

LOW PROFILE MULTILAYER POWER INDUCTOR



ASMPL

1.6 x 0.8 x 0.5 mm
2.0 x 1.25 x 0.5 mm
MSL = 1

RoHS/RoHS II Compliant

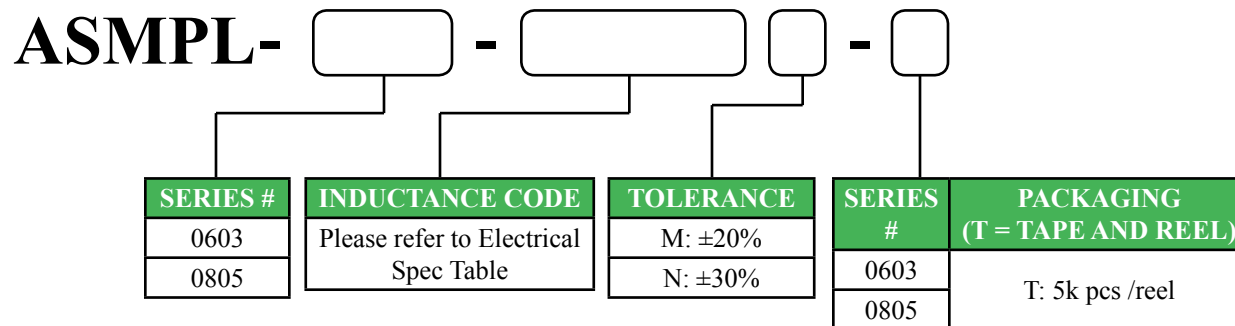
FEATURES

- Miniature ceramic chip inductors
- High current carrying in a compact 1.6 x 0.8mm or 2.0 x 1.25mm footprint
- Low profile 0.5mm MAX for height restricted applications
- Excellent 1.45A saturation current
- High inductance up to 2.2μH
- Wide operating temperature range -40°C ~ +125°C

APPLICATIONS

- IoT and IIoT
- Wearables
- Drones
- Smart watches
- Hand-held devices
- Audio/video, cameras, and speakers
- VR/AR and smart glasses
- Medical monitoring
- Battery operated devices
- DC/DC supplies for Bluetooth and RF modules
- High efficiency battery chargers
- High efficiency switch mode power supplies

OPTIONS AND PART IDENTIFICATION



ELECTRICAL SPECIFICATIONS

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	SELF-RESONANT FREQUENCY	DC RESISTANCE	SATURATION CURRENT	TEMPERATURE RISE CURRENT
	0.1MHz/0.1V		min	max	max	max
UNITS	μH	%	MHz	mΩ	A	A
SYMBOL	L	M	SRF	DCR	Isat	Irms
ASMPL-0603-R22	0.22	±20%, ±30%	180	150	1.45	1.20
ASMPL-0603-R33	0.33	±20%, ±30%	140	200	1.35	1.10
ASMPL-0603-R47	0.47	±20%, ±30%	120	225	1.05	1.15
ASMPL-0603-R68	0.68	±20%, ±30%	100	275	0.80	0.90
ASMPL-0603-1R0	1.0	±20%, ±30%	90	400	0.70	0.80
ASMPL-0805-R22	0.22	±20%, ±30%	100	88	1.20	1.60
ASMPL-0805-R33	0.33	±20%, ±30%	90	125	1.35	1.20
ASMPL-0805-R47	0.47	±20%, ±30%	80	150	1.30	1.10
ASMPL-0805-1R0	1.0	±20%, ±30%	40	238	0.70	0.80
ASMPL-0805-1R5	1.5	±20%, ±30%	35	325	0.50	0.70
ASMPL-0805-2R2	2.2	±20%, ±30%	30	400	0.35	0.60

REVISED: 10.06.2017

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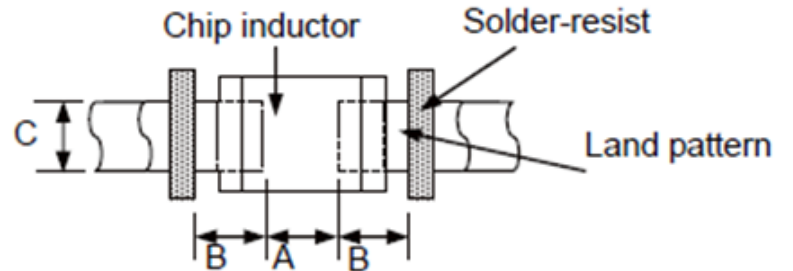
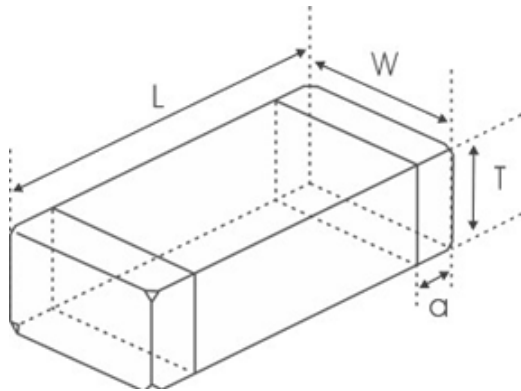


AS MPL

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MECHANICAL DIMENSIONS

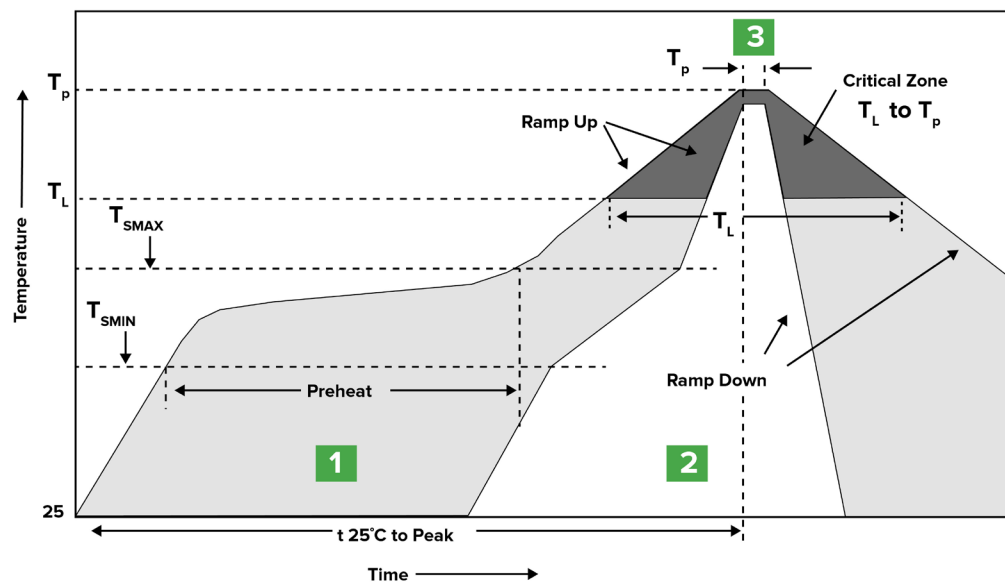


SERIES	L	W	T	A
0603	1.60 ± 0.15	0.8 ± 0.15	0.5 ± 0.05	0.3 ± 0.2
0805	2.0 (+0.3, -0.1)	1.25 ± 0.2	0.5 ± 0.1	0.5 ± 0.3

SERIES	A	B	C
0603	0.60~0.80	0.60~0.80	0.60~0.80
0805	0.80~1.20	0.80~1.20	0.90~1.60

Dimension: mm

REFLOW



Zone	Description	Temperature	Times
1	Preheat	$T_{S\text{MIN}} \sim T_{S\text{MAX}}$ 150°C ~ 200°C	60 ~ 120 sec.
2	Reflow	T_L 217°C	60 ~ 90 sec.
3	Peak heat	T_P 260°C	10 sec. MAX

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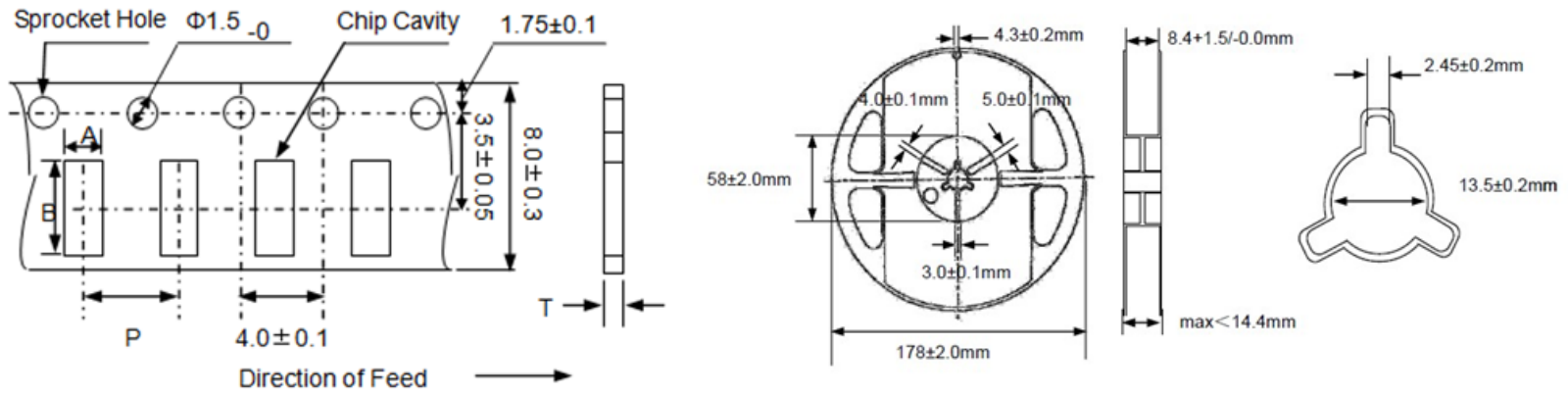


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PACKING (TAPE & REEL: 5000 PCS/REEL)



SERIES	A	B	P	T (max)
0603	1.0 ± 0.2	1.8 ± 0.2	4.0 ± 0.1	0.8
0805	1.6 ± 0.1	2.3 ± 0.1	4.0 ± 0.1	0.8

Dimension: mm