Innovative Service Around the Globe YAGEO

DATA SHEET

SMD 1206 FAST ACTING FUSE

JB12F Series

RoHS compliant & Halogen free

Product specification– January 20, 2026 V.2

REVISED RECORD SHEET

REV.#	PAGES	REV.DATE	REVICED CONTENT
A0	1-7	2022-09-05	Initial version
A1	P3;P11	2023-06-21	P11.add disclaimer.P3.revised typical DCR&I^2t .
A2	P3	2026-1-14	P3. Add S dimension

JB12F Series DataSheet

Scope

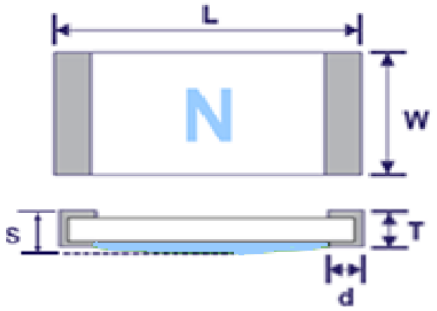
This specification is applicable to over-current protection thick film fuse for 1206 fast acting series produced by YAGEO corporation.

Applications

- LCD Displays
- Battery Packs
- Hard Disk Drives

Dimensions

Series	L (mm)	W (mm)	T (mm)	d (mm)	S (mm)
JB12F	3.20±0.20	1.60±0.20	0.65±0.20	0.50±0.20	0.75±0.20



Features

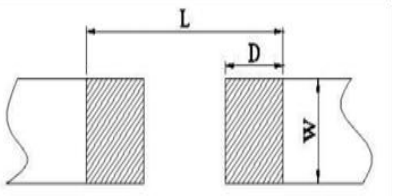
- Small Size,1206 SMD
- Operating temperature -55℃ to 125℃
- Excellent long-term stability
- Halogen Free
- Lead Free

Agency Approval

Agency	File Number	Ampere Range
cULus	E531845	0.5A-40A

Recommended Land Patterns

Series	L (mm)	W (mm)	D (mm)
JB12F	4.56	2.03	1.52



Ordering Information

Part Number	Current Rating (A)	Voltage Rating (Vdc)	Interrupting	Typical DCR (mΩ)[1]	Typical I^2t (A^2s)[2]	Marking
JB12F5000R	0.50A	63Vdc	50A@63Vdc	1029	0.008	0.5
JB12F7500R	0.75A			850	0.028	.75
JB12F1001R	1.0A			240	0.095	H
JB12F1501R	1.5A			125	0.24	K
JB12F2001R	2.0A			80	0.48	N
JB12F2501R	2.5A			38	0.91	O
JB12F3001R	3.0A			32	1.33	P
JB12F3501R	3.5A			25	1.74	R
JB12F4001R	4.0A			20	2.03	S
JB12F5001R	5.0A			13	3.98	T
JB12F6001R	6.0A			15.5	4.34	F
JB12F7001R	7.0A			11.5	5.26	7
JB12F8001R	8.0A			7.6	7.02	M
JB12F1002R	10A			5.5	12.5	U
JB12F1202R	12A	48Vdc	200A@48Vdc	5	18.4	12

JB12F1502R	15A			3.4	22.8	15
JB12F2002R	20A			2.2	32.6	20
JB12F2502R	25A			1.5	48.9	25
JB12F3002R	30A			1.25	63.3	30
JB12F4002R	40A	36Vdc	200A@36Vdc	0.84	120.5	XL

NOTE:1. Measured at≤10% rated current and 25℃

2. Nominal Melting I2t measured at 0.001s opening time

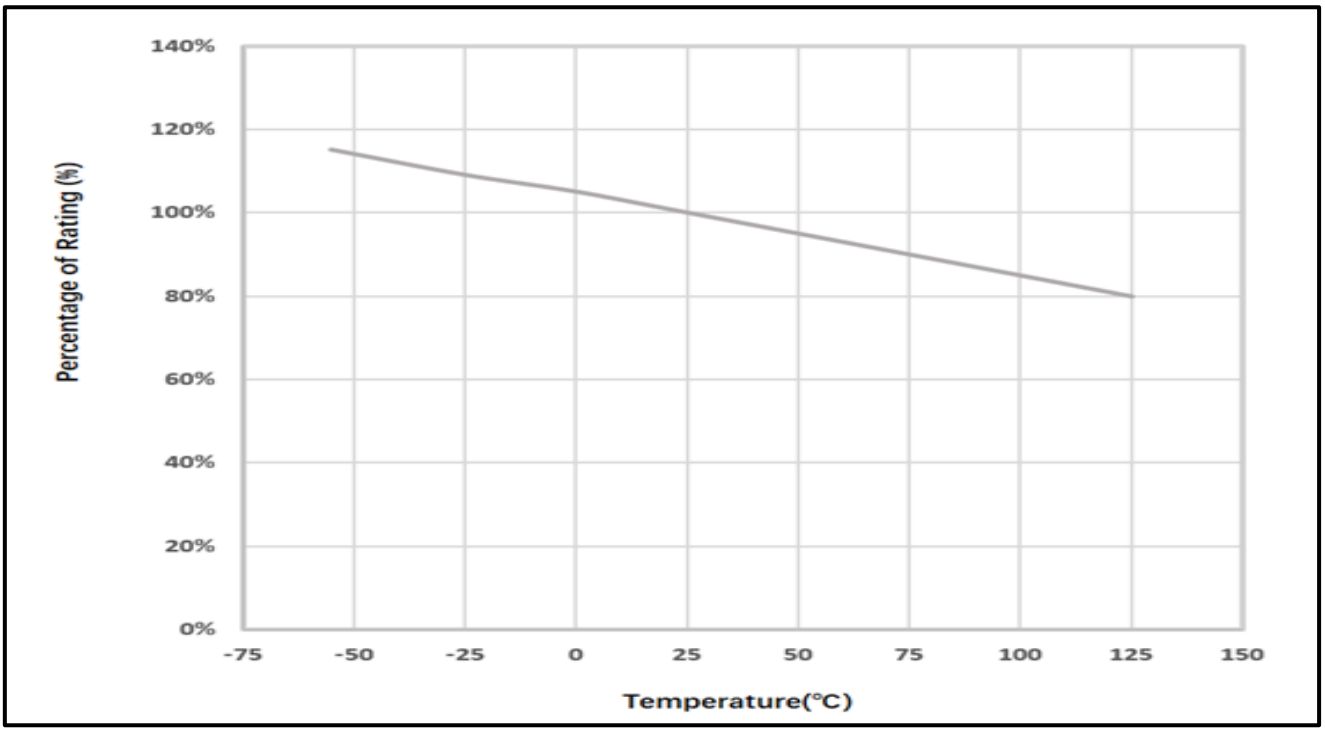
Clearing Time Characteristics

Rated Current	% of Current Rating	Clearing Time at 25℃	
		Min	Max
0.5A-40A	100%	4hours	/
0.5A-5.0A	200%	/	60s
6.0A-40A	300%	/	3s

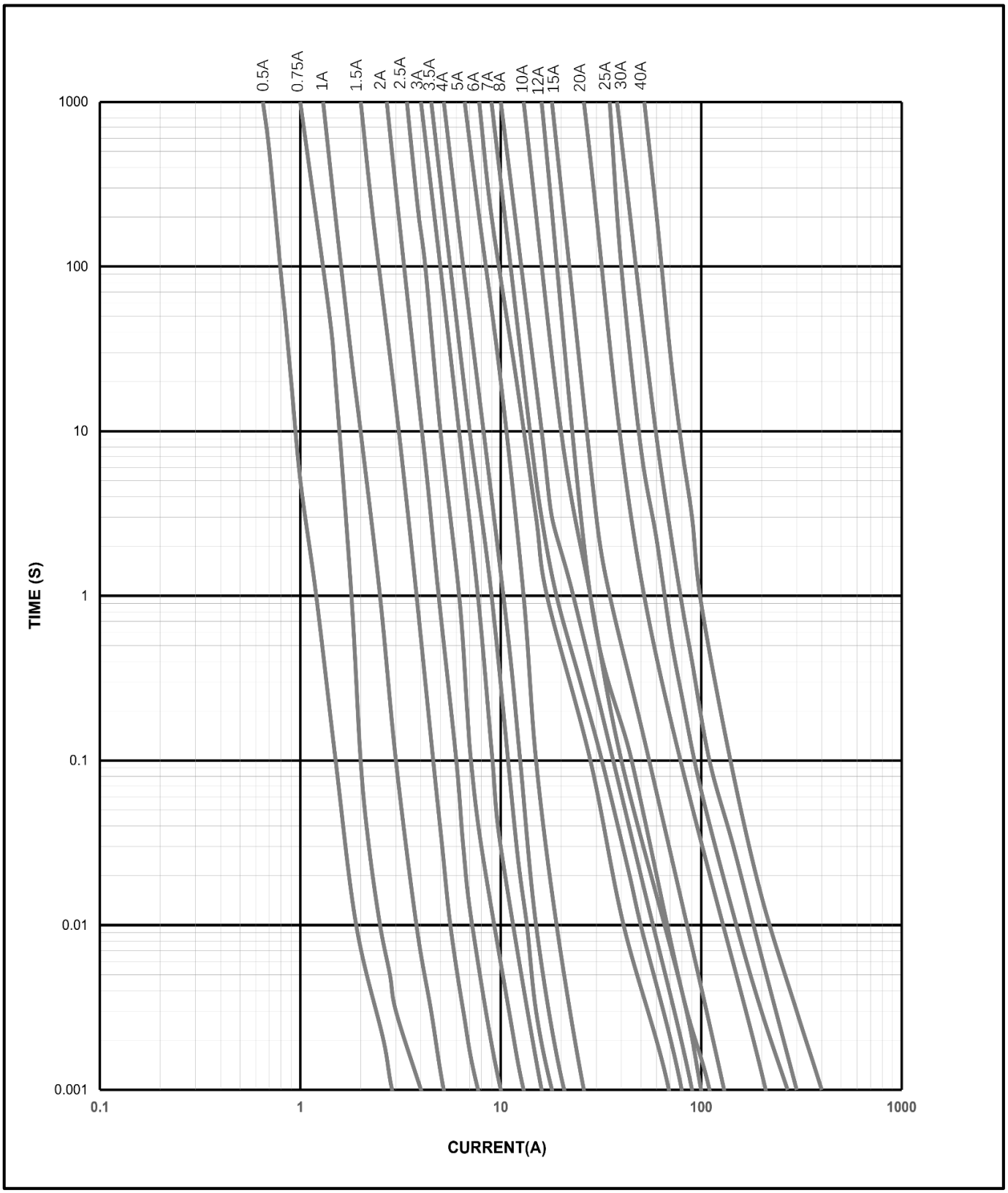
Part Number Code Rule

J	B	12	F	1001	R
Product Code	Product Type	Size Type	Fusing Type	Current Rating	Package
J:Fuse	B: Thick Film	12:1206	F: Fast acting	5000:0.5A 1001:1A	R:Tape and Reel B:Bulk

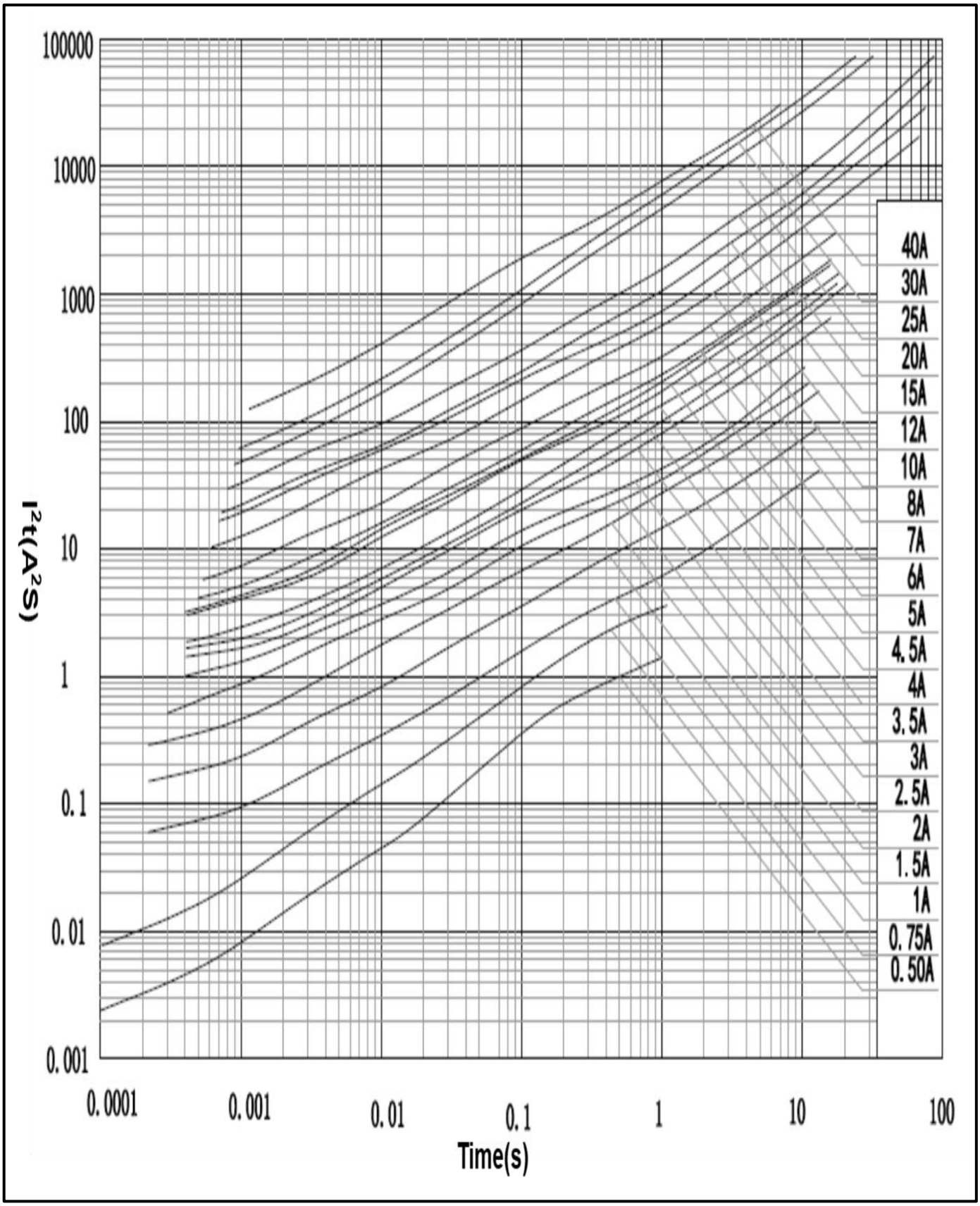
Temperature Derating Curve



Time & Current Curve



I^2t & Time Curve

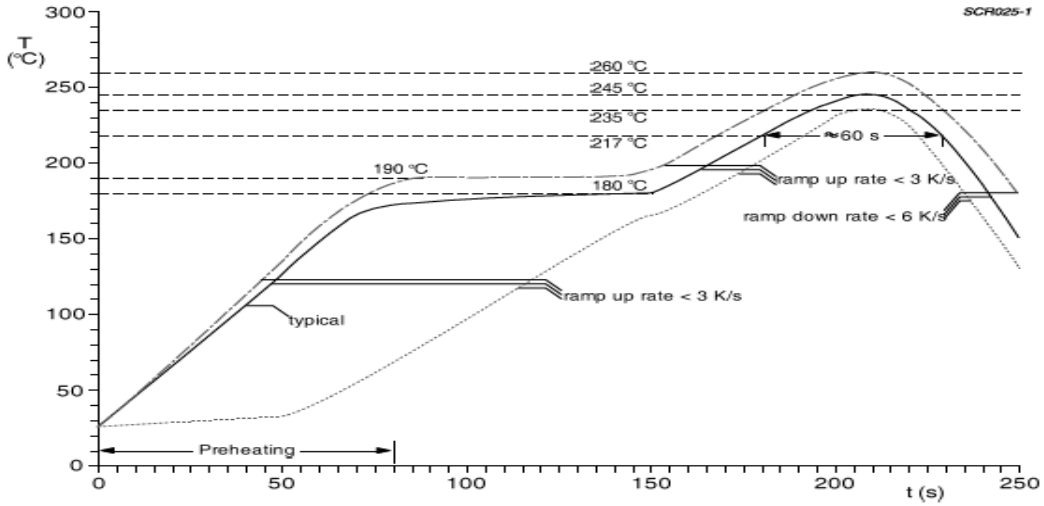


Reliability Test Performance

Item	Test condition/ Methods	Performance	Standard
Time/Current Characteristics	100% Rated Current	No fusing within 4hr	UL248-14
	200% Rated Current	0.5A-5.0A : Max:60s	Refer to clearing time characteristics
	300% Rated Current	6.0A-40A:Max:3s	
Breaking Capacity	0.5A-10A: 50A@63Vdc 12A-30A: 200A@48Vdc 40A:200A@36Vdc	No a permanent arcing, ignition, bursting	UL248-14
Solderability	T=245℃±5℃，t=5s±0.5s	Cover ≧95%	MIL-STD-202 Method 208
Resistance to Soldering	Pre−heating:145°±15℃, max.120s Peak: 260°C, max.10s Reflow cycle: 2 times After immersion into solder, leaving the room temp. for 1h or more, and then measure the internal resistance.	△R<15% No crack and damage, Marking is easily legible	MIL-STD-202, Method 210F
Thermal Shock	-65℃,15min→25℃,5min→ +125℃,15min ; 100 cycles	△R<10% No crack and damage,	MIL-STD-202, Method 213B
Mechanical Shock	a=100G for 11ms, 5pulses	△R<10% No crack and damage	MIL-STD-202, Method 213B
Vibration	Frequency range:10~15~10Hz/min Vibration amplitude:1.5mm	△R<10% No mechanical damages	MIL-STD-202, Method 201A
Salt Spray	5% salt solution,48hr	△R<10% Legible appearance	MIL-STD-202, Method 101
Board Flex	Bending:1mm, time:60s	△R<15% No mechanical damages	IEC 60127-4

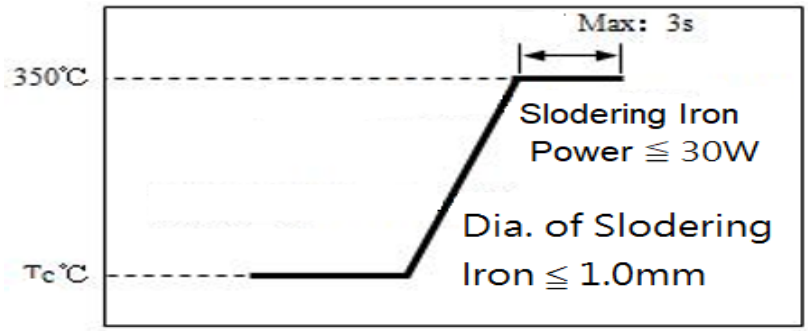
Soldering Condition

Recommend Re-Flowing Profile



Item	Condition
Ramp	<3° C/sec.
Pre-heating	145±15° C, 120s max.
Time above220° C	60s max.
Peak temperature	260° C/10s max.

Recommend Soldering tip Temperature



Item	Condition
Iron soldering power	Max. 30W
Pre-heating time	60sec, 150° C
Soldering tip temperature	Max. 350° C
Soldering time	Max. 3sec

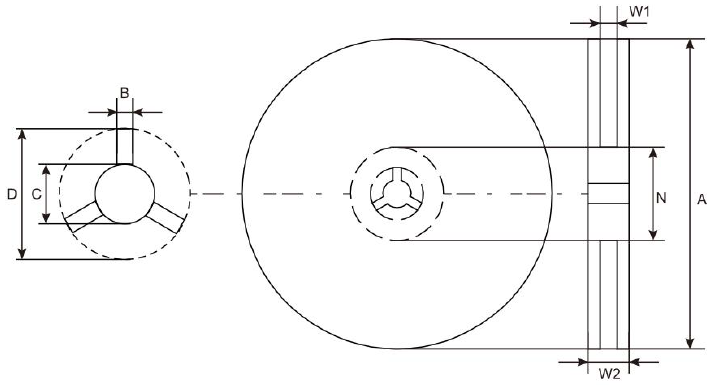
Note: Take care not to apply the tip of the soldering iron to the terminal electrodes.

Packaging Specification

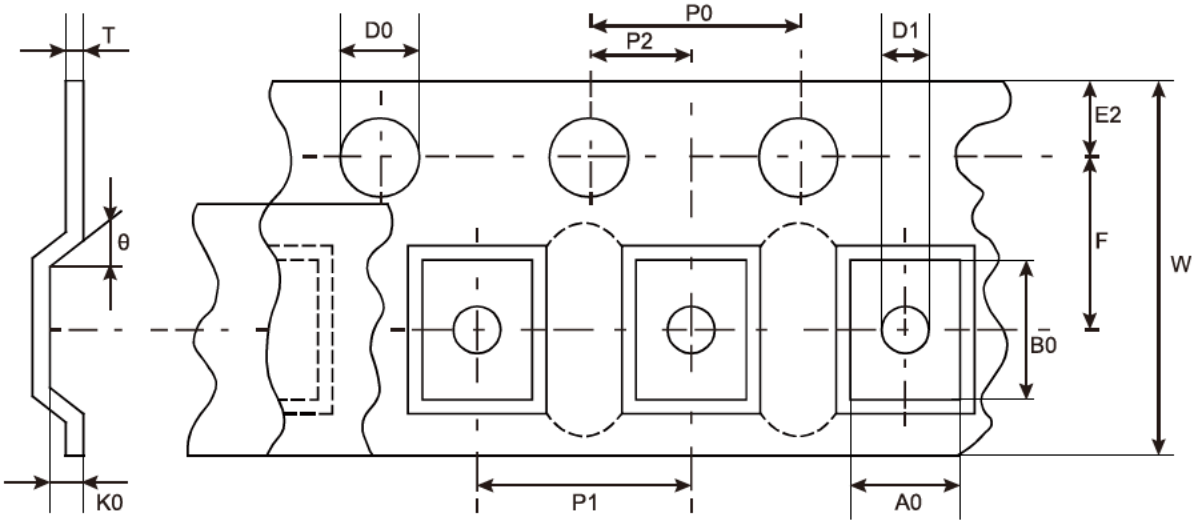
Quantity & Weight

Series	Quantity
JB12F	3000pcs/Reel

Reel & Tape Specification



Series	A (mm)	B (mm)	C (mm)	D (mm)	N (mm)	W1 (mm)	W2 (mm)
JB12F	178±5	1.6 Min.	12.8 Min.	20.8 Min.	58±2	8.4 Min.	12.4 Max.



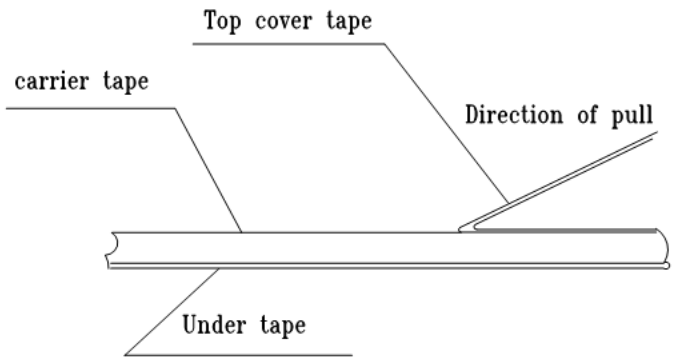
Series	A0 (mm)	B0 (mm)	D0 (mm)	D1 (mm)	E2 (mm)	F (mm)	K0 (mm)
JB12F	1.92±0.10	3.62±0.10	$1.50^{+0.1}$	1.00 min.	1.75±0.10	3.50±0.05	0.87±0.10

P0 (mm)	P1 (mm)	P2 (mm)	T (mm)	W (mm)	θ (mm)
4.00±0.10	4.00±0.10	2.00±0.05	0.25±0.05	8.00±0.30	6^0 max.

Peeling Strength of Seal Tape

The top cover tape is pulled at a speed of 300 mm/min with the angle between the tape during peel and

the direction of unreeling maintained at 165 to 180 degree as following picture. The peel force of paper carrier tape shall be 0.1N to 0.7N(10 to 70 g)



Storage Conditions

- Storage Temperature: 10ºC~+40ºC
- Relative Humidity: ≤75%RH
- Keep away from corrosive atmosphere and sunlight.
- Period of Storage: 2 year.

LEGAL DISCLAIMER

YAGEO, its distributors and agents (collectively, “YAGEO”), hereby disclaims any and all liabilities for any errors, inaccuracies or incompleteness contained in any product related information, including but not limited to product specifications, datasheets, pictures and/or graphics. YAGEO may make changes, modifications and/or improvements to product related information at any time and without notice.

YAGEO makes no representation, warranty, and/or guarantee about the fitness of its products for any particular purpose or the continuing production of any of its products. To the maximum extent permitted by law, YAGEO disclaims (i) any and all liability arising out of the application or use of any YAGEO product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for a particular purpose, non -infringement and merchantability.

YAGEO products are designed for general purpose applications under normal operation and usage conditions. Please contact YAGEO for the applications listed below which require especially high reliability for the prevention of defects which might directly cause damage to the third party's life, body or property: Aerospace equipment (artificial satellite, rocket, etc.), Atomic energy-related equipment, Aviation equipment, Disaster prevention equipment, crime prevention equipment, Electric heating apparatus, burning equipment, Highly public information network equipment, data-processing equipment , Medical devices, Military equipment, Power generation control equipment, Safety equipment, Traffic signal equipment, Transportation equipment and Undersea equipment, or for any other application or use in which the failure of YAGEO products could result in personal injury or death, or serious property damage. Particularly **YAGEO Corporation and its affiliates do not recommend the use of commercial, automotive, and/or COTS grade products for high reliability applications or manned space flight.**

Information provided here is intended to indicate product specifications only. YAGEO reserves all the rights for revising this content without further notification, as long as products are unchanged. Any product change will be announced by PCN.