

**0.4mm Pitch, 0.8mm Height, Board-to-Board Battery Connectors
(BTR10 Series)**

**Product Specification
(For External Use)**

Rev.	Description	Written/Date	Checked/Date	Approved/Date
A	New Release	Mike Liu 08-26-2014	Mike Liu 08-26-2014	Dickson Guan 08-27-2014
B	Add 10pin 24pin 30pin products	Mike Liu 09-22-2014	Mike Liu 09-22-2014	Dickson Guan 09-23-2014
C	Materials changed	Bian Sen 08-24-2015	Tiger 08-24-2015	Dickson Guan 08-25-2015
D	Add part number	Bian Sen 09-05-2015	Tiger 09-05-2015	Dickson Guan 09-06-2015
E	Add part number (40/50PIN)	Bian Sen 06-21-2016	Tiger 06-21-2016	Dickson Guan 06-21-2016
F	Add part number (16PIN)	Bian Sen 11-25-2016	Tiger 11-25-2016	Dickson Guan 11-25-2016
G	Logo changed	Bian Sen 03-07-2018	Tiger 03-07-2018	Dickson Guan 03-07-2018
H	Insulator color changed&Change of packaging	Jim wang 04-23-2020	Seven 04-23-2020	Jason bian 04-23-2020

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Rating	Rated current: Signal 1.0A/Pin Rated current: Power 1.0A *N (N=Power Number) Rated voltage: 60V AC/DC	Operating temperature range : -55ç to +85ç Operating humidity range : 20% to 80%	Storage temperature range: -55ç to +85ç Storage humidity range : 20% to 80%
Instantaneous current	Signal 2.0A/Pin Power 2.0A *N (N=Power Number)	Continue through the middle of the stream 20ms 1s pause for a loop, 5,000 consecutive cycles	

Item	Specification	Conditions
1. Insulation resistance	1000 M Ω min.	200V DC
2. Withstanding voltage	No flashover or insulation breakdown.	500V AC /one minute
3. Temperature rise	The temperature rise should not exceed 30°C	1A rated current is passed on testing specimens for 3 hours
4. Contact resistance	20 m Ω max initial 40 m Ω max final	Subject mated contacts assembled in housing to 20mV maximum open circuit at 100 mA maximum
5. Vibration	No electrical discontinuity of 1 μ s or more	Frequency: 10 to 55 Hz, single amplitude of 1.5mm, 2 hours along each X, Y, Z, total 6 hours
6. Humidity	Contact resistance: 40 m Ω max. Insulation resistance: 500 M Ω min.	120 hours at temperature of 40ç \pm 2ç and RH of 90% to 95%
7. Temperature cycle	Contact resistance: 40 m Ω max. Insulation resistance: 500 M Ω min.	Temperature: -55ç/+5ç/+35ç/+85ç Duration: 30/10/10/30 (Minutes) 5 cycles
8. Durability	Contact resistance: 40 m Ω max.	50 cycles
9. Resistance to soldering heat	No deformation of components affecting performance.	Reflow: At the recommended temperature profile Manual soldering: 300ç for 3 seconds
10. Salt water spray	1). Appearance shall not be distinct damage. 2). Resistance value after test After test: 40m Ω Maximum. Insulation: 1). Initial: 1000 M Ω Minimum. 2). After test: 500 M Ω Minimum.	Temperature: 35°C \pm 2°C Density of salt water : 5 \pm 1% Duration: 48 hours.
11. Mating&Unmating Force	Mating force: Maximum 100grams/terminal x total terminals. Unmating force: Minimum 30grams/terminal x total terminals.	Measure force necessary to mate assemblies at maximum rate of 25 \pm 3 mm per minute.

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Materials and Finishes

Connectors	Component	Material	Finish		Remarks
Socket	Insulator	LCP	Color : Black		UL94V-0
	Contacts	nickel-copper	plating	Contact area: Au 4u” Min, Ni 80-150u”	
				Solder area: Au 4u” Min, Ni 80-150u”	
Hold down	Phosphor bronze	plating	Matte Tin 100-200u” , Ni 80-150u”		
Plug	Insulator	LCP	Color : Black		UL94V-0
	Contacts	nickel-copper	plating	Contact area: Au 4u” Min, Ni 80-150u”	
				Solder area: Au 4u” Min, Ni 80-150u”	
Hold down	Phosphor bronze	plating	Matte Tin 100-200u” , Ni 80-150u”		

Ordering information (Socket)

YXT-BTR10-S-02**

1 2 3 4

1. YXT: YXT PRECISION TECHNOLOGY CO., LTD.
2. Series name: BTR10(0.4mm pitch 0.8mm height Board to Board Battery Connectors)
3. Number of positions: 10、16、24、30、40、50 S-(Socket)
4. 02(standard, with hold down)

Ordering information (Plug)

YXT-BTR10-P-02**

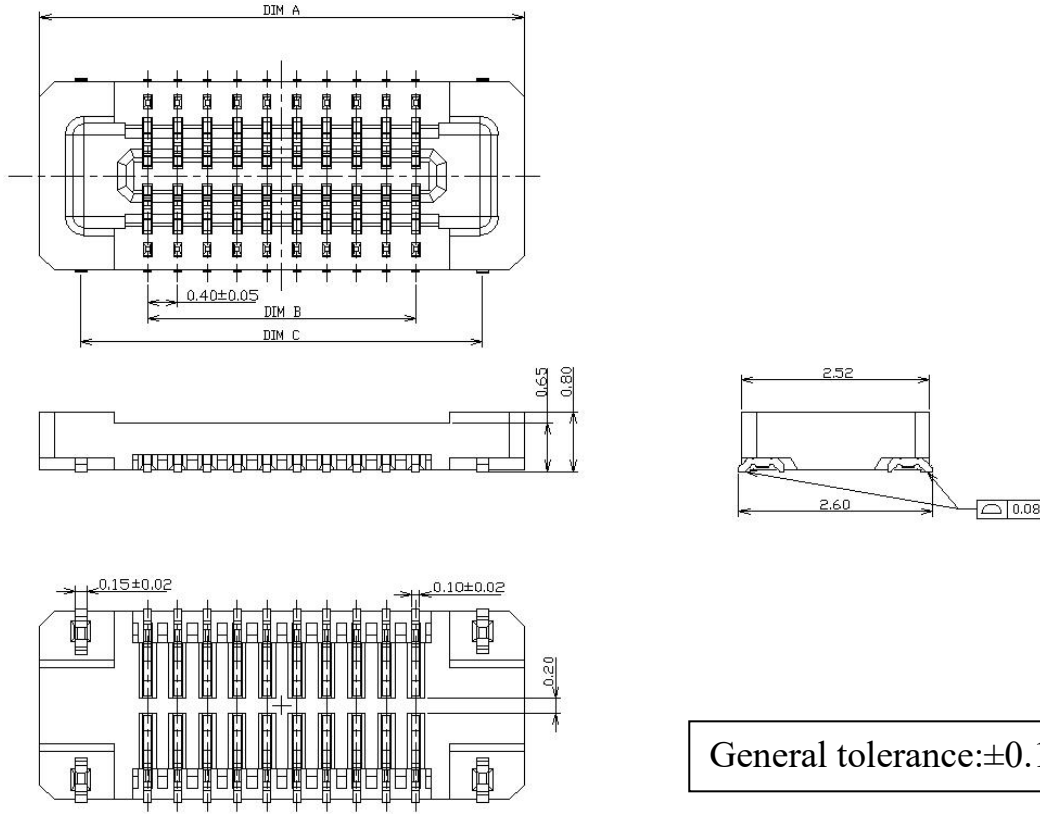
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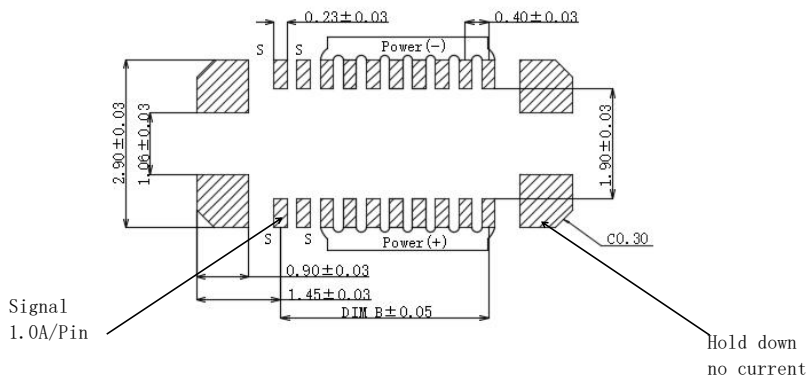
Socket (CAD Data)



General tolerance:±0.10

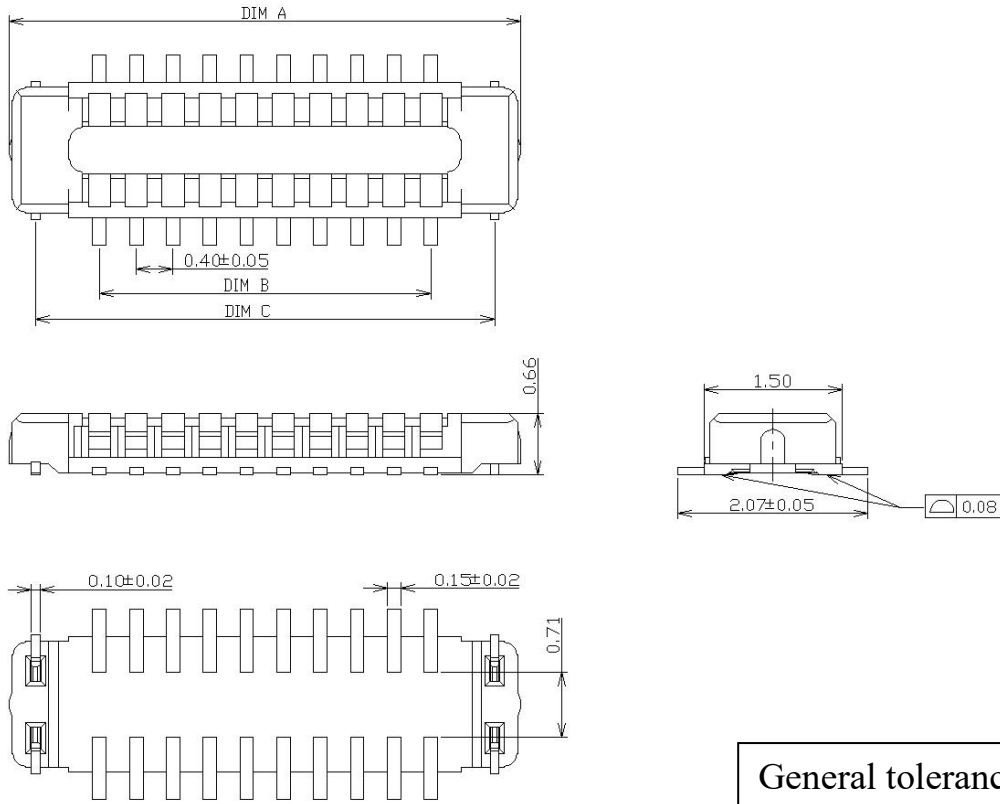
P/N	DIM A	DIM B	DIM C	Signal			Power		
				Position	Instantaneous current	Rate Current	Position	Instantaneous current	Rate Current
YXT-BTR10-10S-02	4.5	1.6	3.39	2	2A/Pin	1A/Pin	8	8A	4A
YXT-BTR10-16S-02	5.7	2.8	4.59	2	2A/Pin	1A/Pin	14	14A	7A
YXT-BTR10-24S-02	7.3	4.4	6.19	4	2A/Pin	1A/Pin	20	20A	10A
YXT-BTR10-30S-02	8.5	5.6	7.39	4	2A/Pin	1A/Pin	26	26A	13A
YXT-BTR10-40S-02	10.5	7.6	9.39	10	2A/Pin	1A/Pin	30	30A	15A
YXT-BTR10-50S-02	12.5	9.6	11.39	10	2A/Pin	1A/Pin	40	40A	20A

Recommended PCB mounting pattern



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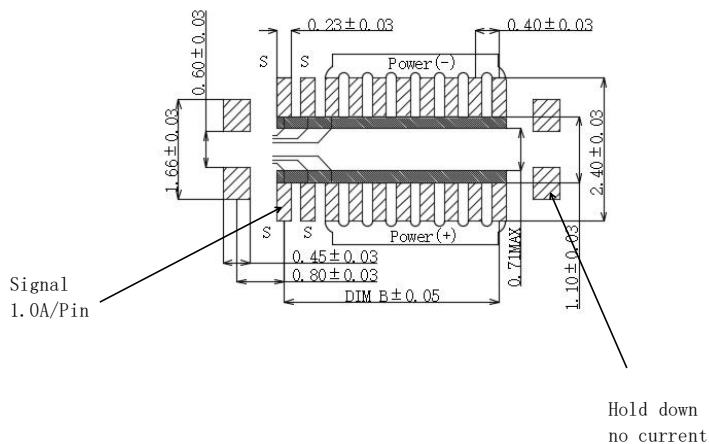
Plug (CAD Data)



General tolerance: ±0.10

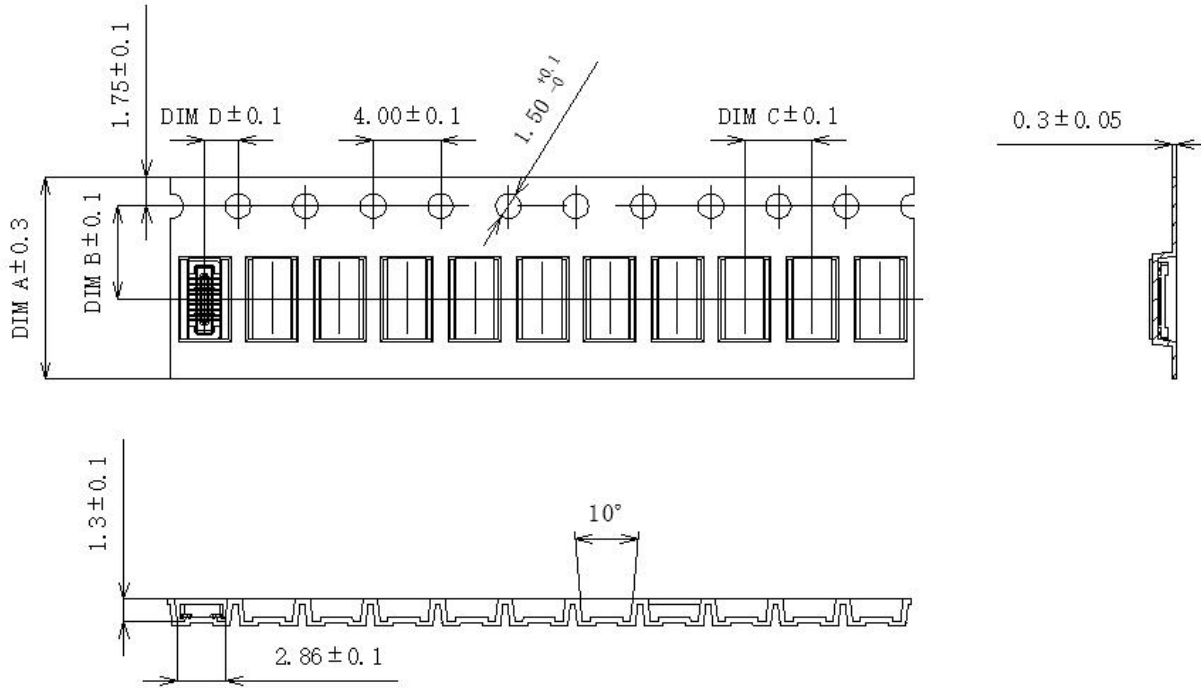
P/N	DIM A	DIM B	DIM C	Signal			Power		
				Position	Instantaneous current	Rate Current	Position	Instantaneous current	Rate Current
YXT-BTR10-10P-02	3.56	1.6	2.99	2	2A/Pin	1A/Pin	8	8A	4A
YXT-BTR10-16P-02	4.76	2.8	4.19	2	2A/Pin	1A/Pin	14	14A	7A
YXT-BTR10-24P-02	6.36	4.4	5.79	4	2A/Pin	1A/Pin	20	20A	10A
YXT-BTR10-30P-02	7.53	5.6	6.99	4	2A/Pin	1A/Pin	26	26A	13A
YXT-BTR10-40P-02	9.53	7.6	8.99	10	2A/Pin	1A/Pin	30	30A	15A
YXT-BTR10-50P-02	11.53	9.6	10.99	10	2A/Pin	1A/Pin	40	40A	20A

Recommended PCB mounting pattern

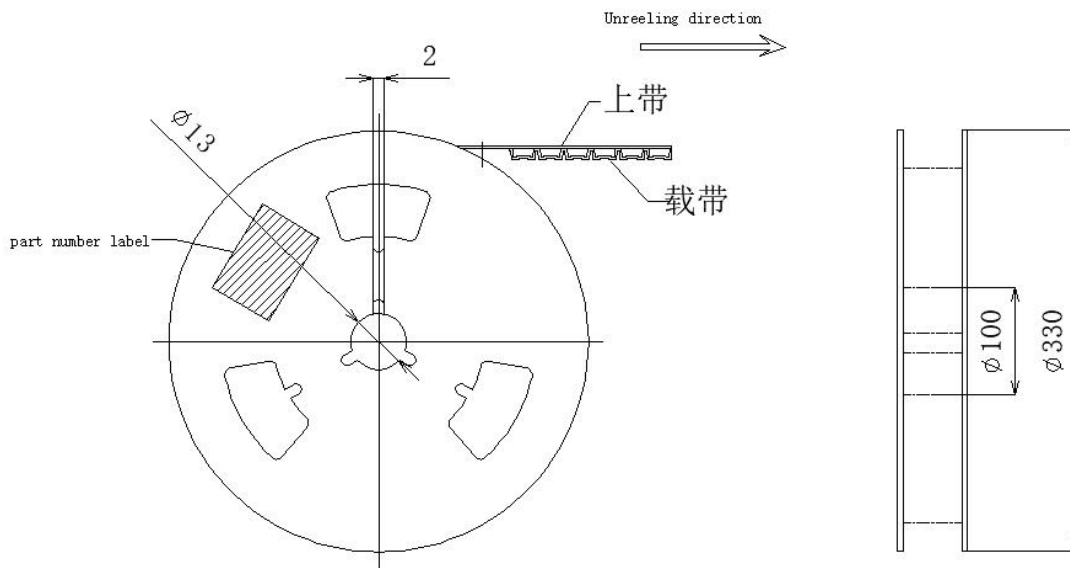


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Embossed Carrier Tape Dimensions-Socket



Reel Dimensions--Socket



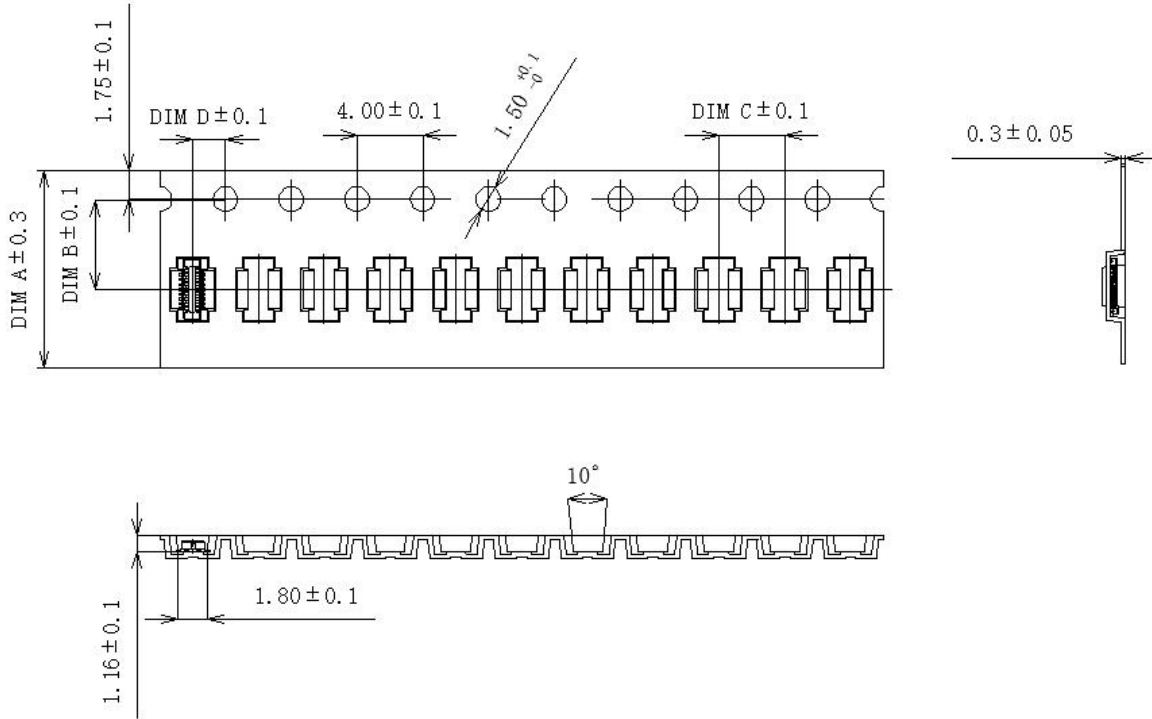
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Dimension table (Unit: mm)

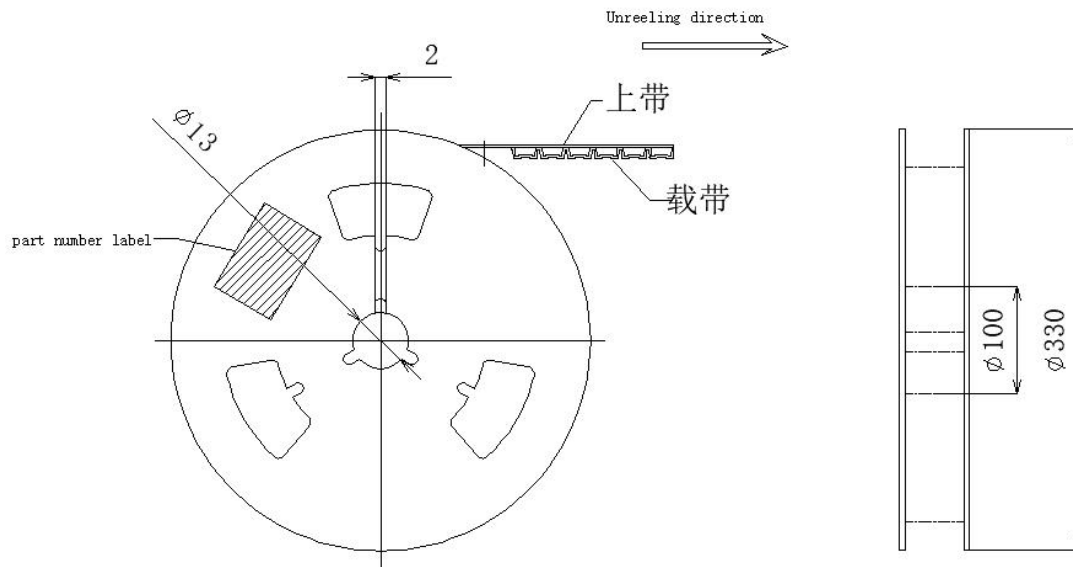
Part Number	A	B	C	D	Quantity(PC/REEL)
YXT-BTR10-10S-02	12	5.5	8	2	10000
YXT-BTR10-16S-02	16	7.5	8	2	10000
YXT-BTR10-24S-02	16	7.5	8	2	10000
YXT-BTR10-30S-02	16	7.5	8	2	10000
YXT-BTR10-40S-02	24	11.5	8	2	10000
YXT-BTR10-50S-02	24	11.5	8	2	10000

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Packing Specification Embossed Carrier Tape Dimensions-Plug



Reel Dimensions--Plug



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Dimension table (Unit: mm)

Part Number	A	B	C	D	Quantity(PC/REEL)
YXT-BTR10-10P-02	12	5.5	8	2	10000
YXT-BTR10-16P-02	16	7.5	8	2	10000
YXT-BTR10-24P-02	16	7.5	8	2	10000
YXT-BTR10-30P-02	16	7.5	8	2	10000
YXT-BTR10-40P-02	24	11.5	8	2	10000
YXT-BTR10-50P-02	24	11.5	8	2	10000