

CUSTOMER: 昶永丰

Fast Acting Surface Mount Chip Fuse 快断片式熔断器

Date	2009-9-1
Revision	7

AEM Part Number: F1206FA7000V024TM

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1 Operating Temperature Range

-55 ~ +125

2 Ratings

AEM Part Number	Current Rating (A)	Voltage Rating (VDC)	Nominal Cold DCR (Ω) ²
F1206FA7000V024TM	7.0	24	0.011

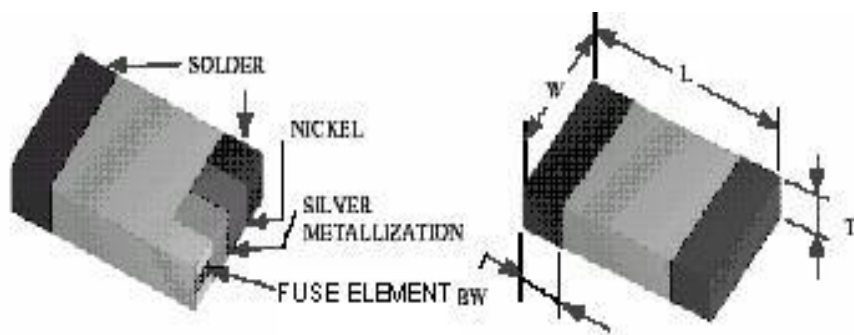
1. Nominal height of 0.023" is available.

2. Measured at 10% rated current and 25 °C ambient.

Clear-Time Characteristics(Fast Acting):

% of current rating	Clear-time at 25
100%	4 hours (min)
250%	5 seconds (max)
400%	0.05 seconds (max)

3 Shape and Dimensions: Inch (mm)



Size	L	W	T	BW
1206 (3216)	0.126±0.008 (3.20±0.20)	0.063±0.008 (1.60±0.20)	0.043±0.008 (1.10±0.20)	0.020±0.010 (0.51±0.25)

Prepared by	Checked by	Approved by	Accepted by customer
Ling Ling Li	Yan Ma	Yan Ma	昶永丰

Signature

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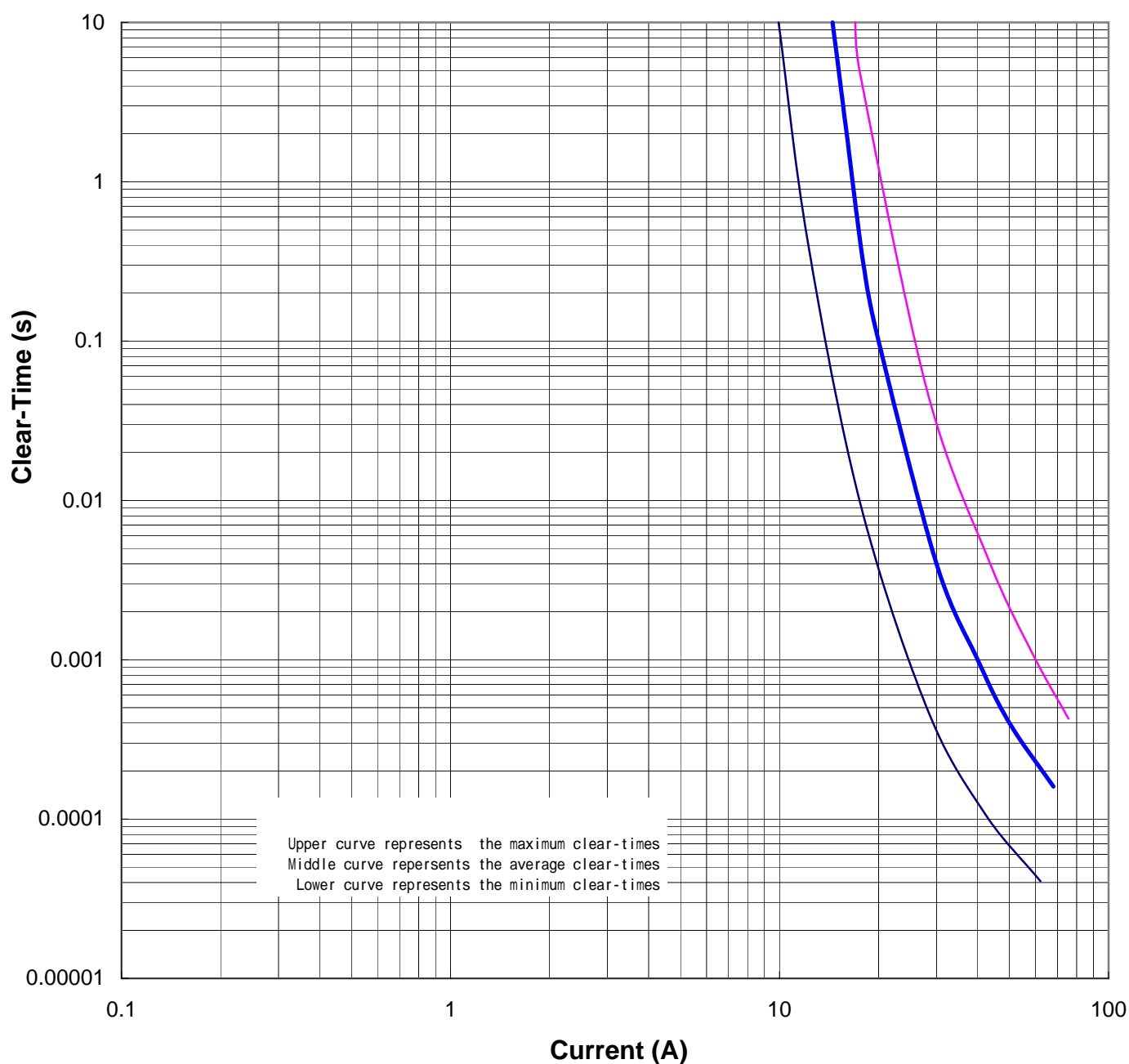
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4 Clear Time Curves:

F1206FA7000V024TM



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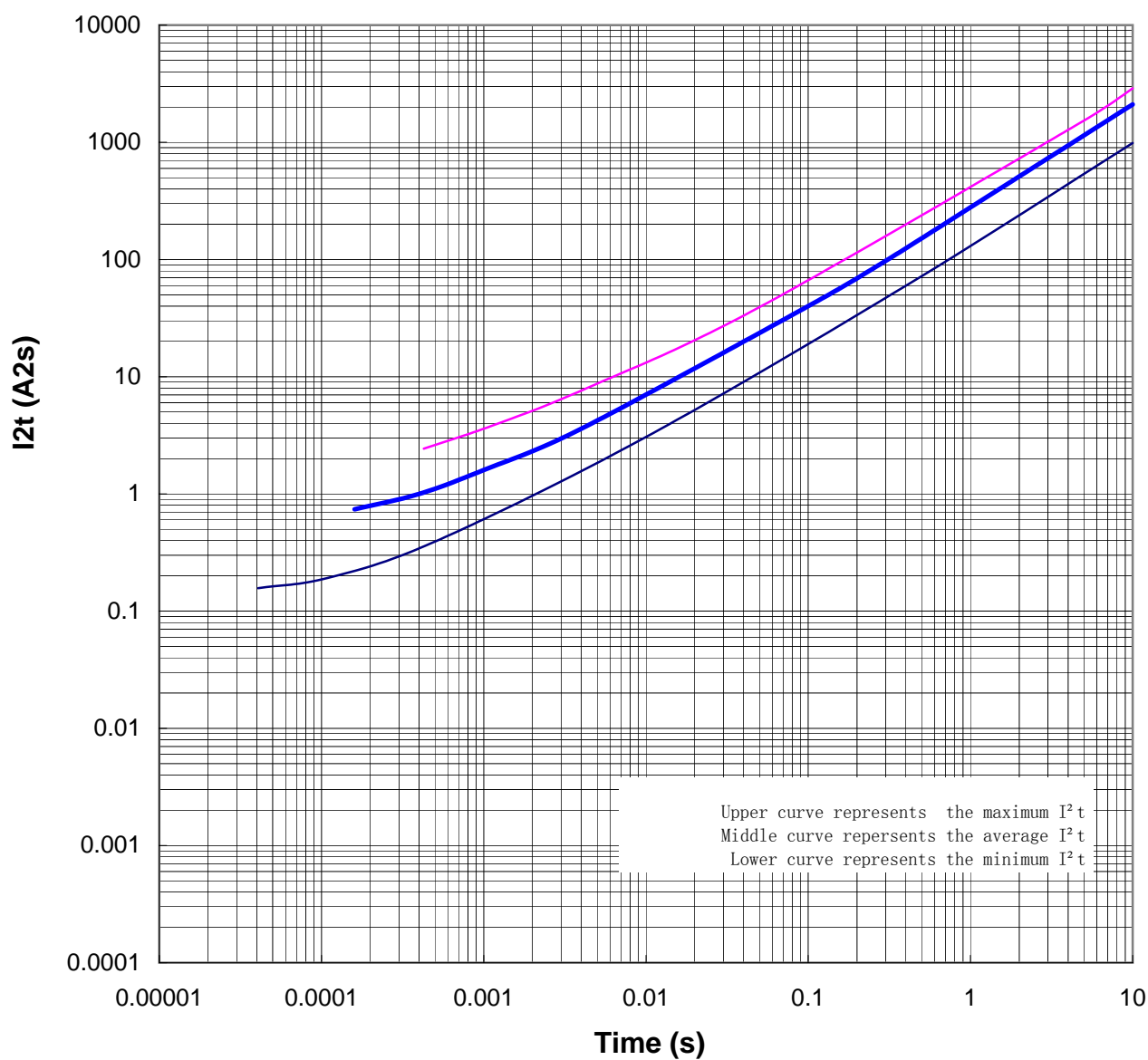
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5 I^2t vs .t Curves:

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6 Product Identification

F 1206 FA 7000 V024 T M

(1) (2) (3) (4) (5) (6)(7)

(1) Series code: F - Chip Fuse

(2) Dimension code: L x W (inch)

The first two digits - L (length)

The last two digits - W (width)

(3) Characteristic code: FA - Fast Acting

(4) Current rating code: 7000 - 7000 mA

(5) Voltage rating code: V024 - 24 VDC

(6) Package code:

T - Tape & Reel

B - Bulk

(7) Marking code: M - with mark (7.0 A : P)

7 Features

7.1 Multilayer monolithic structure with glass ceramic body and silver fusing element

7.2 Silver termination with nickel and solder plating (lead free), providing excellent solderability

7.3 Compatible with both wave and reflow soldering processes

8 Typical Applications

8.1 Consumer Electronics, e.g. CD-/LD-Disc drives, portable sets (drives)

8.2 Communication Technology, e.g. ISDN-line card protection, PCM-cards, mobile phones
tuner input, satellite receivers, cards in GSM-base stations

8.3 Data-Processing, e.g. disc drives, keyboard/mouse ports, LAN-/PC-cards, modems

8.4 Measurement and Control Technology, e.g. communication ports, measurement inputs/
probes/sensors, analysis units, PLCs

8.5 Medical Technology, e.g. communication ports, measurement in & out probes

8.6 Power Supply Technology, e.g. low voltage section of power-supplies/chargers

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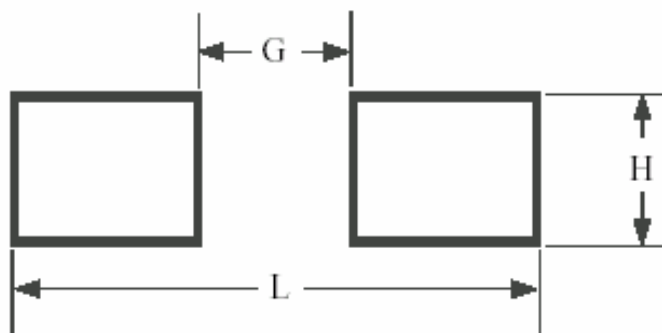
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9 Recommended PC Board Land Pattern

Chip Size	L INCH (mm)	G INCH (mm)	H INCH (mm)
1206 (3216)	0.173 (4.40)	0.059 (1.50)	0.071 (1.80)

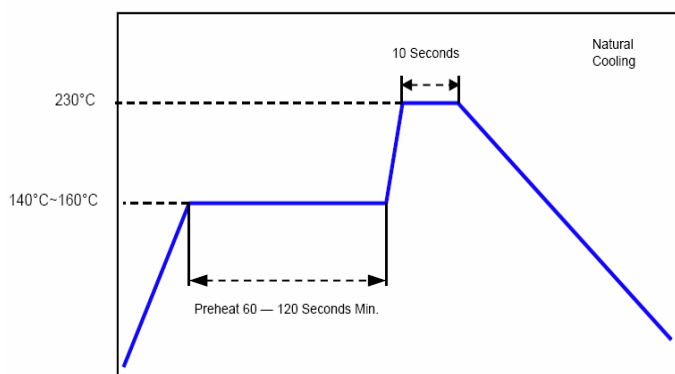


10 Recommended Temperature Profiles for Soldering

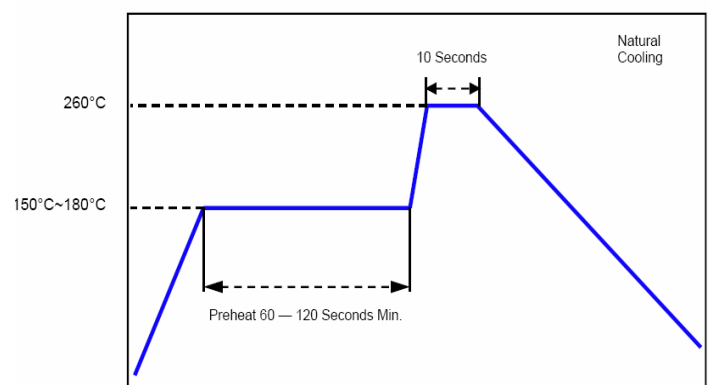
AEM's chip fuses can be soldered on PCB using wave or reflow soldering processes.

The recommended temperature profiles for soldering are listed in the following diagrams.

Recommended Temperature Profile
for Sn/Pb Solder



Recommended Temperature Profile
for Lead-free Solder



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11 Special Measuring Equipment

11.1 Clear Time

Clear time is measured with clear time tester.

11.2 DC Resistance

DC resistance is measured with Keithley 580/Keithley 2010.

11.3 Interrupting Capability

Interrupting capability is measured with short circuit tester.

12 Reliability Tests

Reliability Test	Test Condition and Requirement
Bending	Board: 94x94x1.6 mm, 2 mm bend for 5 seconds, 20% DCR change max.
Solderability	255°C, 5 seconds, 95% coverage min.
Soldering Heat Resistance	260°C, 60 seconds, 10% DCR change max.
Terminal Strength	1206 – 1.5 kg 30 second hanging, no damage 0603 – 0.5 kg 30 second hanging, no damage 0402 - 2 pound push test
Life	25°C, 2000 hours, 80% rated current, no open circuit, voltage drop change $\pm 20\%$.
Thermal Shock	-65°C to +125°C, 100 cycles, no mechanical damage, 10% DCR change max.
Mechanical Vibration	5 – 3000 Hz, 0.4 inch double amplitude or 30 G peak, 10% DCR change max.
Mechanical Shock	1500 G, 0.5 milliseconds, half-sine shocks 10% DCR change max.
Salt Spray	5% salt solution, 48 hour exposure
Moisture Resistance	10 cycles, 15% DCR change max., no excessive corrosion

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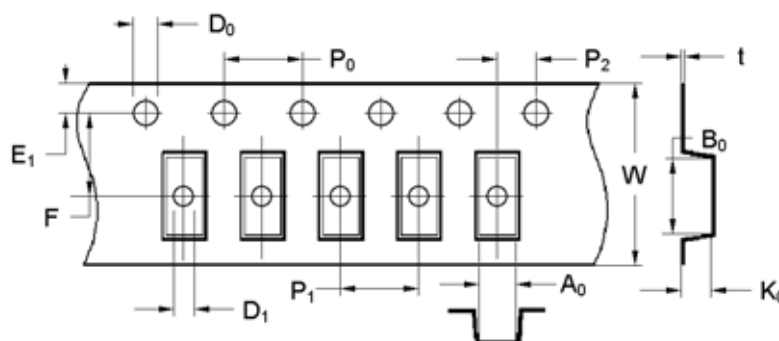
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13 Packaging

13.1 Surface mount chip fuses are provided on tape-and-reel for use in pick-and-place machines or in bulk for special applications. Both tape-and-reel and bulk products are sealed in plastic bags with desiccant. The reel size is 7 inches.

13.2 Tape Dimensions: INCH (mm)



Size	Ao	Bo	Ko	Type
1206 (3216)	0.071±0.004 (1.80±0.10)	0.138±0.004 (3.50±0.10)	0.050±0.004 (1.27±0.10)	Plastic

E1	F	W	P1	P0	P2	D0	D1	t
0.069±0.004 (1.75±0.10)	0.138±0.002 (3.50±0.05)	0.318±0.004 (8.00±0.10)	0.157±0.004 (4.00±0.10)	0.157±0.004 (4.00±0.10)	0.079±0.002 (2.00±0.05)	0.059±0.004 (1.50±0.10/-0.00)	0.039max (1.00max)	0.009±0.001 (0.23±0.02)

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13.3 Quantity Per Reel

Chip Size	Parts on 7 inch (178 mm) Reel
1206 (3216)	3,000

Other sizes and chip quantities can be provided upon customer's request.

14 Storage

14.1 The maximum ambient temperature shall not exceed 40 .

Storage temperature higher than 40 could result in the deformation of packaging materials.

14.2 The maximum relative humidity recommended for storage is 70%.

High humidity with high temperature could accelerate the oxidation of the solder plating on the termination and reduce the solderability of the components.

14.3 Sealed plastic bags with desiccant shall be used to reduce

the oxidation of the termination and shall only be opened prior to use.

14.4 The products shall not be stored in areas where harmful gases

containing sulfur or chlorine are present.