



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

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Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



AUTOMOTIVE GRADE MOLDED POWER INDUCTOR: ULTRA LOW DCR & HIGH CURRENT



ASPIAIG-Q(LR)4020

4.1 x 4.1 x 1.9 mm
MSL = 1

RoHS/RoHS II Compliant

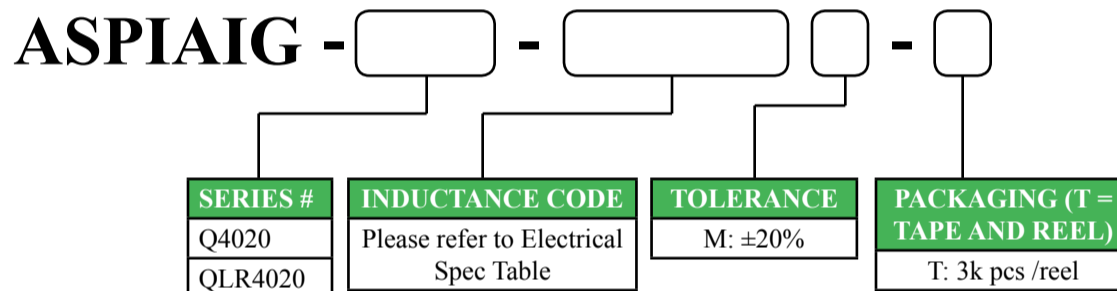
FEATURES

- PPAP ready and supported
- TS-16949 production certified lines
- AEC-Q200 qualified
- Molded wire-wound construction with shielding
- High current up to 18A rms
- High saturation current up to 33A
- High inductance up to 4.7μH
- Low DCR down to 2.4 mΩ
- Low profile 2.1mm MAX for height restricted applications
- Compact 4.1x4.1mm footprint
- Wide operating temperature range -55°C ~ +155°C

APPLICATIONS

- Automotive and extended temperature industrial
- Body electronics and comfort system
- Infotainment and entertainment
- Electric vehicles
- Power Tools
- Lighting
- Solar inverters and power
- Industrial and robotics
- Medium and high power switch mode power supplies
- Point of load (POL) applications
- Motor control and motor drivers
- Heavy machinery and transportation

OPTIONS AND PART IDENTIFICATION



ELECTRICAL SPECIFICATIONS

OPERATING TEMPERATURE	STORAGE CONDITION
-55°C ~ +155°C (including self-temperature rise)	-20°C ~ +40°C and 60% RH (Component in its packaging)

PART NUMBER	INDUCTANCE	TOLERANCE	DC RESISTANCE	SATURATION CURRENT	TEMPERATURE RISE CURRENT
	0.1MHz/0.1V		Max	Max	Typ
UNITS	μH	%	mΩ	A	A
SYMBOL	L	M	DCR	Isat	Irms
ASPIAIG-Q4020-R10	0.10	20%	2.42	33.0	18.0
ASPIAIG-Q4020-R22	0.22	20%	4.60	18.8	16.8
ASPIAIG-Q4020-R36	0.36	20%	6.30	15.0	14.5
ASPIAIG-Q4020-R40	0.40	20%	7.73	13.5	14.0
ASPIAIG-Q4020-R56	0.56	20%	9.30	12.6	12.0
ASPIAIG-Q4020-R60	0.60	20%	9.52	12.3	11.7
ASPIAIG-Q4020-R72	0.72	20%	11.60	10.6	10.5
ASPIAIG-Q4020-1R0	1.00	20%	14.60	8.8	9.6
ASPIAIG-Q4020-1R2	1.20	20%	17.90	7.8	9.0
ASPIAIG-Q4020-1R5	1.50	20%	23.50	7.4	7.6
ASPIAIG-Q4020-1R8	1.80	20%	28.00	7.0	7.0
ASPIAIG-Q4020-2R2	2.20	20%	38.70	6.0	5.6

REVISED: 09.28.2017



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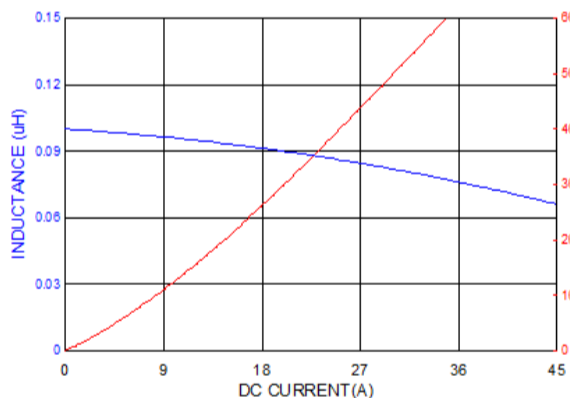
RoHS/RoHS II Compliant

ELECTRICAL SPECIFICATIONS

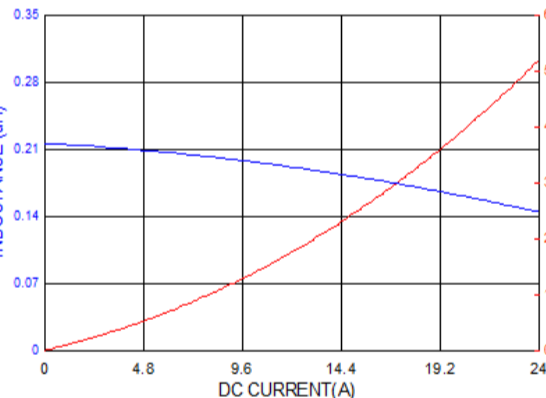
PART NUMBER	INDUCTANCE	TOLERANCE	DC RESISTANCE	SATURATION CURRENT	TEMPERATURE RISE CURRENT
	0.1MHz/0.1V		Max	Max	Typ
UNITS	μ H	%	m Ω	A	A
SYMBOL	L	M	DCR	Isat	Irms
ASPIAIG-QLR4020-R47	0.47	20%	6.8	12.5	13.2
ASPIAIG-QLR4020-R68	0.68	20%	8.2	10.0	12.0
ASPIAIG-QLR4020-R82	0.82	20%	9.5	9.0	11.5
ASPIAIG-QLR4020-1R0	1.00	20%	11.7	8.0	11.0
ASPIAIG-QLR4020-1R2	1.20	20%	13.4	7.5	9.5
ASPIAIG-QLR4020-1R5	1.50	20%	15.8	6.7	9.1
ASPIAIG-QLR4020-2R0	2.00	20%	23.3	5.0	8.2
ASPIAIG-QLR4020-2R2	2.20	20%	23.5	4.8	8.0
ASPIAIG-QLR4020-3R3	3.30	20%	38.3	4.4	5.5
ASPIAIG-QLR4020-4R7	4.70	20%	57.2	3.5	5.1

ELECTRICAL CHARACTERISTICS

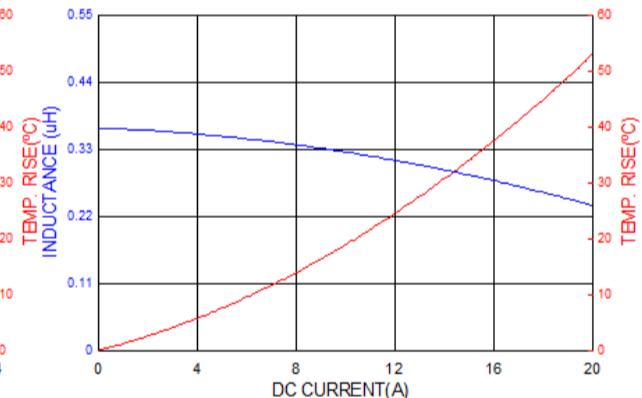
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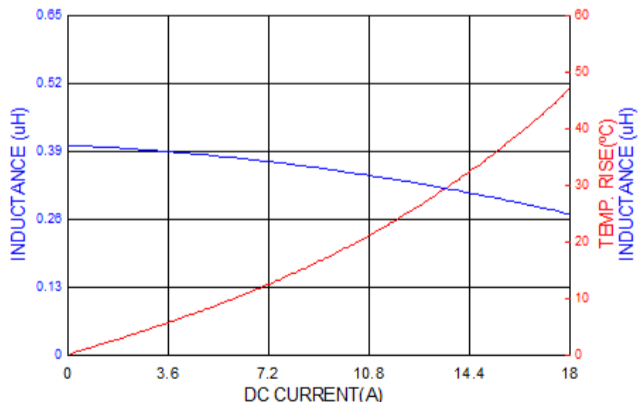
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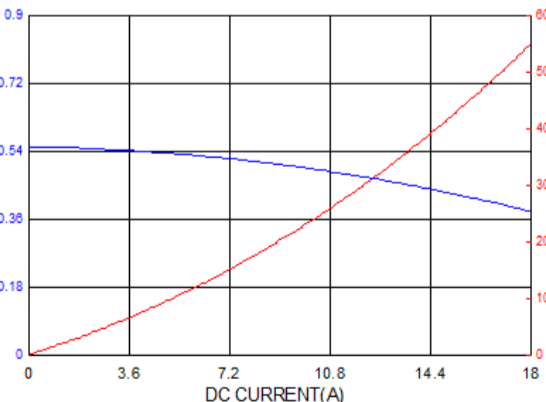
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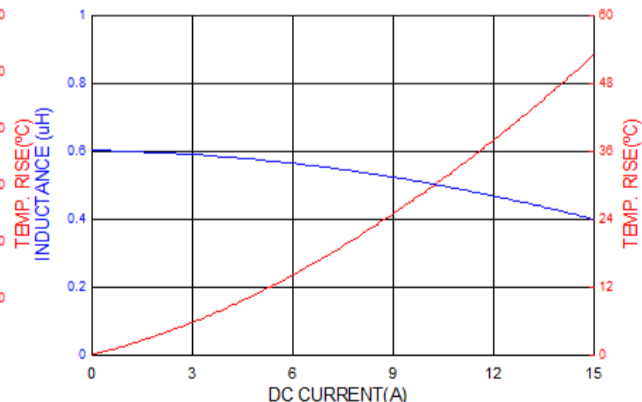
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ASPIAIG-Q4020-R56



ASPIAIG-Q4020-R60



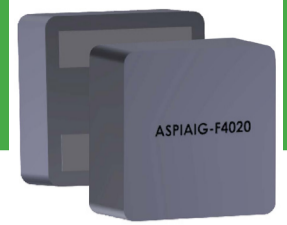
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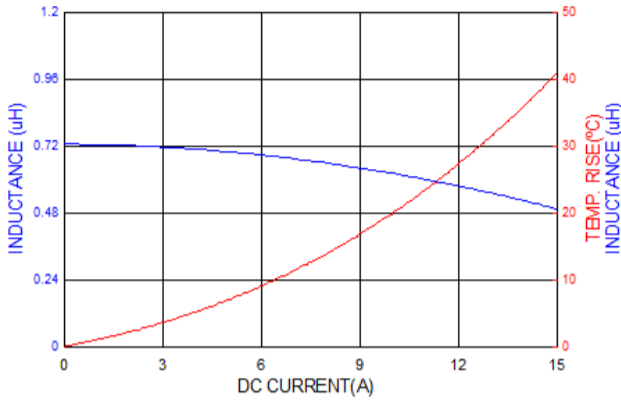
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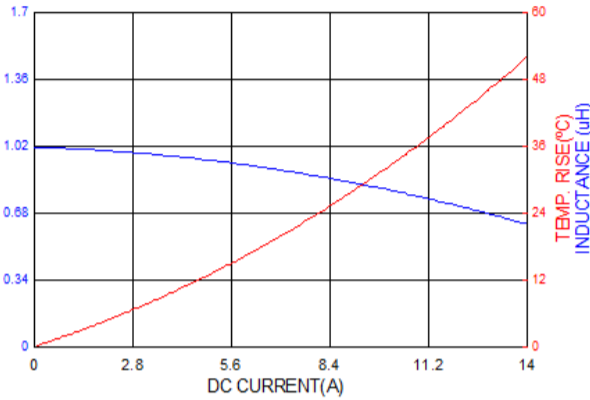
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ELECTRICAL CHARACTERISTICS

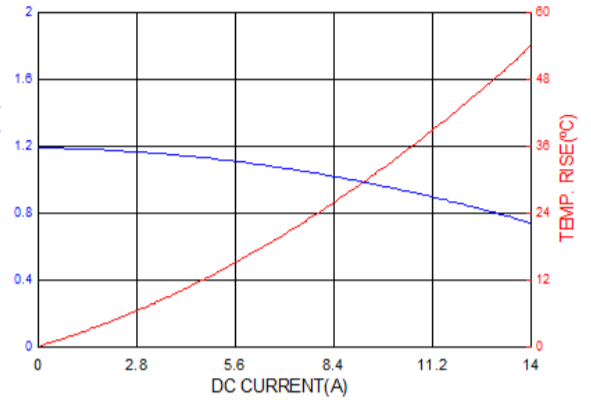
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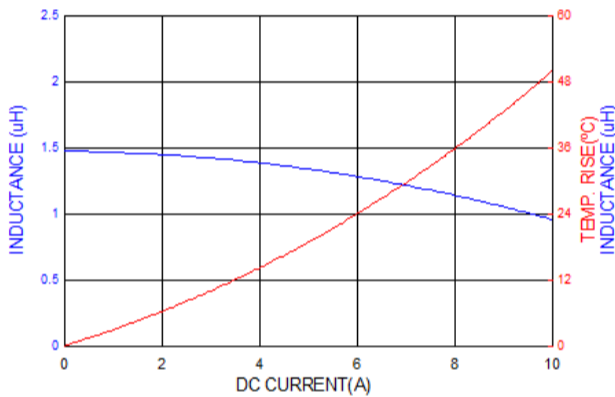
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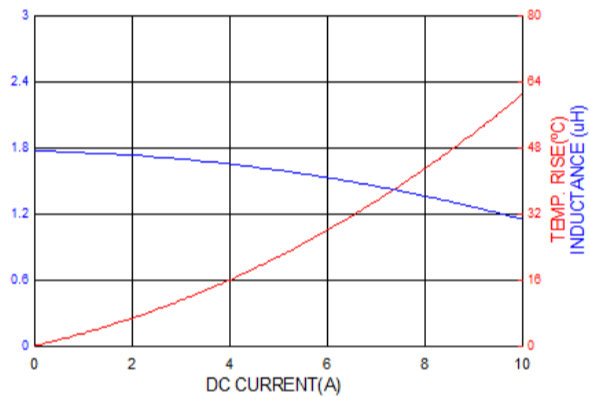
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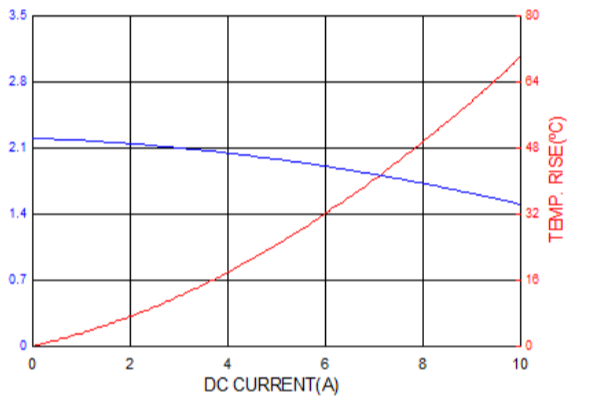
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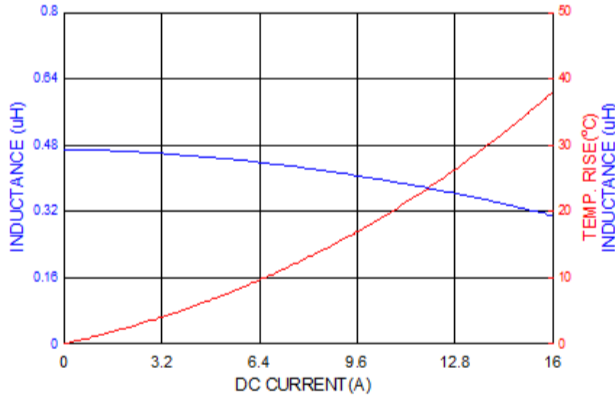
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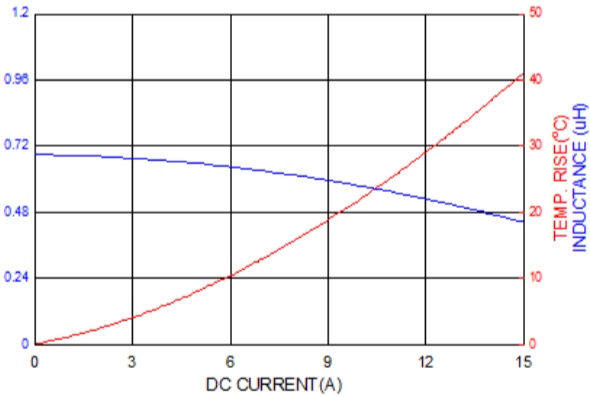
ASPIAIG-Q4020-2R2



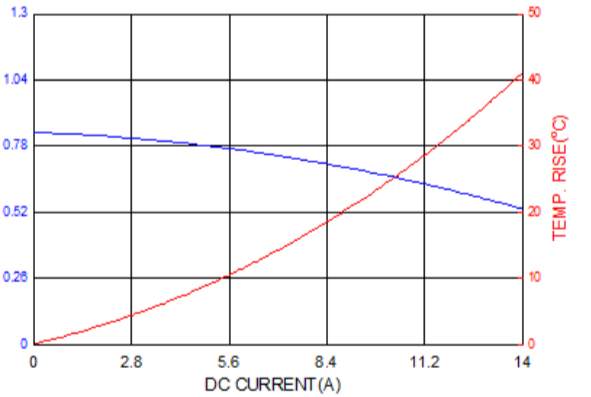
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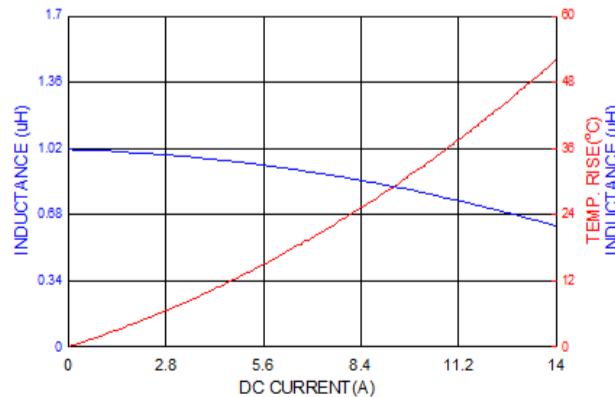
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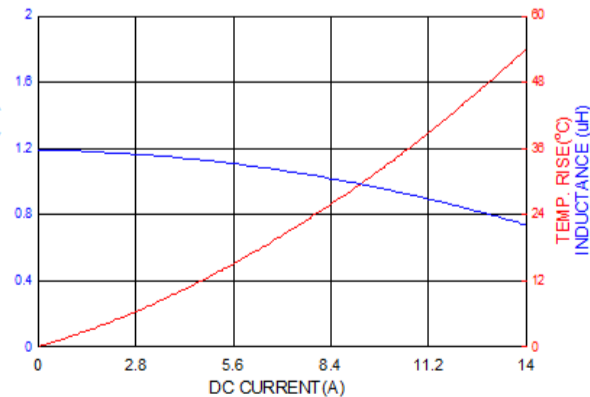
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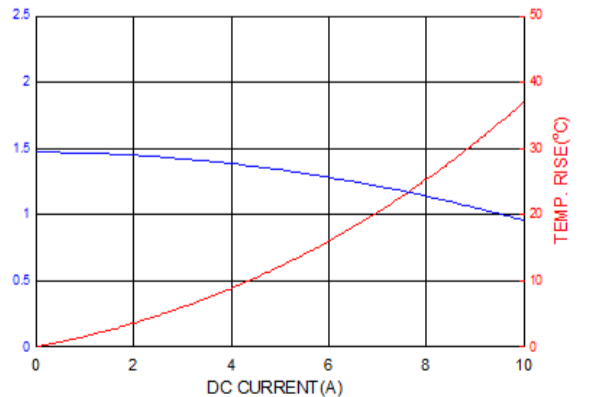
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ASPIAIG-QLR4020-1R2



ASPIAIG-QLR4020-1R5



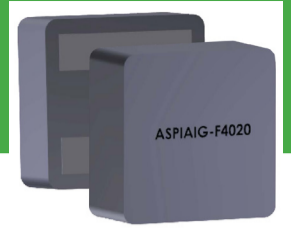
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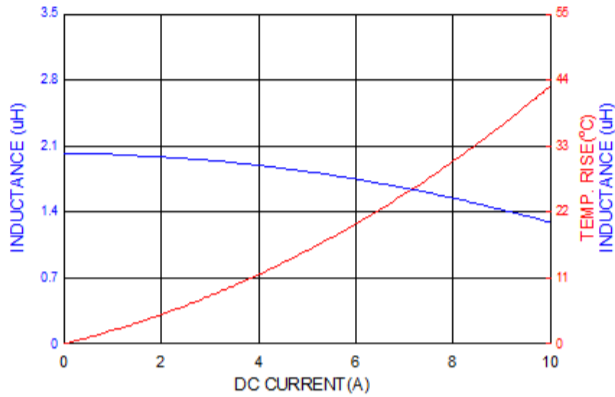
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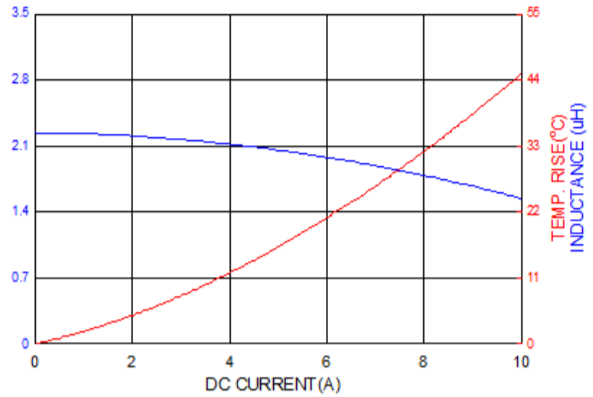
RoHS/RoHS II Compliant

ELECTRICAL CHARACTERISTICS

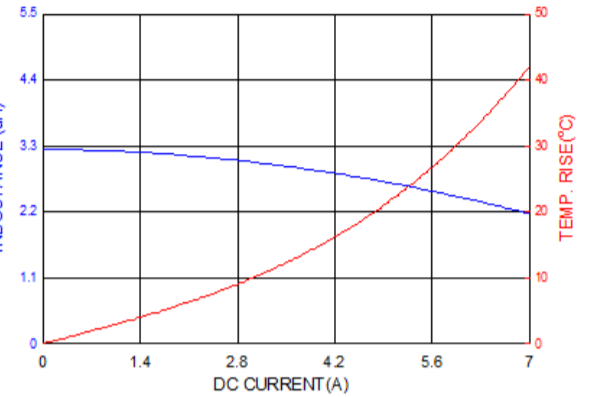
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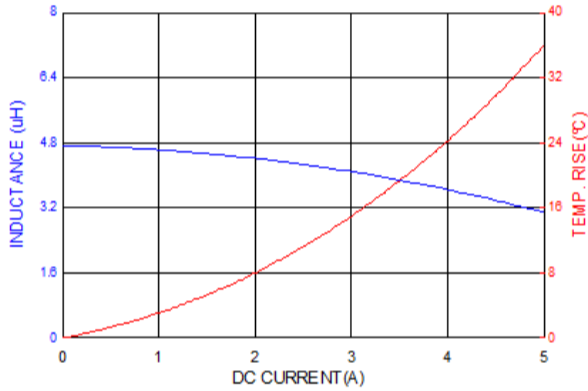
ASPIAIG-QLR4020-2R2



ASPIAIG-QLR4020-3R3

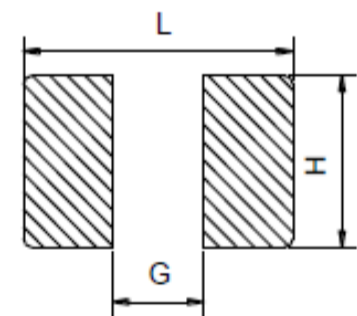
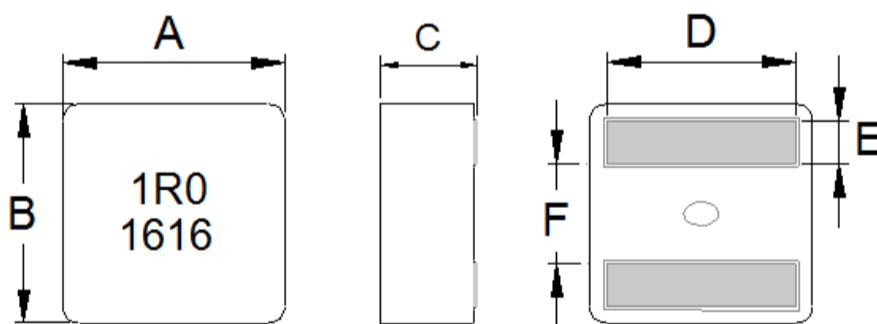


ASPIAIG-QLR4020-4R7



MECHANICAL DIMENSIONS

For both QLR and Q Series



A	B	C	D	E	F
4.1 ± 0.2	4.1 ± 0.2	1.9 ± 0.2	3.4 ± 0.3	0.88 ± 0.2	1.6 ± 0.25

L TYP.	G TYP.	H TYP.
3.4	1.4	3.8

Dimension: mm

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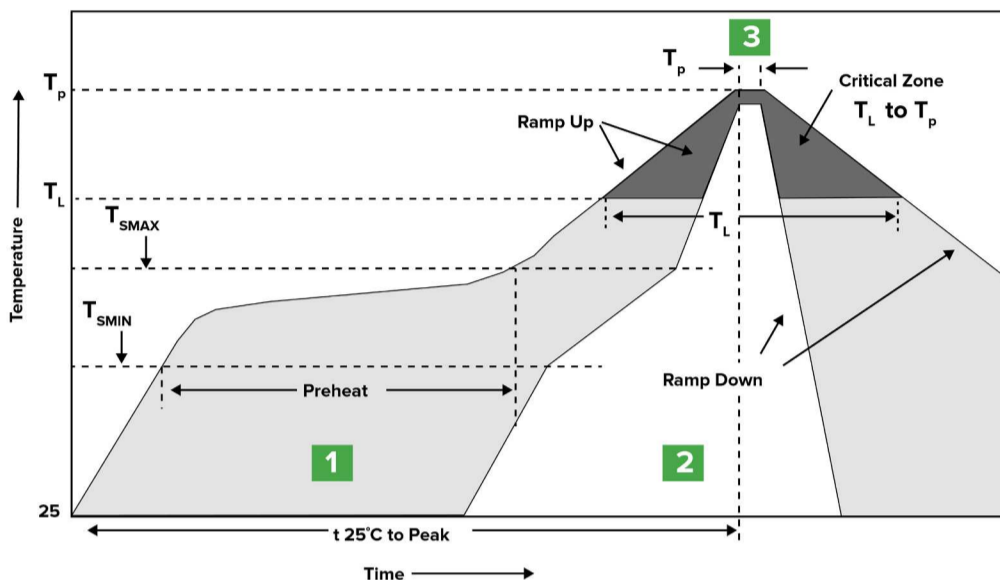


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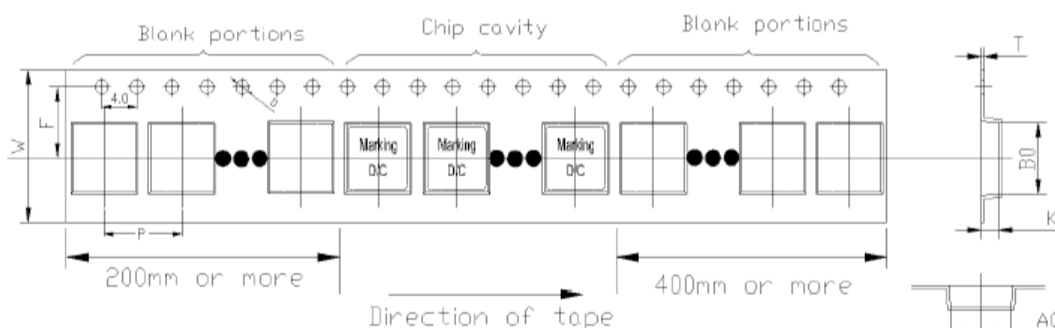
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REFLOW

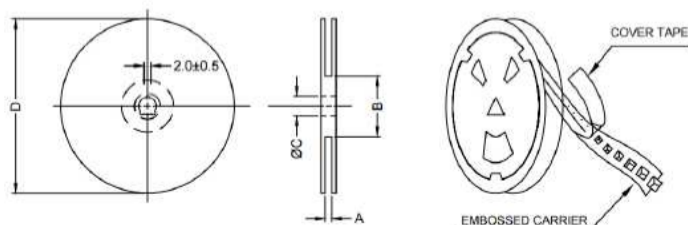


Zone	Description	Temperature	Times
1	Preheat	$T_{SMIN} \sim T_{SMAX}$ 150°C ~ 200°C	60 ~ 180 sec.
2	Reflow	T_L 217°C	60 ~ 150 sec.
3	Peak heat	T_P 260°C	10 sec. MAX

PACKING (TAPE & REEL: 3000 PCS/REEL)



W	F	P	D	A ₀	B ₀	T	K ₀
12.0±0.3	5.5±0.1	8.0±0.1	1.5±0.1	4.4±0.1	4.4 ±0.1	0.35±0.1	2.3±0.1



A	B	C	D
12.4+2/-0	100 ± 2	13.0+0.5/-0.2	330

Dimension: mm