

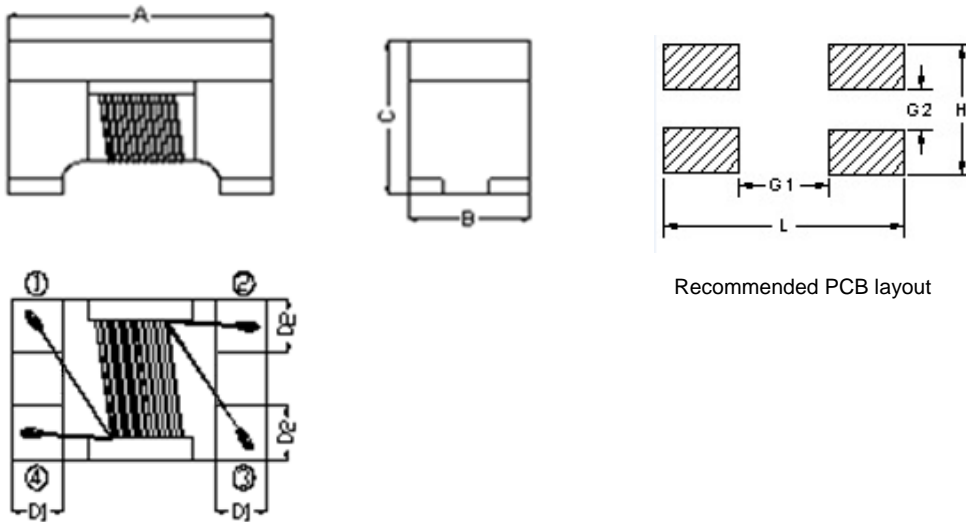
1. Part No. Expression:

**WAQ5FD110-RC-10**

(a) (b) (c) (d) (e)(f) (g)

- (a) Series Code
- (b) Dimension Code
- (c) Material Code
- (d) Inductance Code
- (e) Packaging Code
- (f) Current Rating Code
- (g) Internal Controlled Number

2. Configuration & Dimensions:

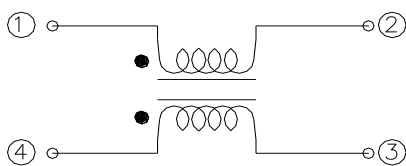


Recommended PCB layout

Unit: mm

A	B	C	D1	D2	L	H	G1	G2
3.20 +0.3/-0.2	2.50±0.2	2.50 Max.	0.55±0.15	0.75±0.2	3.70 Ref.	2.80 Ref.	2.40 Ref.	1.20 Ref.

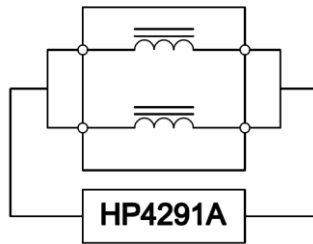
3. Schematic:



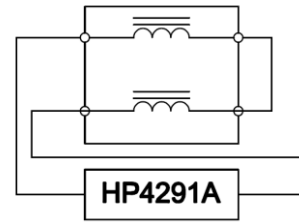
NOTE: Specifications subject to change without notice. Please check our website for latest information.

#### 4. Measuring Circuits:

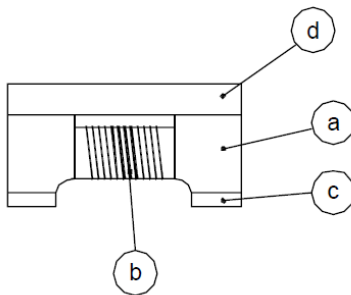
**Common mode**



**Differential mode**



#### 5. Material List:



- (a) Core
- (b) Wire
- (c) Terminal
- (d) Upper Plate

#### 6. General Specification:

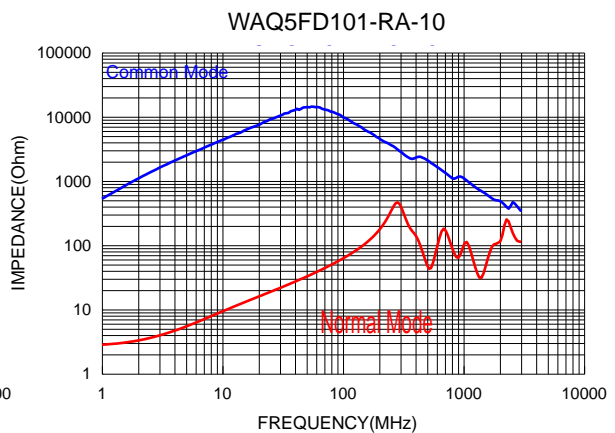
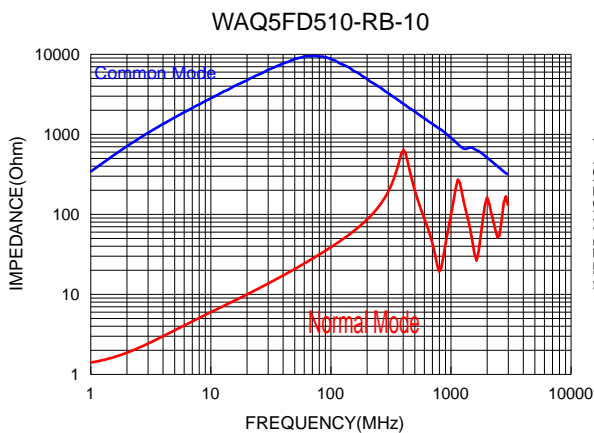
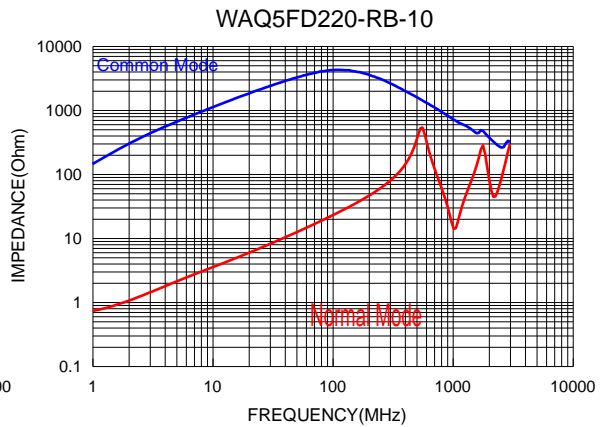
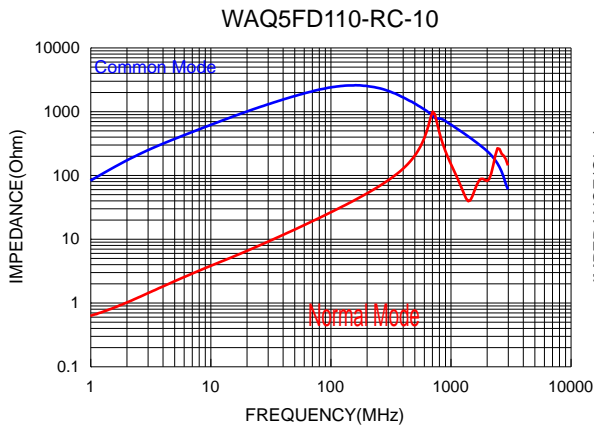
- (a) Reliability test for this part meets AEC-Q200 standard.
- (b) Operating Temp. : -55°C to +150°C (Including self - temperature rise).
- (c) Storage Temp. : -55°C to +150°C (on board).
- (d) Storage Condition (Component in its packaging)
  - i) Temperature: Less than 40°C
  - ii) Humidity : 60% RH

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7. Electrical Characteristics:

Part Number	Common mode Impedance ( $\Omega$ ) [10MHz]		Inductance (uH)+50/-30% [0.1V/100K]	DCR ( $\Omega$ ) Max.	Rated Current (mA) Max.	Rated Volt (Vdc) Max.	IR (M $\Omega$ ) Min.
	Min.	Typ.					
WAQ5FD110-RC-10	300	550	11	0.4	300	80	10
WAQ5FD220-RB-10	500	1100	22	0.5	250	80	10
WAQ5FD510-RB-10	1000	2600	51	0.7	200	80	10
WAQ5FD101-RA-10	2200	5100	100	1.5	150	80	10

8. Characteristics Curves:



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**9. Soldering:**

Mildly activated rosin fluxes are preferred. Our terminations are suitable for all re-flow soldering systems. If hand soldering cannot be avoided, the preferred technique is the utilization of hot air soldering tools.

**9-1 Solder Re-flow**

Recommended temperature profiles for re-flow soldering in Figure 1.

**9-2 Soldering Iron (Figure 2)**

Products attachment with soldering iron is discouraged due to the inherent process control limitations. In the event that a soldering iron must be employed the following precautions are recommended.

Note :

- a) Preheat circuit and products to 150°C.
- b) 350°C tip temperature (Max.)
- c) Never contact the ceramic with the iron tip
- d) 1.0mm tip diameter (Max.)
- e) Use a 20 watt soldering iron with tip diameter of 1.0mm
- f) Limit soldering time to 4~5 sec.

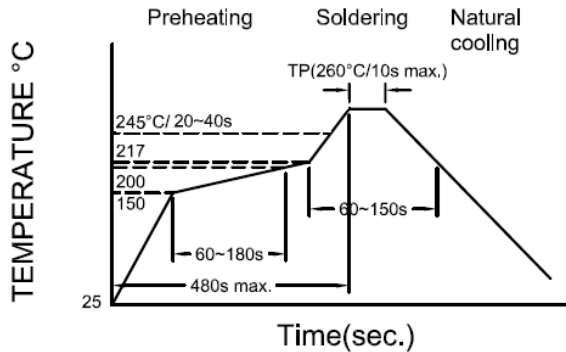


Figure 1. : Re-flow Soldering time 3 times Max.

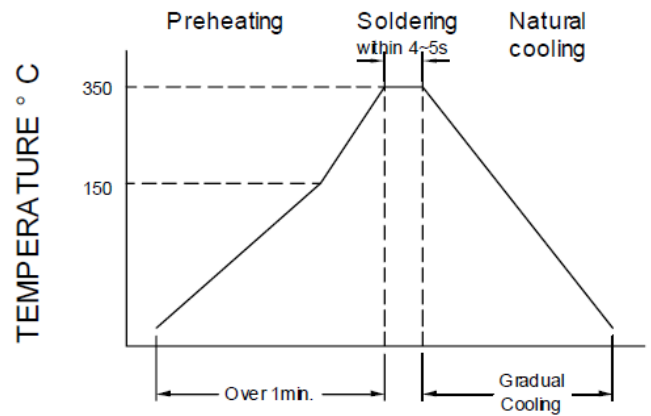


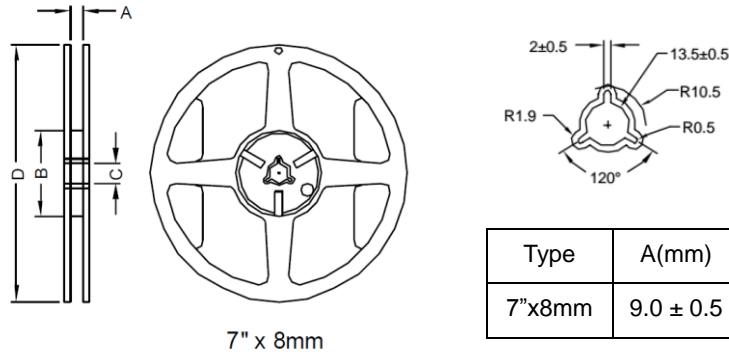
Figure 2. : Iron Soldering time 1 times Max.

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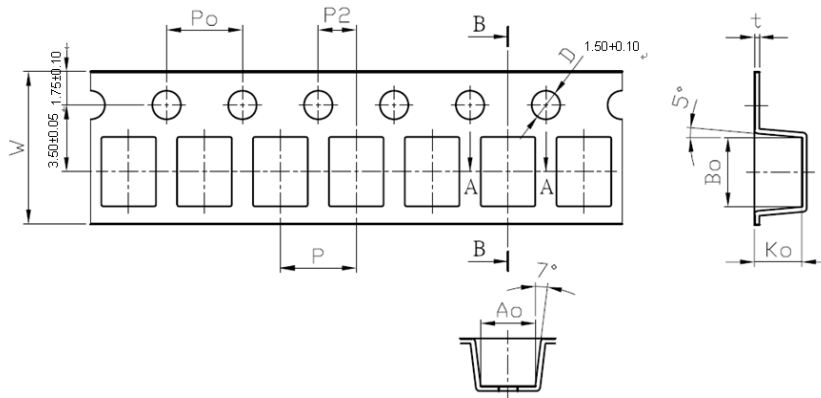
10. Packaging Information:

10-1 Reel Dimension



Type	A(mm)	B(mm)	C(mm)	D(mm)
7"x8mm	9.0 ± 0.5	60.0 ± 2.0	13.5 ± 0.5	178.0 ± 2.0

10-2 Tape Dimension



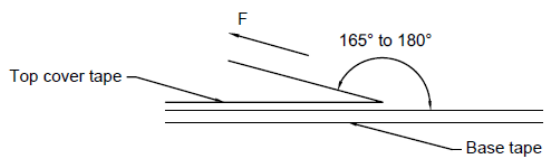
Size	P(mm)	Po(mm)	P2(mm)	Bo(mm)	Ao(mm)	Ko(mm)	W(mm)	t(mm)
WAQ5FD	4.00±0.10	4.00±0.10	2.00±0.05	3.65±0.10	2.88±0.10	2.50±0.10	8.00±0.10	0.26±0.05

10-3 Packaging Quantity

Chip Size	WAQ5FD
Chip/Reel	2,000
Inner Box	10,000
Middle Box	50,000
Carton	100,000

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**10-4 Tearing Off Force**

The force for tearing off cover tape is 15 to 80 grams in the arrow direction under the following conditions.

Room Temp. (°C)	Room Humidity (%)	Room atm (hPa)	Tearing Speed mm/min
5~35	45~85	860~1060	300

**Application Notice:****1. Storage Conditions:**

To maintain the solderability of terminal electrodes:

- a) Recommended products should be used within 12 months from the time of delivery.
- b) The packaging material should be kept where no chlorine or sulfur exists in the air.

**2. Transportation:**

- a) Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
- b) Vacuum pick up is strongly recommended for individual components.
- c) Bulk handling should ensure that abrasion and mechanical shock are minimized.

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