High Current Power Inductor

■ Features

● Assemblage design,sturdy structure.

● High inductance,high current,low magnetic loss,low ESR,small parasitic capacitance.

● Flat wire winding,achieve alow D.C.Resistance.

● Temperature rise current and saturation current is less influenced by environment.

● Operating temperature range:-40℃ ~ +125℃.

■ 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

YSFP □□□□□ - □□□ □
(1)   (2)   (3)   (4)

(1)：Type

(2)：Dimensions

(3)：Inductance value

(4)：Inductance Tolerance: M=±20%,K=±10%,J=±5%

■ Shapes and Dimensions (Unit：mm)
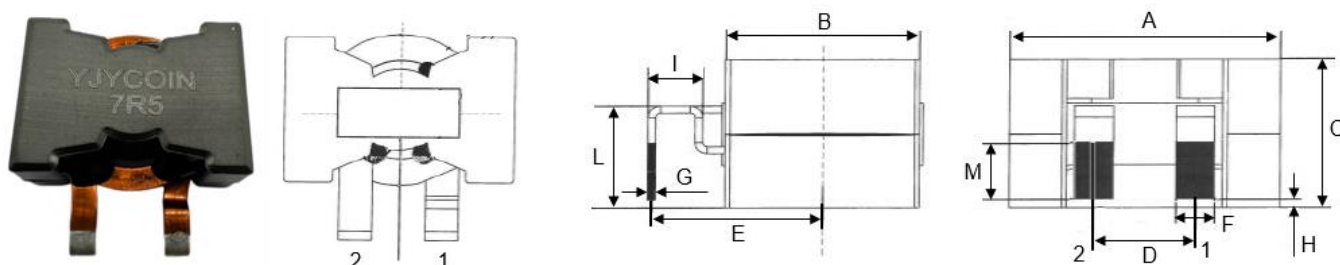
TYPE	A Max.	B Max.	C Max.	D	E	F	G	H	L Min.	L	M Min.
YSFP2612L	27.2	19.8	12.5	10.4±0.4	17.4±0.5	3.0±0.1	0.6±0.1	1.5±0.8	5.6	7~12.5	5.0

■ 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 ℃ ambient.

※ DC current(A) that will cause an approximate ΔT40℃.

※ DC current(A) that will cause L0 to drop approximately 20% Typ.
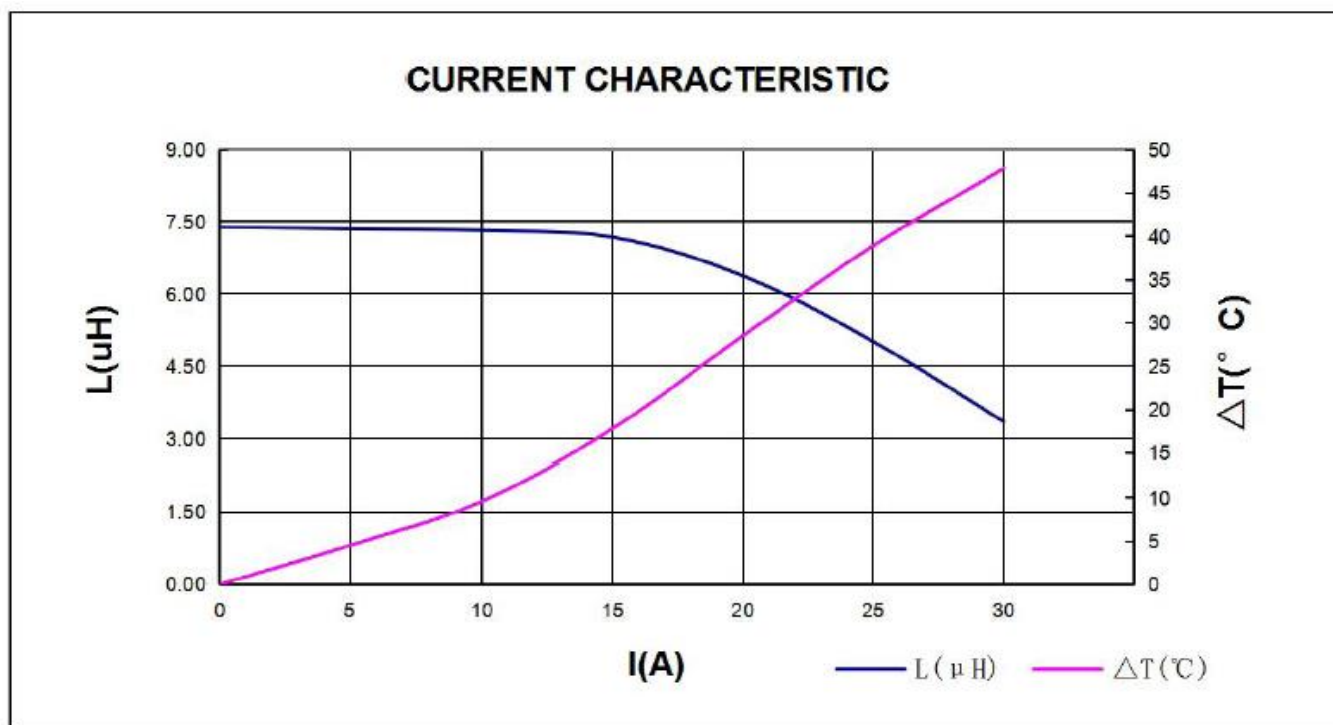
※ The part temperature (ambient + temp rise) should not exceed 125℃ under worst case operating conditions.

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
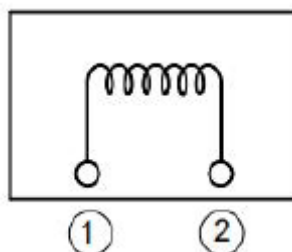
■ Saturation current VS temperature rise current curve

High Current Power Inductor

■ Reliability

Item	Specification and Requirement	Test Method
Solder a bility test	Terminals area must have 95% min solder coverage	Solder heat proof: ①Preheating:160±10℃ for 90 seconds ②Retention time:245±5℃ for 2±0.5 seconds
Vibration test	Inductance change:Within±5% Without Mechanical damage such as break	① Vibration frequency:(10Hz to 55Hz to 10Hz) in 60 seconds as a period ② Vibration time: Reriod cycled for 2 hours in each of 3 mutual perpendicular directions. ③ Amplitude:1.5mm Max.
Shock test	Inductance change: Within±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±5% Without Mechanical damage such as break	① Repeat 100 cycle as follow (-55±2℃ 30±3 minutes),Room temperature,5 minutes (+125±2℃，30±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±5% Without Mechanical damage such as break	① Environment condition:85±2℃ Applied current:Rated current ② Duration:1000+4/-0 hours(see Note 1)
Humidity Resistance	Inductance change: Within±5% Without Mechanical damage such as break	① Environment condition:60±2℃ Humidity:90-95% Applied current:Rated current ② Duration:1000+4/-0 hours(see Note 1)
Low temperature life test	Inductance change: Within±5% Without Mechanical damage such as break	Store temperature -55±±2℃ for total 1000+4/-0 hours
High temperature life test	Inductance change: Within±5% Without Mechanical damage such as break	Store temperature +125±2℃for total 1000+4/-0 hours

■ Reflow Profile

Power Choke Coil Type
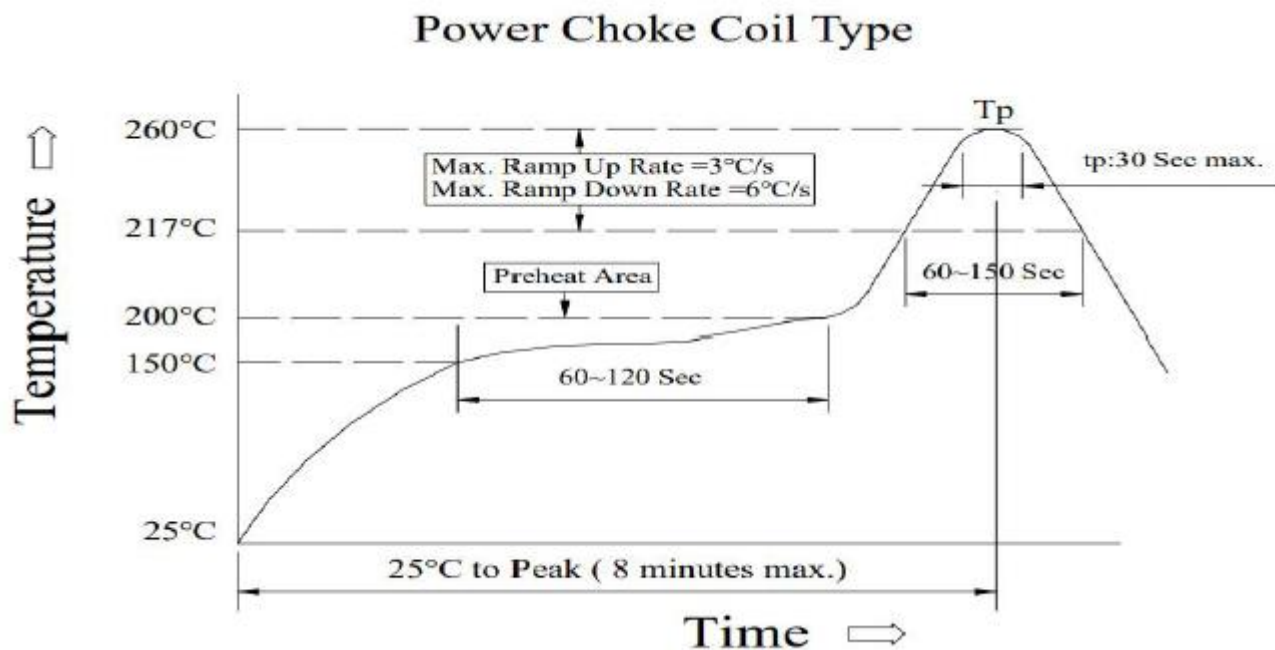
■ Reflow Soldering Method

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

■ Soldering iron method

350±5℃ Max.3 seconds.

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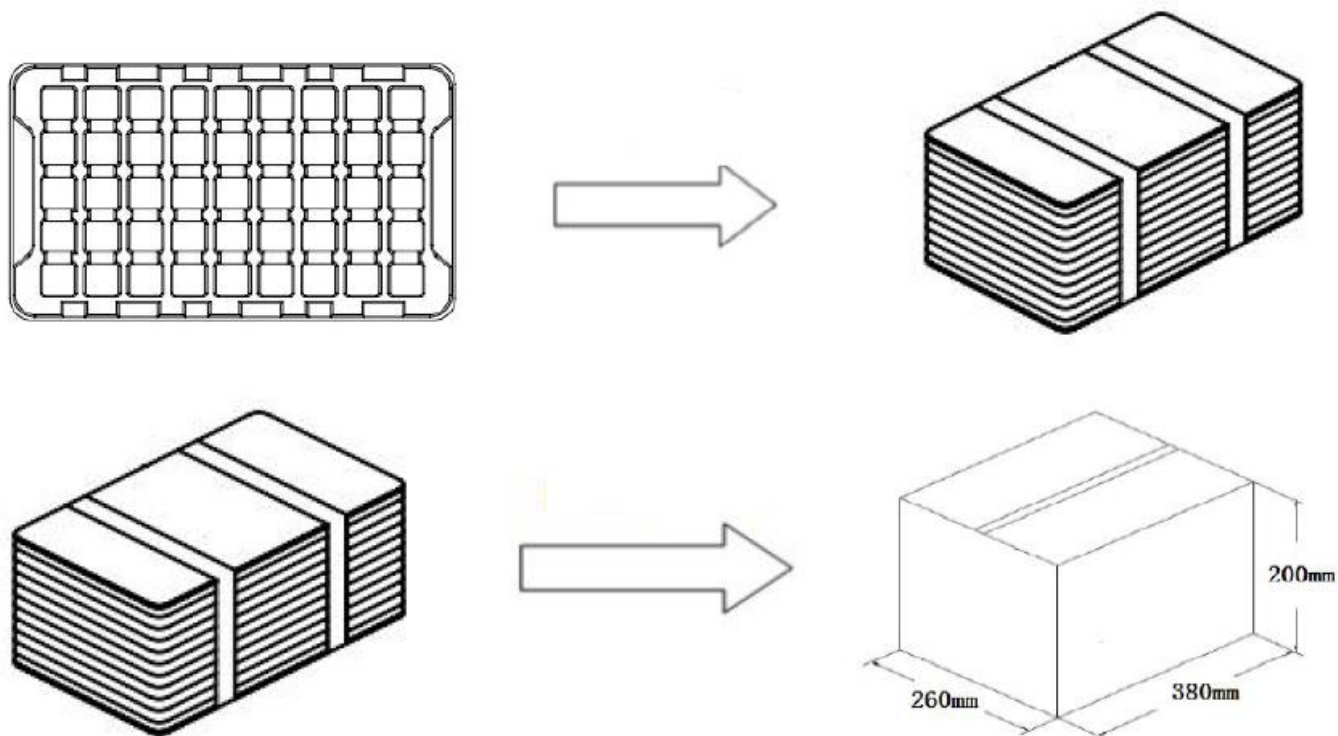
Product Series	Quantity/Tray	Quantity/Carton
YSFP2612L	40 PCS	280 PCS