

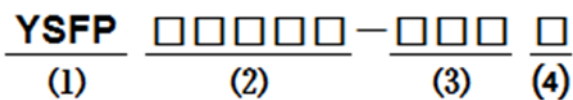
**■ Features**

- Assemblage design, sturdy structure.
- High inductance, high current, low magnetic loss, low ESR, small parasitic capacitance.
- Flat wire winding, achieve a low D.C. Resistance.
- Temperature rise current and saturation current is less influenced by environment.
- Operating temperature range: -40°C ~ +125°C.

**■ Applications**

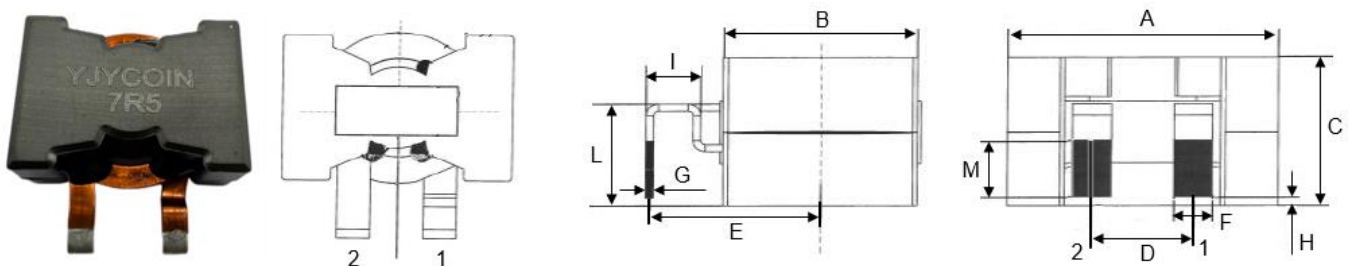
- Low profile, high current power supplies.
- Battery powered devices.
- DC/DC converters in distributed power systems.
- DC/DC converters for field programmable gate array.

**■ Product Identification**



- (1) : Type
- (2) : Dimensions
- (3) : Inductance value
- (4) : Inductance Tolerance: M=±20%, K=±10%, J=±5%

**■ Shapes and Dimensions (Unit: mm)**



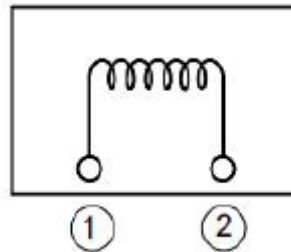
TYPE	A Max.	B Max.	C Max.	D	E	F	G	H	L Min.	L	M Min.
YSFP2612L	27.2	19.8	12.5	10.4±0.4	17.4±0.5	3.0±0.1	0.6±0.1	1.5±0.8	5.6	7~12.5	5.0

**Electrical requirements**

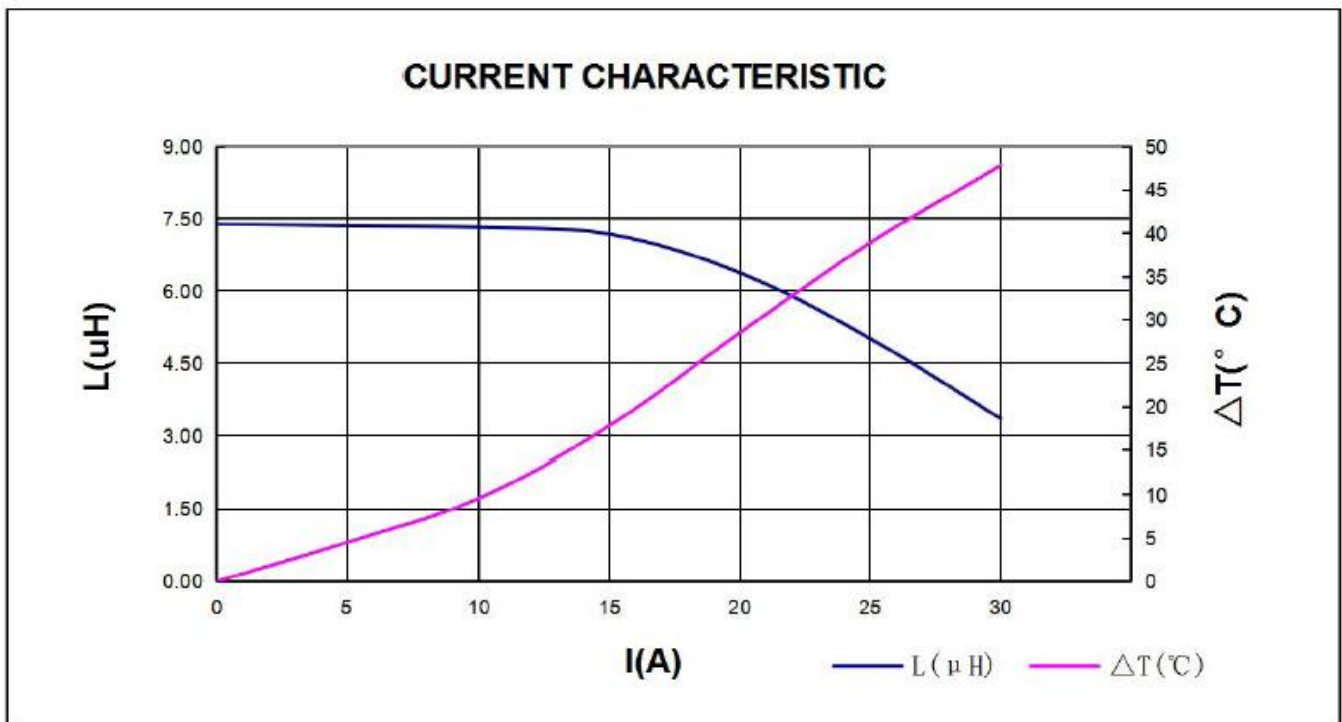
Part Number	L (uH)	Test Freq.	DCR Max.(mΩ)	I sat (A)	I rms (A)
YSFP2612L-7R5K	7.5±10%	200KHz/0.1V	2.6	19	22

- ※ All test data is based on 25 °C ambient.
- ※ DC current(A) that will cause an approximate  $\Delta T 40^{\circ}\text{C}$ .
- ※ DC current(A) that will cause L0 to drop approximately 20% Typ.
- ※ The part temperature (ambient + temp rise) should not exceed 125°C under worst case operating conditions.  
Circuit design,component.PWB trace size and thickness,airflow and other cooling provision all affect the part temperature.Part temperature should be verified in the den application.

**Electrical schematics**



**Saturation current VS temperature rise current curve**

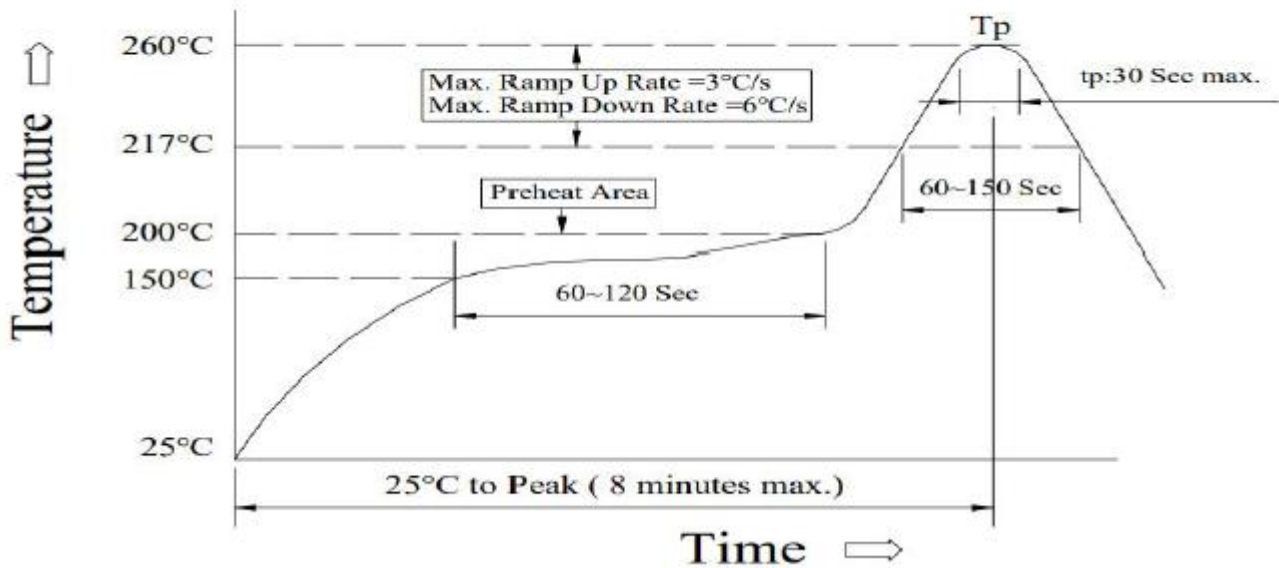


## ■ Reliability

Item	Specification and Requirement	Test Method
Solder ability test	Terminals area must have 95% min solder coverage	Solder heat proof: ① Preheating: $160 \pm 10^{\circ}\text{C}$ for 90 seconds ② Retention time: $245 \pm 5^{\circ}\text{C}$ for $2 \pm 0.5$ seconds
Vibration test	Inductance change: Within $\pm 5\%$ Without Mechanical damage such as break	① Vibration frequency: (10Hz to 55Hz to 10Hz) in 60 seconds as a period ② Vibration time: Period cycled for 2 hours in each of 3 mutual perpendicular directions. ③ Amplitude: 1.5mm Max.
Shock test	Inductance change: Within $\pm 5\%$ Without Mechanical damage such as break	① Peak value: 100G. ② Duration of pulse: 11ms. ③ Times in each positive and negative direction of 3 mutual perpendicular directions
Thermal shock	Inductance change: Within $\pm 5\%$ Without Mechanical damage such as break	① Repeat 100 cycle as follow ( $-55 \pm 2^{\circ}\text{C}$ 30 $\pm$ 3 minutes), Room temperature, 5 minutes ( $+125 \pm 2^{\circ}\text{C}$ , 30 $\pm$ 3 minutes) ② Recovery: 48+4/-0 hours of recovery Under the standard condition after the test. (see Note 1)
High temperature life test	Inductance change: Within $\pm 5\%$ Without Mechanical damage such as break	① Environment condition: $85 \pm 2^{\circ}\text{C}$ Applied current: Rated current ② Duration: 1000+4/-0 hours (see Note 1)
Humidity Resistance	Inductance change: Within $\pm 5\%$ Without Mechanical damage such as break	① Environment condition: $60 \pm 2^{\circ}\text{C}$ Humidity: 90-95% Applied current: Rated current ② Duration: 1000+4/-0 hours (see Note 1)
Low temperature life test	Inductance change: Within $\pm 5\%$ Without Mechanical damage such as break	Store temperature $-55 \pm 2^{\circ}\text{C}$ for total 1000+4/-0 hours
High temperature life test	Inductance change: Within $\pm 5\%$ Without Mechanical damage such as break	Store temperature $+125 \pm 2^{\circ}\text{C}$ for total 1000+4/-0 hours

**Reflow Profile**

**Power Choke Coil Type**



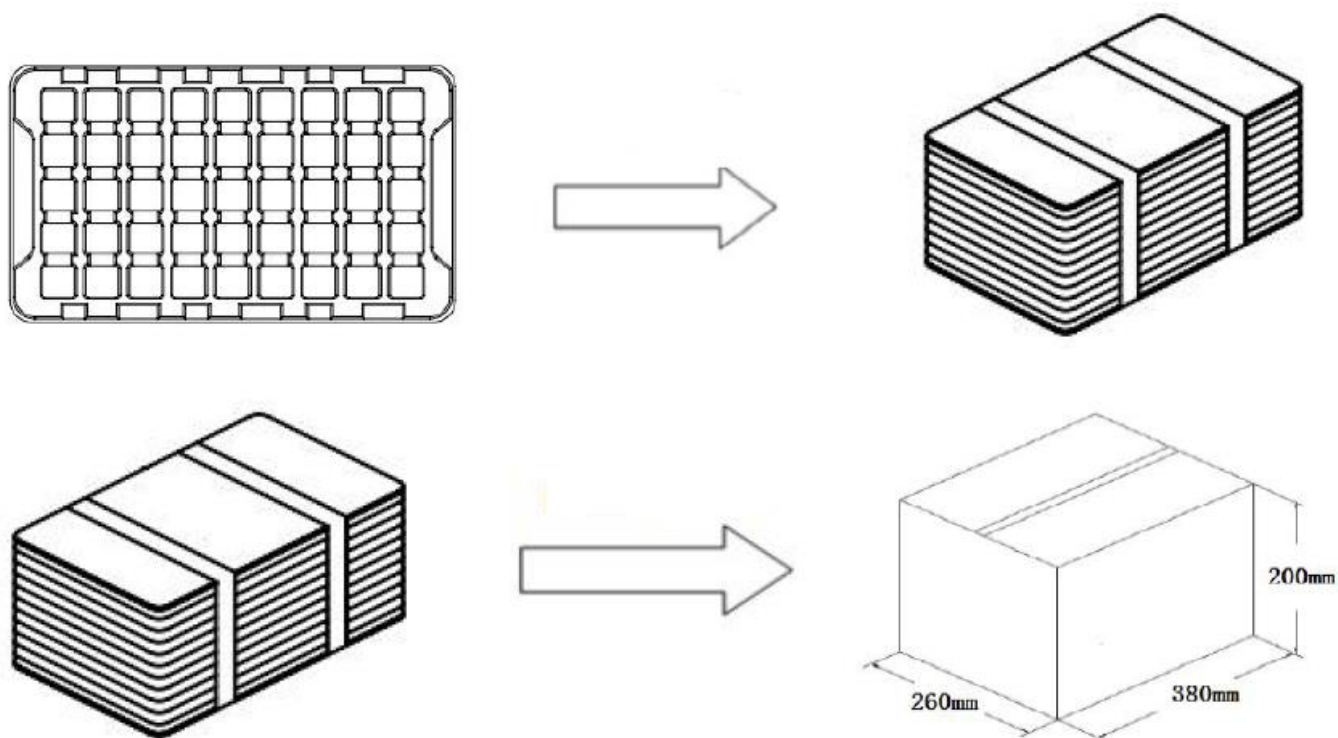
**Reflow Soldering Method**

Reflow Soldering	Tp:255 ~ 260°C	Max. 30 seconds(tp)
	217°C	60 ~ 150 seconds
Pre-Heat	150 ~ 200°C	60 ~ 150 seconds
Time 25°C to peak temperature	8 minutes Max.	

**Soldering iron method**

350±5°C Max.3 seconds.

**■ Packaging**



Product Series	Quantity/Tray	Quantity/Carton
YSFP2612L	40 PCS	280 PCS

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