■ 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

YSFB □□□□－□□□ □

(1) (2) (3) (4)

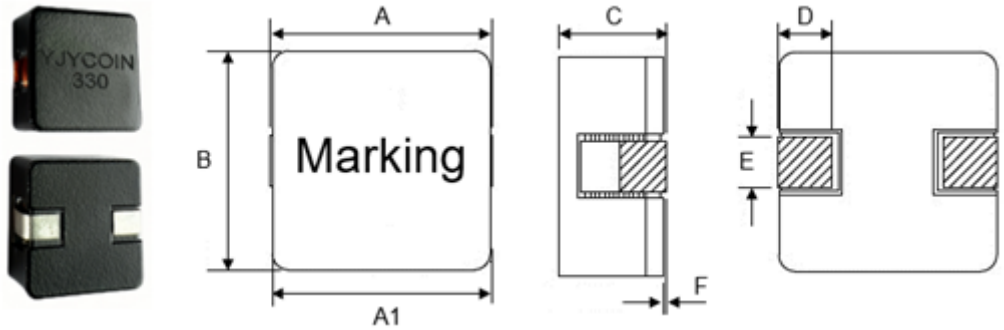
(1)： Type

(2)： Dimensions

(3)： Inductance value

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

■ Shapes and Dimensions (Unit：mm)



TYPE	A	A1	B	C	D	E	F
YSFB2212	22.5±1.0	22.0±0.5	22.0±0.5	12.0±0.4	5.5±1.0	3.5±0.3	0~0.3

■ Electrical requirements

Part Number	Inductance (uH)	DCR Max. (mΩ)	Saturation current (A)	Temperature rise current(A)
YSFB2212-4R7M	4.7±20%	2.5	50	28

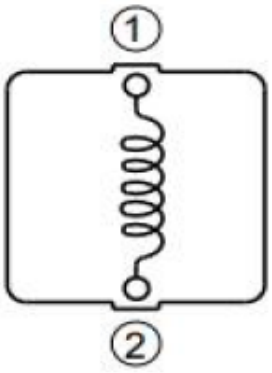
※ All test data is based on 25 ℃ ambient.

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

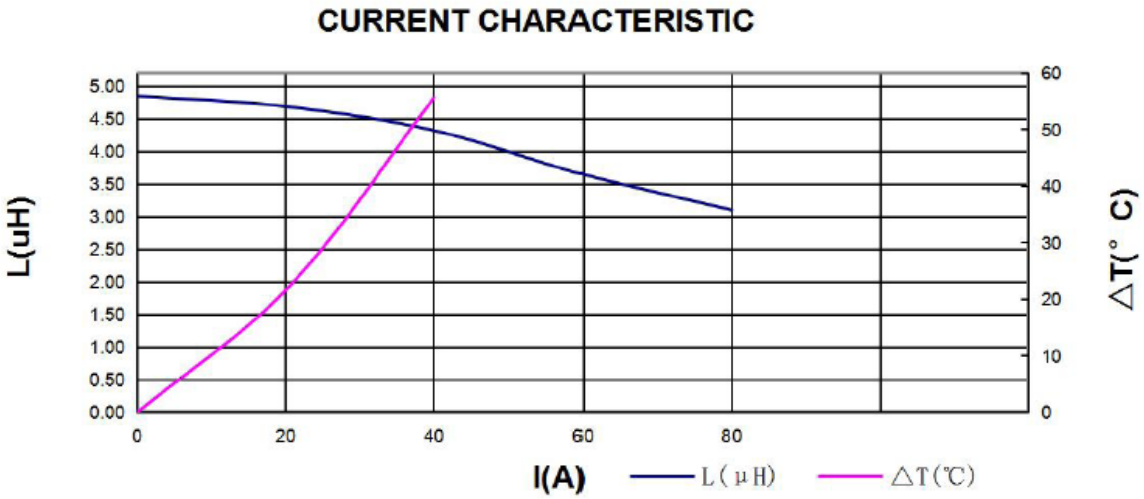
※ DC current(A) that will cause L0 to drop approximately 30% Typ.

※ 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



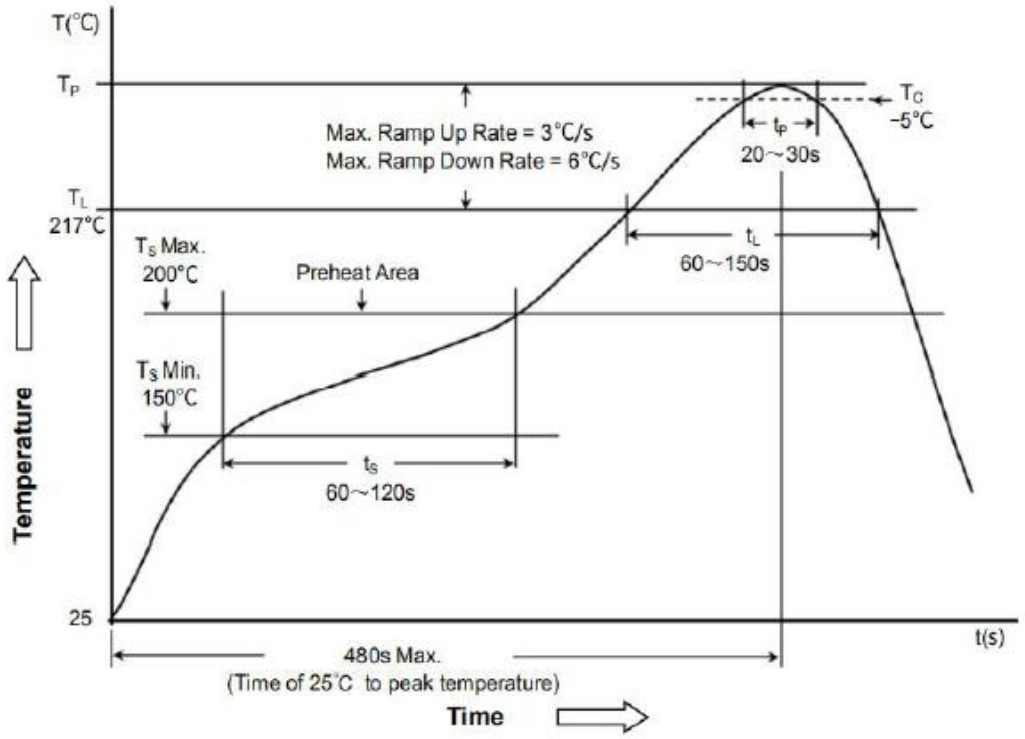
■ Current characteristic



■ 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: Period 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



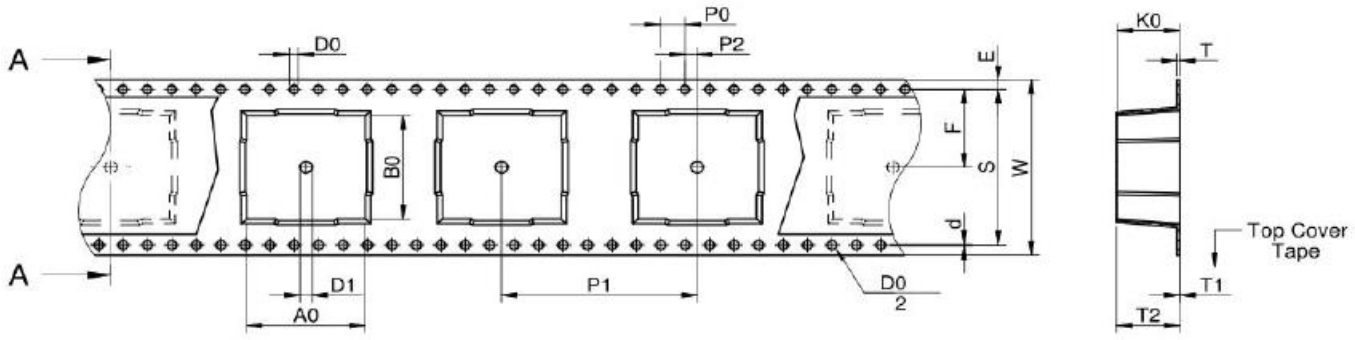
■ Reflow Soldering Method

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

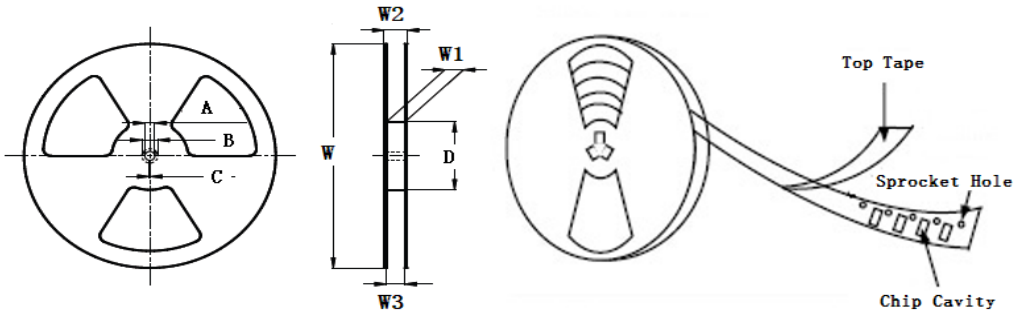
350±5℃ Max.3 seconds.

■ Taping Dimensions(Unit:mm)



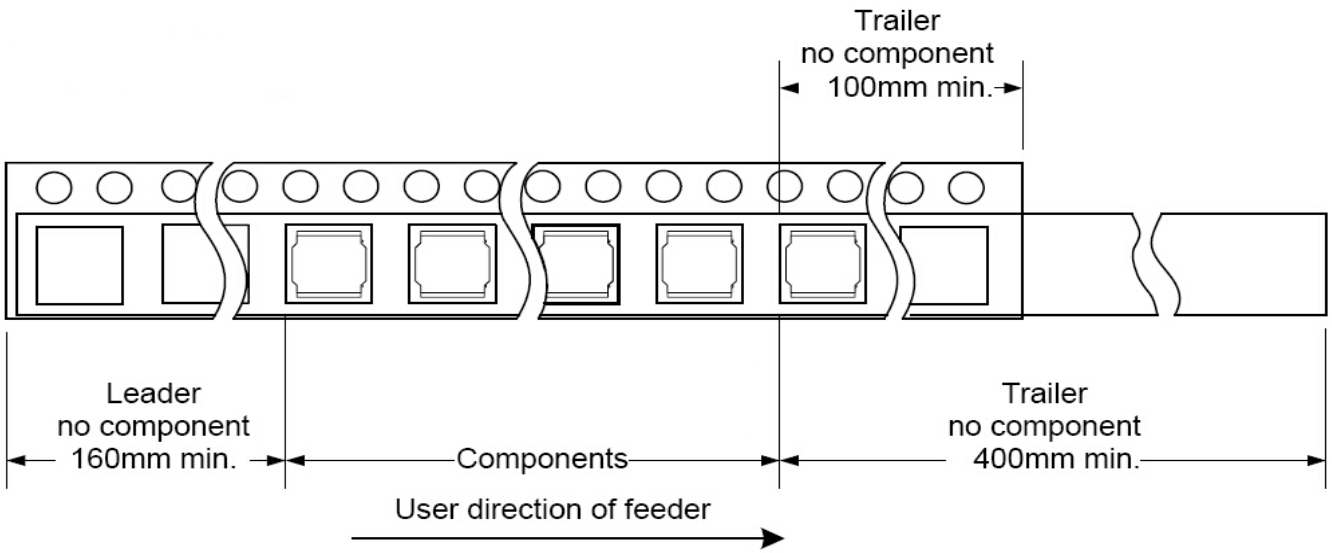
W	A0	B0	K0	P1	E	F	D0	P0	T	MPQ
44.0±0.3	23.5±0.1	23.5±0.1	13.1±0.1	32.0±0.2	1.75±0.1	20.2±0.1	1.5±0.1	4.0±0.1	0.5±0.05	120

■ Reel Dimensions(Unit:mm)

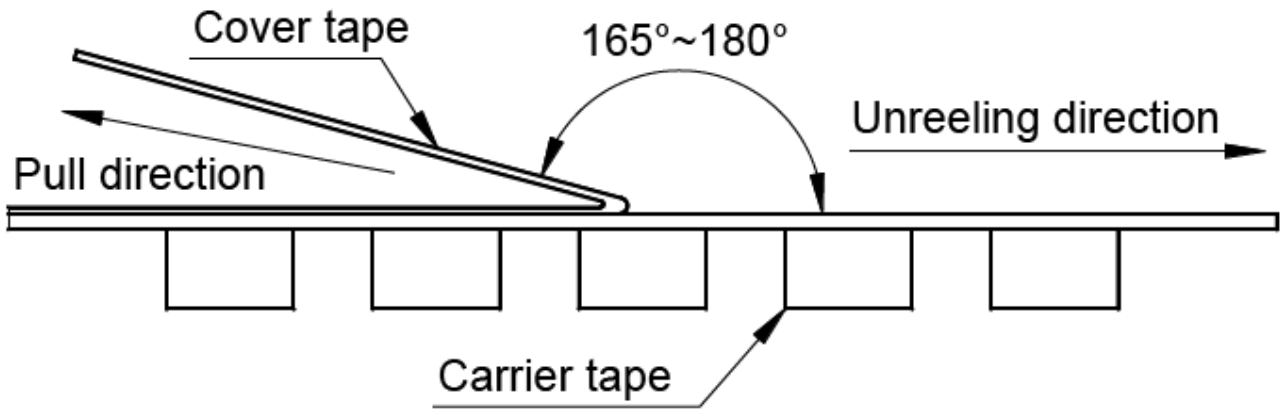


TYPE	W	W1	W2	W3	A	B	C	D
YSFB2212	330±0.5	44.4+1.5-0	50.4Max	43.9 Min	13.0±0.50	21.0±0.80	2.0±0.50	100 Min

■ Direction of rolling



■ Cover tape peel off condition



Cover tape peel force shall be 0.1N to 1.3N.

Reference peel speed 300±10mm/min.