

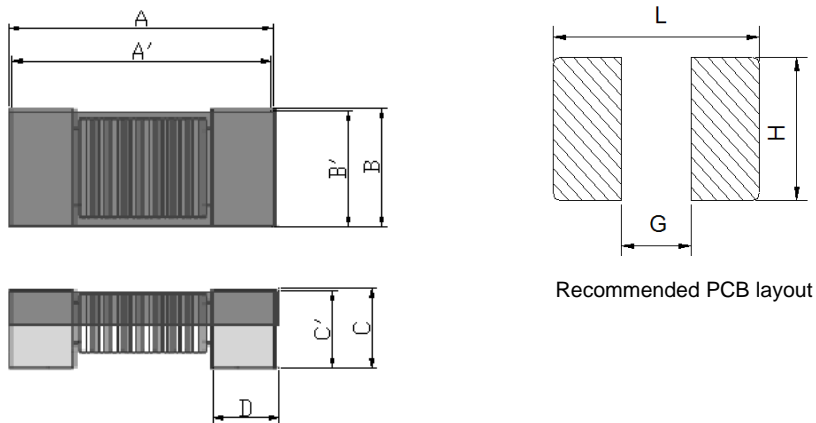
1. Part No. Expression:

**W Q 4 4 2 0 3 5 2 K F 1 0 D S**

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

- (a) Series Code
- (b) Dimension Code
- (c) Inductance Code
- (d) Tolerance Code
- (e) Test Frequency
- (f) Category Code

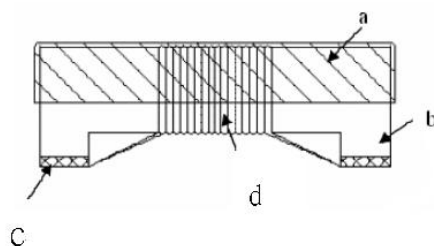
2. Configuration & Dimensions:



Unit: mm

A	A'	B	B'	C	C'	D	L	G	H
4.55±0.25	4.2±0.2	2.2±0.25	1.8±0.2	2.0±0.2	1.8±0.2	0.98 Ref.	4.6 Ref.	2.54 Ref.	2.0 Ref.

3. Material List:



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

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



**4. General Specification:**

- (a) Reliability test for this part meets AEC-Q200 standard
- (b) Operating Temp. : -55°C to +125°C(Including self - temperature rise)
- (c) Storage Temp. : -55°C to +125°C (on board)
- (d) Humidity Range: 85 ± 3% RH
- (e) Storage Condition (Component in its packaging)
  - i) Temperature: Less than 40°C
  - ii) Humidity : 60% RH

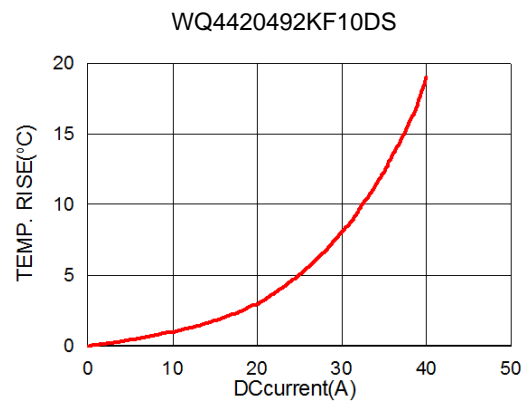
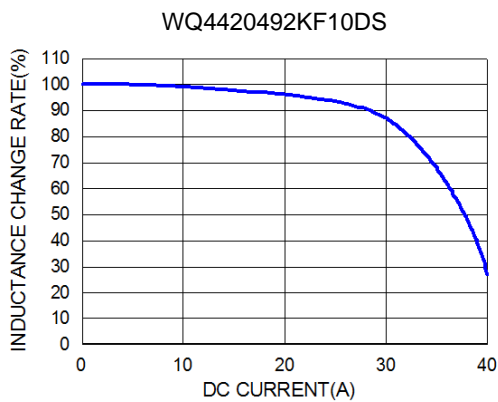
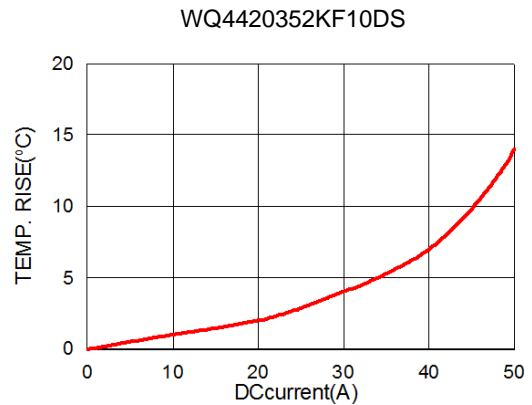
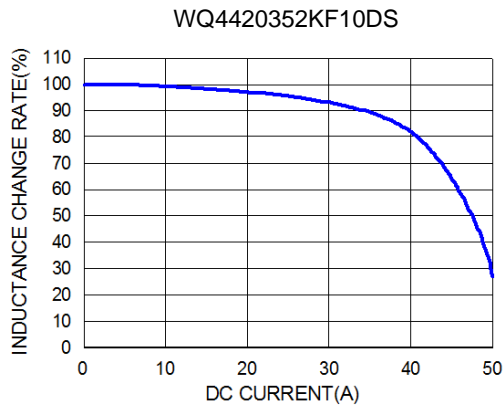
**5. Electrical Characteristics:**

Part Number	Inductance (uH)	Test Frequency (Hz)	SRF (MHz) Min.	DCR (Ω) Max.	Rated Current (mA) Max.
WQ4420352KF10DS	3500±10%	0.1V/10K	1.00	85	20
WQ4420492KF10DS	4900±10%	0.1V/10K	0.65	109	20

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6. Characteristics Curves:



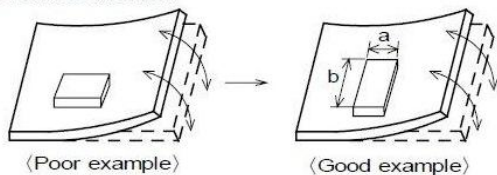
7. Soldering:

7-1. Attention regarding P.C.B. bending

The following shall be considered when designing P.C.B.'S

(a) P.C.B. shall be designed so that products are not subjected to the mechanical stress for board warpage.

<Products direction>

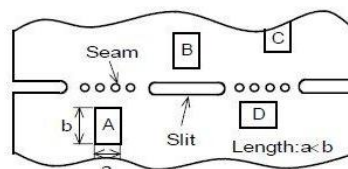


Products shall be located in the sideways direction (Length:a<b) to against the mechanical stress.

(b) Products location on P.C.B.

Products (A,B,C,D) shall be located carefully to prevent mechanical stress when warping the board.

Products may be subjected to the mechanical stress in the order of A>C>B ≅ D.



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**7-2. 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.

**7-2.1 Solder Re-flow**

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

**7-2.2 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) 355°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.

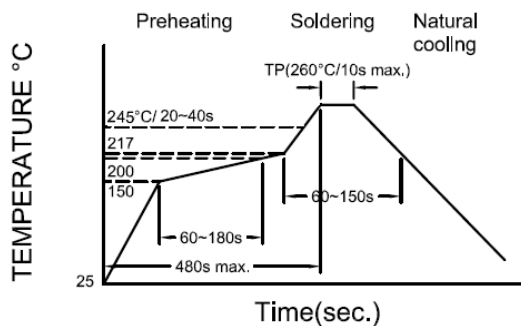


Figure 1. : Re-flow Soldering time 3 times max

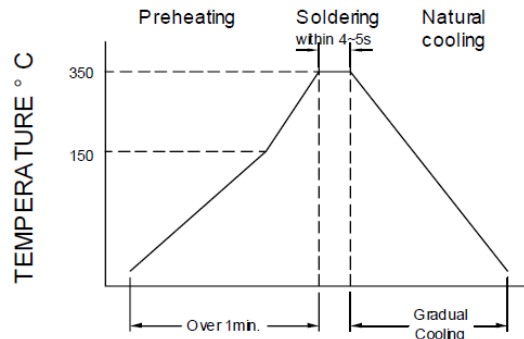


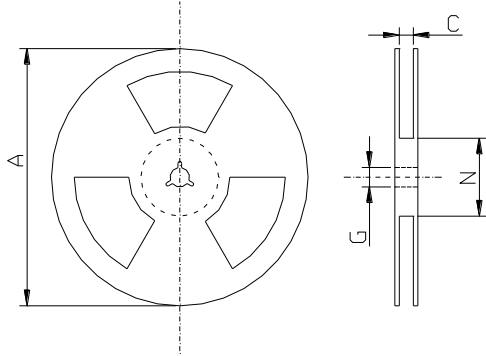
Figure 2. : Iron Soldering time 1 times max

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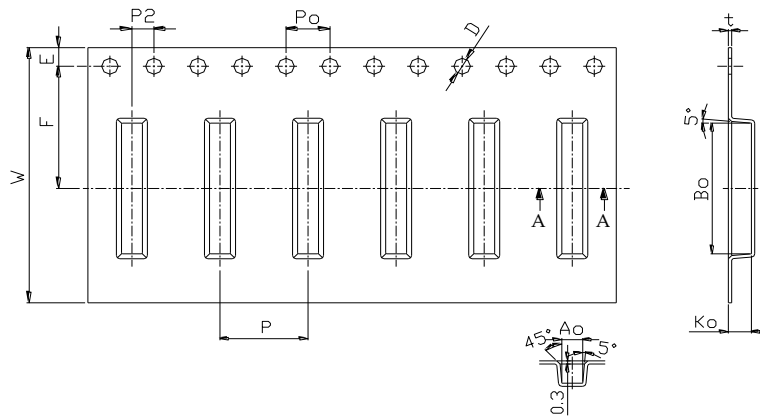
8. Packaging Information:

8-1 Reel Dimension



Type	A(mm)	C(mm)	G(mm)	N(mm)
7"x12mm	180±2.0	16.5±1.0	13.5±0.5	100±2.0

8-2 Tape Dimension



Size	P(mm)	Po(mm)	P2(mm)	Bo(mm)	Ao(mm)	Ko(mm)
		8.00±0.1	4.00±0.1	2.00±0.1	5.00±0.10	2.50±0.10
W4420F	D(mm)	E(mm)	F(mm)	W(mm)	t(mm)	
		1.50+0.1/-0	1.75±0.1	5.50±0.1	12.00±0.30	0.30±0.05

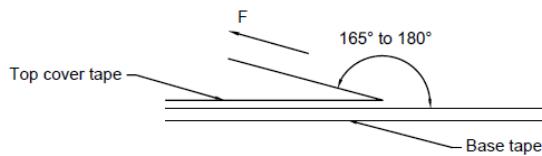
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**8-3 Packaging Quantity**

Chip Size	WQ4420-DS
Chip/Reel	1,000

**8-4 Tearing Off Force**



The force for tearing off cover tape is 10 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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