

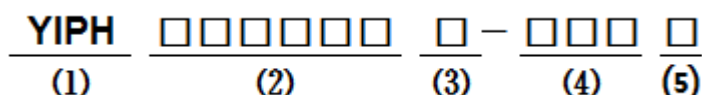
■ Features

- Use flat wire in it and could endure higher current(5 Amps).
- It is mounted in the boards with surface mounting equipment.

■ Applications

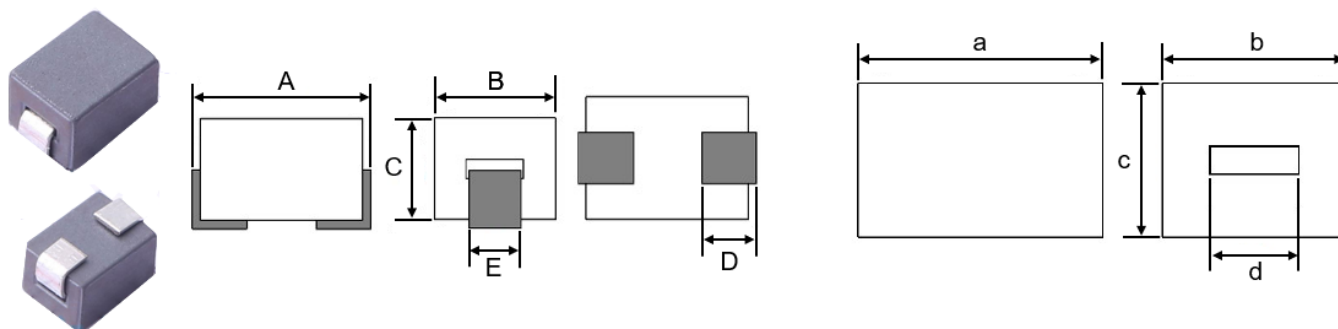
- Computer products.(Motherboard,Hard Disk,TV card,Etc.)
- Communication product.(Cordless Phone,Etc.)
- Modem,OA products,power supplier,Etc.
- Countermeasures for complying with CE,FCC VDE or VCCI radialiated emissions.

■ Product Identification



- (1) : Type
- (2) : Dimensions
- (3) : Material Code
- (4) : Impedance
- (5) : Taping and Reel

■ Shapes and Dimensions (Unit: mm)

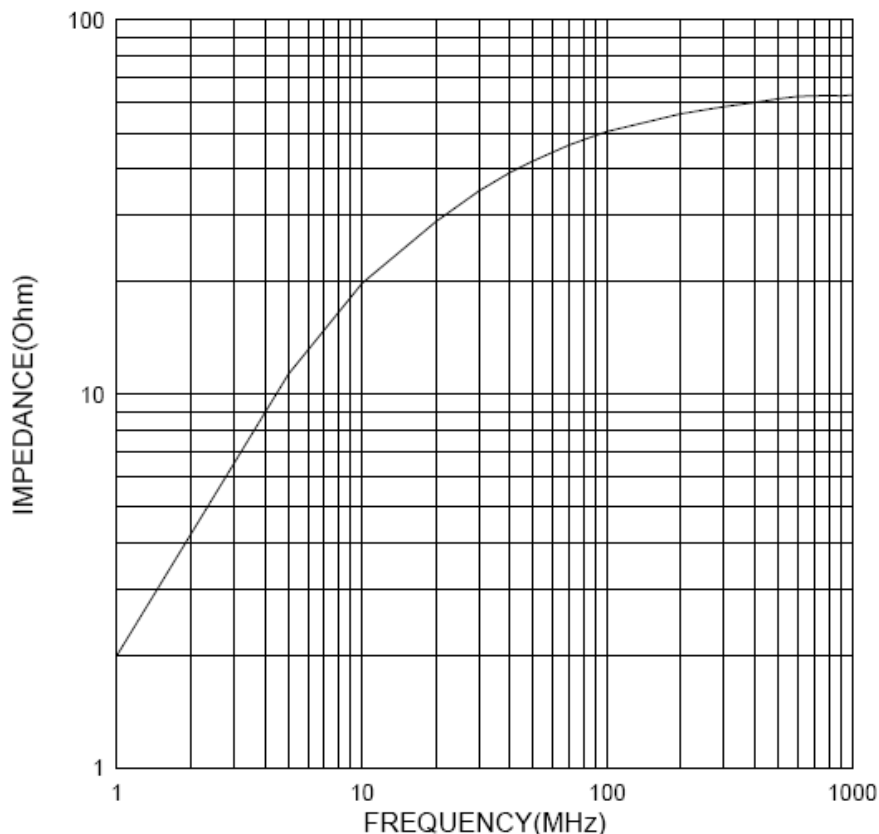


Product Size					Core Size			
A	B	C	D	E	a	b	c	d
4.30~5.10	3.10±0.15	2.70~3.10	1.35±0.20	1.35±0.15	4.00±0.25	3.10±0.15	2.50±0.15	1.50±0.15

Electrical requirements

Part Number	Electrical Requirements 1		Electrical Requirements 1		DCR Max. (mΩ)	Rated Current	
	Impedance (Ω)	Test Frequency (MHz)	Impedance (Ω)	Test Frequency (MHz)		ΔT=40°C Typ.	Test Frequency (MHz)
YIPH403025W-470T	25 Min	25	47 ± 20%	100	0.6	15	1

Typical Impedance v.s. Frequency Curve



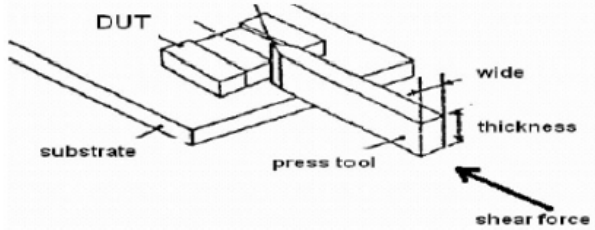
Material List

No.	Description	Specification
a	Core	Ferrite Core
b	Wire	Electroplated nickel-tin flat copper wire W X T=1.25 X 0.20 m/m

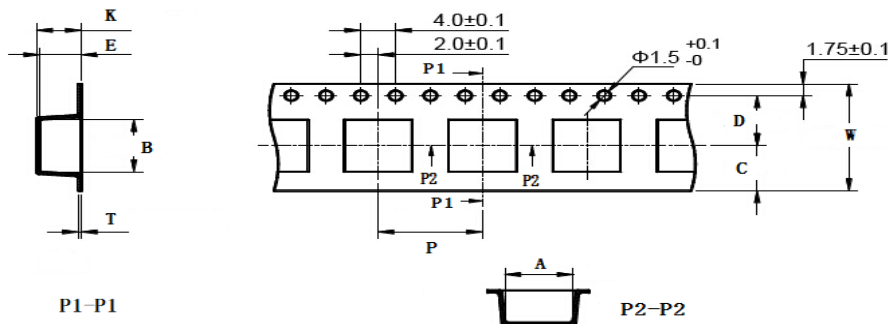
■ Reliability and Test Condition

Item	Performance	Test Condition
Operating temperature	-40~+125℃(Including self-temperature rise)	
Storage temperature	-40~+125℃(on board)	
Electrical Performance Test		
Z(Impedance)	Refer to standard electrical characteristics list	CH3302,CH1320,CHA113009,Aglient E4991A,Agilent 16197A LCR Meter
DCR		CH16502,Agilent 33420A Micro-Ohm Meter.
Heat Rated Current(Irms)	Approximately $\Delta T \leq 40^\circ\text{C}$	Heat Rated Current(Irms) will cause the coil temperature rise $\Delta T(^\circ\text{C})$ without core loss. 1.Applied the allowed DC current(keep 1 min.). 2.Temperature measured by digital surface thermometer
Reliability Test		
Life Test	Appearance : No damage. Inductance : within $\pm 10\%$ of initial value Q: Shall not exceed the specification value. RDC: within $\pm 15\%$ of initial value and shall not exceed the specification value.	Preconditioning:Run through IR reflow for 2 times. (IPC/JEDECJ-STD-020D Classification Reflow Profiles) Temperature:125 $\pm 2^\circ\text{C}$ (Inductor) Applied current:rated current Duration:1000 ± 12 hrs Measured at room temperature after placing for 24 ± 2 hrs
Load Humidity		Preconditioning:Run through IR reflow for 2 times. (IPC/JEDECJ-STD-020D Classification Reflow Rprofiles. Humidity:85 $\pm 2\%$ R.H, Temperature:85 $\pm 2^\circ\text{C}$ Duration:1000hrs Min. with 100% rated current Measured at room temperature after placing for 24 ± 2 hrs
Moisture Resistance		Preconditioning:Run through IR reflow for 2 times. (IPC/JEDECJ-STD-020D Classification Reflow Rprofiles. 1.Baked at 50 $^\circ\text{C}$ for 25 hrs,measured at room temperature after Placing for 4 hrs. 2.Raise temperature to 65 $\pm 2^\circ\text{C}$ 90-100% RH in 2.5 hrs,and Keep 3 hours,cool down to 25 $^\circ\text{C}$ in 2.5hrs 3.Raise temperature to 65 $\pm 2^\circ\text{C}$ 90-100% RH in 2.5 hrs,and Keep 3 hours,cool down to 25 $^\circ\text{C}$ in 2.5hrs,keep at 25 $^\circ\text{C}$ for 2 hrs then keep at -10 $^\circ\text{C}$ for 3 hrs 4.Keep at 25 $^\circ\text{C}$ 80-100%RH for 15min and vibrate at the frequency of 10 to 55 Hz to 10 Hz,measure at room temperature after placing for 1 ~ 2hrs.
Thermal shock		Preconditioning:Run through IR reflow for 2 times. (IPC/JEDECJ-STD-020D Classification Reflow Rprofiles. Condition for 1 cycle Step1 : -40 $\pm 2^\circ\text{C}$ 30 ± 5 min Step2 : 25 $\pm 2^\circ\text{C}$ ≤ 0.5 min Step3 : 125 $\pm 2^\circ\text{C}$ 30 ± 5 min Number of cycles:500 Measured at room temperature after placing for 24 ± 2 hrs
Vibration		Oscillation Frequency:10 ~ 2K ~ 10Hz for 20 minutes Equipment:Vibration checker Total Amplitude:1.52mm $\pm 10\%$ Testing Time:12 hours(20 minutes,12 cycles each of 3 orientations).

■ Reliability and Test Condition

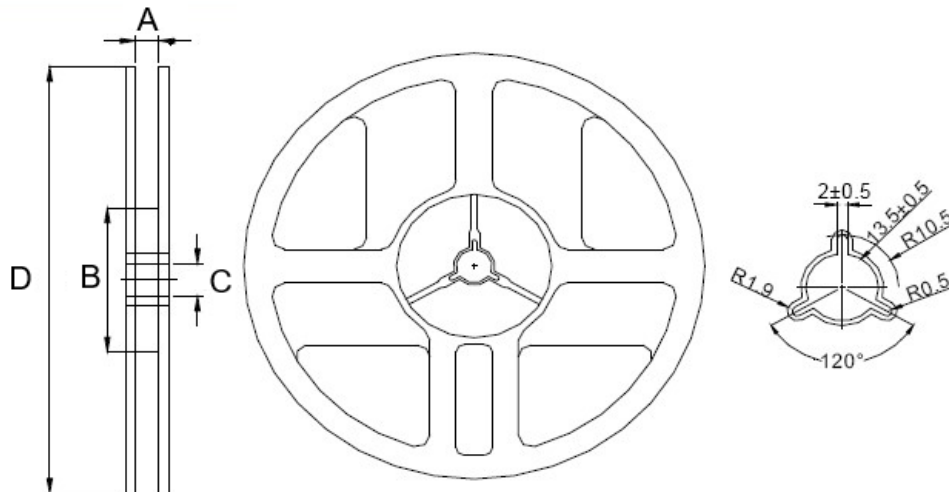
Item	Performance	Test Condition															
Shock	Appearance : No damage. Inductance : within±10% of initial value Q: Shall not exceed the specification value. RDC: within ±15% of initial value and shall not exceed the specification value.	<table border="1" data-bbox="839 353 1331 548"> <thead> <tr> <th>Type</th> <th>Peak value (g's)</th> <th>Normal duration (D)(ms)</th> <th>Wave form</th> <th>Velocity change (Vi)ft/sec</th> </tr> </thead> <tbody> <tr> <td>SMD</td> <td>50</td> <td>11</td> <td>Half-sine</td> <td>11.3</td> </tr> <tr> <td>Lead</td> <td>50</td> <td>11</td> <td>Half-sine</td> <td>11.3</td> </tr> </tbody> </table> shocks in each direction along 3 perpendicular axes.	Type	Peak value (g's)	Normal duration (D)(ms)	Wave form	Velocity change (Vi)ft/sec	SMD	50	11	Half-sine	11.3	Lead	50	11	Half-sine	11.3
Type	Peak value (g's)	Normal duration (D)(ms)	Wave form	Velocity change (Vi)ft/sec													
SMD	50	11	Half-sine	11.3													
Lead	50	11	Half-sine	11.3													
Bending		Shall be mounted on a FR4 substrate of the following dimensions : ≥0805 : 40×100×1.2mm <0805 : 40×100×0.8mm Bending depth : ≥0805 inch(2012mm):1.2mm <0805 inch(2012mm):0.8mm duration of 10 sec.															
Soderability	More than 95% of the terminal electrode should be covered with solder.	Preheat : 150℃ , 60sec. ◦ Solder : Sn96.5% Ag 3% Cu0.5% Temperature : 245±5℃ ◦ Flux for lead free : Rosin.9.5% ◦ Dip time : 4±1sec ◦ Depth : completely cover the termination															
Resistance to Soldering Heat		Number of heat cycles:1 <table border="1" data-bbox="839 1032 1331 1193"> <thead> <tr> <th>Temperature (℃)</th> <th>Time(s)</th> <th>Temperature ramp/immersion and emersion rate</th> </tr> </thead> <tbody> <tr> <td>260±5 (solder temp)</td> <td>10±1</td> <td>25mm/s±6mm/s</td> </tr> </tbody> </table>	Temperature (℃)	Time(s)	Temperature ramp/immersion and emersion rate	260±5 (solder temp)	10±1	25mm/s±6mm/s									
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260±5 (solder temp)	10±1	25mm/s±6mm/s															
Terminal Strength	Appearance : No damage. Inductance : within±10% of initial value Q: Shall not exceed the specification value. RDC: within ±15% of initial value and shall not exceed the specification value.	Preconditioning : Run through IR reflow for 2 times. (IPC/JEDEC J-STD-020D Classification Reflow Rprofiles. With the component mounted on a PCB with the device to be tested, apply a force(>0805 inch(2012mm):1kg, ≤0805 (2012mm):0.5kg) to the side of a device being tested. This force shall be applied for 60+1 seconds. Also the force shall be applied gradually as not to apply a shock to the component being tested. 															

■ Taping Dimensions(Unit:mm)



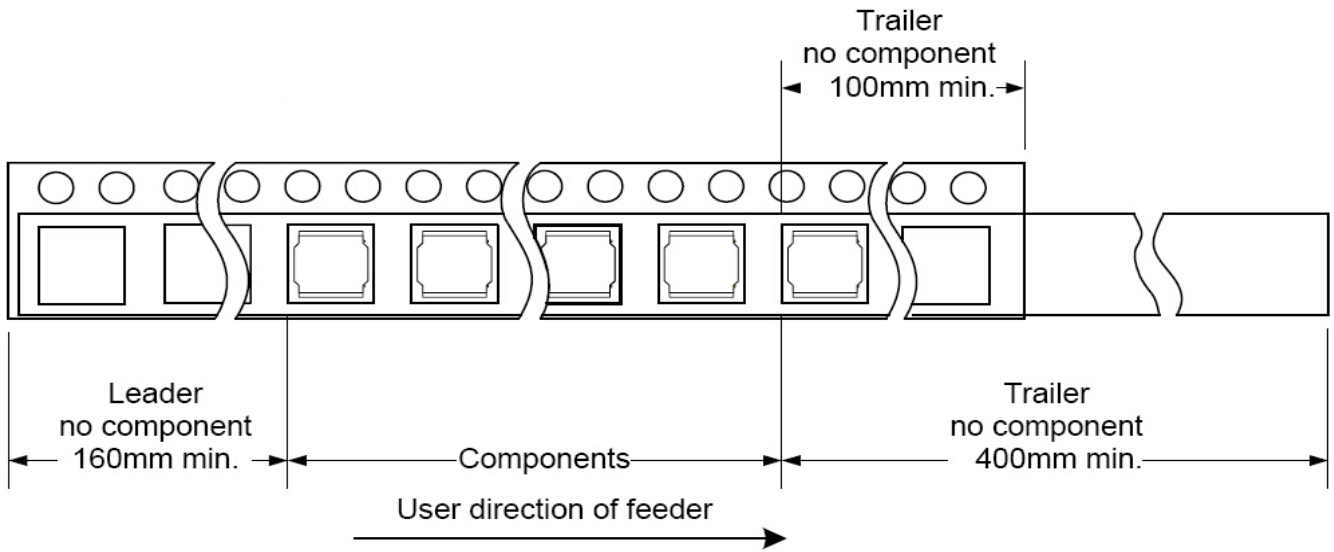
TYPE	W	A	B	C	D	E	P	K	T	MPQ
YIPH403025W	12±0.3	3.6±0.1	4.9±0.1	5.0	5.0±0.1	3.5±0.1	8.0±0.1	5.0	0.30±0.1	500

■ Reel Dimensions(Unit:mm)

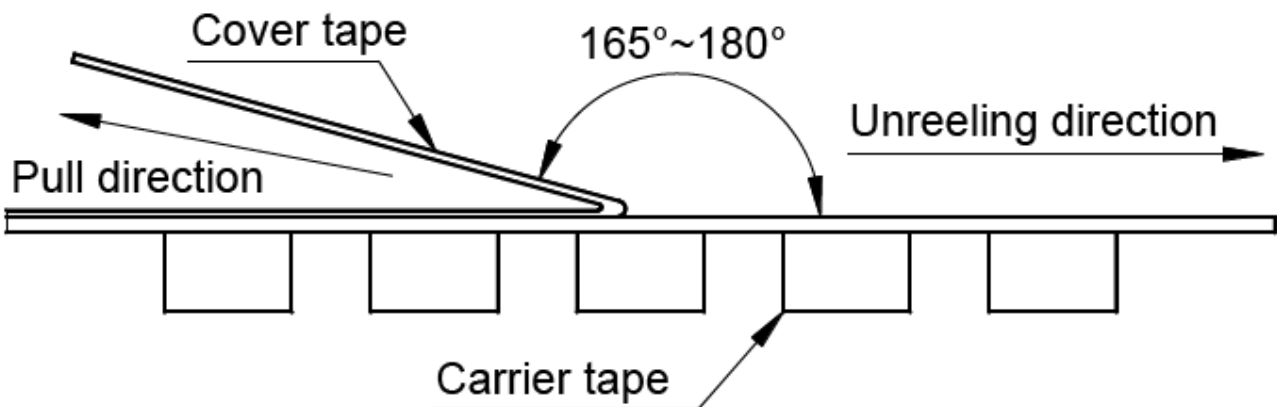


TYPE	A	B	C	D
YIPH403025W	13.5±0.5	60.0±2.0	13.5±0.50	178±2.0

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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