

规格书
SPECIFICATION

PRODUCT SPECIFICATION

Floating Board to Board SERIES

-Index-

1.Scope

2.Part name & part number

3.Construction、 dimensions、 material & surface finish

4.Characteristics

5.Mechanical test

5.1Vibration

5.2Shock resistance

6.Electrical test

6.1Contact resistance

6.2Insulation resistance

6.3Withstanding voltage

7.Environmental test

7.1Humidity

7.2Vibration

8.Ordering information

8.1 Socket

8.2 Plug

9.High-speed transmission property

10.Production dimension

11.Carrier Tape Dimensions

12.Recommended temperature profile

规格书
SPECIFICATION

PRODUCT SPECIFICATION Floating Board to Board SERIES

1.Scope:

This product specification contains the product performance requirements and testing methods, and is applicable to floating BTB connectors. The specification values are detailed in the table below. The design, structure, and detailed dimensions of the product are included in the applicable product drawings.

2.Part name&part number:

Part Name	Part Number
Male(Mating Height 10mm)	BM0501M-XXHM-01-AG
Male(Mating Height 19mm)	BM0501M-XXHM-01-BG
Female	BM0501M-XXHF-01-G

3.Construction、dimensions、material&surface finish:

Construction and dimensions shall be in accordance with the referenced drawings. Material and surface finish shall be as specified below.

Part name	Material	Surface finish	UL Standard
Male(Mating Height 10mm)	Insulator:Polyamide resin	Black	UL94V-0
	Signal:Copper alloy	Contacted part:Gold plating Solder part:Gold plating	/
	Power:Copper alloy	Contacted part:Gold plating Solder part:Pure tin plating	
	Fitting:Copper alloy	Pure tin plating	
Male(Mating Height 19mm)	Insulator:Polyamide resin	Black	UL94V-0
	Signal:Copper alloy	Contacted part:Gold plating Solder part:Gold plating	/
	Power:Copper alloy	Contacted part:Gold plating Solder part:Pure tin plating	
	Fitting:Copper alloy	Pure tin plating	
Female	Insulator:Polyamide resin	Black	UL94V-0
	Signal:Copper alloy	Contacted part:Gold plating Solder part:Gold plating	/
	Power:Copper alloy	Contacted part:Gold plating Solder part:Pure tin plating	
	Fitting:Copper alloy	Pure tin plating	

规格书
SPECIFICATION

PRODUCT SPECIFICATION	Floating Board to Board SERIES
-----------------------	--------------------------------

- 4.Characteristics:
- Current rating: Signal:0.5A/PIN Power: 3A/PIN
 - Voltage rating: Signal:50V DC Power:200V DC
 - Operating temperature range: -55°C ~ +105°C
 - Storage temperature range: -10°C ~ +60°C
 - Storage humidity range: 90 % Max
 - performance index: ≥100 Number of insertion and extraction
 - Floating movable amount:direction X:0.6mm direction Y:0.6mm
 - High-speed transmission:8+Gbps
 - Differential impedance:100Ω±10% 87.5ps(20 to 80%)
5. Mechanical test:
- 5.1 Vibration
- 5.1.1 Requirement: No momentary disconnections of 1 micro-sec/min.
 - 5.1.2 Condition: Frequency:10Hz to 50Hz,Half amplitude of 0.75mm,10 cycles in each of 3 axis directions for 5 minutes /cycle.
- 5.2 Shock resistance
- 5.3.1 Requirement: No momentary disconnections of 1 micro-sec/min.
 - 5.3.2 Condition: Acceleration of 490m/s²,duration 11ms,sine half-wave,3 cycles in each of the 3axes each in both direction
- 5.3 Durability
- 5.3.1 Requirement: No momentary disconnections of 1 micro-sec/min.
 - 5.3.2 Condition: 100 cycles
6. Electrical test:
- 6.1 Contact resistance
- 6.1.1 Requirement: Signal:70mΩ(max.);Power:20mΩ(max.)
 - 6.1.2 Condition: Test current:100mA(max.);Open voltage:20mV(max.)
- 6.2 Insulation resistance
- 6.2.1 Requirement: Signal:100MΩ(min.);Power:1000MΩ(min.)
 - 6.2.2 Condition: Signal:100DC;Power:250DC.
- 6.3 Withstanding Voltage
- 6.3.1 Requirement: No flashover or insulation breakdown.
 - 6.3.2 Condition: Signal:150AC/minute;Power:600AC/minute.
- 7.Environment test:
- 7.1Humidity
- 7.1.1 Requirement: Contact resistance: Signal:80MΩ Max
Power:30MΩ Max
Insulation resistance:Signal:100MΩ Max
Power:1000MΩ Max
Condition: Temperature: 40°C
Humidity: 90% ~ 95% (RH)
Period: 96 hours continuously

规格书
SPECIFICATION

PRODUCT SPECIFICATION	Floating Board to Board SERIES
-----------------------	--------------------------------

7.2Temperature Cycling

7.2.1 Requirement: Contact resistance: Signal:80MΩ Max
Power:30MΩ Max
Insulation resistance: Signal:100MΩ Max
Power:1000MΩ Max
Condition: Mated Connector and apply the following test condition.
Cycle: 5 cycles
Temperature:-55-+85℃

8.Ordering information

8.1 Socket:

BM0501 M-XX H F-01- G
1 2 3 4 5 6

1.Series No.
2.SMT Type
3.No. of position
4.Gold flash on contact;Matte Tin on tail
5.Female
6.W/O Cap In Tape/Reel

8.2 Plug:

BM0501 M-XX H M-01- A G
1 2 3 4 5 6 7

1.Series No.
2.SMT Type
3.No. of position
4.Gold flash on contact;Matte Tin on tail
5.Male
6.Mating height: 10mm
7.W/O Cap In Tape/Reel

BM0501 M-XX H M-01- B G
1 2 3 4 5 6 7

1.Series No.
2.SMT Type
3.No. of position
4.Gold flash on contact;Matte Tin on tail
5.Male
6.Mating height: 19mm
7.W/O Cap In Tape/Reel

规格书
SPECIFICATION

PRODUCT SPECIFICATION

Floating Board to Board SERIES

9.High-speed transmission property

Pin assignment

The follwing pin arrangement is recommended to match the 100Ω differential impedance and to contain cross-talk.



Differential impedance 85ps rise time(20 to 80%)

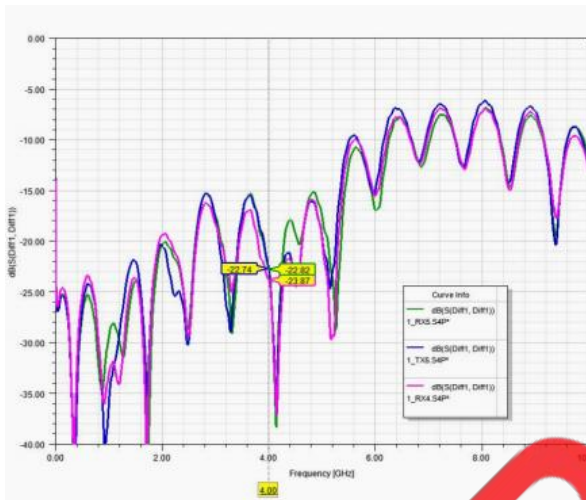


规格书
SPECIFICATION

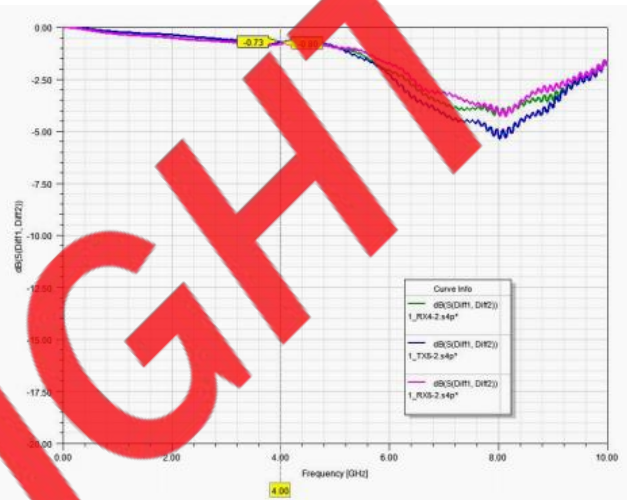
PRODUCT SPECIFICATION

Floating Board to Board SERIES

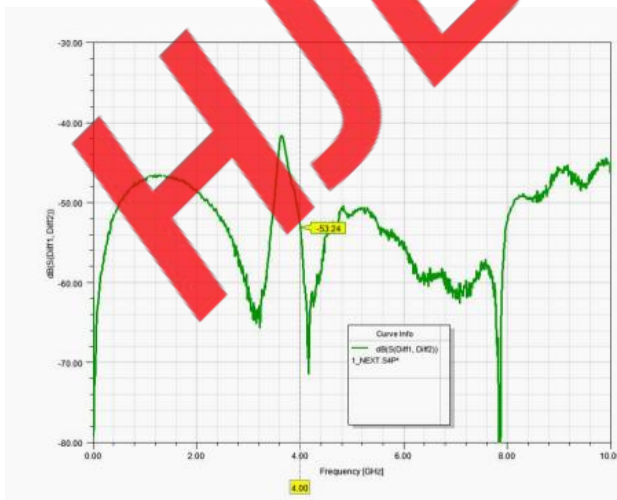
Return loss



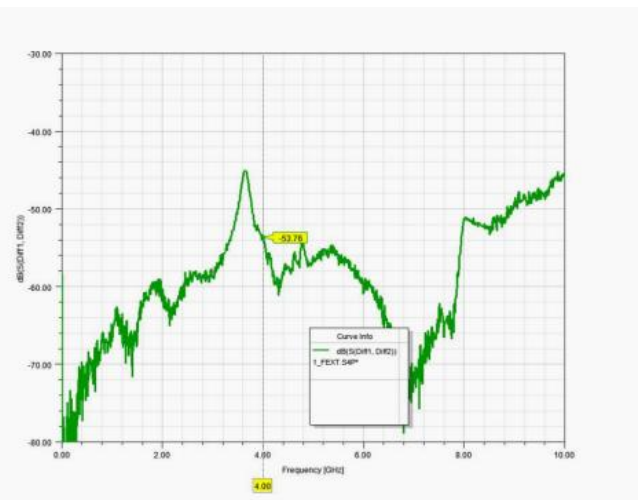
Insertion loss



Near end cross-talk



Far end cross-talk



规格书
SPECIFICATION

PRODUCT SPECIFICATION

Floating Board to Board SERIES

Eye Pattern



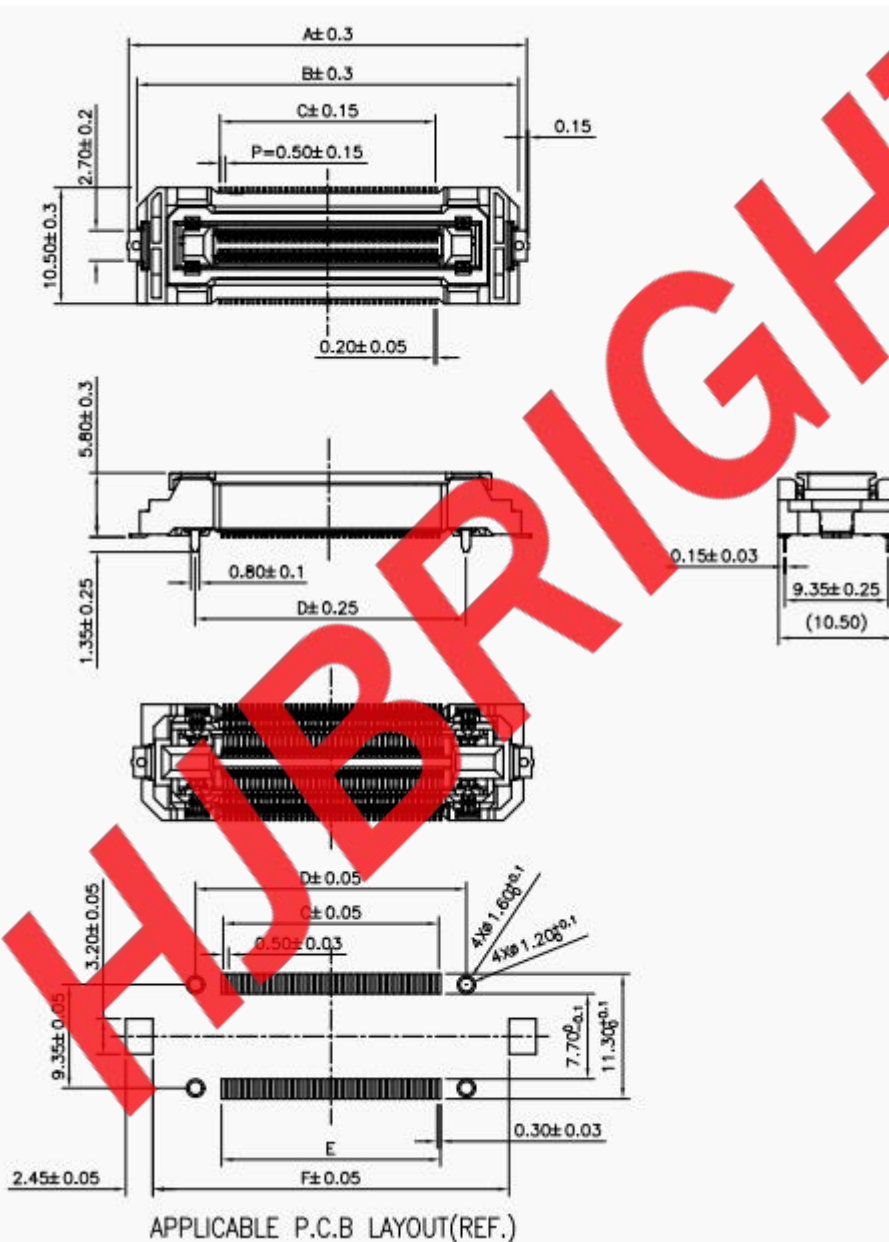
规格书
SPECIFICATION

PRODUCT SPECIFICATION

Floating Board to Board SERIES

10. Production dimension Floating Board to board series

BM0501M-XXHF-01-G



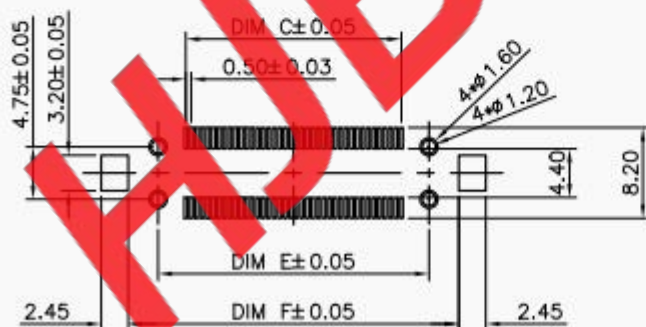
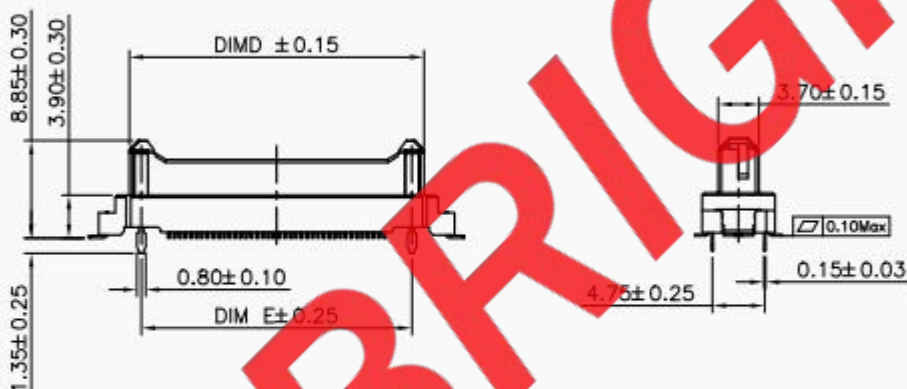
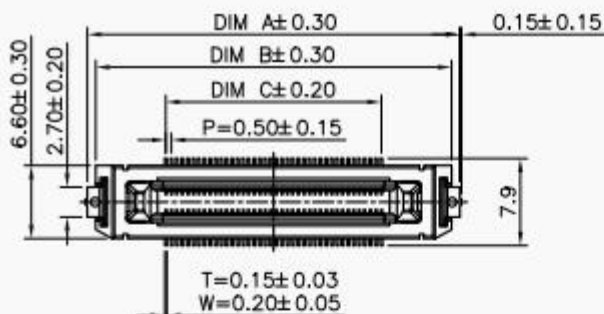
No. OF PIN	A	B	C	D	E	F
60	31.0	29.5	14.5	19.5	14.8	27.2
80	36.0	34.5	19.5	24.5	19.8	32.2
120	46.0	44.5	29.5	34.5	29.8	42.2

规格书
SPECIFICATION

PRODUCT SPECIFICATION

Floating Board to Board SERIES

BM0501M-XXHM-01-AG

APPLICABLE P.C.B LAYOUT(REF.)
THICKNESS T=1.6mm

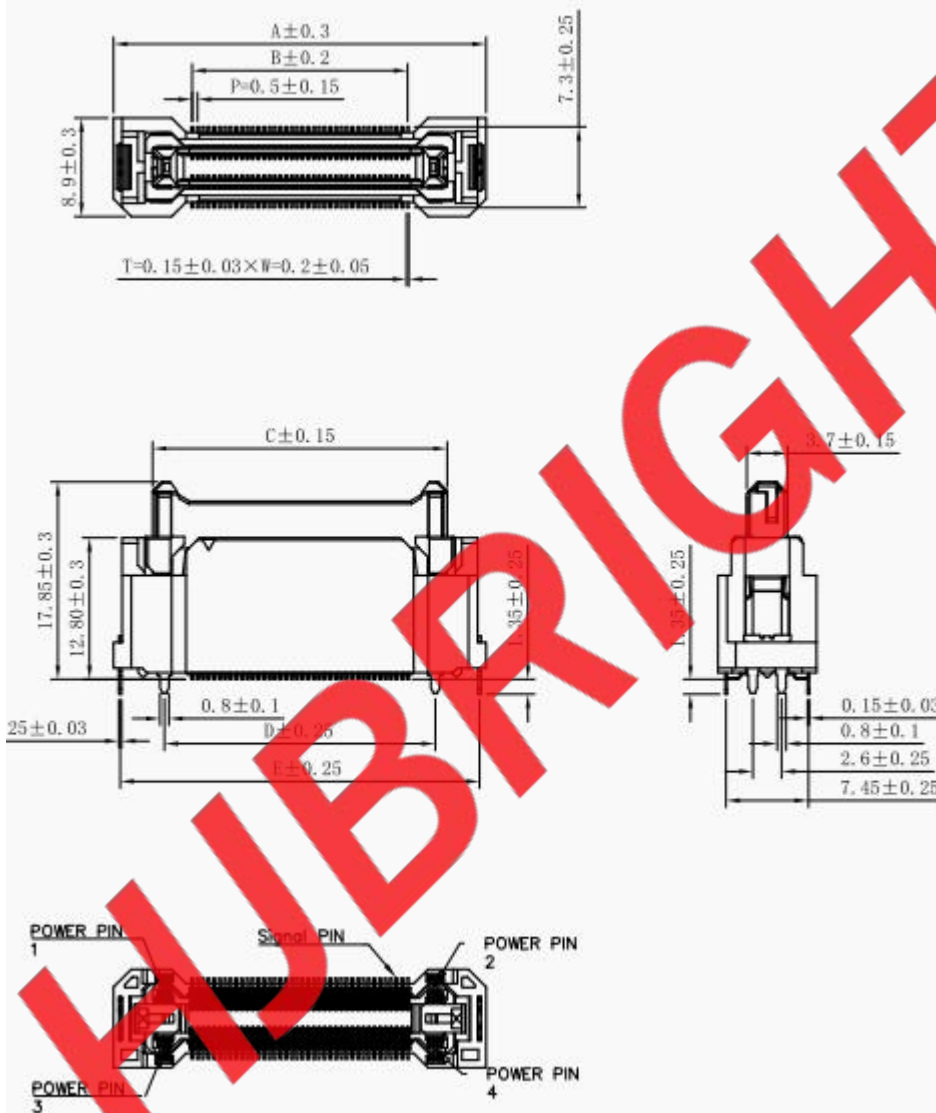
No. OF PIN	A	B	C	D	E	F
60	28.7	27.2	14.5	21.65	19.5	24.9
80	33.7	32.2	19.5	26.65	24.5	29.9
120	43.7	42.2	29.5	36.65	34.5	39.9

规格书
SPECIFICATION

PRODUCT SPECIFICATION

Floating Board to Board SERIES

BM0501M-XXHM-01-BG



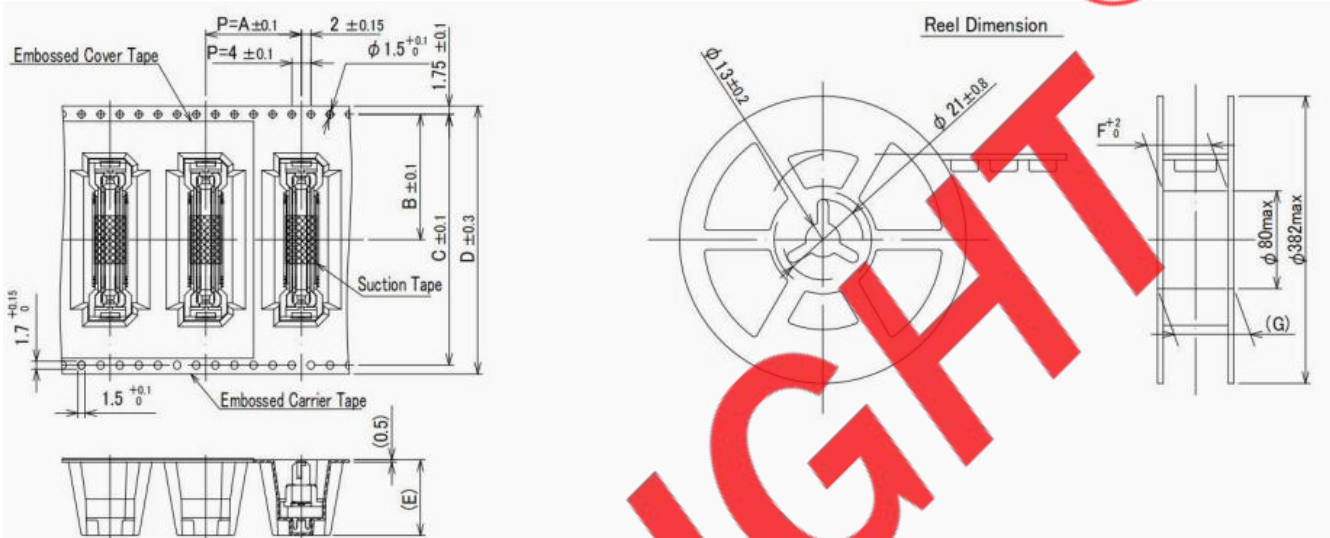
No. OF PIN	A	B	C	D	E
60	28.7	14.5	21.65	19.5	27.5
80	33.7	19.5	26.65	24.5	32.5
120	43.7	29.5	36.65	34.5	42.5

规格书
SPECIFICATION

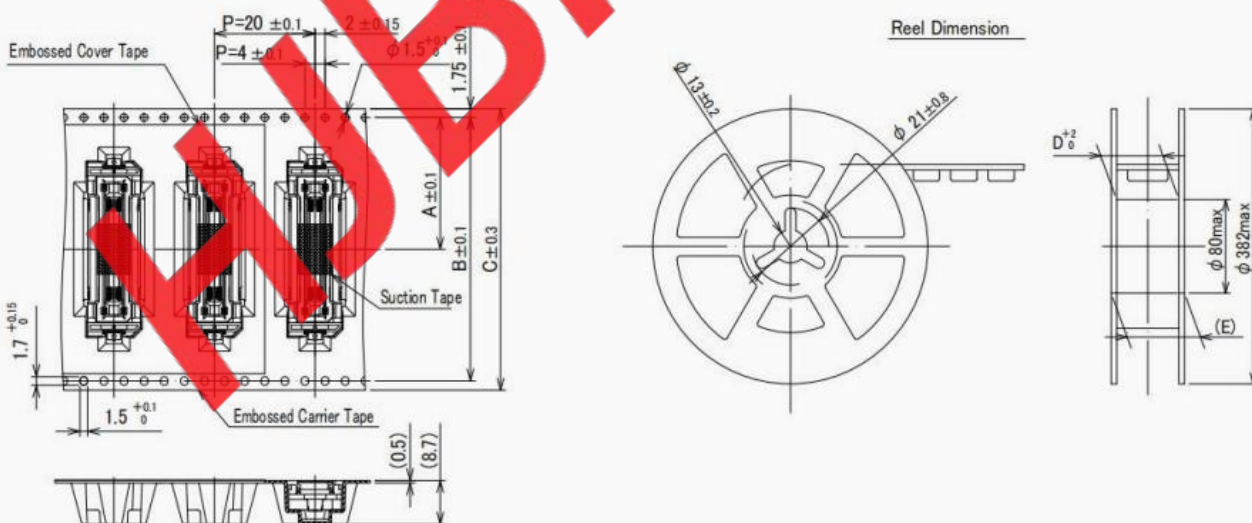
PRODUCT SPECIFICATION

Floating Board to Board SERIES

11. Carrier Tape Dimensions



Part No.	Pcs/Reel	A	B	C	D	E	F	G
BM0501M-60HM-01-BG	150	24	26.2	52.4	56	20.45	56.4	62.4
BM0501M-80HM-01-BG	150	24	26.2	52.4	56	20.45	56.4	62.4
BM0501M-120HM-01-BG	150	24	26.2	52.4	72	20.45	56.4	78.4

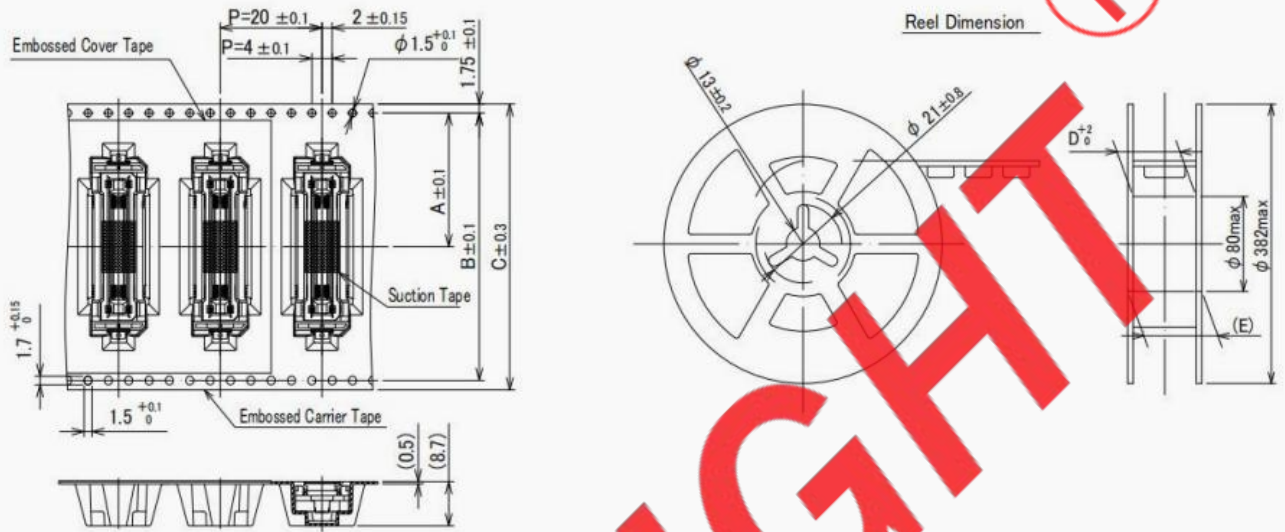


Part No.	Pcs/Reel	A	B	C	D	E
BM0501M-60HF-01-G	500	24	26.2	52.4	56.4	62.4
BM0501M-80HF-01-G	500	24	26.2	52.4	56.4	62.4
BM0501M-120HF-01-G	500	24	26.2	52.4	56.4	78.4

规格书
SPECIFICATION

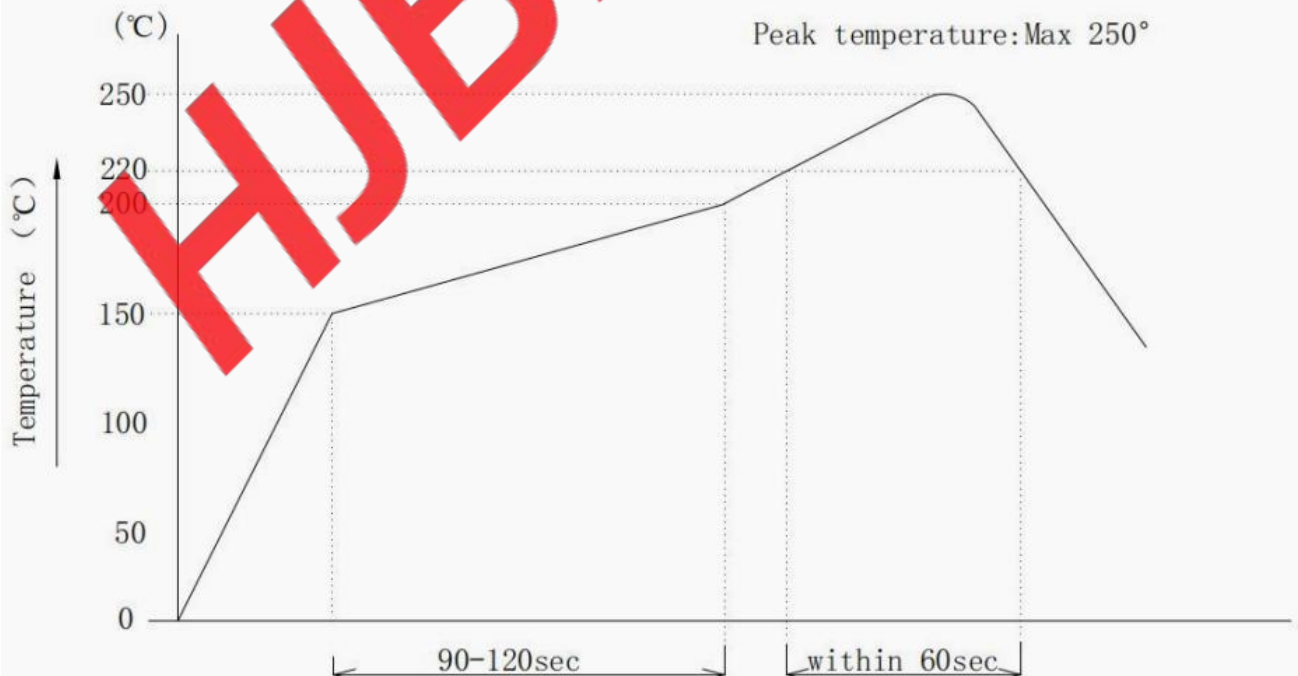
PRODUCT SPECIFICATION

Floating Board to Board SERIES



Part No.	Pcs/Reel	A	B	C	D	E	F	G
BM0501M-60HM-01-AG	500	16	20.2	40.4	44	11.50	56.4	50.4
BM0501M-80HM-01-AG	500	16	26.2	52.4	56	11.50	56.4	62.4
BM0501M-120HM-01-AG	500	16	34.2	68.4	72	11.50	56.4	78.4

12.Recommended temperature profile



规格书
SPECIFICATION

PRODUCT SPECIFICATION

Floating Board to Board SERIES

Notice:

1.The values specified in this specification are only for reference. The products and their specifications are subject to change without notice.Contact our sales for further information before considering or ordering any of our products.
For purchase, a product specification must be agreed upon.

2.Users are requested to provide protection circuits and redundancy circuits to ensure safety of the equipment, and sufficiently review the suitability of BRIGHT-E's products to the equipment.

3.The products presented in this series are designed for the uses recommended below. We strongly suggest you contact our sales staff when considering use of any of the products in any other way than the recommended applications or for a specific use that requires an extremely high reliability.

(1)Applications that require consultation:

(i)Please contact us if you are considering use involving a quality assurance program that you specify or that is peculiar to the industry,such as:

Automotive electrical components, train control, telecommunications devices (mainline), traffic light control, electric power, combustion control, fire prevention or security systems, disaster prevention equipment, etc.

(ii)We may separately give you our support with a quality assurance program that you specify, when you think of a use such as:

Aviation or space equipment, submarine repeaters, nuclear power control systems, medical equipment for life support, etc.

(2)Recommended applications include:

Computers, office appliances, telecommunications devices (terminals, mobile units), measuring equipment, audiovisual equipment, home electric appliances, factory automation equipment.etc.