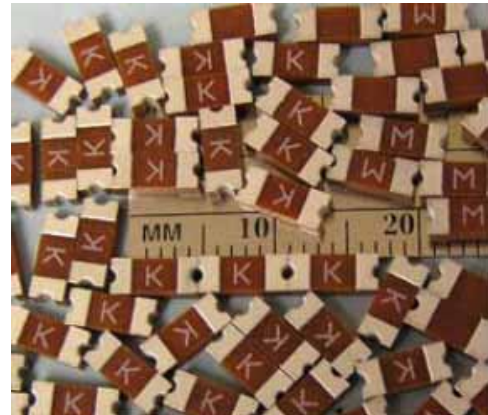


# AirMatrix™ 2410 Fast Acting Surface Mount Fuses



## Features:

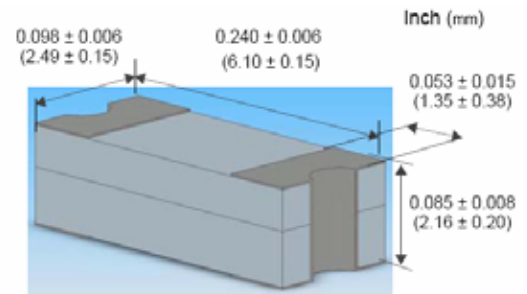
- Very fast acting at 200% overload current level
- Excellent inrush current withstanding capability
- Fiberglass enforced epoxy fuse body
- Copper or copper alloy composite fuse link
- Copper termination with nickel and tin plating
- Halogen free, RoHS compliant and 100% lead-free
- Operating temperature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



## Clear-Time Characteristics:

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

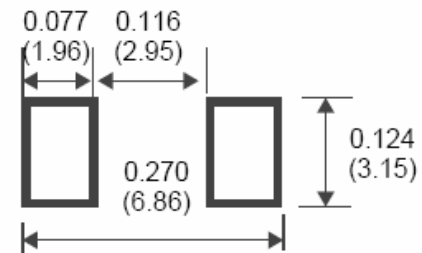
## Shape and Dimensions:



**Agency Approval:** Recognized Under the Components Program of Underwriters Laboratories. File Number: E232989  
PSE Pending: 1.00~5.00A 50@125VAC

**Patents:** Pending

## Recommended Land Pattern:



Inch (mm)

## Typical Applications:

- Consumer Electronics, e.g. LCD TV, PDP, DVD, PCM
- Communication Technology, e.g. Telecom system, Networking, Modem, Router, Changer, Base station
- Office Automation Electronics
- IT Products, e.g. LCD monitor, Notebook, PC server
- White Goods, Lighting
- Industrial Equipment
- Medical Equipment
- Power Supply, e.g. DC/DC converter, Backlight drivers

## AirMatrix™ 2410 Fast Acting Surface Mount Fuses



### Marking: White marking character code

0.50A:C; 0.63A:S; 0.75A:D; 1.00A:E; 1.25A:F; 1.50A:G; 2.00A:I; 2.5A:J; 3.00A:K; 3.15A:V; 3.5A:L;  
4.00A:M; 5.00A:N; 6.30A:O; 7.00A:P; 8.00A: R; 10.0A:Q; 12.0A: X; 15.0A:Y; 20.0A:Z.

### Ordering Information:

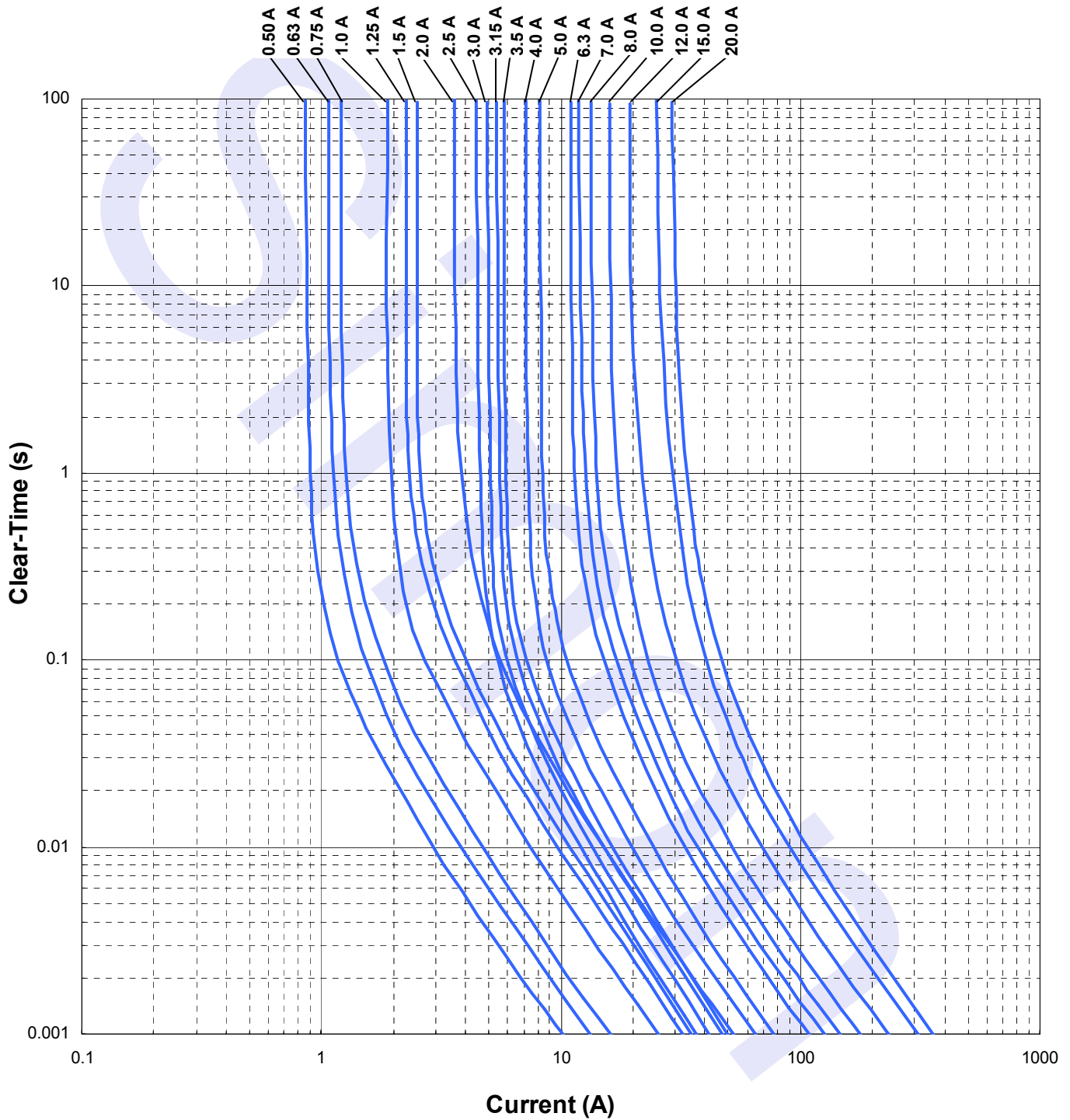
Part Number	Current Rating (A)	Voltage Rating (V)		Interrupting Rating	Nominal Cold DCR ( $\Omega$ ) <sup>1</sup>	Nominal $I^2t$ ( $A^2s$ ) <sup>2</sup>
		AC	DC			
AF2-0.50V125TM	0.50	250	125	50A @ 250VAC 50A @ 125VDC 300A @ 32VDC	0.228	0.10
AF2-0.63V125TM	0.63	250	125		0.172	0.16
AF2-0.75V125TM	0.75	250	125		0.141	0.23
AF2-1.00V125TM	1.00	250	125		0.089	0.59
AF2-1.25V125TM	1.25	250	125		0.069	0.96
AF2-1.50V125TM	1.50	125	125	50A @ 125VAC 50A @ 125VDC 300A @ 32VDC	0.061	1.19
AF2-2.00V125TM	2.00	125	125		0.040	2.75
AF2-2.50V125TM	2.50	125	125		0.0281	1.21
AF2-3.00V125TM	3.00	125	125		0.0244	1.73
AF2-3.15V125TM	3.15	125	125		0.0216	2.2
AF2-3.50V125TM	3.50	125	125		0.0205	2.5
AF2-4.00V125TM	4.00	125	125		0.0157	4.1
AF2-5.00V125TM	5.00	125	125		0.0135	5.9
AF2-6.30V125TM	6.30	125	125		0.0096	12.5
AF2-7.00V125TM	7.00	125	125		0.0089	14.2
AF2-8.00V125TM	8.00	125	125	0.0078	20.3	
AF2-10.0V125TM	10.0	125	125	35A@125VAC 50A @ 125VDC 300A @ 32VDC	0.0061	29.2
AF2-12.0V065TM	12.0	65	65	50A @ 65VAC 50A @ 65VDC 300A @ 32VDC	0.0052	49.2
AF2-15.0V065TM	15.0	65	65		0.0034	102.5
AF2-20.0V065TM	20.0	65	65	50A @ 65VAC 100A @ 65VDC 300A @ 32VDC	0.0031	126.2

1. Measured at  $\leq 10\%$  rated current and 25°C ambient.
2. Melting  $I^2t$  at 0.001 second pre-arcing time

# AirMatrix™ 2410 Fast Acting Surface Mount Fuses



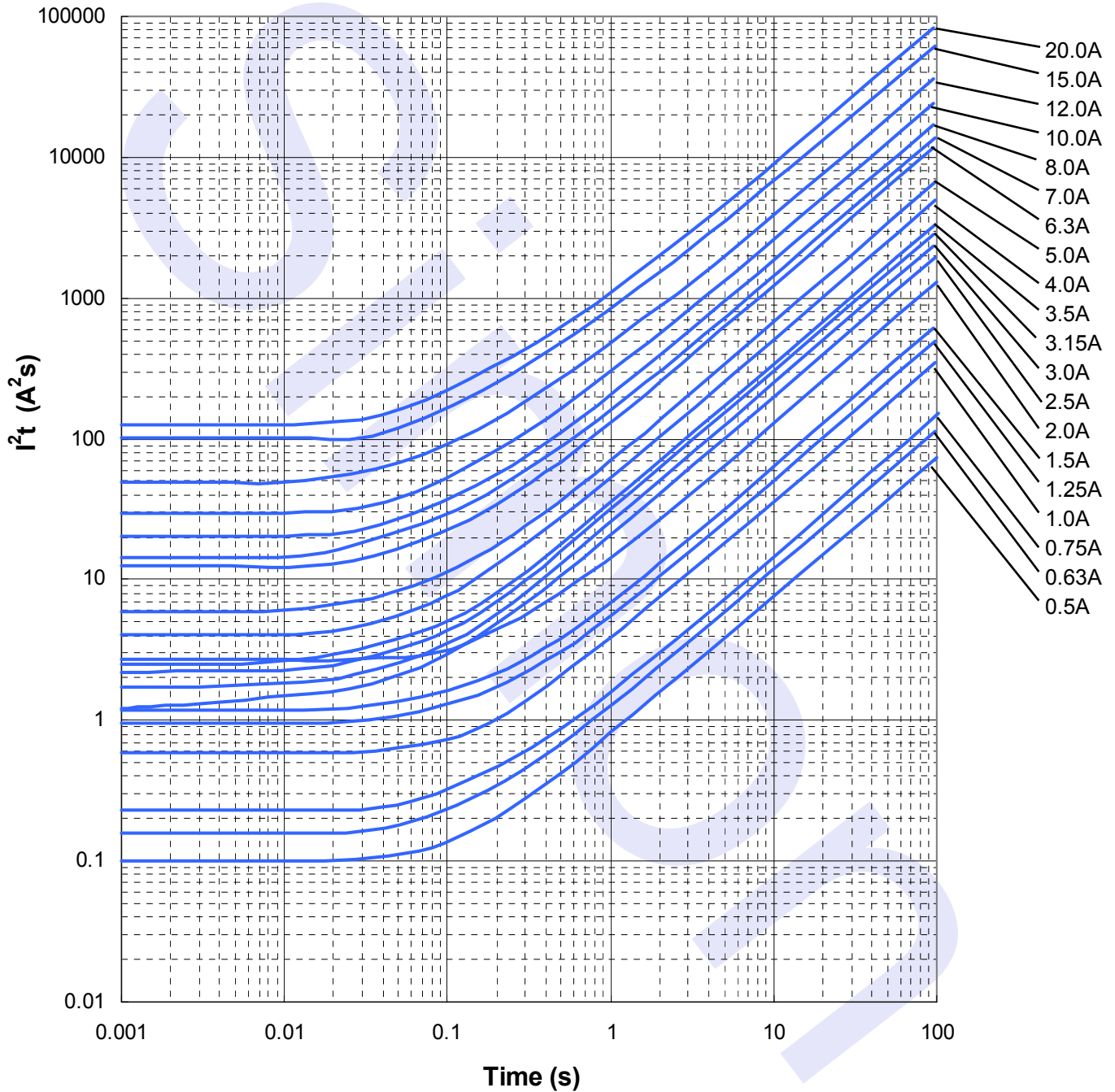
## Average Clear-Time Curves



# AirMatrix™ 2410 Fast Acting Surface Mount Fuses



## Average $I^2t$ vs. $t$ Curves



# AirMatrix™ 2410 Fast Acting Surface Mount Fuses

## Product Identification:

AF2 1.00 V125 T M

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

- (1) Series code: AF2 - Very Fast Acting
- (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:

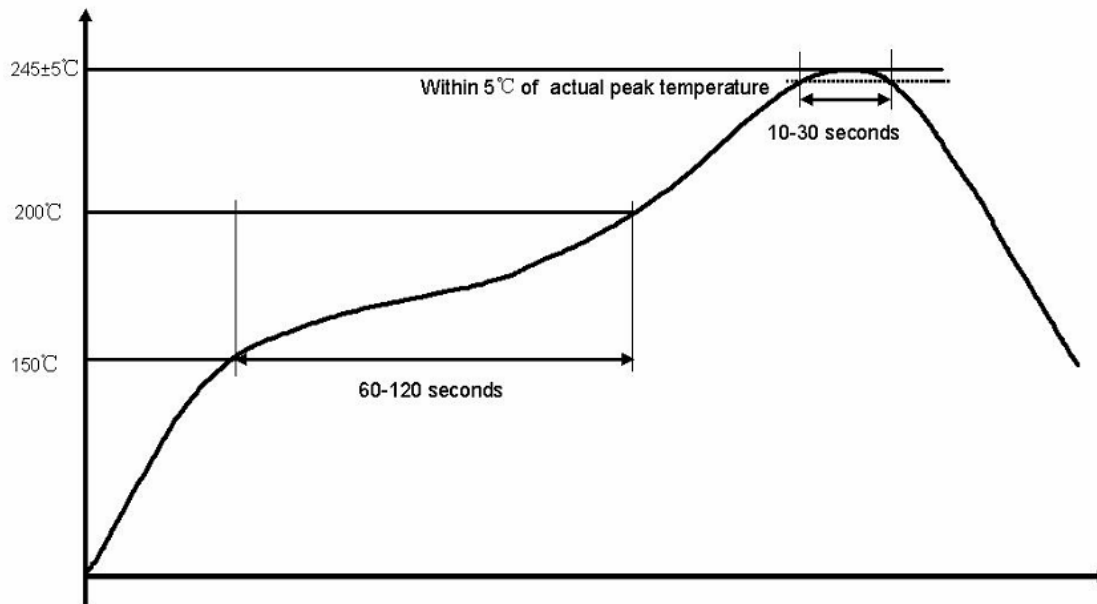
Reliability Test	Test Condition and Requirement
Reflow & Bend	3 reflows at 245°C followed by a 2 mm bend, 20% DCR change max. (10% for ≤1A), no mechanical damage
Solderability	245°C, 5 seconds, new solder coverage 90% minimum
Soldering Heat Resistance	260°C, 10 seconds, 20% DCR change max. (10% for ≤1A), new solder coverage 75% minimum
Life	25°C, 2000 hours, 80% rated current (75% for <1A), voltage drop change ≤±20%
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, 15% DCR change max., no excessive corrosion

# AirMatrix™ 2410 Fast Acting Surface Mount Fuses



## Soldering Temperature profiles

### Recommended Temperature Profile for Reflow Soldering

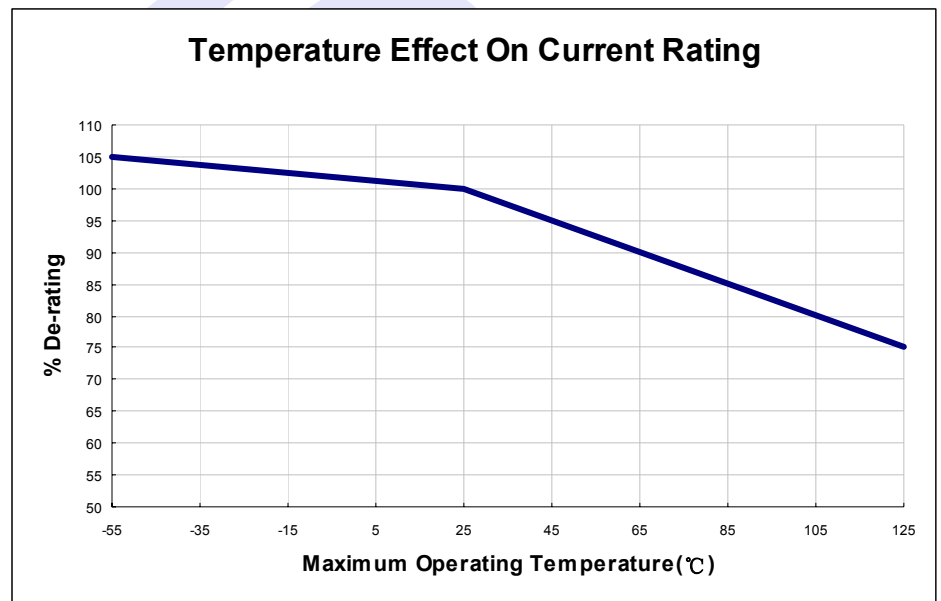


## Fuse Selection and Temperature De-rating Guideline

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 4A. The current rating for fuse selected from the catalog shall be:  
 $4 / 0.75 / 90\% = 5.9$  or 6A.

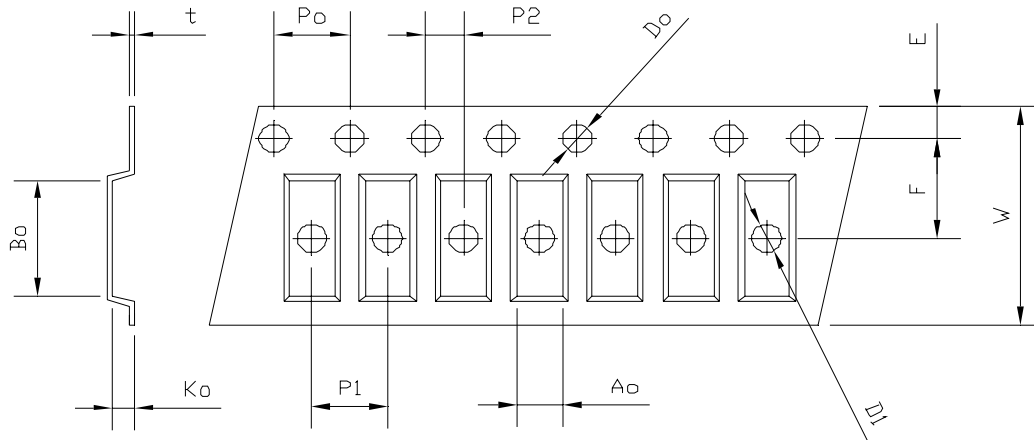


# AirMatrix™ 2410 Fast Acting Surface Mount Fuses



## Packaging

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.



Unit: mm

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

Unit: mm

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	1.55±0.10	1.55±0.10	0.25±0.05

## Packaging Data

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.

## AirMatrix™ 2410 Fast Acting Surface Mount Fuses

### **Storage**

- The maximum ambient temperature shall not exceed 40°C.

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

- 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.

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

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

Specifications and descriptions in this literature are as accurate as known at the time of printing, but are subject to change without notice. For the most updated information, please consult the factory.

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