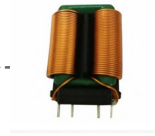


# Flat Common Mode Inductors—SUQ Series



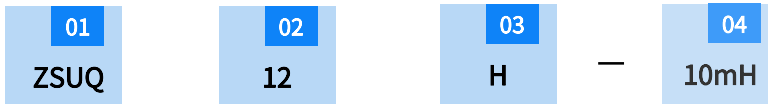
## FEATURES

- ROHS, Halogen free and REACH Compliance.
- Stable performance, high frequency efficiency.
- High power, low DC resistance, low temperature rise.
- Easy to plug-in, high difference energy.

## APPLICATIONS

Monitors, Game consoles and LED lightings, AP Routers, STBs and LCD TVs. Notebook computer, DC - DC converters, etc

## PRODUCT IDENTIFICATION



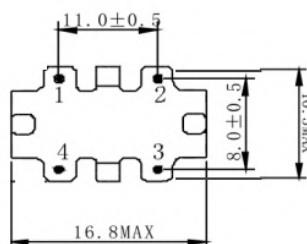
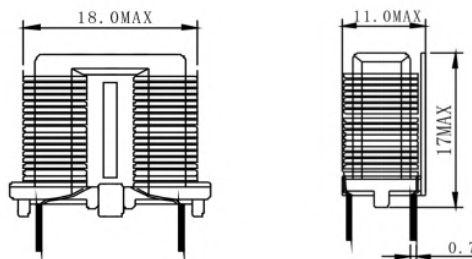
| 01 Type |                           |
|---------|---------------------------|
| ZSUQ    | Flat Common Mode Inductor |

| 02 External Dimensions (ΦDxT)(mm) |       |
|-----------------------------------|-------|
| 12                                | 18*17 |

| 04 Nominal Inductance |               |
|-----------------------|---------------|
| Example               | Nominal value |
| 10mH                  | 10mH          |

| 03 Shape Type |            |
|---------------|------------|
| H             | Horizontal |
| V             | Vertical   |

## SHAPE AND DIMENSIONS



## SPECIFICATIONS

### ● ZSUQ12V TYPE

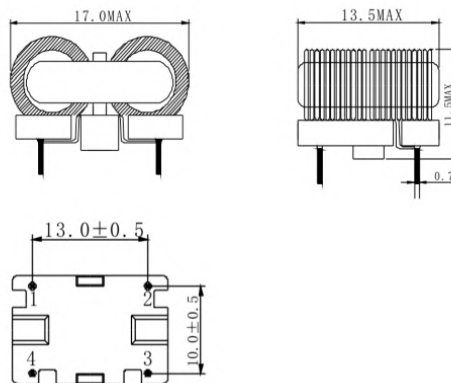
| Part Number  | Inductance (uH) | Wire Diameter | DCR(mΩ) | Rated Current(A) | Power Range |
|--------------|-----------------|---------------|---------|------------------|-------------|
| ZSUQ12V-25mH | 25mH            | 0.1*1.0       | 220 Max | 0.5A             | 40W         |
| ZSUQ12V-22mH | 22mH            | 0.1*1.0       | 220 Max | 0.6A             | 48W         |
| ZSUQ12V-15mH | 15mH            | 0.1*1.0       | 220 Max | 0.7A             | 56W         |
| ZSUQ12V-10mH | 10mH            | 0.13*1.0      | 220 Max | 0.75A            | 60W         |

**A: Withstanding Voltage: AC 2.0KV 60Sec(Winding to Winding)**

**B: Measureing Condition: 1KHz, 250mV, 25°C.**

**C: I<sub>rat</sub> is defined as the maximum rated current that is applied to the coil with the resulted temperature rise not exceeding 40°C.**

### ● ZSUQ12H TYPE



**A: Withstanding Voltage: AC 2.0KV 60Sec(Winding to Winding)**

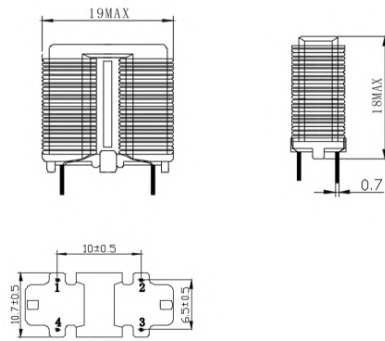
**B: Measureing Condition: 1KHz, 250mV, 25°C.**

**C: I<sub>rat</sub> is defined as the maximum rated current that is applied to the coil with the resulted temperature rise not exceeding 40°C.**

| Part Number  | Inductance (uH) | Wire Diameter | DCR(mΩ) | Rated Current(A) | Power Range |
|--------------|-----------------|---------------|---------|------------------|-------------|
| ZSUQ12H-15mH | 15mH            | 0.1*1.0       | 220 Max | 0.5A             | 48W         |
| ZSUQ12H-10mH | 10mH            | 0.13*1.0      | 220 Max | 0.6A             | 56W         |
| ZSUQ12H-5mH  | 5mH             | 0.2*1.0       | 220 Max | 0.7A             | 60W         |

**Note: The products can be customized according to customer requirement**

● ZSUQ15V TYPE

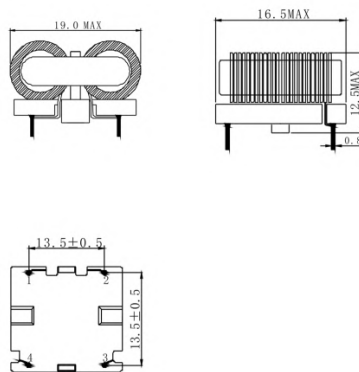


**A: Withstanding Voltage: AC 2.0KV 0.5sec(winding to winding)**  
**B: Measuring Condition: 1KHz, 250mV, 25°C.**  
**C: I<sub>rat</sub> is defined as the maximum rated current that is applied to the coil with the resulted temperature rise not exceeding 40°C.**

| Part Number  | Inductance (uH) | Wire Diameter | DCR(mΩ) | Rated Current(A) | Power Range |
|--------------|-----------------|---------------|---------|------------------|-------------|
| ZSUQ15V-28mH | 28mH            | 0.13*1.0      | 220 Max | 0.6A             | 50W         |
| ZSUQ15V-20mH | 20mH            | 0.15*1.2      | 220 Max | 0.7A             | 56W         |
| ZSUQ15V-18mH | 18mH            | 0.15*1.5      | 220 Max | 0.9A             | 72W         |
| ZSUQ15V-15mH | 15mH            | 0.15*1.5      | 220 Max | 1.5A             | 80W         |
| ZSUQ15V-5mH  | 5mH             | 0.3*1.2       | 220 Max | 2.0A             | 150W        |

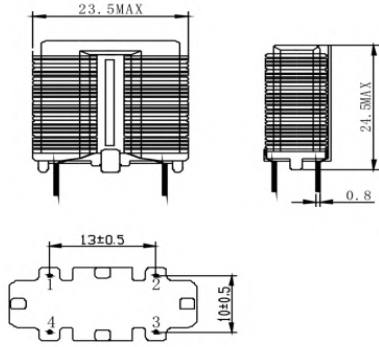
**Note: The products can be customized according to customer requirement**

● ZSUQ15H TYPE



| Part Number  | Inductance (uH) | Wire Diameter | DCR(mΩ) | Rated Current(A) | Power Range |
|--------------|-----------------|---------------|---------|------------------|-------------|
| ZSUQ15H-28mH | 28mH            | 0.13*1.0      | 260 Max | 0.6A             | 50W         |
| ZSUQ15H-20mH | 20mH            | 0.15*1.2      | 220 Max | 0.75A            | 56W         |
| ZSUQ15H-18mH | 18mH            | 0.15*1.5      | 220 Max | 0.9A             | 72W         |
| ZSUQ15H-15mH | 15mH            | 0.15*1.5      | 220 Max | 1.5A             | 80W         |
| ZSUQ15H-5mH  | 5mH             | 0.3*1.2       | 220 Max | 2.0A             | 150W        |

● ZSUQ19V TYPE

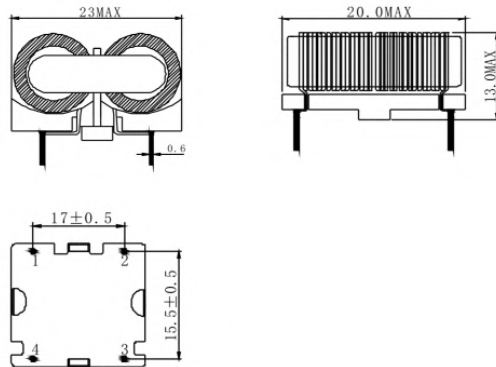


**A: Withstanding Voltage: AC 2.0KV 60Sec(Winding to Winding)**  
**B: Measuring Condition: 1KHz, 250mV, 25°C.**  
**C: I<sub>rat</sub> is defined as the maximum rated current that is applied to the coil with the resulted temperature rise not exceeding 40°C.**

| Part Number  | Inductance (uH) | Wire Diameter | DCR(mΩ) | Rated Current(A) | Power Range |
|--------------|-----------------|---------------|---------|------------------|-------------|
| ZSUQ19V-20mH | 20mH            | 0.15*1.0      | 240 Max | 1.0A             | 80W         |
| ZSUQ19V-10mH | 10mH            | 0.2*1.0       | 145 Max | 2.25A            | 180W        |
| ZSUQ19V-8mH  | 8mH             | 0.25*1.0      | 105 Max | 3.5A             | 220W        |
| ZSUQ19V-7mH  | 7mH             | 0.3*1.5       | 50 Max  | 4.5A             | 260W        |

**Note: The products can be customized according to customer requirement**

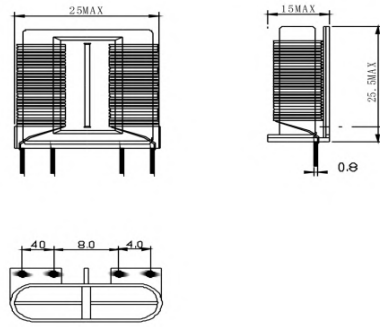
● ZSUQ15H TYPE



| Part Number  | Inductance (uH) | Wire Diameter | DCR(mΩ) | Rated Current(A) | Power Range |
|--------------|-----------------|---------------|---------|------------------|-------------|
| ZSUQ19H-20mH | 20mH            | 0.15*1.0      | 240 Max | 1.0A             | 80W         |
| ZSUQ19H-10mH | 10mH            | 0.2*1.0       | 145 Max | 2.25A            | 180W        |
| ZSUQ19H-8mH  | 8mH             | 0.25*1.2      | 105 Max | 3.5A             | 220W        |
| ZSUQ19H-5mH  | 5mH             | 0.3*1.2       | 50 Max  | 4.8A             | 280W        |

**Note: The products can be customized according to customer requirement**

● ZSUQ24V TYPE

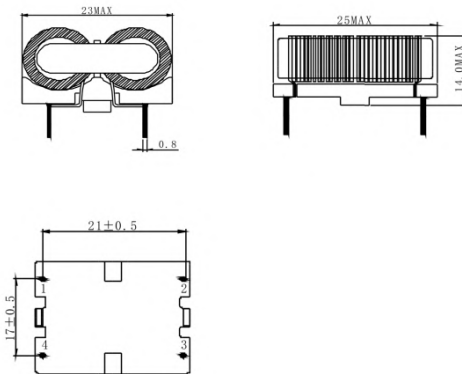


**A: Withstanding Voltage: AC 2.0KV 60Sec(Winding to Winding)**  
**B: Measuring Condition: 1KHz, 250mV, 25°C.**  
**C: Irat is defined as the maximum rated current that is applied to the coil with the resulted temperature rise not exceeding 40°C.**

| Part Number  | Inductance (uH) | Wire Diameter | DCR(mΩ) | Rated Current(A) | Power Range |
|--------------|-----------------|---------------|---------|------------------|-------------|
| ZSUQ24V-10mH | 10mH            | 0.3*1.5       | 75 Max  | 6.5A             | 250W        |
| ZSUQ24V-5mH  | 5mH             | 0.4*1.5       | 60 Max  | 7.5A             | 360W        |
| ZSUQ24V-2mH  | 2mH             | 0.6*2.0       | 50 Max  | 13A              | 600W        |

**Note: The products can be customized according to customer requirement**

● ZSUQ24H TYPE



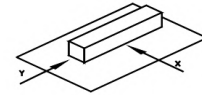
| Part Number  | Inductance (uH) | Wire Diameter | DCR(mΩ) | Rated Current(A) | Power Range |
|--------------|-----------------|---------------|---------|------------------|-------------|
| ZSUQ24H-10mH | 10mH            | 0.3*1.5       | 75 Max  | 4.5A             | 250W        |
| ZSUQ24H-5mH  | 5mH             | 0.4*1.5       | 60 Max  | 6.5A             | 360W        |

**Note: The products can be customized according to customer requirement**

## DETAIL ELECTRICAL CHARACTERISTICS

1. Operating temperature range: -40 to + 105°C(Includes temperature when the coil is heated) .
2. External appearance: On visual inspection, the coil has no external defects.
3. Terminal strength: After soldering. Between copper plate and terminals of coil. Push in two directions of X.Y

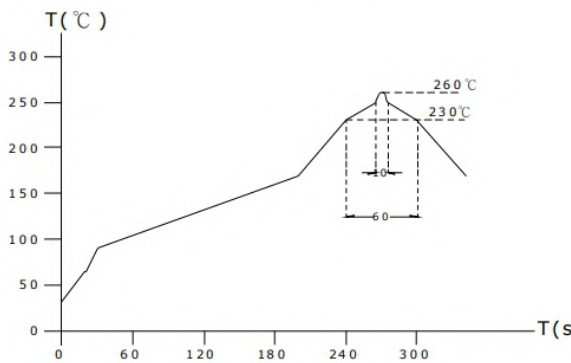
withstanding at below conditions.



Terminal should not peel off. (refer to figure at right) 5. 0N 60 sec.

4. Insulating resistance: Over 100MΩ at 100V D.C. between coil and core.
5. Dielectric strength: No dielectric breakdown at 100V D.C. for 1 minute between coil and core.
6. Temperature characteristics: Inductance coefficient  $(0\sim 2,000)\times 10^{-6}/^{\circ}\text{C}$  (-25~+80°C degree Celsius), inductance deviation within  $\pm 5.0\%$ , after 96 hours.
7. Humidity characteristics(Moisture Resistance): Inductance deviation within  $\pm 5\%$ , after 96 hours in 90~95% relative humidity at  $40 \pm 2^{\circ}\text{C}$  and 1 hour drying under normal condition.
8. Vibration resistance: Inductance deviation within  $\pm 5\%$ , after vibration for 1 hour. In each of three orientations at sweep vibration (10~55~10 Hz) with 1.5mm P-P amplitudes.
9. Shock resistance: Inductance deviation within  $\pm 5\%$ , after being dropped once with 981m/s<sup>2</sup> (100G) shock attitude upon a rubber block method shock testing machine, in three different orientations.
10. Resistance to Soldering Heat: 260°C, 10 seconds(See attached recommend reflow) .
11. Storage condition: Temperature Range: 0°C ~ 35°C; -40°C ~ 105°C (after PCB), Humidity Range: 50% ~ 70% RH.
12. Use components within 12 months. If 12 months or more have elapsed, check solderability before use.
13. Reflow profile recommend:

Lead-free heat endurance test



Lead-free the recommended reflow condition

