

## ■ 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

$$\frac{\text{YSMC}}{(1)} \quad \frac{\square\square\square\square\square}{(2)} - \frac{\square\square\square}{(3)} \quad \frac{\square}{(4)}$$

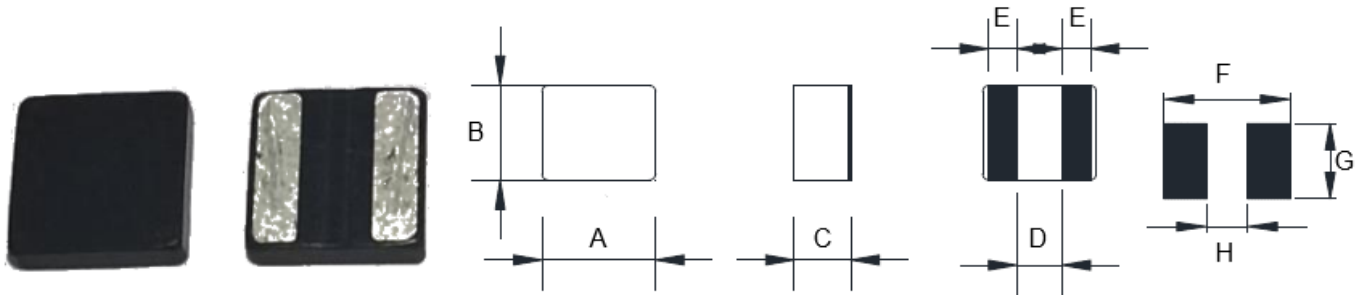
(1) : Type

(2) : Dimensions

(3) : Inductance value

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

## ■ Shapes and Dimensions (Unit: mm)



TYPE	A	B	C Max.	D	E	F Ref.	G Ref.	H Ref.
YSMC2016S	2.0±0.2	1.6±0.2	1.0	0.8 Typ	0.5 Typ	2.1	1.7	0.5

## ■ YSMC2016S Series

Part Number	Inductance (uH) @100KHz	DC Resistance (mΩ)		Saturation current(A)		Heat Rating current(A)	
		Typ.	Max.	Typ.	Max.	Typ.	Max.
YSMC2016S-R24□	0.24	9	12	7.8	7.0	5.9	5.4
YSMC2016S-R33□	0.33	16	19	7.6	6.8	5.7	5.2
YSMC2016S-R47□	0.47	18	21	6.0	5.6	5.4	4.8
YSMC2016S-1R0□	1.0	35	42	4.5	4.2	4.6	4.2
YSMC2016S-1R5□	1.5	61	68	3.5	3.0	3.6	3.2

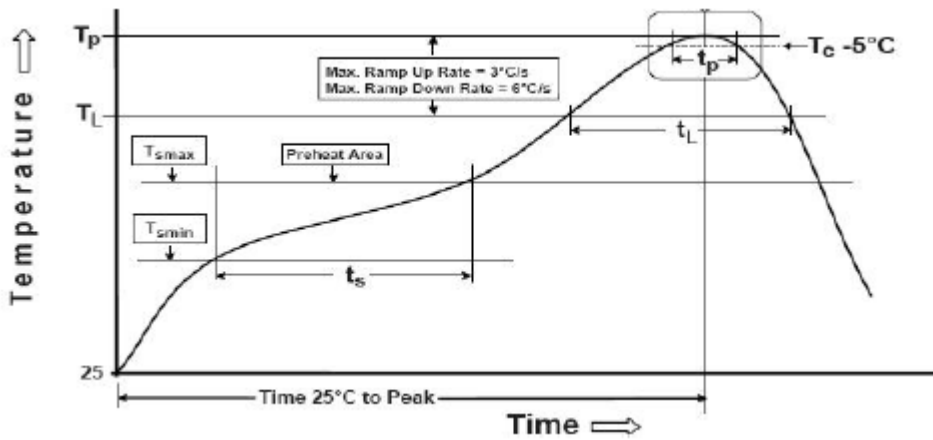
※ Saturation current: indicates the current when the inductance decrease to approximately 70% of initial value.(at 25°C)

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

## ■ Reliability Test

NO.	ITEMS	CONDITIONS	SPECIFICATION
1	OPERATION TEMPERATURE STORAGE TEMPERATURE		-40 ~ +125 °C (INCLUDING COIL TEMPERATURE RISE) -40 ~ +125 °C
2	TEMPERATURE COEFFICIENT	-30 ~ +105 °C	0 ~ 2000ppm/°C
3	FIXING STRENGTH	SAMPLE IS PUSHED IN THREE DIRECTIONS O,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 °C FOR 2±0.5 SECONDS.	OVER 95% OF THE SURFACE BEING IMMERSED SHALL BE COVERED WITH NEW SOLDER UNIFORMLY.
6	HUMIDITY TEST	TEMPERATURE:60°C±2°C HUMIDITY:90%~95%RH DURATION:96±4 HOURS.	DEVIATION RELATIVE TO INITIAL VALUE: L:WITHIN ±5.0%
7	THERMAL SHOCK TEST	20 CYCLES OF +105°C FOR 30 MINUTES,-40°C FOR 30 MINUTES.CHARACTERISTICS ARE MEASURED AFTER THE AMBIENT AIR EXPOSURE OF 1 HOUR.	DEVIATION RELATIVE TO INITIAL VALUE: L:WITHIN ±5.0%
8	HIGH TEMPERATURE STORAGE TEST	TEMPERATURE:125°C±2°C DURATION:96±4 HOURS	
9	LOW TEMPERATURE STORAGE TEST	TEMPERATURE:-40°C±3°C DURATION:96±4 HOURS.	

## Reflow profile for SMT components



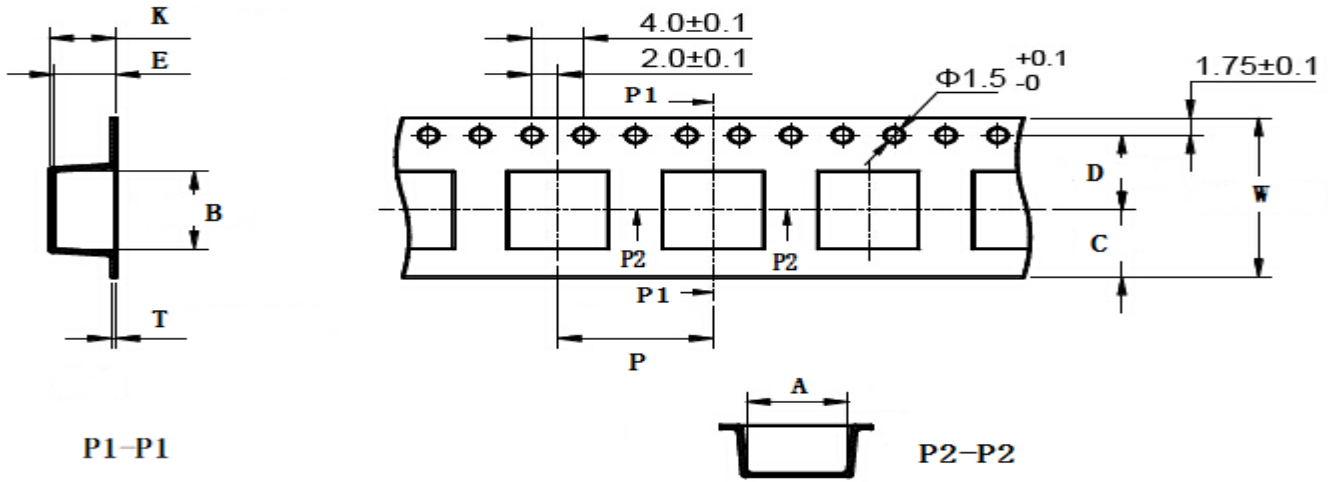
## Reflow is referred to standard IPC/JEDEC J-STD-020D

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

Table2. Pb-Free Process-Classification Temperatures (Tc)

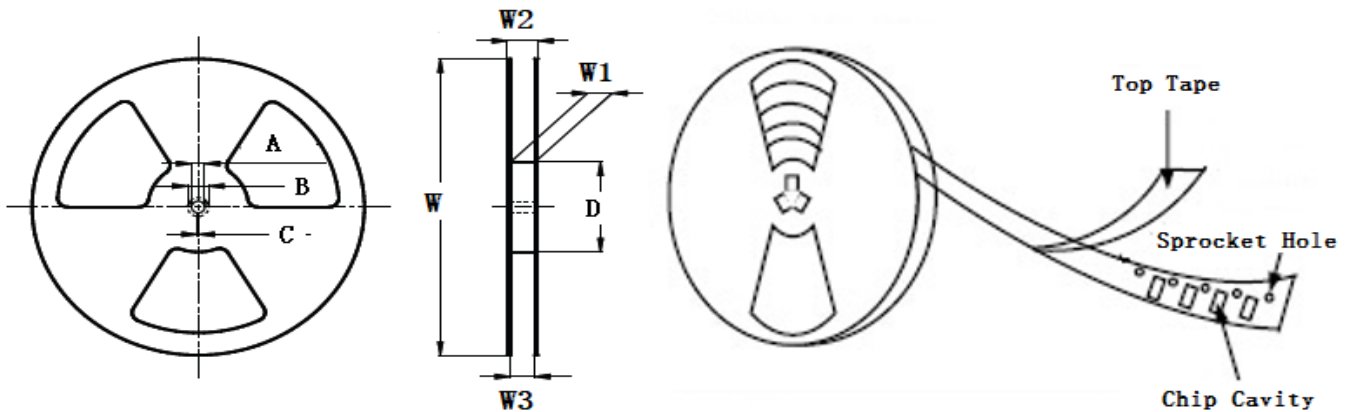
Package Thickness	Volume mm <sup>3</sup> <350	Volume mm <sup>3</sup> 350~2000	Volume mm <sup>3</sup> >2000
<1.6mm	260°C	260°C	260°C
1.6mm - 2.5mm	260°C	250°C	245°C
>2.5mm	250°C	245°C	245°C

**■ Taping Dimensions(Unit:mm)**



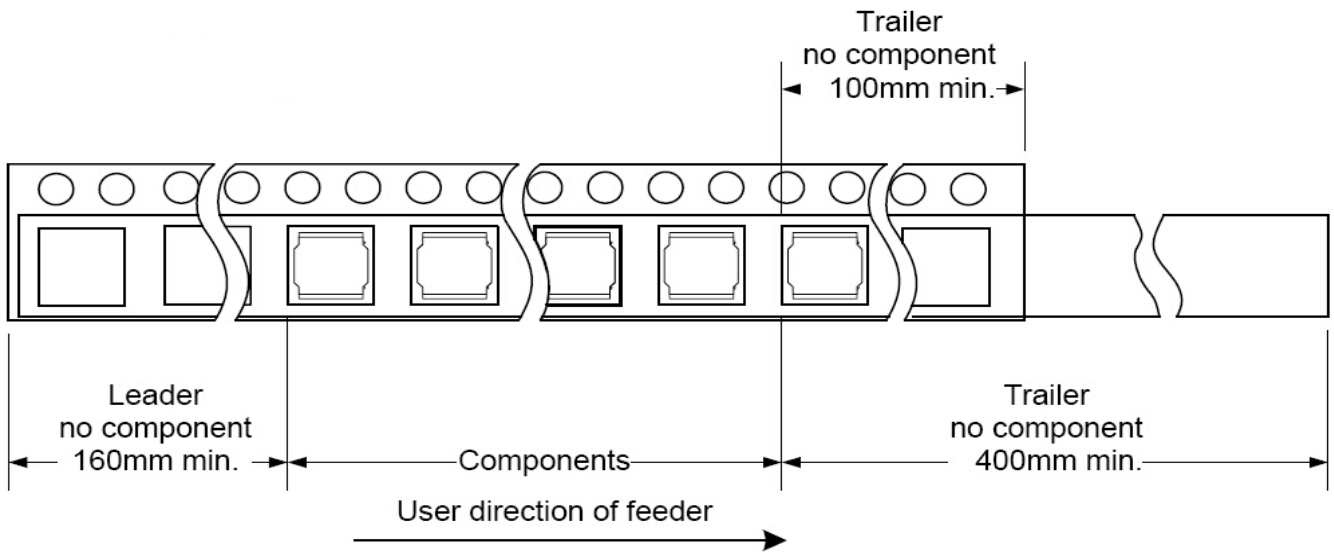
TYPE	W	A	B	C	D	E	P	K Ref	T	MPQ
YSMC2016S	8.0±0.1	2.35±0.05	2.8±0.05	2.75	3.5±0.05	1.35±0.05	4.0±0.1	1.35	0.25±0.05	3000

**■ Reel Dimensions(Unit:mm)**

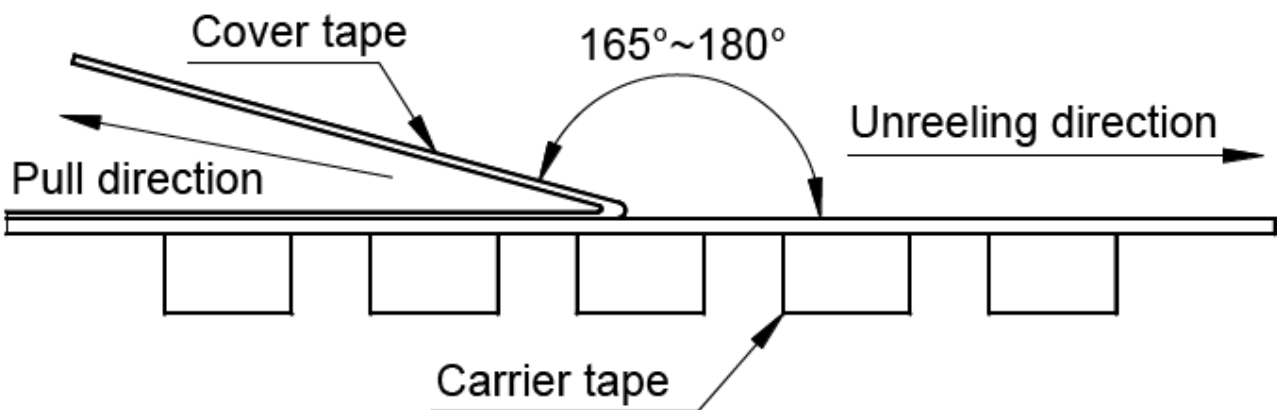


TYPE	W	W1	W2	W3	A	B	C	D
YSMC2016S	178±2.0	12.8±1.50	14.4MAX	8.4 Min	13.0±0.50	21.0±0.80	2.0±0.50	100 Min

**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.