

REACH & RoHS
COMPLIANT

introduction

- Halogen Free ,ROHS compliance
- High rated current
- 125℃ maximum total temperature operation
- 4.75 x 4.45 x 2.0mm maximum surface mount package
- Low core loss
- Ultra low buzz noise due to molding construction

Applications

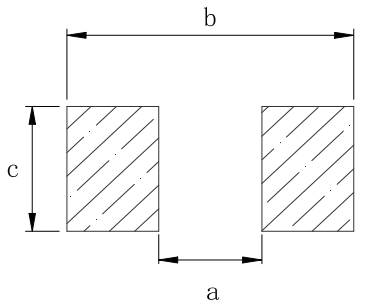
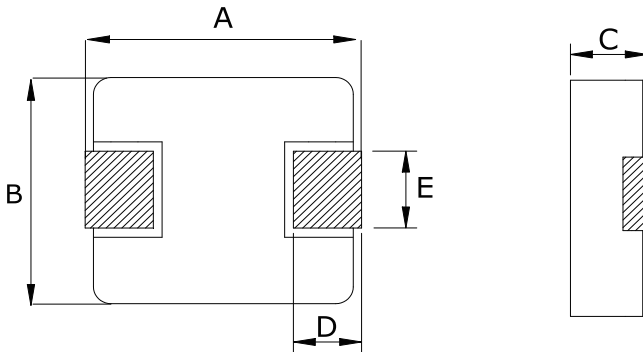
- Laptops and PCs
- Switch and servers
- Base stations
- DC/DC converters
- Battery powered devices
- SSD modules

Product Identification

YTA 0420 --1R5 M
① ② ③ ④

- ① YTA ----- Series name
② 0420 ----- Dimension
③ 1R5 ----- Inductance Value (1R5 = 1.5μH)
④ M ----- Inductance Tolerance (M= ± 20%)

Dimensions-mm (Unit: mm)



Recommend Land Pattern

A	B	C	D	E	a typ	b typ	c typ
4.4±0.35	4.2±0.25	1.8±0.2	0.8±0.3	2.0±0.3	2.2	5.2	2.5

VOOHU 苏州沃虎电子科技有限公司
Su Zhou Voohu Electronic Tech.Co.Ltd

TITLE:
YTA0420 Series

SIZE
A4

UNITS
MM[INCH]

GENERAL TOLERANCES
UNLESS SPECIFIED

APPROVED BY:
Geoffrey.Song

PART NO.:
YTA0420系列规格书

SACLE
1:1

REV
A0

x±0.35 x°±3.0°
.x±0.30 .x°±2.0°

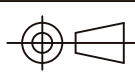
CHECKED BY:
Elvis.Song

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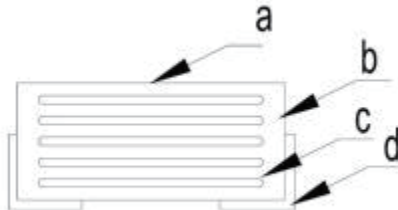

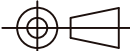
REMARK:



SHEET
1/7



.xx±0.25 .xx°±1.5°
.xxx±0.10 .xxx°±1.0°

DESIGND BY:
Sunny.Xu

1	2	3	4	5	6	7	8															
REACH & RoHS COMPLIANT																						
Marking		Structure and Components																				
The inductor is marked with a 3-digit code		<table><tr><td>Symbol</td><td>Components</td><td>Material</td></tr><tr><td>a</td><td>MARKING</td><td>Ink (black)</td></tr><tr><td>b</td><td>CORE</td><td>Alloy Sponge Powder</td></tr><tr><td>c</td><td>WIRE</td><td>Polyurethane copper wire</td></tr><tr><td>d</td><td>TERMINAL</td><td>Copper plated with Sn</td></tr></table>						Symbol	Components	Material	a	MARKING	Ink (black)	b	CORE	Alloy Sponge Powder	c	WIRE	Polyurethane copper wire	d	TERMINAL	Copper plated with Sn
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<div>VOOHU 苏州沃虎电子科技有限公司</div> <div>Su Zhou Voohu Electronic Tech.Co.Ltd</div>		TITLE: YTA0420 Series	SIZE A4	UNITS MM[INCH]	GENERAL TOLERANCES UNLESS SPECIFIED		APPROVED BY: Geoffrey.Song															
		PART NO.: YTA0420系列规格书	SACLE 1:1	REV A0	<div><div>x±0.35</div><div>.x±0.30</div></div>	<div><div>x°±3.0°</div><div>.x°±2.0°</div></div>	CHECKED BY: Elvis.Song															
TEL: +86 400 1048 018	WEB: WWW.WOHU-TEK.COM	REMARK:	SHEET 2/7		<div><div>.xx±0.25</div><div>.xxx±0.10</div></div>	<div><div>.xx°±1.5°</div><div>.xxx°±1.0°</div></div>	DESIGND BY: Sunny.Xu															

1		2		3		4		5		6		7		8	
REACH & RoHS COMPLIANT															
		Part No.	Inductance	DC Resistance	Saturation Current	Heating Rating									
			L0 (μH)	DCR (mΩ)	Isat (A)	Current									
			±20 %, 100 kHz, 1V	MAX.	TYP.	TYP.									
G		WHYTA0420-R10M	0.1	4	22	13									
		WHYTA0420-R22M	0.22	6.6	12.5	9.5									
		WHYTA0420-R33M	0.33	11	12	10									
F		WHYTA0420-R47M	0.47	14	9.5	7.5									
		WHYTA0420-R56M	0.56	16	9	7									
		WHYTA0420-R68M	0.68	18	8	7									
E		WHYTA0420-1R0M	1.0	27	7	6									
		WHYTA0420-1R2M	1.2	27	6.5	6									
		WHYTA0420-1R5M	1.5	46	5.5	5									
D		WHYTA0420-2R2M	2.2	58	5	4.5									
		WHYTA0420-3R3M	3.3	87	3.5	3.3									
		WHYTA0420-4R7M	4.7	105	3	2.8									
C		WHYTA0420-6R8M	6.8	175	2.5	2.4									
		WHYTA0420-100M	10	282	2	1.6									
B		Notes													
		1. All test data is referenced to 25 °C ambient													
		2. Operating temperature range - 55 °C to + 125 °C													
A		3. Irms (A):DC current (A) that will cause an approximate ΔT of 40 °C(reference ambient temperature is 25 °C)													
		4. Isat(A):DC current (A) that will cause L0 to drop approximately 30 %													
		5. The part temperature (ambient + temp rise) should not exceed 125 °C under worst case operating conditions.													
		Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions													
		all affect the part temperature. Part temperature should be verified in the end application.													
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							.x±0.30	.x°±2.0°	Elvis.Song						
TEL: +86 400 1048 018		WEB: WWW.WOHU-TEK.COM		REMARK:		SHEET 3/7		.xx±0.25	.xx°±1.5°	DESIGND BY:					
								.xxx±0.10	.xxx°±1.0°						
1		2		3		4		5		6		7		8	

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Mechanical Reliability		
Item	Specification and Requirement	Test Method
Solderability	1. No case deformation or change in apperance	1.Preheat: 155℃±5℃ , 60S±2S 2.Tin: lead-free. 3.Temperature:240℃±5℃, flux 3.0S±0.5S.
	2. New solder coverage More than 95%	
Mechanical shock	1. No case deformation or change in apperance	1. Acceleration: 100G 2. Pulse time:: 6ms 3. 3 times in each positive and negative direction of 3 mutual perpendicular directions
	2. ΔL/Lo≦±10%	
Mechanical vibration	1. No case deformation or change in apperance	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
	2. ΔL/Lo≦±10%	
Endurance Reliability		
Item	Specification and Requirement	Test Method
Thermal Shock	Inductance change: Within ± 10% Without distinct damage in appearance	1. First -55℃ for 30 minutes, last 125℃ 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
Humidity Resistance	Inductance change: Within ± 10% Without distinct damage in appearance	1.Reflow 2 times, 2.85℃,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℃ 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℃ 2. Time: 1000 hours 3. Measured at room temperature after placing for 24±2 hours

Recommended Soldering Technologies

(1)Re-flowing Profile

Preheat condition: 150 ~200℃/60~180sec.

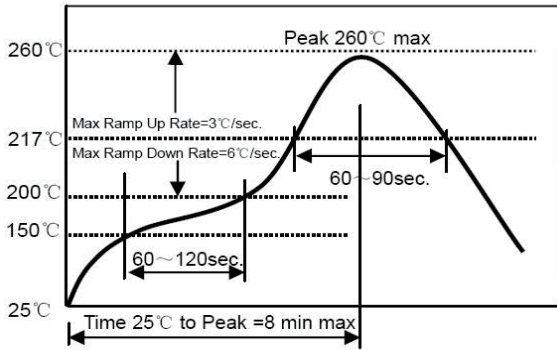
Allowed time above 217℃: 80~120sec.

Max temp: 260℃

Max time at max temp: 5 sec.

Solder paste: Sn/3.0Ag/0.5Cu

Allowed Reflow time: 2x max



(2)Iron Soldering Profile

Iron soldering power: Max. 30W

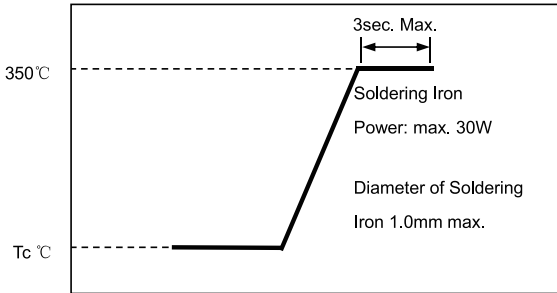
Pre-heating: 150℃/60sec.

Soldering Tip temperature: 350℃ Max.

Soldering time: 3sec. Max.

Solder paste: Sn/3.0Ag/0.5Cu

Max.1 times for iron soldering



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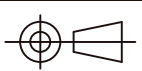
SIZE
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SHEET
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GENERAL TOLERANCES
UNLESS SPECIFIED

x±0.35
.x±0.30

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APPROVED BY:
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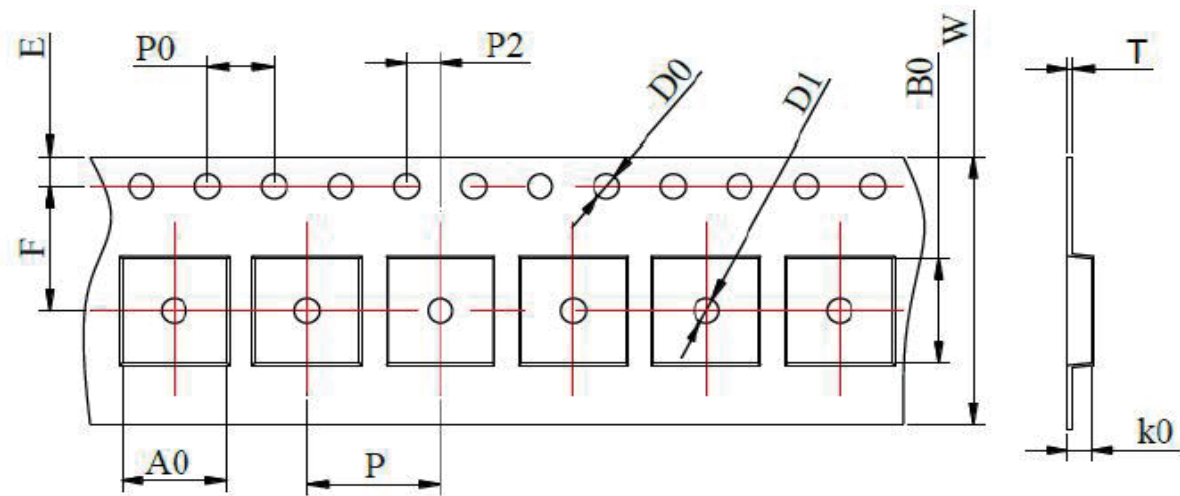
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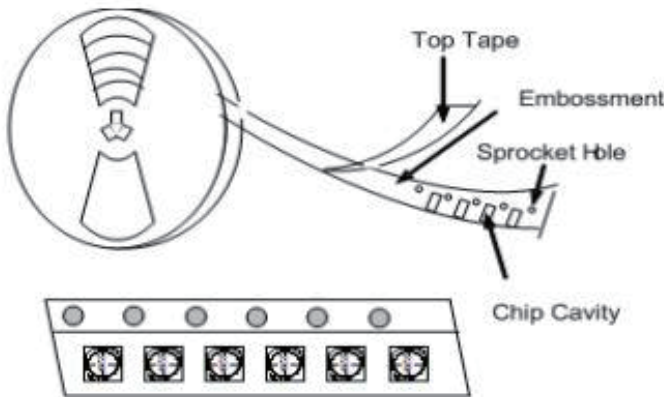
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Packaging Information

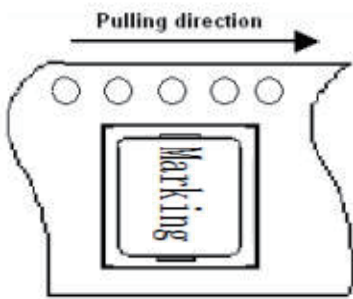
(1) Tape Packaging Dimensions (Unit: mm)



Taping Drawings (UNIT:mm)



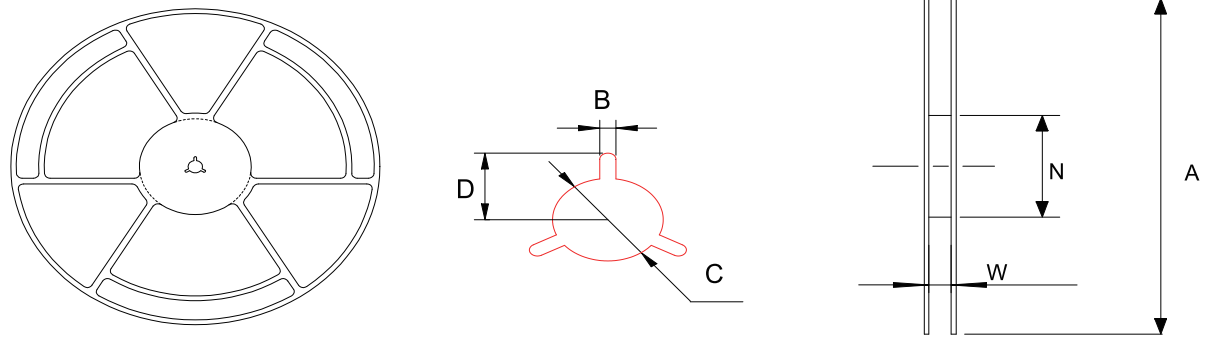
Type	Tape dimensions (mm)											
	W	P	P0	P2	D0	D1	T	A0	B0	K0	E	F
WHYTA0420	12 ±0.3	8 ±0.1	4 ±0.1	2 ±0.1	1.5 ±0.1	1.5 ±0.1	0.35 ±0.05	4.5 ±0.1	4.85 ±0.1	2.3 ±0.1	1.75 ±0.1	5.5 ±0.1



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	REMARK:		SHEET 5/7		.xxx±0.10	.xxx°±1.0°	DESIGND BY: Sunny.Xu	

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(2) Reel Dimensions (Unit: mm)



A	W	N	B	C	D
330+2.0	12.8±0.2	97±0.5	2.2+0.5	13.0±0.2	10.75±0.25

(3) Packaging Quantity(PCS)

Type	Standard Quantity		
	Reel	Inner box	Carton box
WHYTA0420	3000 pcs / reel	4Reel / box (12000 pcs)	4 Middle boxes, (48,000 pcs)

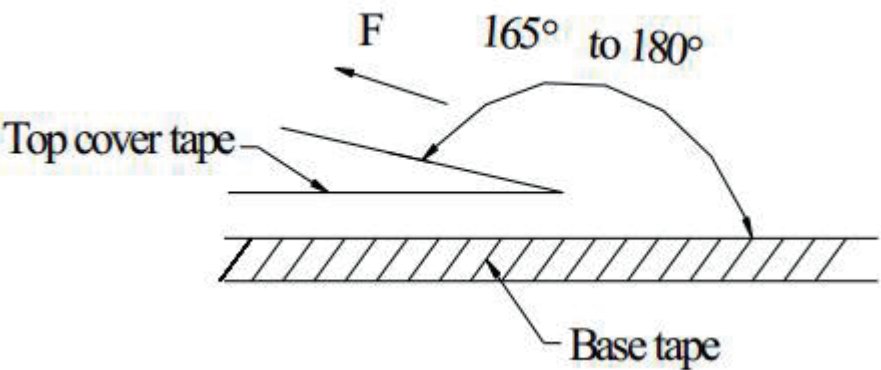
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TEL: +86 400 1048 018		WEB: WWW.WOHU-TEK.COM					

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(4) Peel force of top cover tape

The peel speed shall be about 300mm/minute

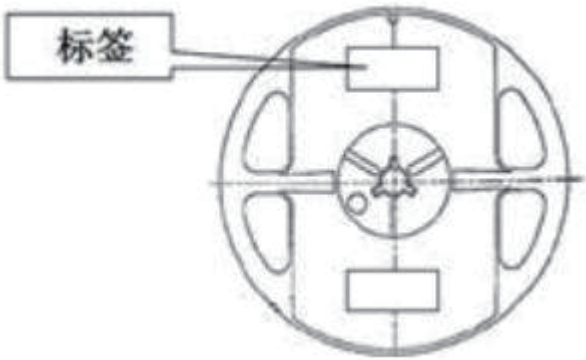
The peel force of top cover tape shall be between 0.1 to 1.3 N



(5) Reel Label

Label on the reel

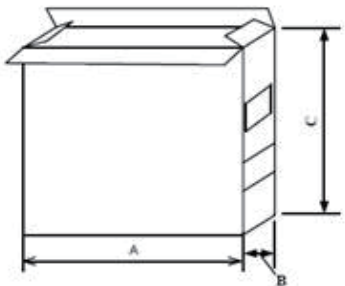
- Customer's part Number
- Lot Number
- Quantity
- date code



Shipping Label

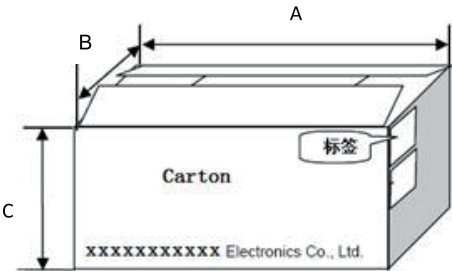
- Customer's part Number
- Manufacturer's part Number
- Quantity
- date code

(6) Inner Box



Packaging type	A (mm)	B (mm)	C (mm)
Inner box	335	70	340

(7) Carton



Packaging type	A (mm)	B (mm)	C (mm)
type	360	360	360

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GENERAL TOLERANCES
UNLESS SPECIFIED

$x \pm 0.35$
 $.x \pm 0.30$
 $.xx \pm 0.25$
 $.xxx \pm 0.10$

$x^\circ \pm 3.0^\circ$
 $.x^\circ \pm 2.0^\circ$
 $.xx^\circ \pm 1.5^\circ$
 $.xxx^\circ \pm 1.0^\circ$

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