

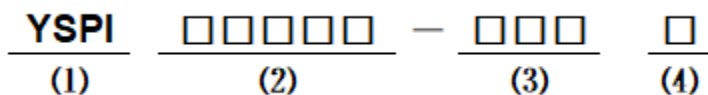
■ Features

- Molding Inductor, low noise.
- Low Profile, Low Temp.
- Large Current (Over 15A).
- Customize For Different Need.
- Operating temperature: $-55^{\circ}\text{C} \sim +125^{\circ}\text{C}$ (Including self-temperature rise) .

■ Applications

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

■ Product Identification



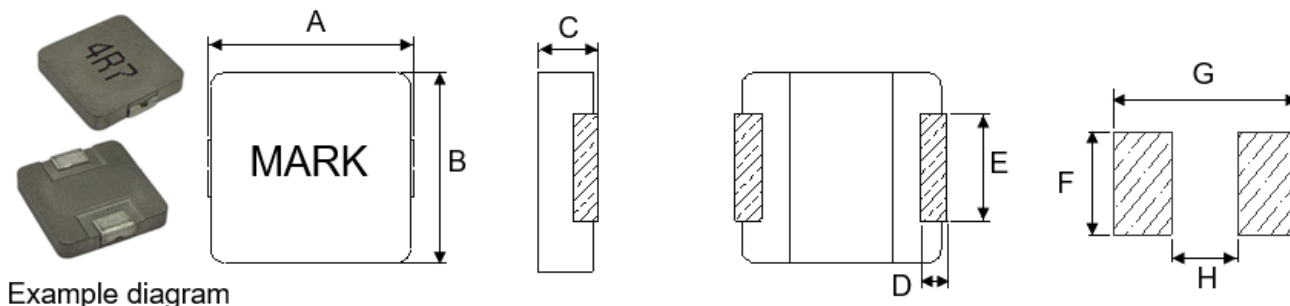
(1) : Type

(2) : Dimensions

(3) : Inductance value

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

■ Shapes and Dimensions (Unit: mm)



TYPE	A Max.	B	C	D	E	F Typ.	G Typ.	H Typ.
YSPI1020S	11.5	10.0±0.3	1.8±0.2	2.0±0.5	3.0±0.5	4.1	13.6	5.4

■ Electrical Characteristics

Part Number	Inductance (μ H) @100KHz/1V	DCR Max. (m Ω)	Saturation Current Isat(A) Typ.	Heat Rating Current Irms(A) Typ.
YSPI1020S-4R7M	4.7 $\pm$ 20%	40.0	7.0	6.5

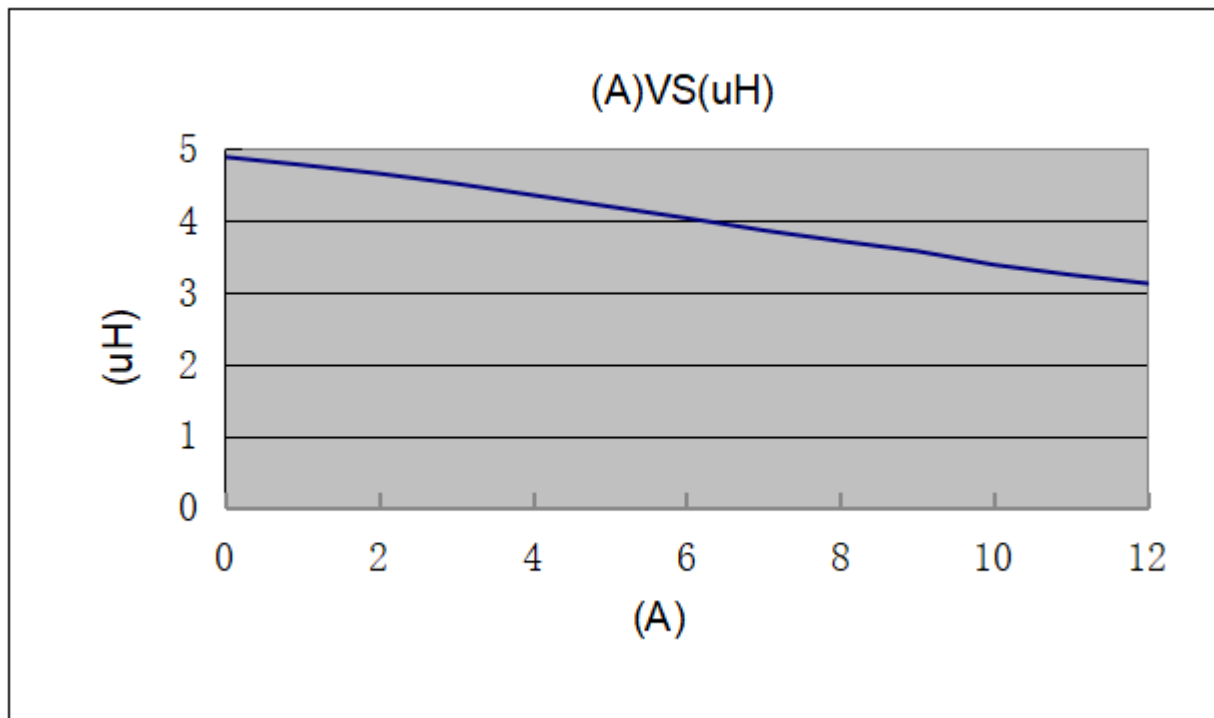
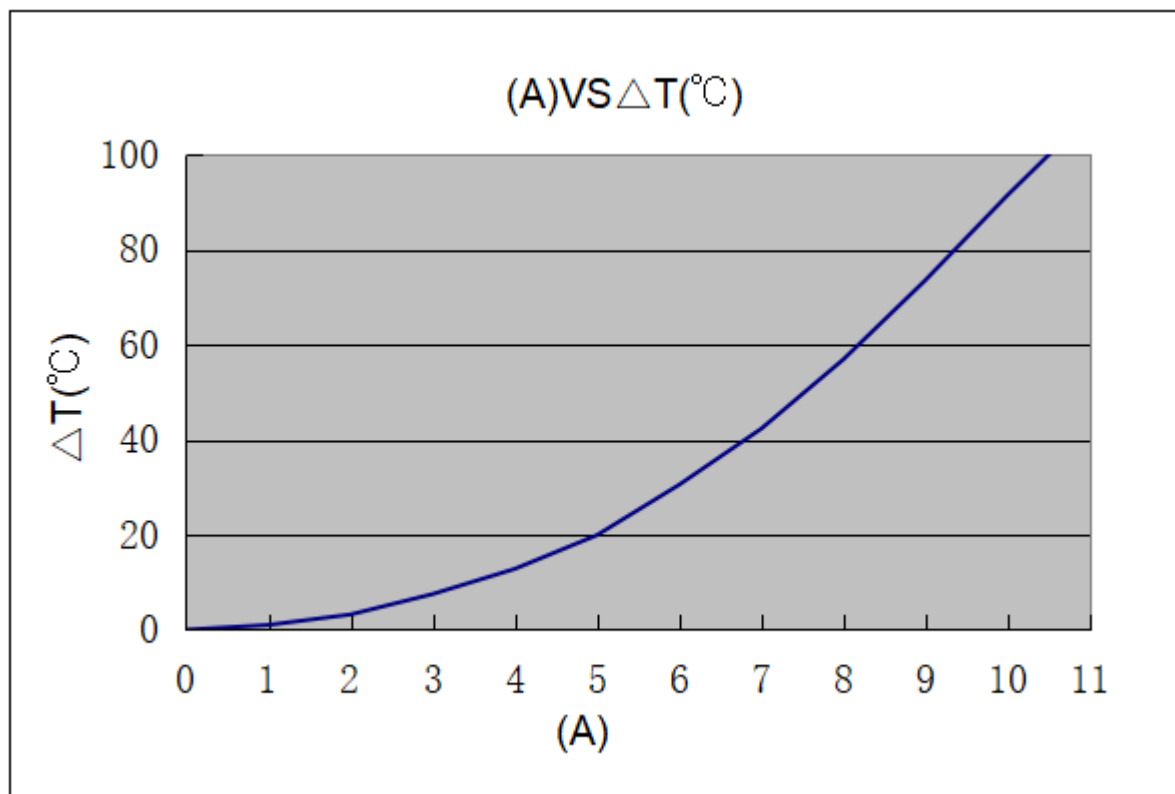
- ※ All test data is referenced to 25 °C ambient.
- ※ Irms (A): DC current (A) that will cause an temperature rise ΔT approximate to 40°C.
- ※ Isat(A): DC current (A) that will cause L0 to drop approximately 30% TYP.
- ※ Absolute maximum voltage 30VDC.
- ※ Storage temperature and humidity range (product with tapping):-10°C~+40°C,RH70% Max.

■ Mechanical Reliability

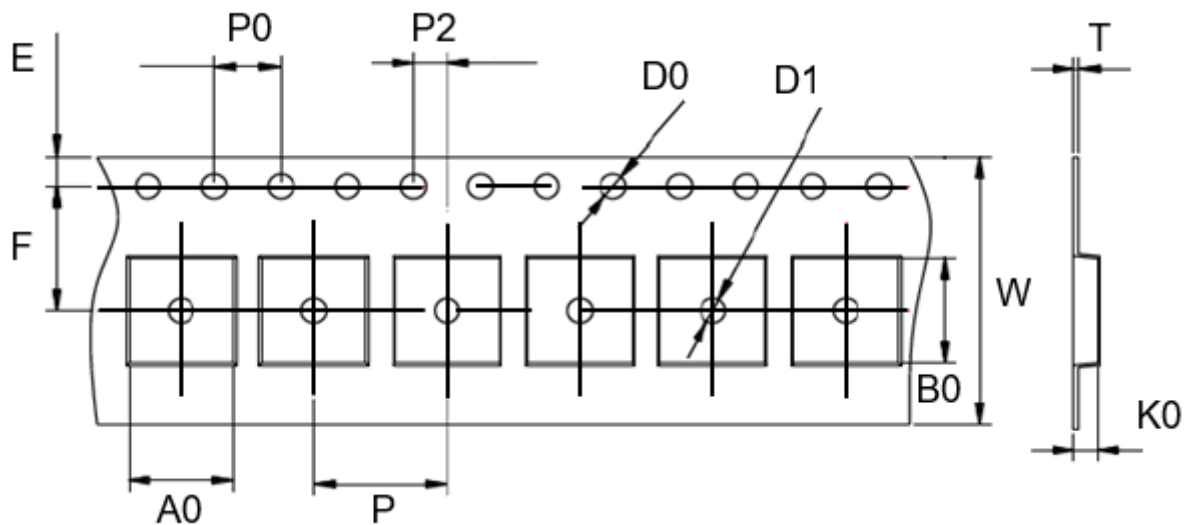
TEST ITEM	SPECIFICATION	TEST DETAILS
Solderability	1. No case deformation or change in appearance. 2. New solder coverage More than 95%.	1.Preheat:155°C±5°C,60S±2S. 2.Tin: lead-free. 3.Temperature:240°C±5°C, flux 3.0S±0.5S.
Mechanical shock	1. No case deformation or change in appearance. 2. $\Delta L/L_0 \leq \pm 10\%$.	1. Acceleration:100G. 2. Pulse time:6ms. 3. Direction:±X ±Y ±Z. 4. 3 times in each positive and negative direction of 3 mutual perpendicular directions.
Mechanical vibration	1. No case deformation or change in appearance. 2. $\Delta L/L_0 \leq \pm 10\%$.	1. Reflow: 2times. 2. Frequency: 10HZ ~ 55HZ ~ 10HZ,20 Min/Cycles 3. Amplitude: 1.52 mm. 4. Directions: X,Y,Z 5. Time: 12 cycle / direction

■ Endurance Reliability

TEST ITEM	SPECIFICATION	TEST DETAILS															
Thermal Shock	Inductance change:Within±10% Without distinct damage in appearance.	1. First -55°C for 30 minutes, last 125°C for 30 minutes as 1 cycle. Go through 1000 cycles. 2. Max transfer time is 3 minutes. 3. Measured at room temperature after placing for 24±2 hours <table border="1"> <thead> <tr> <th></th><th>Temperature</th><th>Duration</th></tr> </thead> <tbody> <tr> <td>1</td><td>-55±2°C (Thermostat No.1)</td><td>30 min.</td></tr> <tr> <td>2</td><td>Standard atmospheric</td><td>Within 3 minutes No.1→No.2</td></tr> <tr> <td>3</td><td>125±2°C (Thermostat No.2)</td><td>30 min.</td></tr> <tr> <td>4</td><td>Standard atmospheric</td><td>Within 3 minutes No.2→No.1</td></tr> </tbody> </table>		Temperature	Duration	1	-55±2°C (Thermostat No.1)	30 min.	2	Standard atmospheric	Within 3 minutes No.1→No.2	3	125±2°C (Thermostat No.2)	30 min.	4	Standard atmospheric	Within 3 minutes No.2→No.1
	Temperature	Duration															
1	-55±2°C (Thermostat No.1)	30 min.															
2	Standard atmospheric	Within 3 minutes No.1→No.2															
3	125±2°C (Thermostat No.2)	30 min.															
4	Standard atmospheric	Within 3 minutes No.2→No.1															
Humidity Resistance	Inductance change:Within±10% Without distinct damage in appearance.	1.Reflow 2 times. 2.85°C,85%RH,1000 hours. 3.Measured at room temperature after placing for 24±2 hours.															
Low temperature storage	Inductance change:Within±10% Without distinct damage in appearance.	1. Temperature:-55 ± 2°C. 2. Time:1000 hours 3. Measured at room temperature after placing for 24±2 hours.															
High temperature storage	Inductance change:Within±10% Without distinct damage in appearance.	1. Temperature:+125 ± 2°C. 2. Time:1000 hours. 3. Measured at room temperature after placing for 24±2 hours.															

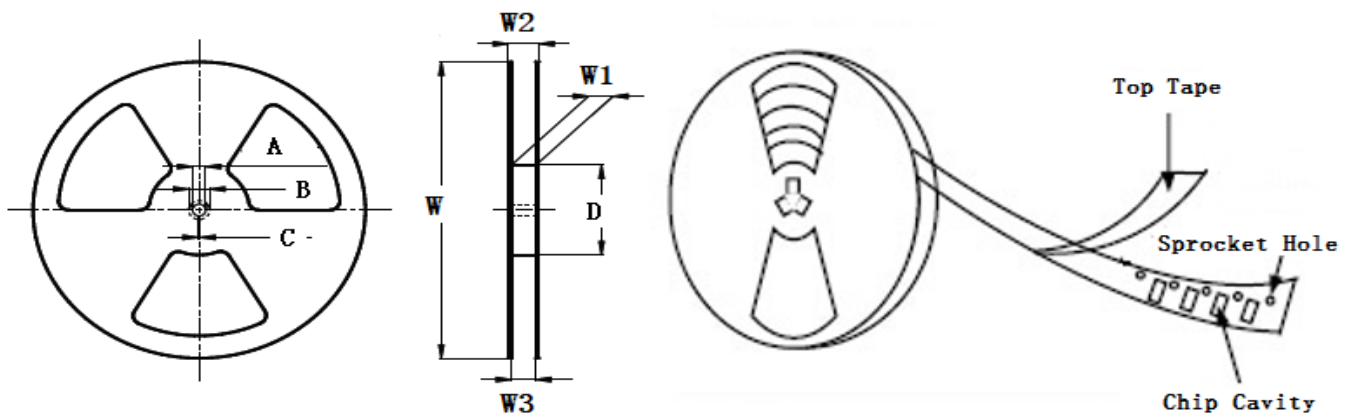
■ Current Value vs. Inductance Value Curve**■ Current Value vs. Temperature Curve**

■ **Taping Dimensions(Unit:mm)**



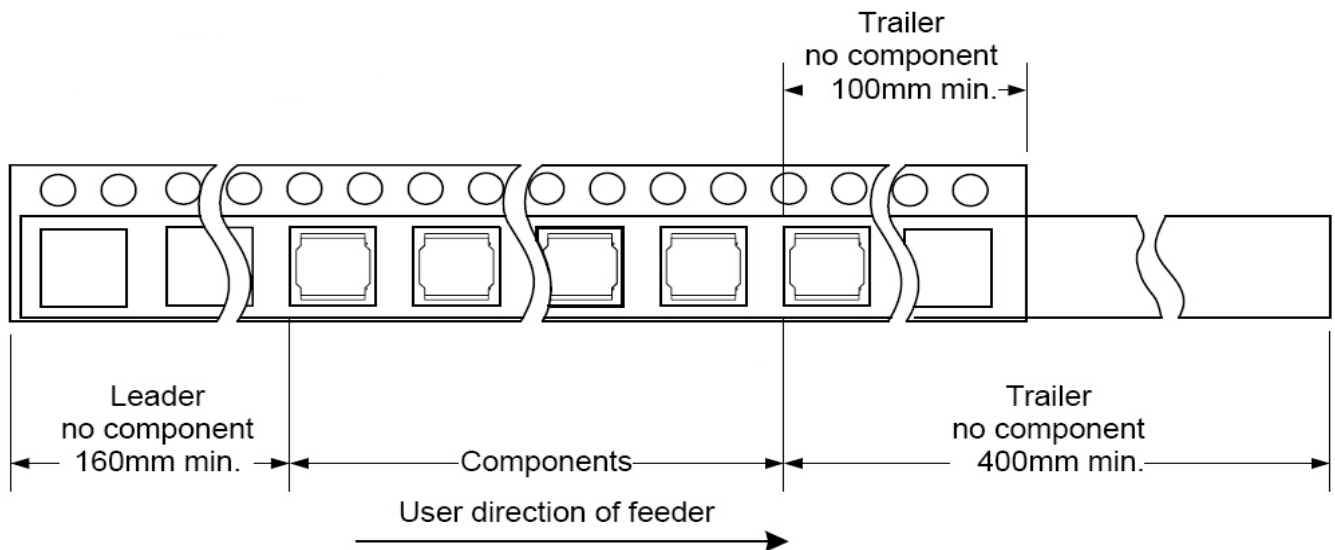
TYPE	W	P	P0	P2	D0	D1	T	A0	B0	K0	E	F	MPQ
YSPI1020S	24.0 ±0.3	16.0 ±0.1	4.0 ±0.1	2.0 ±0.1	1.5 ±0.1	1.5 ±0.1	0.35 ±0.05	10.4 ±0.1	11.6 ±0.1	2.3 ±0.1	1.75 ±0.1	11.5 ±0.1	1500

■ **Reel Dimensions(Unit:mm)**

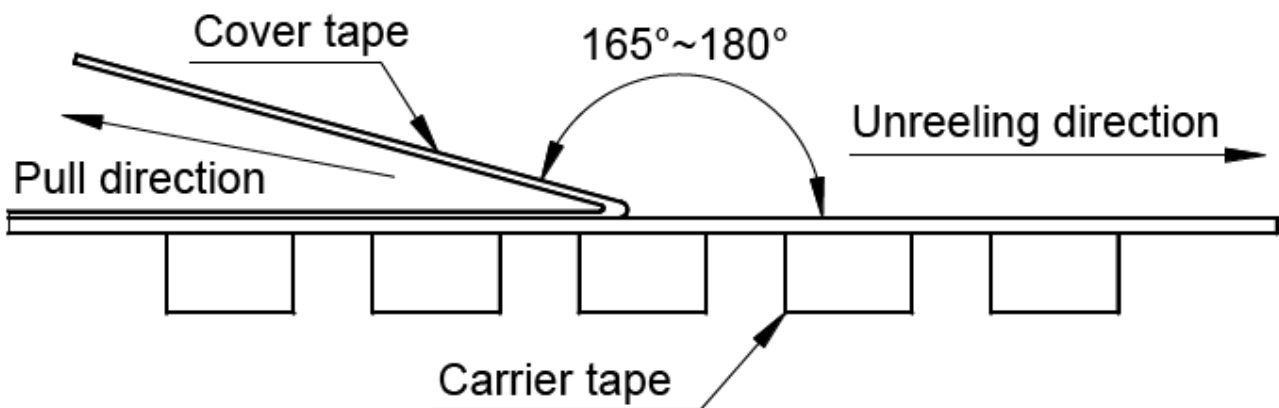


TYPE	W	W1	W2	W3	A	B	C	D
YSPI1020S	330±2.0	24.4±1.5	30.4MAX	23.9 Min	13.0±0.5	21.0±0.8	2.0±0.5	97.0±0.5

■ 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.