

### ASPIAIG-Q7050

Request Samples



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8.4 x 8.0 x 4.8 mm RoHS/RoHS II Compliant MSL Level = 1

#### **Features**

- PPAP ready and supported
- TS16949 certified production lines
- AEC-Q200 Grade 0 qualified  $(-55^{\circ}\text{C} \sim +155^{\circ}\text{C})$
- 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
	0.1MHz/0.1V		Max	Max	Max
Units	μH % mΩ		${ m m}\Omega$	A	A
Symbol	L		DCR	Isat	Irms
ASPIAIG-Q7050 – 2R2	2.2	20	6.4	17.0	14.0
ASPIAIG-Q7050 – 3R3	3.3	20	11.4	14.0	13.0
ASPIAIG-Q7050 – 4R7	4.7	20	15.4	13.0	11.0
ASPIAIG-Q7050 – 5R6	5.6	20	17.2	11.0	7.0

#### **Test Conditions**

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

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

**Operating Temperature:**  $-55^{\circ}\text{C} \sim +155^{\circ}\text{C}$  (including self-temperature rise) **Storage Condition:**  $-55^{\circ}\text{C} \sim +155^{\circ}\text{C}$  (PCB mounted) and R.H. 60 max

Operating Voltage: 40V (across inductor)

ASPIAIG-Q7050 Series is RoHS Compliant and Pb free

ASPIAIG-Q7050 is AEC-Q200 Grade 0 qualified (-55 $^{\circ}$ C  $\sim$  +155 $^{\circ}$ C)

MSL level: 1





### **ASPIAIG-Q7050**

Request Samples (>)

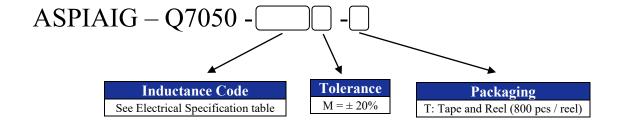


Check Inventory (>)

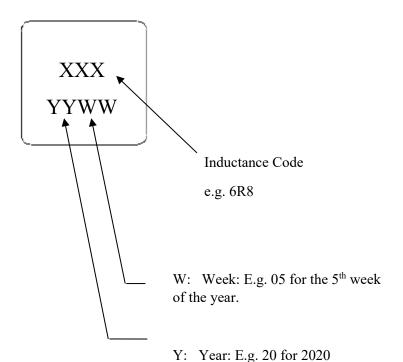


8.4 x 8.0 x 4.8 mm **RoHS/RoHS II Compliant** MSL Level = 1

#### **Part Number Identification**



#### Marking



Marking Method = Ink Marking





## **ASPIAIG-Q7050**

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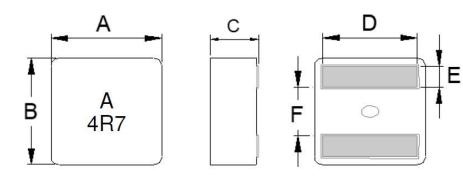


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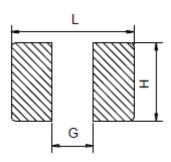


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### **Mechanical Dimensions**



Series	A	В	C	D	E	F
ASPIAIG-Q7050	$8.4 \pm 0.3$	$8.0 \pm 0.3$	$4.8 \pm 0.3$	$6.2\pm0.3$	$1.75 \pm 0.2$	$3.15 \pm 0.25$



L	G	Н
7.4 Ref.	2.8 Ref.	7.2 Ref.

**Dimensions: mm** 





## **ASPIAIG-Q7050**

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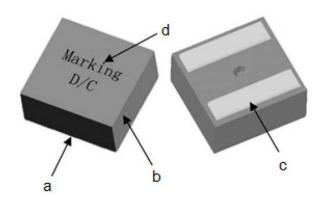


Check Inventory (S)



8.4 x 8.0 x 4.8 mm RoHS/RoHS II Compliant MSL Level = 1

### Materials



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





**ASPIAIG-Q7050** 

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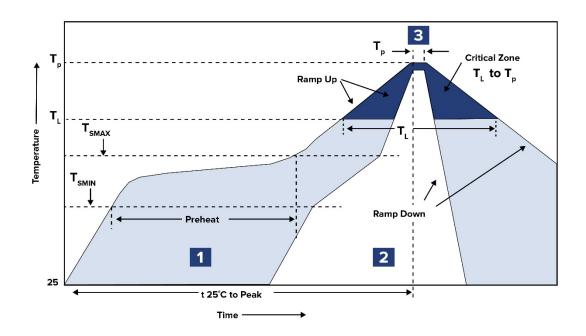


Check Inventory (>)



8.4 x 8.0 x 4.8 mm RoHS/RoHS II Compliant MSL Level = 1

### **Reflow Profile**



Zone	Description	Temperature	Times
1	Preheat	$\begin{split} T_{SMIN} \sim T_{SMAX} \\ 150^{\circ}C \sim 200^{\circ}C \end{split}$	$60 \sim 180 \text{ sec.}$
2	Reflow	T <sub>L</sub> 217°C	60 ∼ 150 sec.
3	Peak heat	Т <sub>Р</sub> 260°С	10 sec. MAX





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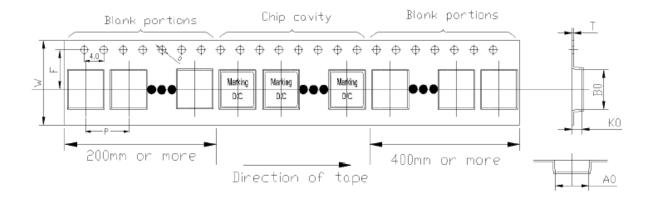
Check Inventory (>)



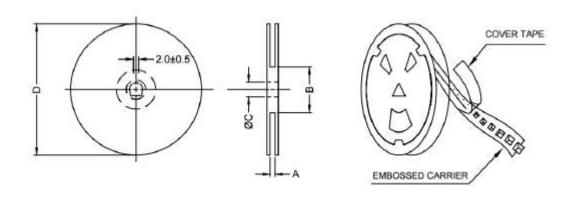
8.4 x 8.0 x 4.8 mm **RoHS/RoHS II Compliant** MSL Level = 1

### **Packaging**

Tape & Reel: 800 pcs/reel



W	F	P	D	A <sub>0</sub>	$\mathbf{B}_0$	T	$\mathbf{K}_{0}$
$16.0\pm0.3$	$7.5 \pm 0.1$	$12.0\pm0.1$	1.5±0.1	$8.8 \pm 0.1$	$8.4 \pm 0.1$	$0.35 \pm 0.05$	$5.3 \pm 0.1$



A	В	C	D
16.4+2/-0	$100 \pm 2$	13.0+0.5/-0.2	330

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