

REACH & RoHS
COMPLIANT

introduction

- ROHS, Halogen Free and REACH compliance
- High rated current
- 125℃ maximum total temperature operation
- 5.75×5.4×3.0mm maximum surface mount package
- Low core loss
- Ultra low buzz noise due to molding construction

Applications

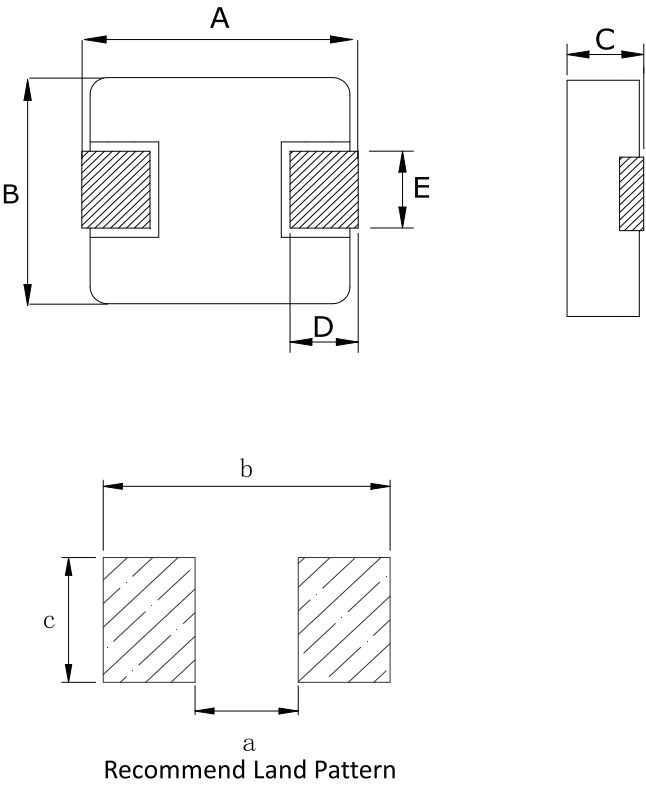
- Laptops and PCs
- Switch and servers
- Base stations
- DC/DC converters
- Battery powered devices
- SSD modules

Product Identification

YTA 0530 --1R5 M
① ② ③ ④

- ① YTA ----- Series name
② 0530 ----- Dimension
③ 1R5 ----- Inductance Value (1R5 = 1.5μH)
④ M -----Inductance Tolerance (M= ± 20%)

Dimensions



A	B	C	D	E	a typ	b typ	c typ
5.4±0.35	5.2±0.2	2.8±0.2	1.2±0.2	2.2±0.3	2.2	6	2.5

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

TEL: +86 400 1048 018

WEB: WWW.WOHU-TEK.COM

TITLE:
YTA0530 Series

PART NO.:
YTA0530系列规格书

REMARK:

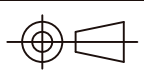
SIZE
A4

SACLE
1:1

SHEET
1/7

UNITS
MM[INCH]

REV
A0



GENERAL TOLERANCES
UNLESS SPECIFIED

x±0.35	x°±3.0°
.x±0.30	.x°±2.0°
.xx±0.25	.xx°±1.5°
.xxx±0.10	.xxx°±1.0°

APPROVED BY:
Geoffrey.Song

CHECKED BY:
Elvis.Song

DESIGND BY:
Sunny.Xu

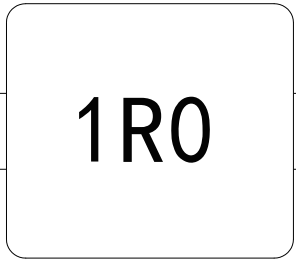
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Marking

The inductor is marked with a 3-digit code

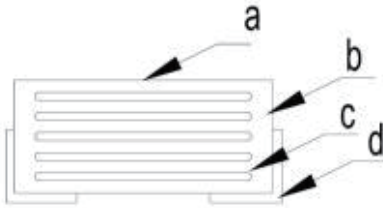
Nominal Inductance	
Example	Nominal Value
1R0	1.0 μH
100	10 μH
101	100 μH

Note : Using Ink for marking



Structure and Components

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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SIZE
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SACLE
1:1

SHEET
2/7

UNITS
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GENERAL TOLERANCES
UNLESS SPECIFIED

x±0.35	x°±3.0°
.x±0.30	.x°±2.0°

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

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1	2	3	4	5	6	7	8
REACH & RoHS COMPLIANT							


Part No.	Inductance	DC Resistance	Saturation Current	Heating Rating Current
	L0 (μH)	DCR (mΩ)	Isat (A)	Irms (A)
	±20 %, 100 kHz, 1V	MAX.	TYP.	TYP.
WHYTA0530-R10M	0.1	3.0	30	25
WHYTA0530-R20M	0.2	3.9	20	14
WHYTA0530-R33M	0.33	5.5	18	14
WHYTA0530-R47M	0.47	8.5	15	11
WHYTA0530-R68M	0.68	12	11.5	9.0
WHYTA0530-1R0M	1.0	14	10	8.5
WHYTA0530-1R2M	1.2	16	9.5	8.5
WHYTA0530-1R5M	1.5	25	9	8.2
WHYTA0530-2R2M	2.2	29	7.0	7.0
WHYTA0530-3R3M	3.3	38	6.0	5.5
WHYTA0530-4R7M	4.7	60	4.6	4.5
WHYTA0530-6R8M	6.8	90	3.6	3.5
WHYTA0530-100M	10	125	3.5	3.2

Notes

1. All test data is referenced to 25 °C ambient
2. Operating temperature range - 55 °C to + 125 °C
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.

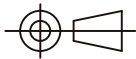


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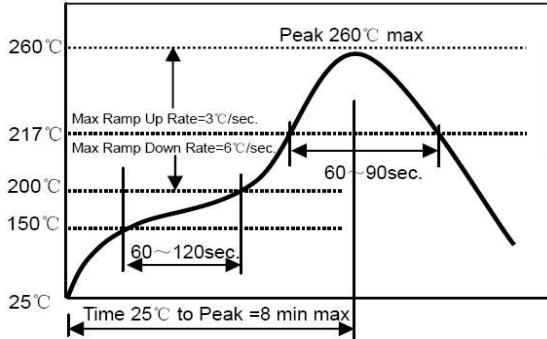
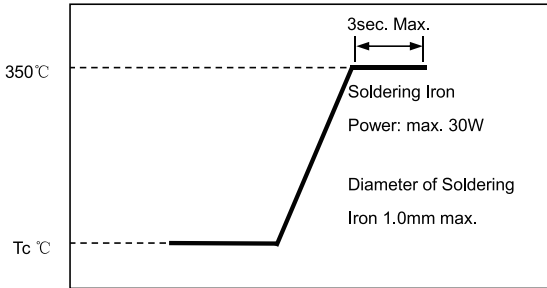


TITLE: YTA0530 Series	SIZE A4	UNITS MM[INCH]	GENERAL TOLERANCES UNLESS SPECIFIED		APPROVED BY: Geoffrey.Song
PART NO.: YTA0530系列规格书	SACLE 1:1	REV A0	x±0.35	x°±3.0°	CHECKED BY:
			.x±0.30	.x°±2.0°	Elvis.Song
REMARK:	SHEET 3/7		.xx±0.25	.xx°±1.5°	DESIGND BY:
			.xxx±0.10	.xxx°±1.0°	Sunny.Xu

TEL: +86 400 1048 018

WEB: WWW.WOHU-TEK.COM

SHEET
3/7

Sunny.Xu

	1	2	3	4	5	6	7	8		
REACH & RoHS COMPLIANT										
Mechanical Reliability										
Item	Specification and Requirement			Test Method						
Solderability	1. No case deformation or change in apperance 2. New solder coverage More than 95%			1.Preheat: 155℃±5℃ , 60S±2S 2.Tin: lead-free. 3.Temperature:240℃±5℃, flux 3.0S±0.5S.						
Mechanical shock	1. No case deformation or change in apperance 2. ΔL/Lo≤±10%			1. Acceleration: 100G 2. Pulse time:: 6ms 3. 3 times in each positive and negative direction of 3 mutual perpendicular directions						
Mechanical vibration	1. No case deformation or change in apperance 2. ΔL/Lo≤±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										
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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		PART NO.: YTA0530系列规格书			SACLE 1:1	REV A0	x±0.35 .x±0.30	x°±3.0° .x°±2.0°	CHECKED BY: Elvis.Song	
TEL: +86 400 1048 018 WEB: WWW.WOHU-TEK.COM		REMARK:			SHEET 4/7		.xx±0.25 .xxx±0.10	.xx°±1.5° .xxx°±1.0°	DESIGND BY: Sunny.Xu	

Recommended Soldering Technologies

(1)Re-flowing Profile

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

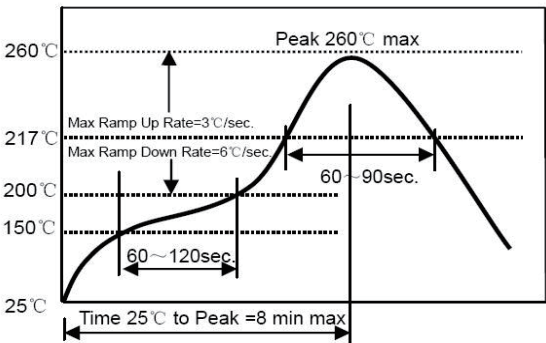
Allowed time above 217℃: 80~120sec.

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

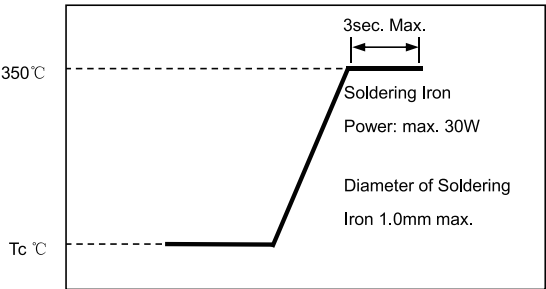
Pre-heating: 150℃/60sec.

Soldering Tip temperature: 350℃ Max.

Soldering time: 3sec. Max.

Solder paste: Sn/3.0Ag/0.5Cu

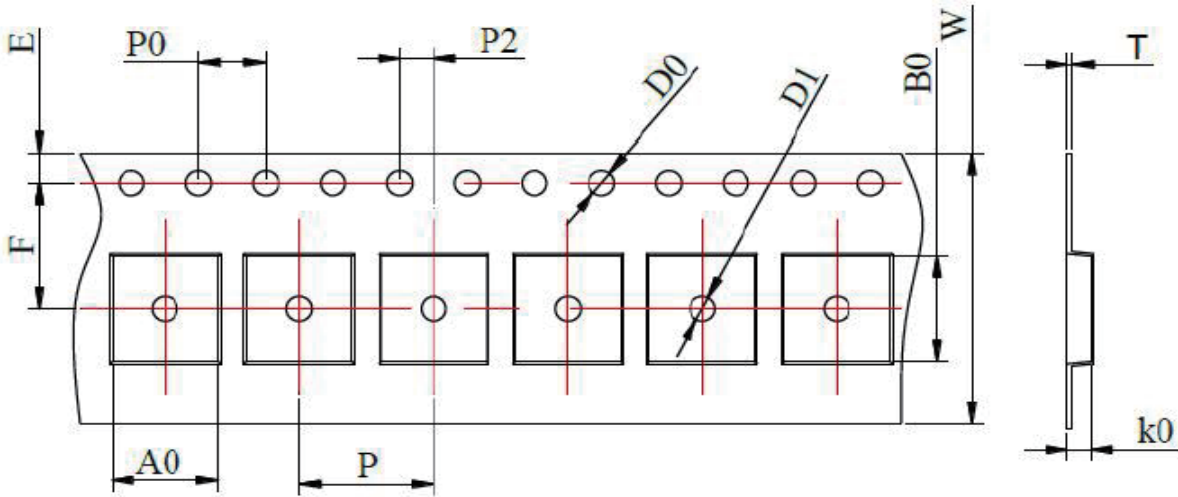
Max.1 times for iron soldering



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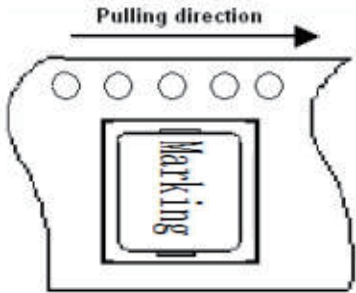
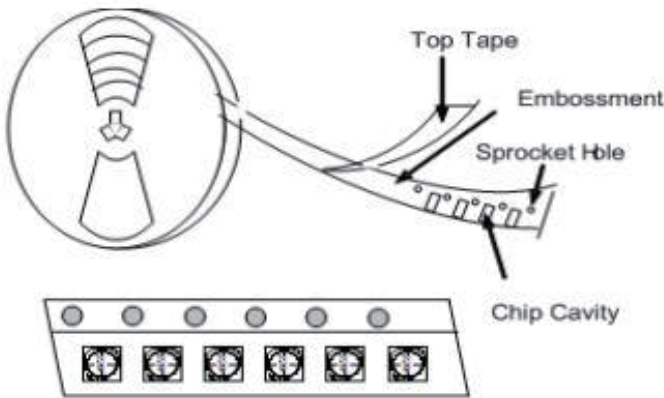
Packaging Information



(1) Tape Packaging Dimensions (Unit: mm)



Type	Tape dimensions (mm)											
	W	P	P0	P2	D0	D1	T	A0	B0	K0	E	F
WHYTA0530	12 ±0.3	8 ±0.1	4 ±0.1	2 ±0.1	1.5 ±0.1	1.5 ±0.1	0.35 ±0.05	5.5 ±0.1	5.9 ±0.1	3.3 ±0.1	1.75 ±0.1	5.5 ±0.1

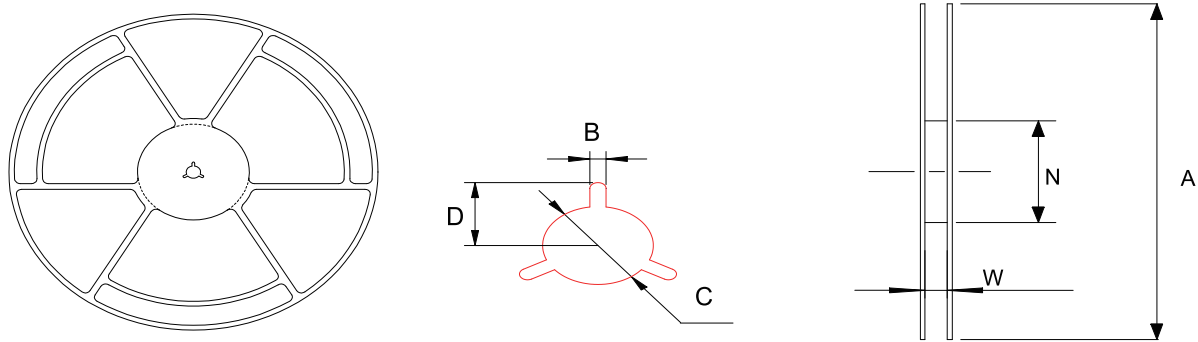
Taping Drawings (UNIT:mm)



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					.x±0.30	.x°±2.0°	
TEL: +86 400 1048 018	WEB: WWW.WOHU-TEK.COM	REMARK:	SHEET 5/7		.xx±0.25	.xx°±1.5°	DESIGND BY: Sunny.Xu
					.xxx±0.10	.xxx°±1.0°	

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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	13.2±0.2	10.75±0.25

(3) Packaging Quantity(PCS)

Type	Standard Quantity		
	Reel	Inner box	Carton box
WHYTA0530	2000 pcs / reel	4Reel / box (8000 pcs)	4 Middle boxes, (32,000 pcs)

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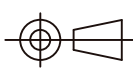
SIZE
A4

SACLE
1:1

SHEET
6/7

UNITS
MM[INCH]

REV
A0



GENERAL TOLERANCES
UNLESS SPECIFIED

x±0.35
.x±0.30

.xx±0.25
.xxx±0.10

x°±3.0°
.x°±2.0°

.xx°±1.5°
.xxx°±1.0°

APPROVED BY:
Geoffrey.Song

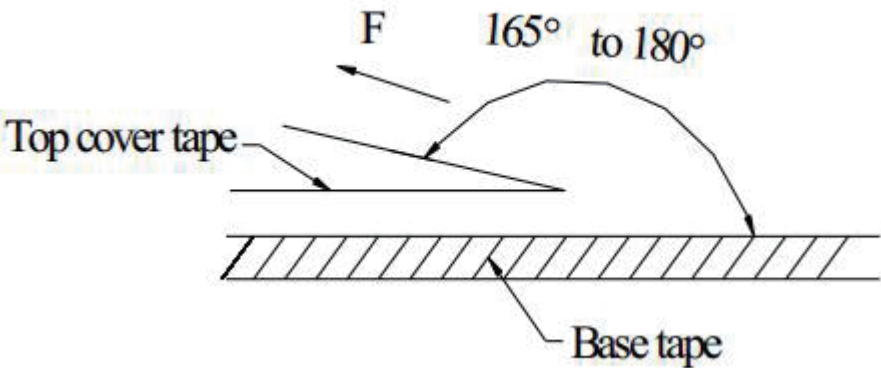
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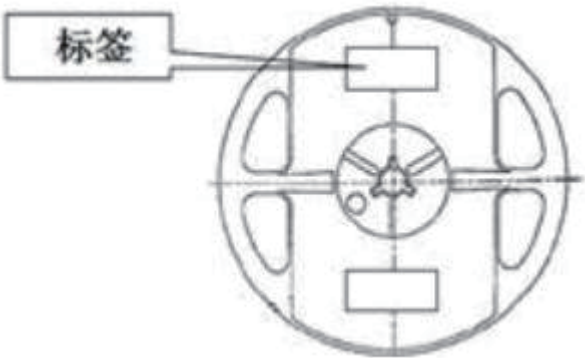
(4) Peel force of top cover tape

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

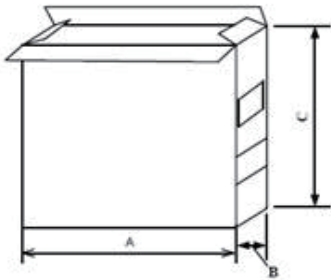
- Label on the reel
- Customer's part Number
 - Lot Number
 - Quantity
 - date code



Shipping Label

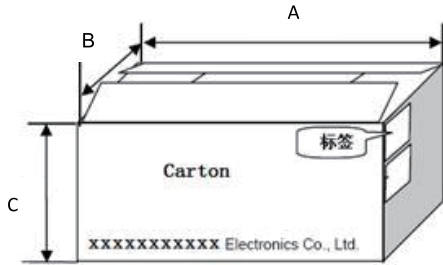
- Customer's part Number
- Manufacturer's part Number
- Quantity
- date code

(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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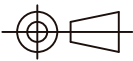
SIZE
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SACLE
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SHEET
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REV
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GENERAL TOLERANCES
UNLESS SPECIFIED

$x \pm 0.35$	$x^\circ \pm 3.0^\circ$
$.x \pm 0.30$	$.x^\circ \pm 2.0^\circ$
$.xx \pm 0.25$	$.xx^\circ \pm 1.5^\circ$
$.xxx \pm 0.10$	$.xxx^\circ \pm 1.0^\circ$

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