■ Features

- Molding Inductor.
- Low Profile,Low Temp.
- Large Current.
- Customize For Different Need.
- Operating temperature:-40℃ ~ +125℃.

■ Applications

- General Electronic.
- Video Device,TV,TFT.
- Power Module for PC.
- NB/Lap Top Computer.
- Server,VGA Card/Module.

■ Product Identification

YSMC □□□□□－□□□ □

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

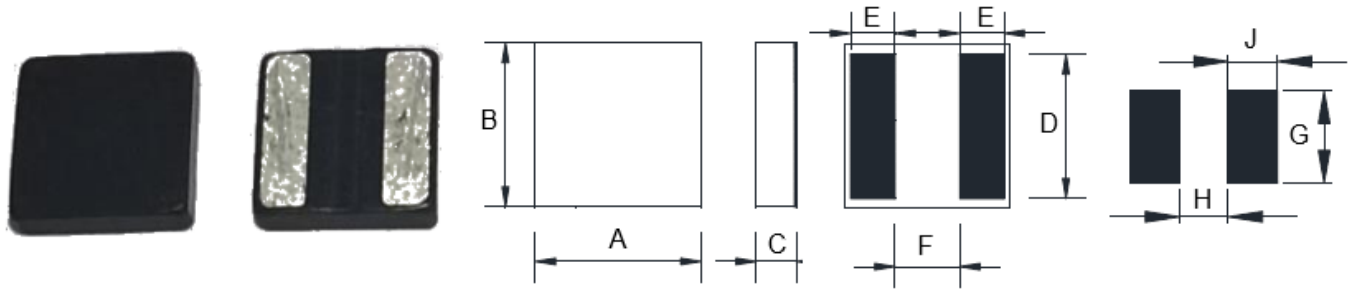
(1)： Type

(2)： Dimensions

(3)： Inductance value

(4)： Inductance Tolerance：N=±30%,M=±20%，K=±10%

■ Shapes and Dimensions (Unit：mm)



A	B	C Max.	D	E	F.	G Ref.	H Ref.	J Ref
4.1±0.2	4.1±0.2	1.0	3.7±0.2	1.0±0.2	1.6±0.2	3.9	1.6	1.2

■ Characteristics

Part Number	Inductance (uH) @100KHz	DC Resistance (mΩ)		Saturation current(A)		Heat Rating current(A)	
		Typ.	Max.	Typ.	Max.	Typ.	Max.
YSMC4010S-100M	10	198	216	2.1	2.0	2.6	2.4

※ Saturation current：indicates the current when the inductance decrease to approximately 70% of initial value.(at 25℃)

※ The temperature rise current value is the DC current value having temperature increase up to approximately 40℃. (at 25℃)

※ RoHS COMPLIANCE REMARKS

Lead will be present in the ferrite core of the matrix in the component. This use is exempt from RoHS legislation per the annex(item 7),which refers to"lead in electronic ceramic part".

■ General characteristics

*STANDARD TESTING CONDITIONS:

UNLESS OTHERWISE SPECIFIED,THE STANDARD RANGE OF ATMOSPHERIC CONDITIONS FOR MEASUREMENTS AND TESTS ARE FOLLOWS:AMBIENT TEMPERATURE:15℃~35℃。

RELATIVE HUMIDITY:25%~85%.AIR PRESSURE:86kPa~106kPa.

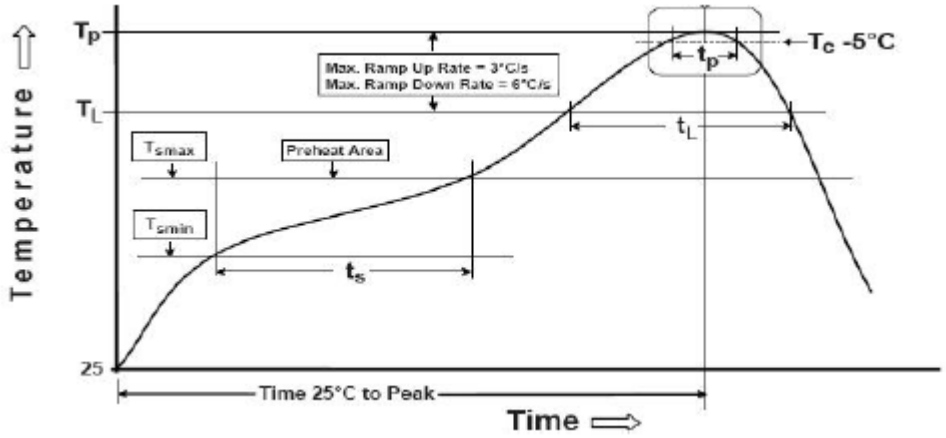
IF THERE IS ANY DOUBT ABOUT THE RESULTS,MEASUREMENT SHALL BE MADE WITHIN THE FOLLOWING LIMITS:AMBIENT TEMPERATURE:20℃±1℃.RELATIVE HUMIDITY:63%~67%.

AIR PRESSURE:86kPa~106kPa.

■ Reliability Test

NO.	ITEMS	CONDITIONS	SPECIFICATION
1	OPERATION TEMPERATURE STORAGE TEMPERATURE		-40 ~ +125 ℃ （INCLUDING COIL TEMPERATURE RISE） -40 ~ +125 ℃
2	TEMPERATURE COEFFICIENT	-30 ~ +105 ℃	0 ~ 2000ppm/℃
3	FIXING STRENGTH	SAMPLE IS PUSHED IN THREE DIRECTIONS O,X,Y AND Z WITH FORCE OF 5. ON FOR 10±5 SECONDS.AFTER SOLDERING BETWEEN COPPER PLATE AND ELECTRODES.	NO ELECTRODE DETACHMENT.
4	RESISTANCE TO SOLDERING HEAT TEST	REFER TO THE SPEC “STD-001NP”	NO MECHANICAL BREAKAGE.DEVIATION RELATIVE TO INITIAL VALUE:L:WITHIN ±5.0%
5	SOLDERABILITY TEST	IMMERSE THE ELECTRODE IN FLUX FOR 5 SECONDS.THEN DIP THE ELECTRODE INTO A SOLDERING BATH OF 245±5℃ FOR 2±0.5 SECONDS.	OVER 95% OF THE SURFACE BEING IMMERSED SHALL BE COVERED WITH NEW SOLDER UNIFORMLY.
6	VIBRATION TEST	AMPLITUDE:1.5mm P-P FREQUENCY:10~55~10Hz(1 MINUTE PER CYCLE) DURATION:1 HOUR IN EACH OF X,Y,Z AXIS.	DEVIATION RELATIVE TO INITIAL VALUE: L:WITHIN ±5.0%
7	HUMIDITY TEST	TEMPERATURE:60℃±2℃ HUMIDITY:90%~95%RH DURATION:96±4 HOURS.	DEVIATION RELATIVE TO INITIAL VALUE: L:WITHIN ±5.0%
8	THERMAL SHOCK TEST	20 CYCLES OF +105℃ FOR 30 MINUTES,-40℃ FOR 30 MINUTES.CHARACTERISTICS ARE MEASURED AFTER THE AMBIENT AIR EXPOSURE OF 1 HOUR.	DEVIATION RELATIVE TO INITIAL VALUE: L:WITHIN ±5.0%
9	HIGH TEMPERATURE STORAGE TEST	TEMPERATURE:125℃±2℃ DURATION:96±4 HOURS	
10	LOW TEMPERATURE STORAGE TEST	TEMPERATURE:-40℃±3℃ DURATION:96±4 HOURS.	

■ Reflow profile for SMT components

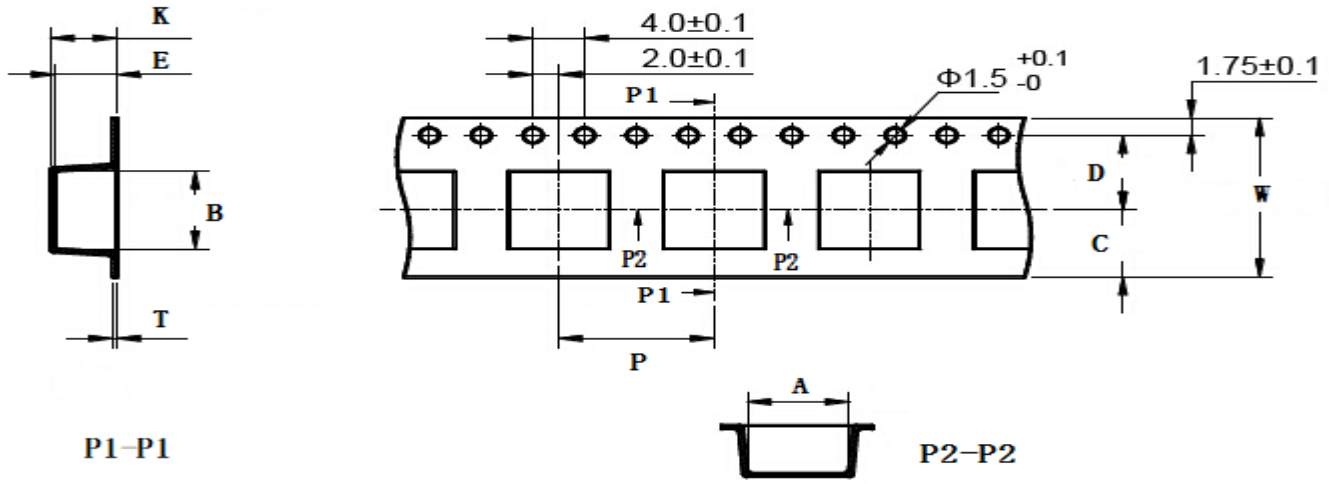


■ Reflow is referred to standard IPC/JEDEC J-STD-020D

Profile Feature		Lead(Pb) Free solder
Preheat and Soak	Temperature Min.(Tsmin)	150℃
	Temperature Max.(Tsmax)	200℃
	time(Tsmin to Tsmax)(ts)	60-120 Seconds
Average ramp up rate Tsmax to Tp		3℃/Second Max.
Liquidous temperature(TL)		217℃
Time(TL)maintained above TL		60-150 Seconds
Peak package body temperature(Tp)		Table2
Time(tp)*within 5℃ of the specified classification Temperature(Tc)		30*seconds
Average Ramp-down rate(Tp to TL)		6℃/second max
Time 25℃ to peak temperature		8 minutes max.

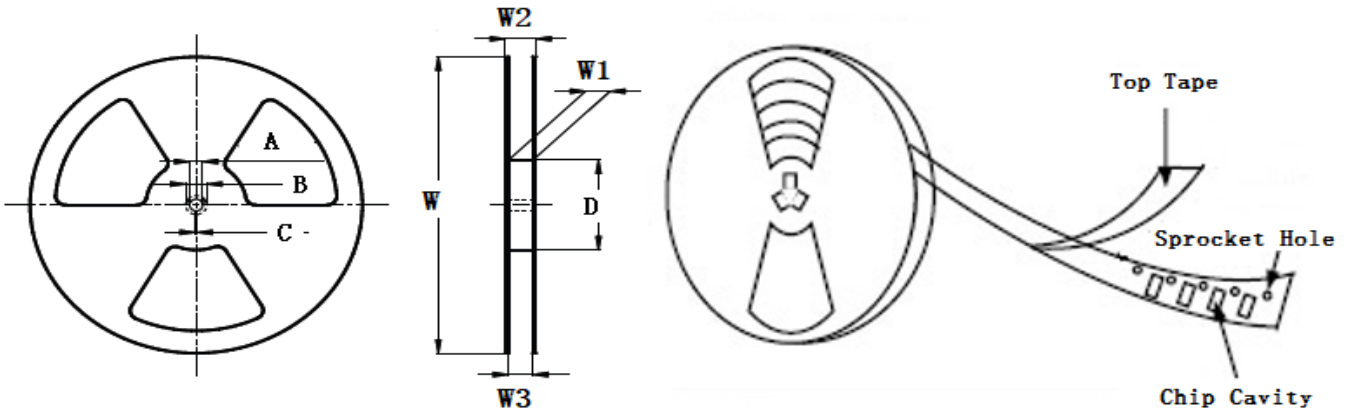
Table2. Pb-Free Process-Classification Temperatures(Tc)			
Package Thickness	Volume mm³ ＜350	Volume mm³ 350~2000	Volume mm³ ＞2000
＜1.6mm	260℃	260℃	260℃
1.6mm – 2.5mm	260℃	250℃	245℃
＞2.5mm	250℃	245℃	245℃

■ Taping Dimensions(Unit:mm)



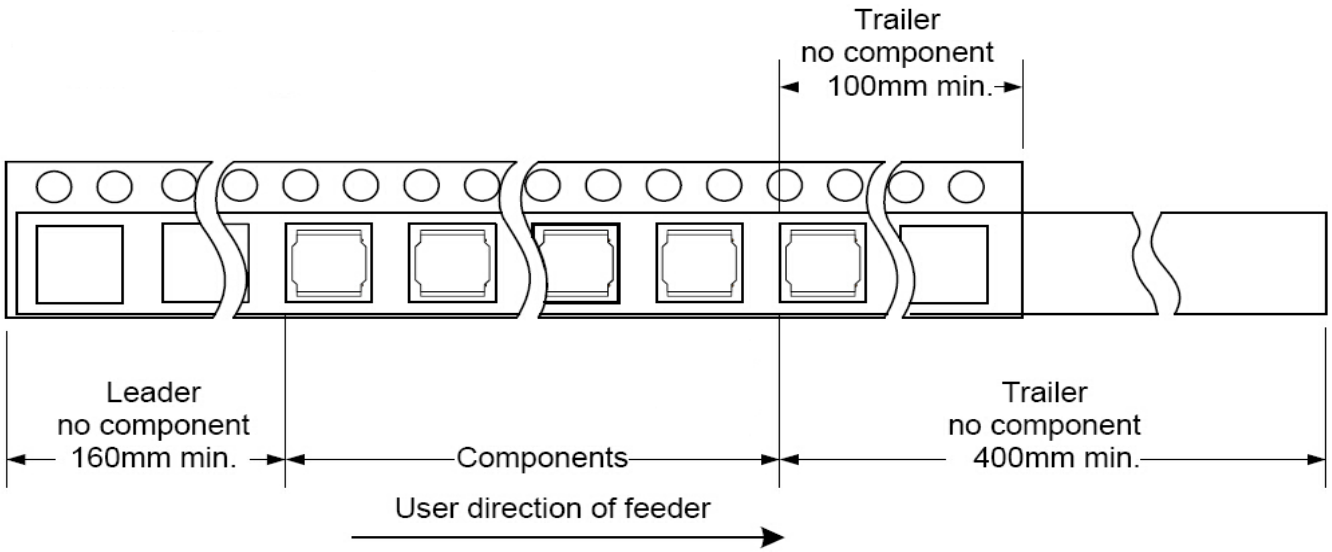
TYPE	W	A	B	C	D	E	P	K Ref	T	MPQ
YSMC4010S	8.0±0.1	2.35±0.05	2.8±0.05	2.75	3.5±0.05	1.35±0.05	4.0±0.1	1.35	0.25±0.05	3000

■ Reel Dimensions(Unit:mm)

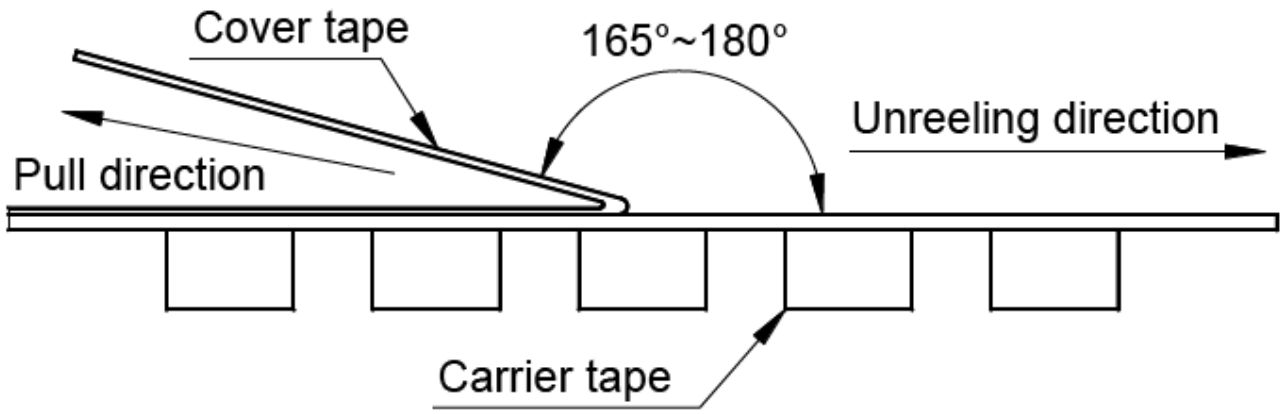


TYPE	W	W1	W2	W3	A	B	C	D
YSMC4010S	178±2.0	12.8±1.50	14.4MAX	8.4 Min	13.0±0.50	21.0±0.80	2.0±0.50	100 Min

■ 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.

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