Product Specification

产　品　规　格　书

Product Name : MF2410

AEM Part Number : MF2410F2.000TM

Customer :

Revision:　1

Date: 2012-03-06

AEM Components (Suzhou) Co., Ltd

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Prepared by	Checked by	Approved by	Accepted by customer
Lingling Li	Yan Ma	Yan Ma	
Signature			

CUSTOMER:

MF2410

AEM Part Number: MF2410F2.000TM

1 Operating Temperature Range

-55℃ ~ +125℃ (with de-rating)

2 Ratings

AEM Part Number	Current Rating (A)	Voltage Rating (VDC)	Nominal DCR	Voltage Drop	Nominal I^2t (A^2s)
		AC	(Ω)	Max. (mV)	
MF2410F2.000TM	2.00	250	0.038	123	3.00

Resistance is measured at ≤10% of rated current and 25℃ ambient.

Voltage drop is measured at 100% of rated current.

Melting I2t is calculated at 0.001 second pre-arcing time.

3 Clear-Time Characteristics

% of current rating	Pre-arcing Time at 25°C	
125%	1 hours (min)	
200%		120 seconds (max)
1000%	0.001 seconds (min)	0.01 seconds (max)

4 Interrupting Rating:

2.000A 100A@ 250VAC 50A@ 125VDC

5 Marking(Optional):

Black marking character codes

2.000A: I

6 Agency Approval:

6.1 UL File Number: E232989

6.2 CQC File Number: CQC11012065956

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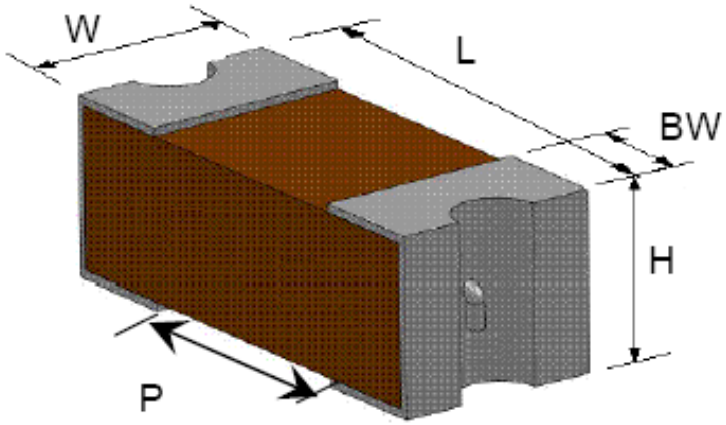
7 Shape and Dimensions: Inch (mm)



Size	L	W	H	BW	P
2410 (6125)	0.240±0.006 (6.10±0.15)	0.098±0.006 (2.49±0.15)	0.085±0.008 (2.16±0.20)	0.053±0.015 (1.35±0.38)	⩾0.118 ⩾3.00

8 Product Identification

MF 2410 F 2.000 T M

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

(1) Series code: MF

(2) Size code: 2410

(3) Time/current characteristics: F

(4) Current rating code: 2.000 - 2.0 A

(5) Package code:

T - Tape & Reel

B - Bulk

(5) Marking code: M - with mark

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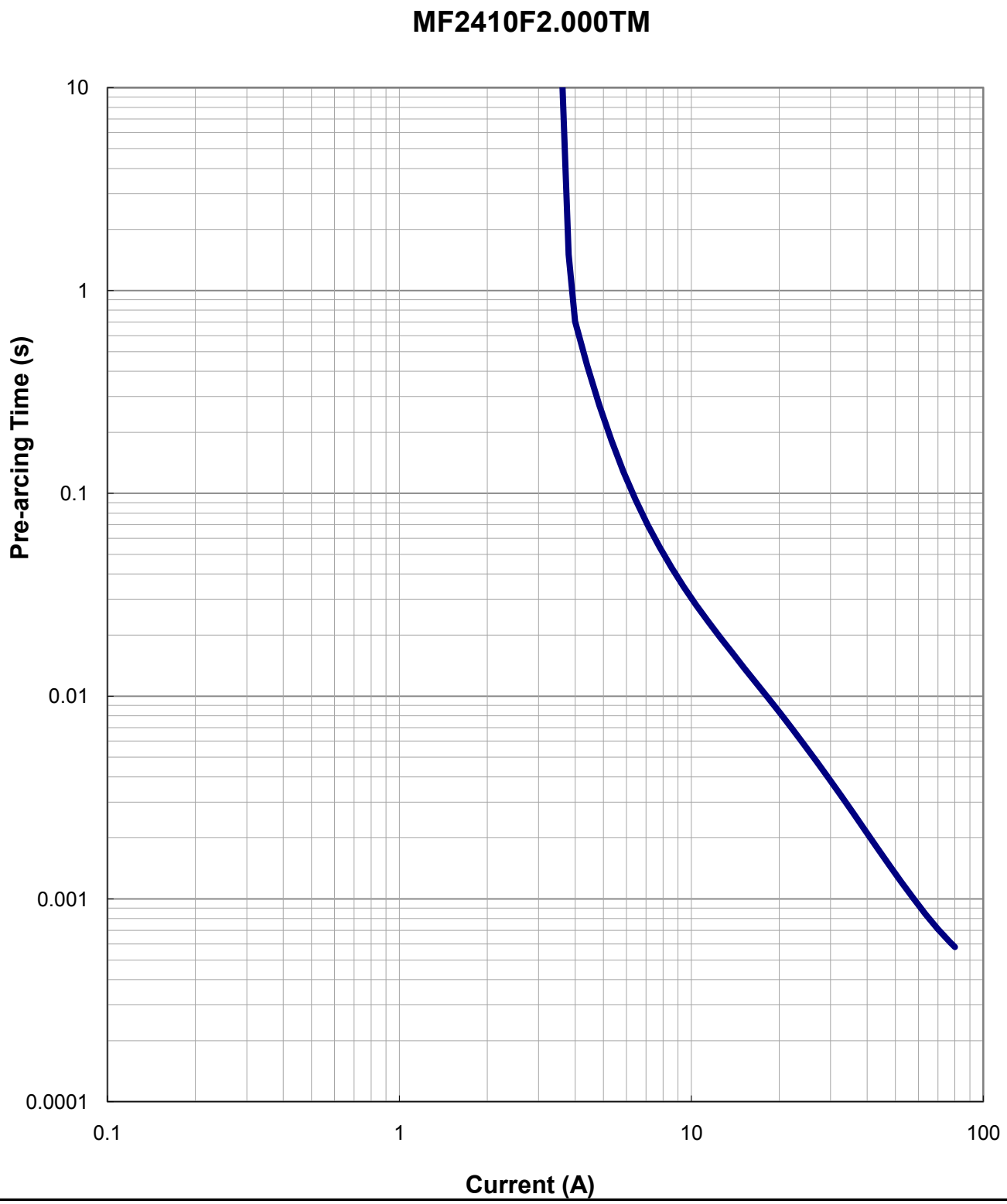
9. Time vs.Current Curve:



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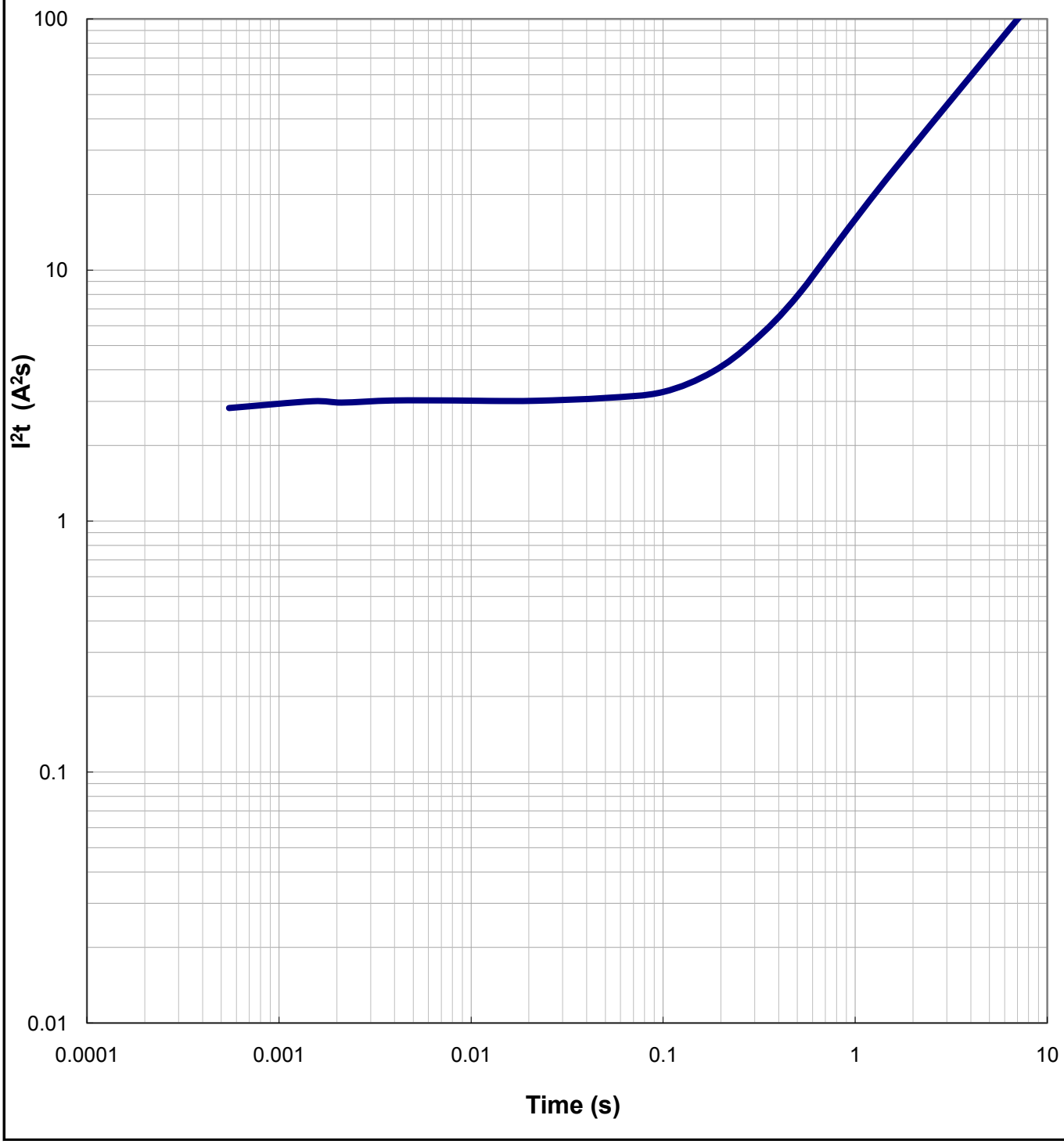
10. I^2t vs .t Curve:



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11 Features

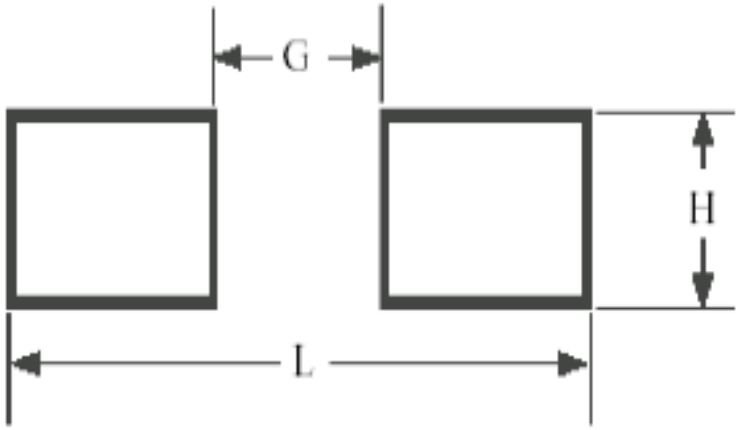
11.1 Extremely small size with 250 VAC rating
11.2 Surface mount fuses in AC applications
11.3 Excellent inrush current withstanding capability
11.4 Complying with IEC 60127-4
11.5 Fiberglass enforced epoxy fuse body
11.6 Copper termination with nickel and tin plating
11.7 Halogen free, RoHS compliant
11.8 100% lead-free

12 Typical Applications

12.1 Lighting: Ballast, LED Drivers
12.2 Power: Chargers, Adapters, Power Boards
12.3 Medical Equipment
12.4 Indutrial Equipment
12.5 White Goods

13 Recommended PC Board Land Pattern

Chip Size	L INCH (mm)	G INCH (mm)	H INCH (mm)
2410 (6125)	0.338(8.6)	0.118(3.00)	0.124 (3.15)



CUSTOMER:	
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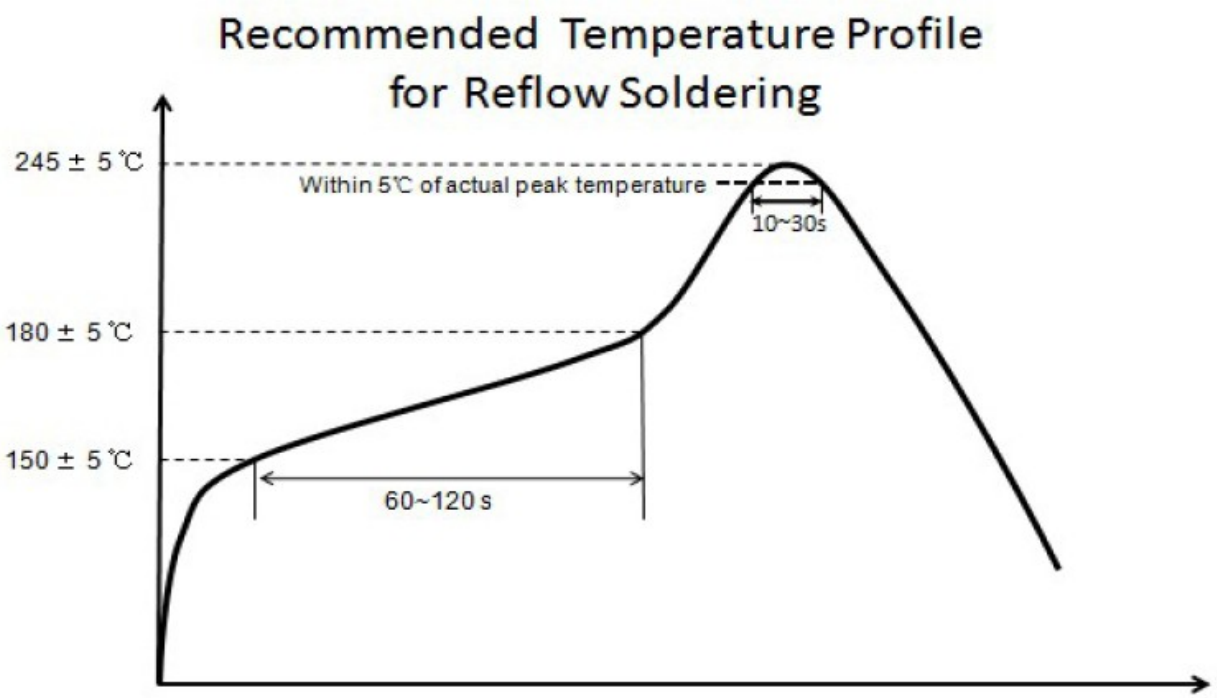
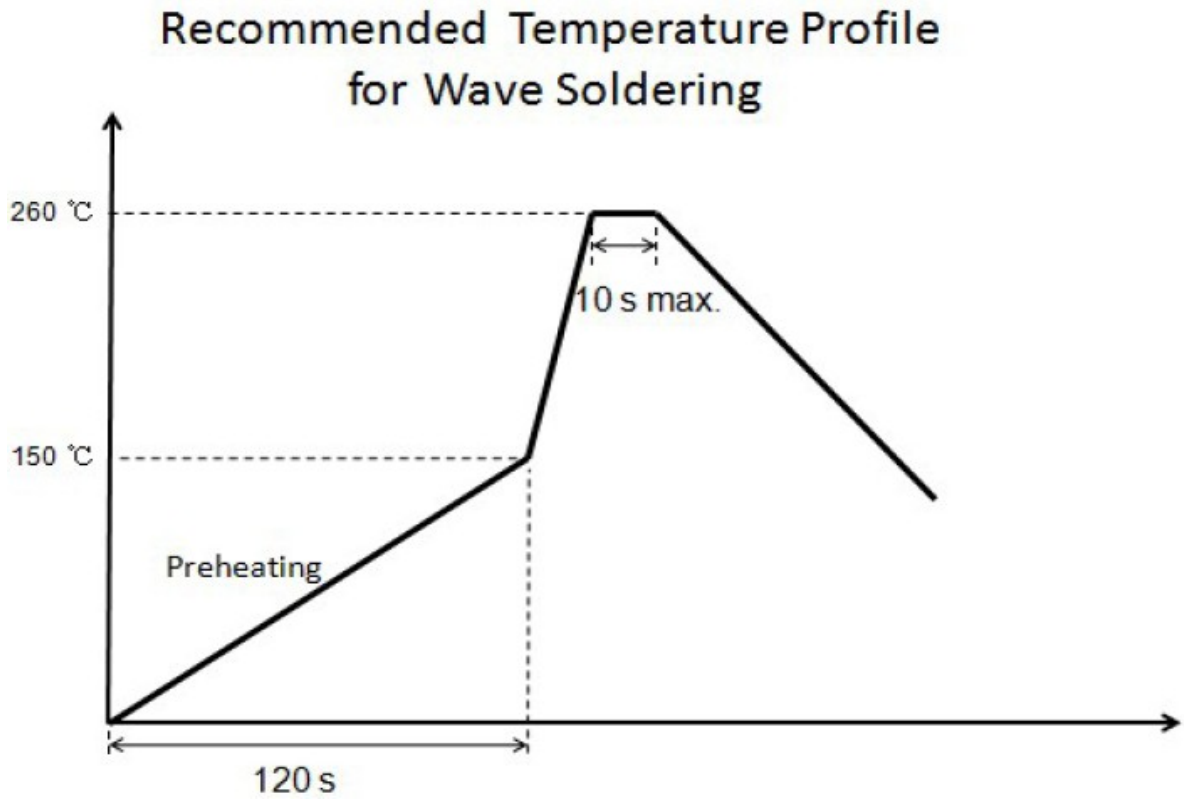
14 Soldering Temperature profiles





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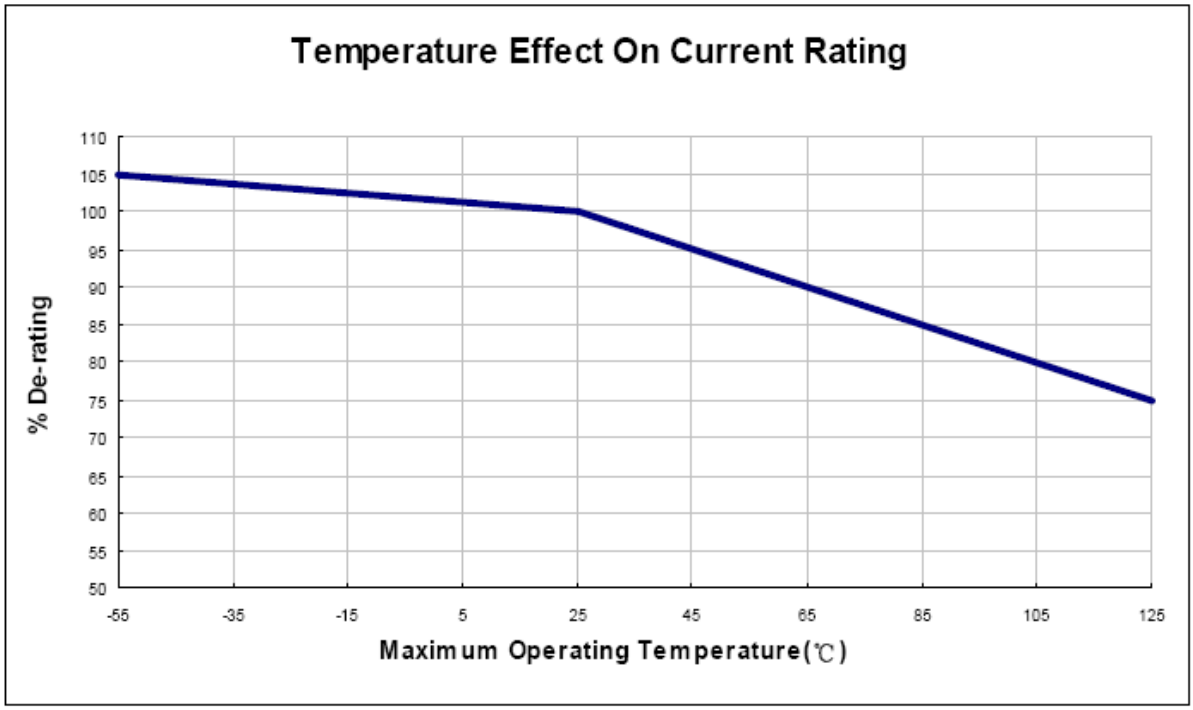
15 Fuse Selection and Temperature De-rating Guideline

The ambient temperature affects the current carrying capacity of fuses. When a fuse is operating at atemperature higher than 25oC, the fuse shall be “de-rated”.



16 Electrical Specification: (Reference to IEC 60127-1/-4)

Electrical Specification	Test Condition and Requirement
Voltage Drop	100% rated current, meeting IEC 60127-4 requirements
Time/Current Characteristics	See short form datasheet
Breaking Capacity	100 A @ 250 VAC; 50 A @ 125 VDC
Insulation Resistance after Opening	Under 200% rated voltage, resistance ≥ 0.1 MΩ
Endurance Test	Reference to IEC 60127-4, voltage drop change ≤10%, mark remaining legible, no mechanical damage
Temperature Rise	≤ 70 K, meeting IEC 60127-4 requirements

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17 Special Measuring Equipment

17.1 Clear Time

Clear time is measured with clear time tester.

17.2 DC Resistance

DC resistance is measured with Keithley 580/Keithley 2010.

17.3 Interrupting Capability

Interrupting capability is measured with short circuit tester.

18 Reliability Tests

Reliability Test	Test Condition and Requirement
Reflow and Bend	3 reflows at 245°C followed by a 2 mm bend, voltage meeting IEC 60127-4, no mechanical damage
Solderability	245°C , 5~10 seconds, 90% new solder coverage min.
Soldering Heat Resistance	260°C , 10 seconds, voltage drop meeting IEC 60127-4, no mechanical damage, marking remaining legible, no marking colour change
Life	25°C , 2000 hours, 20% voltage drop change max.
Thermal Shock	-65°C to + 125°C , 100 cycles, 10% DCR change max., no mechanical damage
Mechanical Vibration	5 – 3000 Hz, 0.4 inch double amplitude or 30 G peak, 10% DCR change max., no mechanical damage
Mechanical Shock	1500 G, 0.5 milliseconds, half-sine shocks, 10% DCR change max., no mechanical damage
Salt Spray	5% salt solution, 48 hour exposure, 10% DCR change max., no excessive corrosion
Moisture Resistance	10 cycles (10 days), 15% DCR change max., no excessive corrosion

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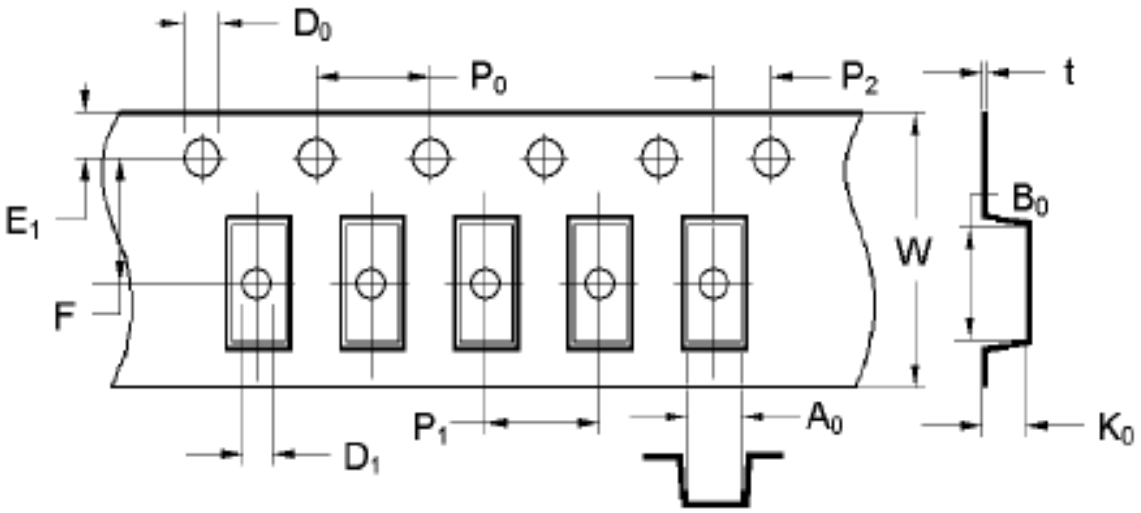
19 Packaging

19.1 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.

19.2 Tape Dimensions: Inch (mm)



Size	A0	B0	K0	Type
2410	2.85±0.10	6.40±0.10	2.35±0.10	Plastic

E	F	W	P1	P0	P2	D0	D1	t
1.75±0.10	5.50±0.10	12.00±0.10	4.00±0.10	4.00±0.10	2.00±0.10	1.50+0.10 -0.00	1.55±0.10	0.25±0.05

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19.3 Quantity Per Reel

Chip Size	Parts on 7 inch (178 mm) Reel
2410 (6125)	2,000

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

20 Storage

20.1 The maximum ambient temperature shall not exceed 35℃.
Storage temperature higher than 35℃ could result in the deformation of packaging materials.

20.2 The maximum relative humidity recommended for storage is 75%.
High humidity with high temperature could accelerate the oxidation of the solder plating on the termination and reduce the solderability of the components.

20.3 Sealed plastic bags with desiccant shall be used to reduce the oxidation of the termination and shall only be opened prior to use.

20.4 The products shall not be stored in areas where harmful gases containing sulfur or chlorine are present.