

# Molded SMD Power Inductor



## ASPIAIG-Q8080

### Features

- PPAP ready and supported
- TS16949 certified production lines
- AEC-Q200 Grade 0 qualified (-55°C ~ +155°C)
- Shielded construction
- Soft saturation
- Low DCR, High Efficiency

### Applications

- Body electronics and comfort system
- Infotainment and entertainment
- Electric vehicles
- Lighting
- Solar inverters and power
- Industrial and robotics
- Medium and high power switch mode power supplies.

### Electrical Specifications

Part Number	Inductance	Tolerance	DC Resistance	Saturation Current	Temperature Rise Current	Dimension D
	0.1MHz/0.1V		Typ / Max	Typ/Max	Max	±0.4
Units	μH	%	mΩ	A	A	(mm)
Symbol	L		DCR	Isat	Irms	
ASPIAIG Q8080-1R8	1.80	M	4.0	24.0	24.0	7.2
ASPIAIG Q8080-2R2	2.20	M	4.3	22.0	21.5	7.2
ASPIAIG Q8080-3R3	3.30	M	7.3	20.0	18.0	6.9
ASPIAIG Q8080-4R7	4.70	M	9.8	17.0	14.6	6.9
ASPIAIG Q8080-6R8	6.80	M	14.3	12.5	11.3	6.9
ASPIAIG Q8080-100	10.0	M	22.9	10.0	8.7	6.9

### Test Conditions

**Isat:** DC current at which the inductance drops 30% from its value without current.

**Irms:** DC current that causes the temperature rise ( $\Delta T$ , approximate 40 °C) from 20°C ambient

**Operating Temperature:** -55°C ~ +155°C (including self-temperature rise)

**Storage Condition:** -55°C ~ +155°C (PCB mounted) and R.H. 60 max

**Operating Voltage:** 40V (across inductor)

**ASPIAIG-Q8080 Series is RoHS Compliant and Pb free**

**ASPIAIG-Q8080 is AEC-Q200 Grade 0 qualified (-55°C ~ +155°C)**

**MSL level: 1**

# Molded SMD Power Inductor



ASPIAIG-Q8080

## Part Number Identification

ASPIAIG – Q8080 -     -  

### Inductance Code

See Electrical Specification table

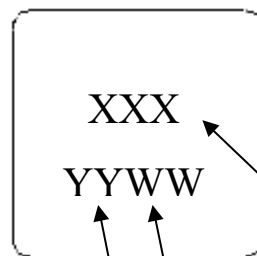
### Tolerance

M =  $\pm 20\%$

### Packaging

T: Tape and Reel (450 pcs / reel)

## Marking



Inductance Code  
e.g. 6R8

W: Week: E.g. 05 for the 5<sup>th</sup> week  
of the year.

Y: Year: E.g. 20 for 2020

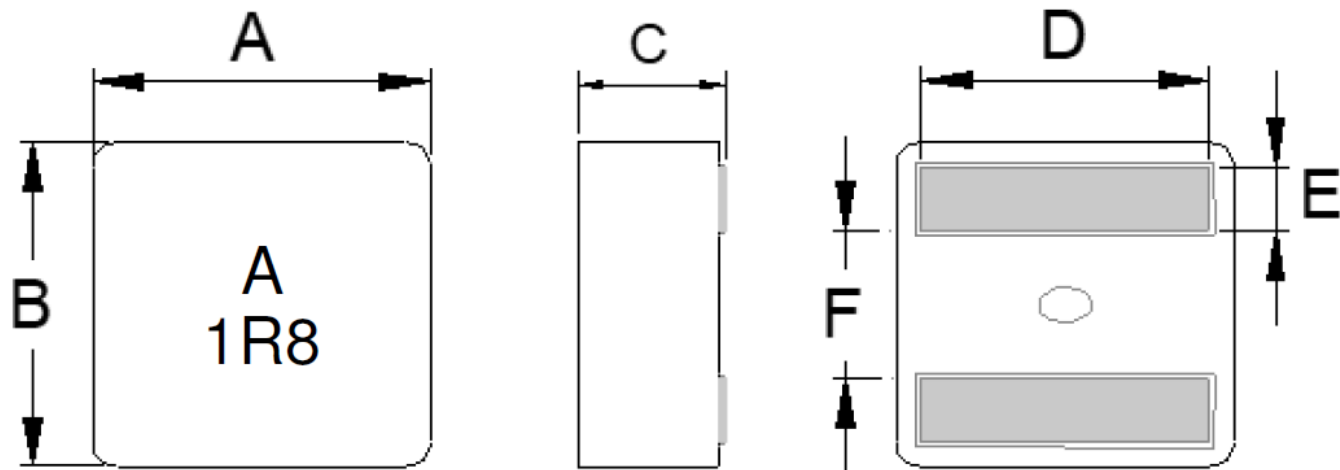
Marking Method = Ink Marking

# Molded SMD Power Inductor

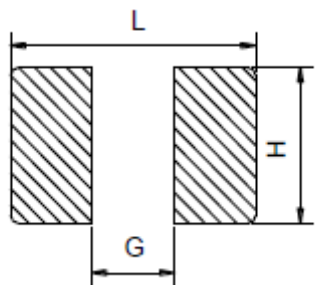


ASPIAIG-Q8080

## Mechanical Dimensions



Series	A	B	C	D	E	F
ASPIAIG-Q8080	$8.9 \pm 0.3$	$8.5 \pm 0.3$	$7.7 \pm 0.3$	See Electrical Spec table	$1.8 \pm 0.2$	$3.5 \pm 0.3$



L	G	H
8.0 Ref.	2.7 Ref.	7.8 Ref.

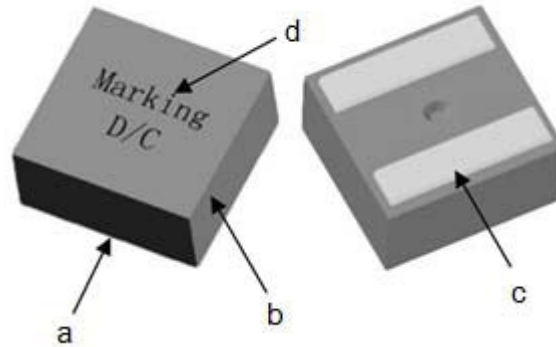
Dimensions: mm

# Molded SMD Power Inductor



ASPIAIG-Q8080

## Materials



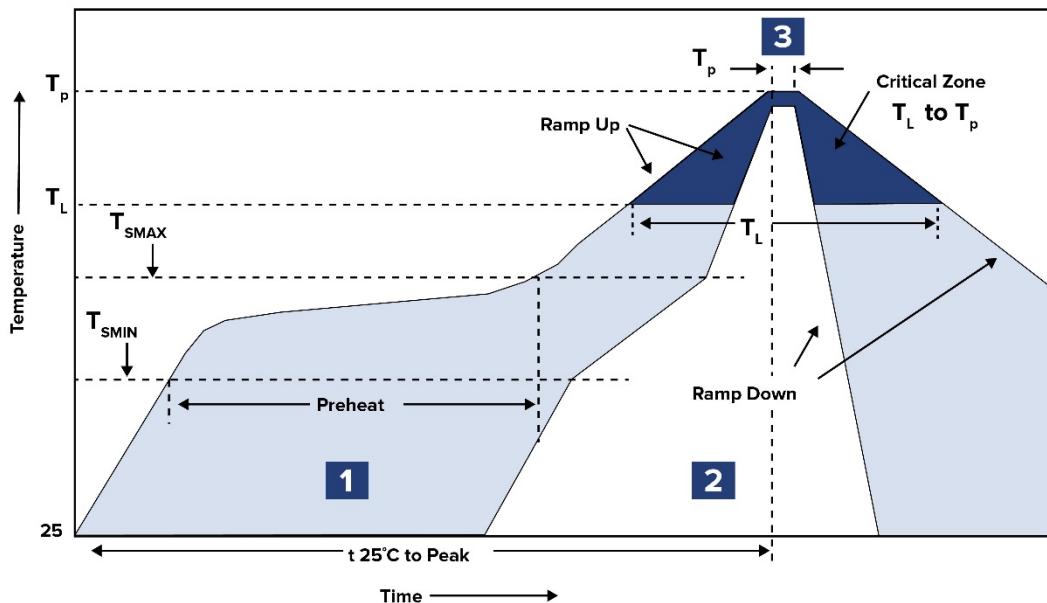
	Components	Material
a	Core	Alloy powder
b	Wire	220 deg. C Flat Wire
c	Solder	100% Pb free solder
d	Ink	Halogen-free ketone

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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	$T_P$ 260°C	<30 sec. MAX

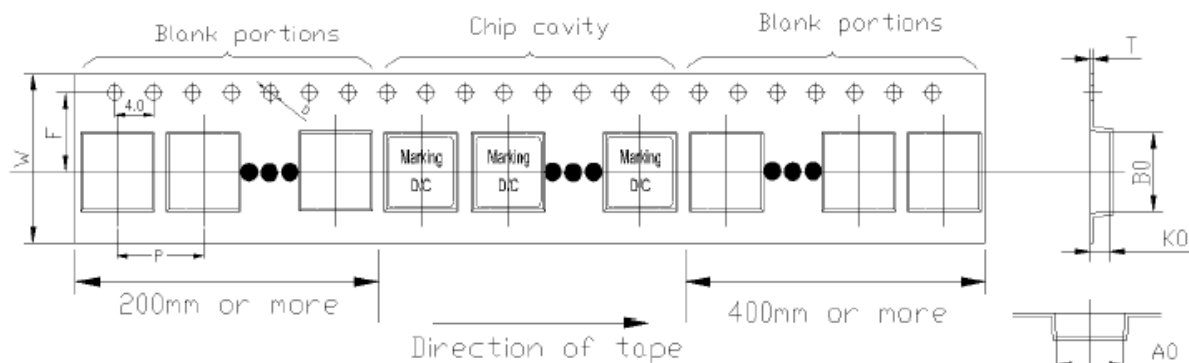
# Molded SMD Power Inductor



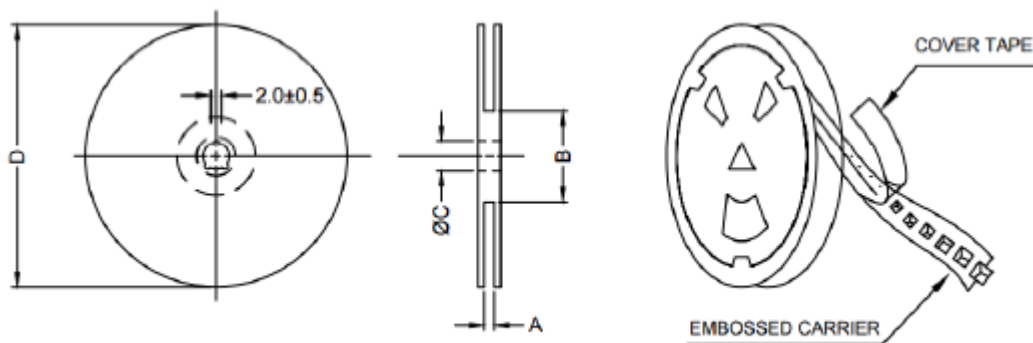
**ASPIAIG-Q8080**

## Packaging

**Tape & Reel: 450 pcs/reel**



W	F	P	D	A <sub>0</sub>	B <sub>0</sub>	T	K <sub>0</sub>
24.0±0.3	7.5±0.1	16.0±0.1	1.5±0.1	9.4±0.1	8.9±0.1	0.35±0.1	8.5±0.1



A	B	C	D
24.4+2/-0	100 ± 2	13.0+0.5/-0.2	330

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