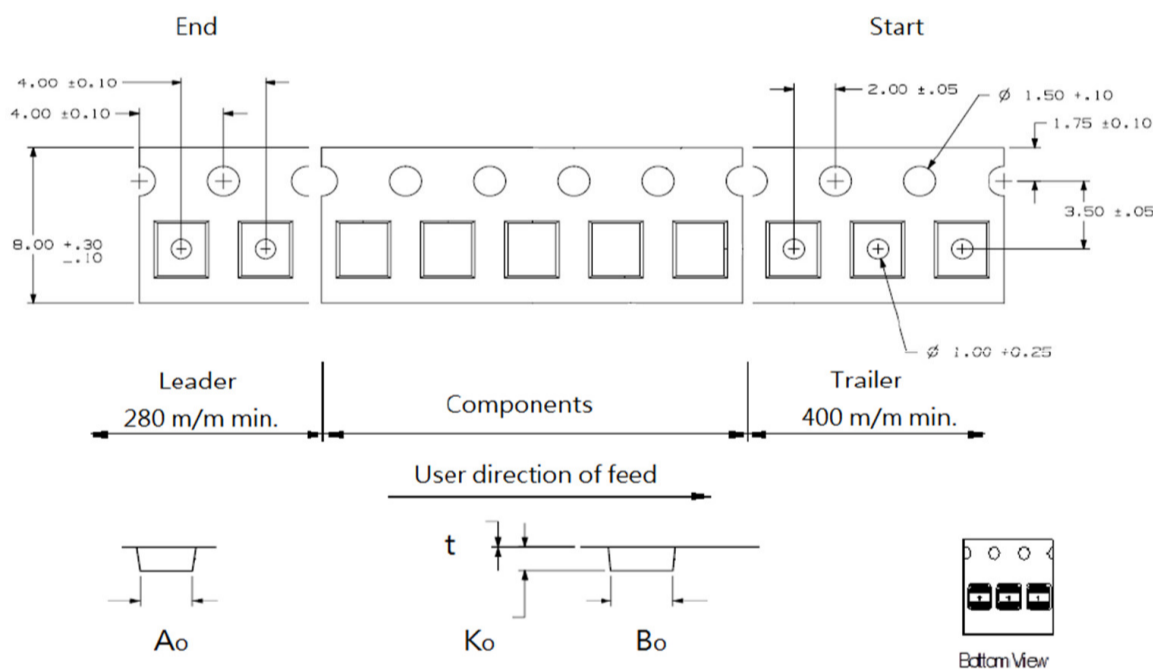
RoHS/RoHS II Compliant

## REFLOW

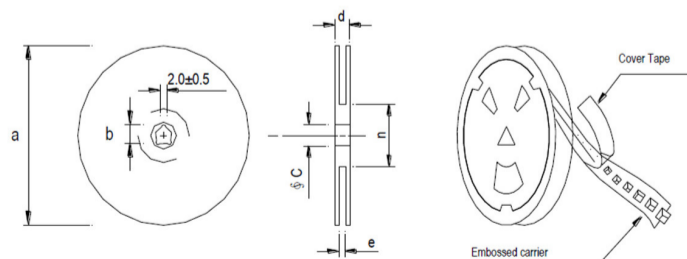


Zone	Description	Temperature	Times
1	Preheat	$T_{S_{MIN}} \sim T_{S_{MAX}}$ 150°C ~ 200°C	60 ~ 180 sec.
2	Reflow	$T_L$ 217°C	40 ~ 90 sec.
3	Peak heat	$T_P$ 260°C	5 sec. MAX

## PACKING (TAPE & REEL: 2000 PCS/REEL)



Series	A <sub>0</sub>	B <sub>0</sub>	t	K <sub>0</sub>
2512	2.35±0.1	2.90 ±0.1	0.25±0.05	1.40±0.1
3015	3.15±0.1	3.15 ±0.1	0.25±0.05	1.60±0.1



a	b	ΨC	d	E	N
178.0 ± 2.0	21.0 ± 0.8	13.0 ± 0.8	12.5 MAX	8.4 ± 1.0	50 MIN