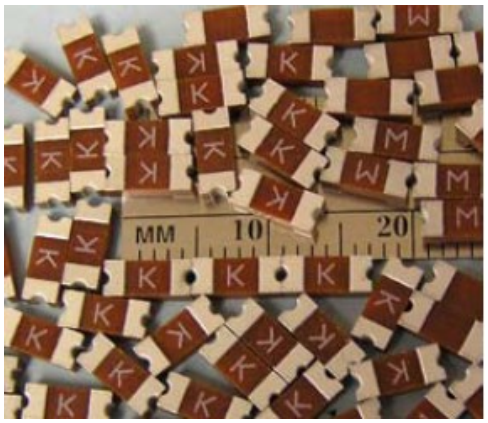
AirMatrix™ 2410 Fast Acting Surface Mount Fuses

Features:

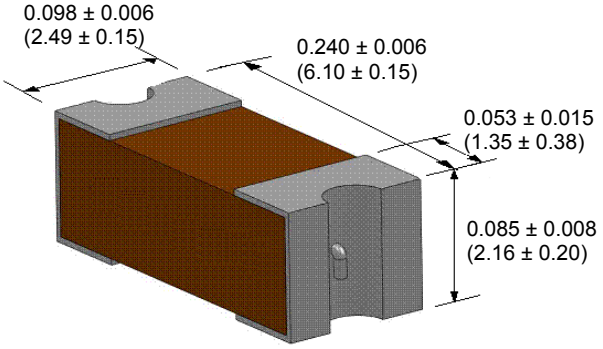
- Fast acting at 200% overload current level
- Excellent inrush current withstanding capability
- Fiberglass enforced epoxy fuse body
- Copper or copper alloy composite fuse link
- Copper termination with nickel and tin plating
- Halogen free, RoHS compliant and 100% lead-free
- Operating temperature range: -55°C to +125°C (with de-rating)



Clearing Time Characteristics:

% of Current Rating	Clearing Time at 25°C	
100%	4 hours min.	
200%(0.50~10.0 A)	0.01 seconds min.	5 seconds max.
200%(12.0~20.0 A)	0.01 seconds min.	20 seconds max.

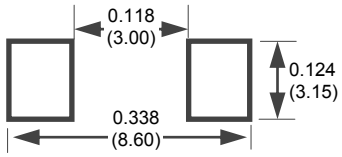
Shape and Dimensions:



Agency Approval:

- Recognized Under the Components Program of Underwriters Laboratories. File Number: E232989
- PSE Certificate No: NBK180711-JP13710
- TUV File Number: 50209083
- CQC No.: CQC11012065955

Recommended Land Pattern:



Inch (mm)

Patents: *Pending*

Typical Applications:

- Power Supply, e.g. DC/DC converters, DC/AC inverters, Backlight drivers , etc.
- Consumer Electronics, e.g. LCD TVs, PDP, DVDs, PCM , etc.
- Communication Technology, e.g. Telecom systems, Networking, Modems, Routers, Changers, Base stations , etc.
- Office Automation Electronics
- IT Products, e.g. LCD monitors, Notebooks, PC servers, etc.

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Marking: White marking character code

0.5 A:C; 0.63 A:S; 0.75 A:D; 1.0 A:E; 1.25 A:F; 1.5 A:G; 2.0 A:I; 2.5 A:J; 3.0 A:K; 3.15 A:V; 3.5 A:L; 4.0 A:M; 5.0 A:N; 6.3 A:O; 7.0 A:P; 8.0 A:R; 10.0 A:Q; 12.0 A: X; 15.0 A:Y; 20.0 A:Z.

Ordering Information:

Part Number	Current Rating (A)	Voltage Rating (V)		Interrupting Rating	Nominal Cold DCR (Ω)[1]	Nominal I^2t $(A^2s)^2$	Agency Approval			
		AC	DC				UL	PSE	TUV	CQC
AF2-0.50V125TM	0.5	250	125	**TUV:** **0.5 ~ 2 A** *100 A @ 250 VAC* *50 A @ 125 VDC* **CQC:** **0.5 A、1 A、2 A** *100 A @ 250 VAC* *50 A @ 125 VDC* **PSE:** **1 ~ 5 A** *50 A @ 125 VAC* **UL:** **0.5 ~ 2 A** *100A @ 250VAC* **1.5 ~8 A** *50A @125VAC* ***0.5 ~ 8 A*** *50 A @ 125 VDC* *300 A @ 32 VDC*	0.231	0.1	√		√	√
AF2-0.63V125TM	0.63	250	125		0.174	0.16	√		√	
AF2-0.75V125TM	0.75	250	125		0.148	0.23	√			
AF2-1.00V125TM	1.0	250	125		0.093	0.59	√	√	√	√
AF2-1.25V125TM	1.25	250	125		0.07	0.96	√	√	√	
AF2-1.50V125TM	1.5	250	125		0.062	1.19	√	√		
AF2-2.00V125TM	2.0	250	125		0.042	2.75	√	√	√	√
AF2-2.50V125TM	2.5	125	125		0.031	1.21	√	√		
AF2-3.00V125TM	3.0	125	125		0.0249	1.73	√	√		
AF2-3.15V125TM	3.15	125	125		0.0232	2.2	√	√		
AF2-3.50V125TM	3.5	125	125		0.022	2.5	√	√		
AF2-4.00V125TM	4.0	125	125		0.0172	4.1	√	√		
AF2-5.00V125TM	5.0	125	125		0.0143	5.9	√	√		
AF2-6.30V125TM	6.3	125	125		0.01	12.5	√			
AF2-7.00V125TM	7.0	125	125		0.0094	14.2	√			
AF2-8.00V125TM	8.0	125	125		0.0086	20.3	√			
AF2-10.0V125TM	10.0	125	125	*35 A@ 125 VAC* *50 A @ 125 VDC* *300 A @ 32 VDC*	0.0066	29.2	√			
AF2-12.0V065TM	12.0	65	65	*50 A @ 65 VAC* *50 A @ 65 VDC* *300 A @ 32 VDC*	0.0053	49.2	√			
AF2-15.0V065TM	15.0	65	65		0.0038	102.5	√			
AF2-20.0V065TM	20.0	65	65	*50 A @ 65 VAC* *100 A @ 65 VDC* *300 A @ 32 VDC*	0.0034	126.2	√			

1. Measured at ≤ 10% rated current and 25ºC ambient
2. Melting I^2t at 0.001 seconds pre-arcing time

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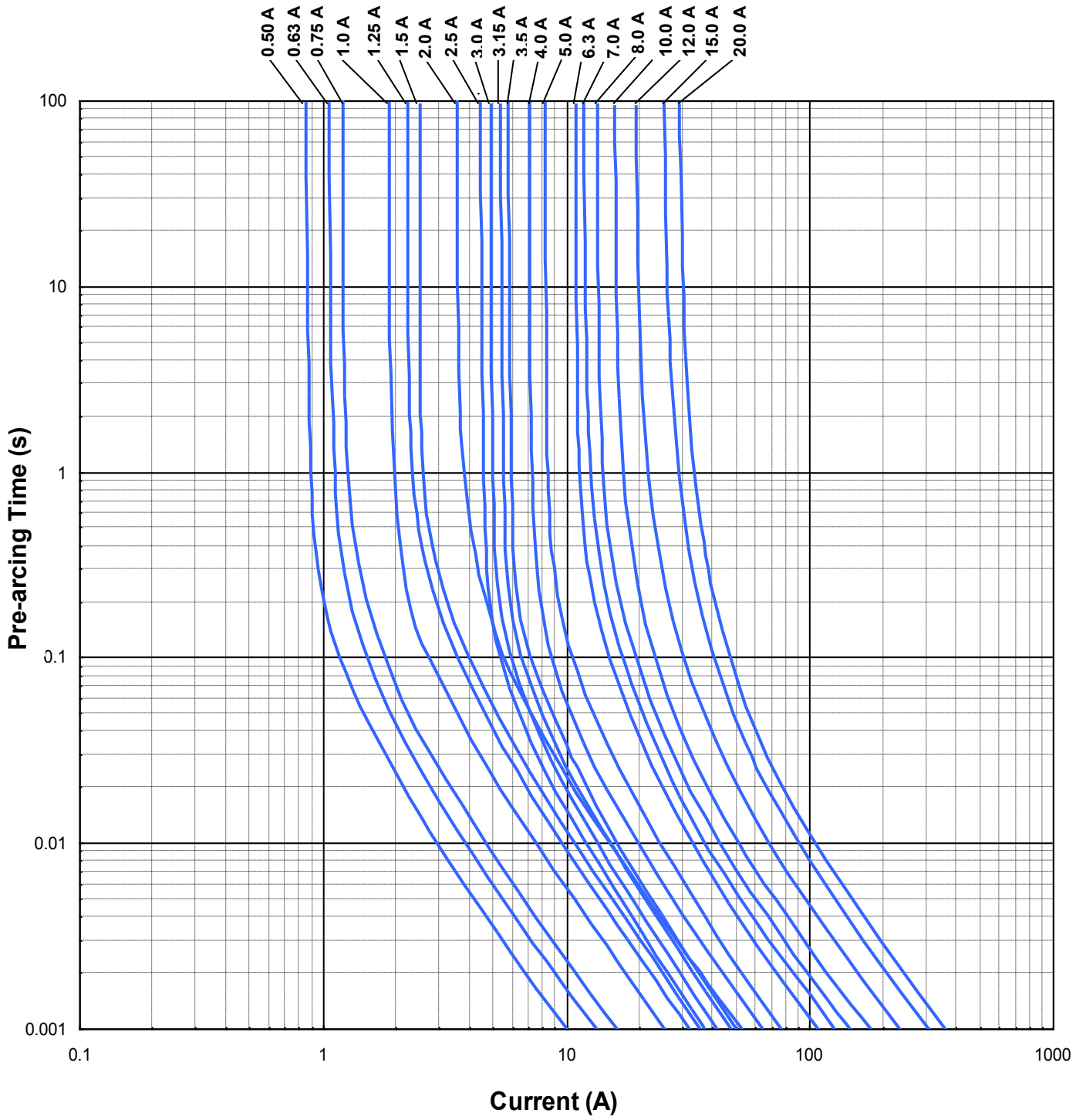
Average Pre-arcing Time Curves



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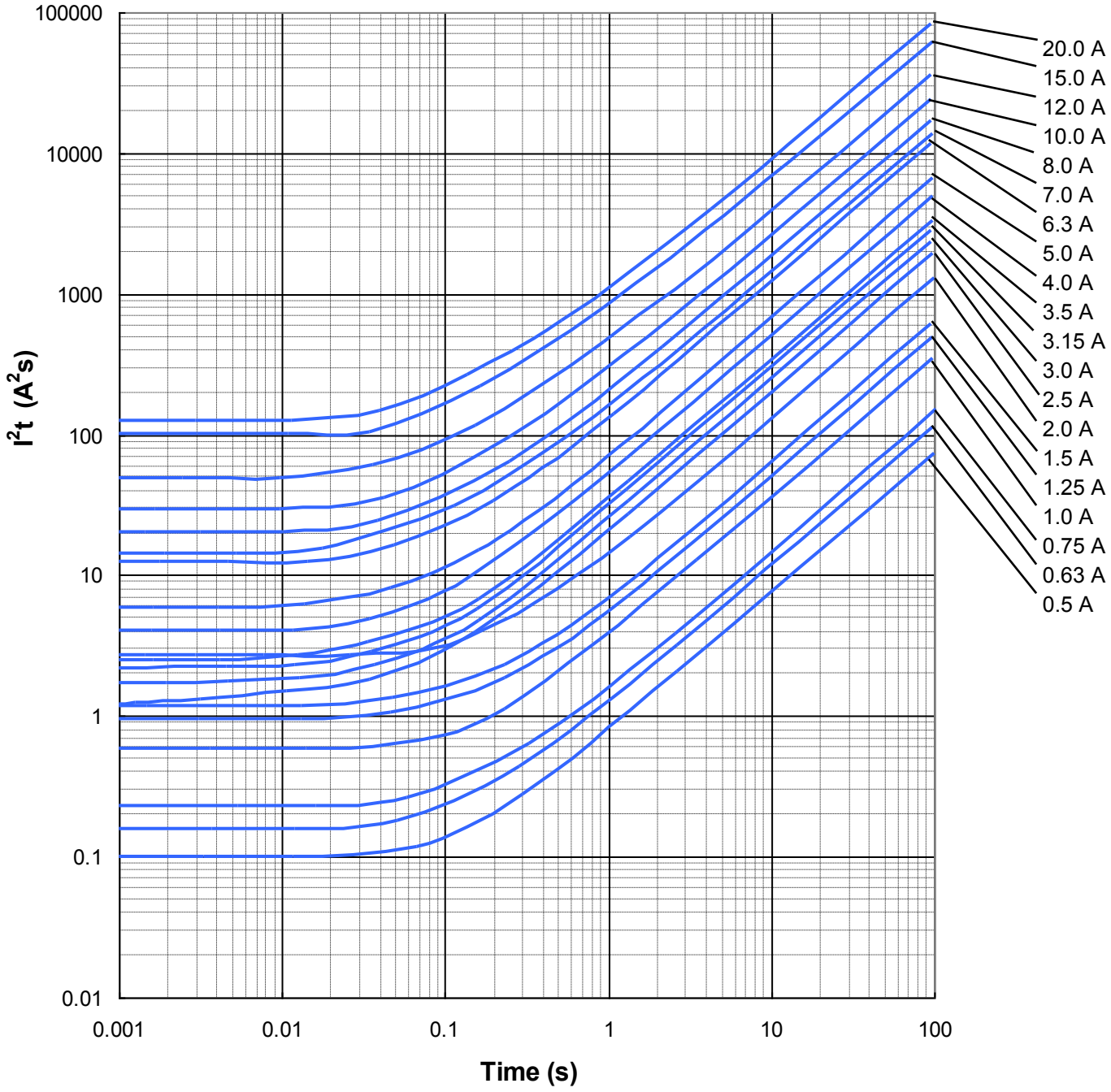
Average I^2t vs. t Curves



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Product Identification:

AF2 1.00 V125 T M

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

(1) Series code: AF2

(2) Current rating code: 1.00 - 1.00 A

(3) Voltage rating code: V125 - 125 VDC

(4) Package code:

T - Tape & Reel

B - Bulk

(5) Marking code: M - with mark

Environmental Tests:

Reliability Test	Test Condition and Requirement	Test Reference
Reflow & Bend	3 reflows at 245°C followed by a 2 mm bend, 20% DCR change max. (10% for ≤ 1 A), no mechanical damage	Refer to AEM QIQ034 ,QIQ048 IEC60068-2-21
Solderability	245°C, 5 seconds, new solder coverage 90% minimum	MIL-STD-202 Method 208
Soldering Heat Resistance	260°C, 10 seconds, 20% DCR change max. (10% for ≤ 1 A), new solder coverage 75% minimum	MIL-STD-202 Method 210
Life	25°C, 2000 hours, 80% rated current (75% for < 1 A), voltage drop change≤ ±20%	Refer to AEM QIQ106
Thermal Shock	-65°C to +125°C, 100 cycles, 10% DCR change max., no mechanical damage	MIL-STD-202 Method 107
Mechanical Vibration	5 – 3000 Hz, 0.4 inch double amplitude or 30 G peak, 10% DCR change max., no mechanical damage	MIL-STD-202 Method 204
Mechanical Shock	1500 G, 0.5 milliseconds, half-sine shocks, 10% DCR change max., no mechanical damage	MIL-STD-202 Method 213
Salt Spray	5% salt solution, 48 hour exposure, 10% DCR change max., no excessive corrosion	MIL-STD-202 Method 101
Moisture Resistance	10 cycles, 15% DCR change max., no excessive corrosion	MIL-STD-202 Method 106

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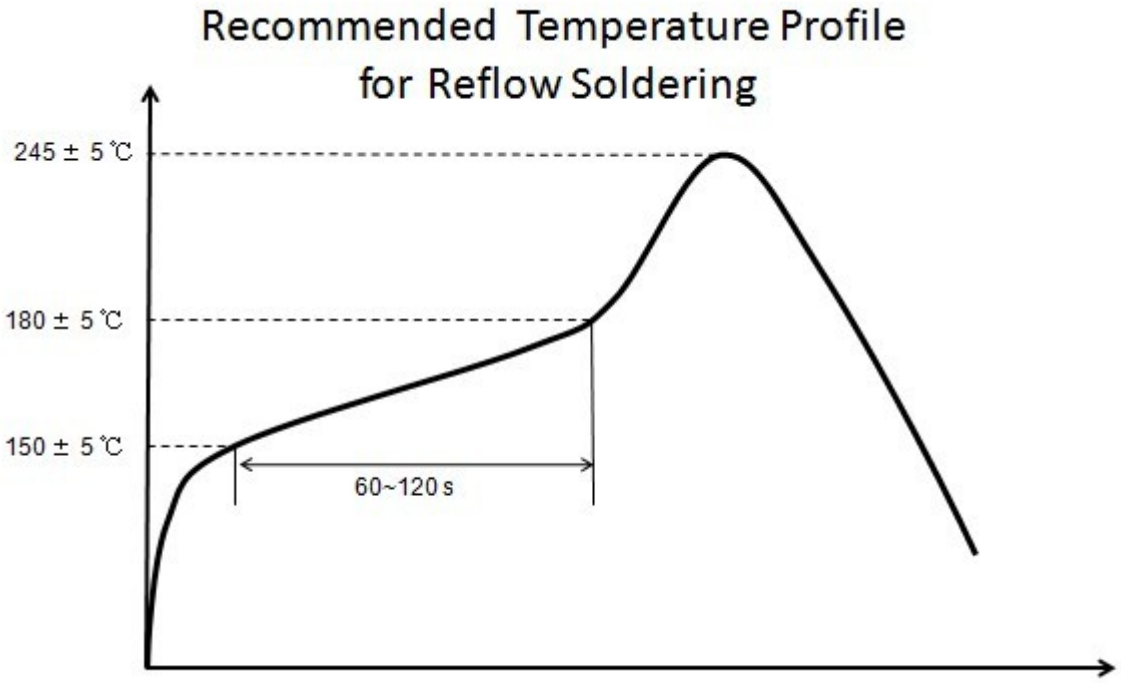
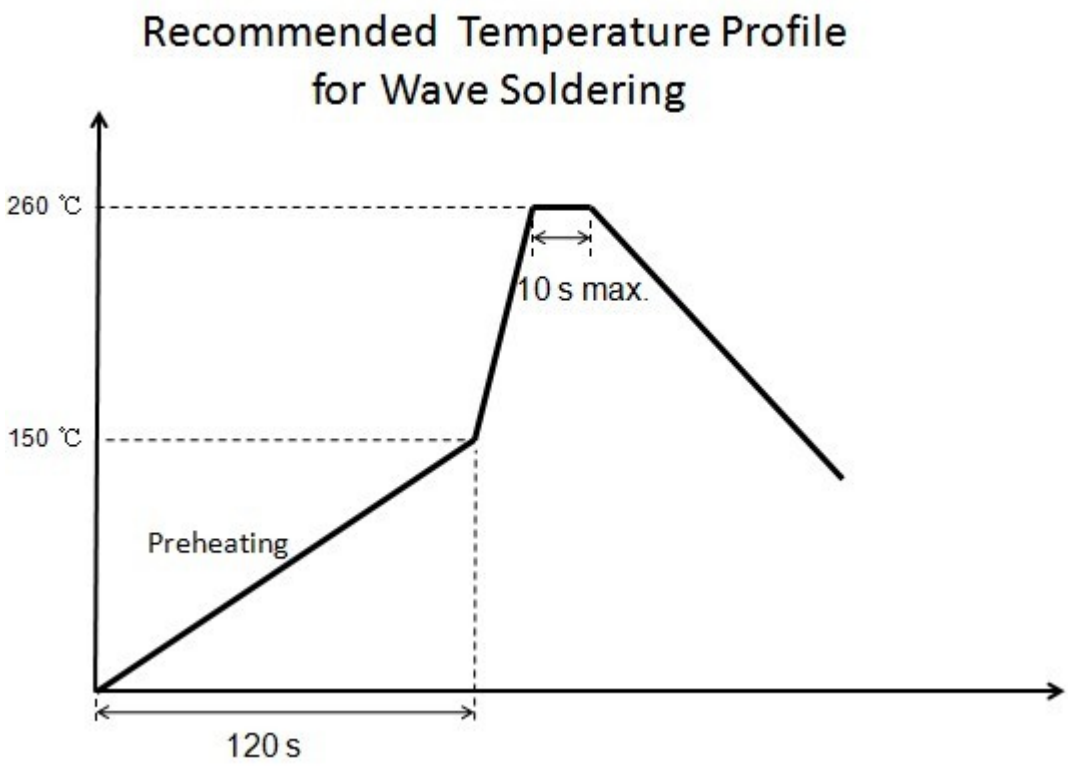
Soldering Temperature Profiles





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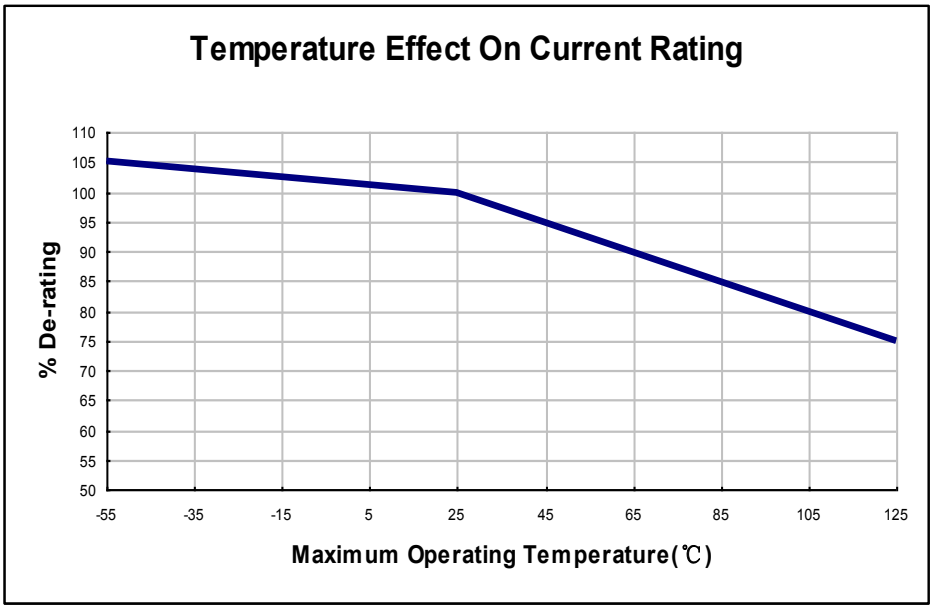
Fuse Selection and Temperature De-rating Guideline

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

To select a fuse from the catalog, the following rule may be followed:
Catalog Fuse Current Rating = Nominal Operating Current / 0.75 / % De-rating at the maximum operating temperature.

Example: At maximum operating temperature of 65°C, % De-rating is 90%. The nominal operating current is 4 A. The current rating for fuse selected from the catalog shall be:
4 / 0.75 / 90% = 5.9 or 6.3 A.



Packaging Data

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