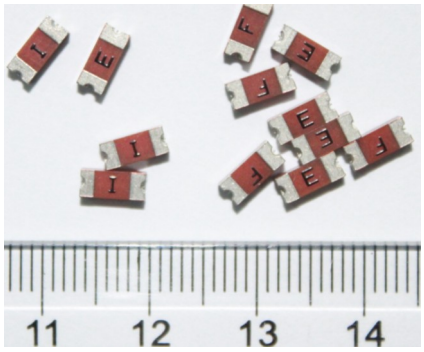
AirMatrix® Surface Mount Fuses

MF Series, 2410 Size



Features:

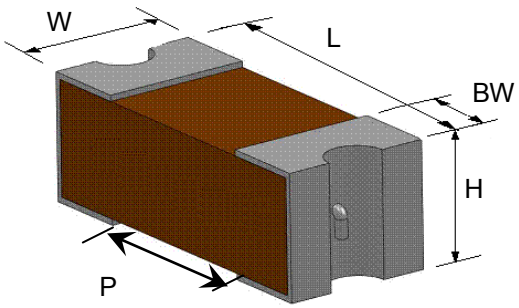
- Extremely small size with 250 VAC rating
- Surface mount fuses in AC applications
- Excellent inrush current withstanding capability
- Fiberglass enforced epoxy fuse body
- Copper termination with nickel and tin plating
- 100% lead-free
- Operating temperature range: -55°C to +125 °C (with de-rating)

Application Fields:

- Lighting: Ballast, LED Drivers
- Power: Chargers, Adapters, Power Boards
- Medical Equipment
- Indutrial Equipment
- White Goods

Shape and Dimensions:

	Inch	mm
L	0.240 ± 0.006	6.10 ± 0.15
W	0.098 ± 0.006	2.49 ± 0.15
H	0.085 ± 0.008	2.16 ± 0.20
BW	0.053 ± 0.015	1.35 ± 0.38
P	≥ 0.118	≥ 3.00



Clearing Time Characteristics:

% of Current Rating	Clearing Time at 25°C	
	Min.	Max.
125%	1 hour	
200%		120 seconds
1000%	0.001 seconds	0.01 seconds

Agency Approval:

Agency	File No.
UL	E232989
CQC	CQC11012065956
KC	SU05038-12001/12002
PSE	PSE12020434
VDE	40034853

Patents:

Patent numbers “ZL200810092353.3”, “ZL200910007157.6”, “ZL201120450579.3”, “ZL201120536307.5”, “ZL201220063222.4”, “ZL201110123326.X”.

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Ordering Information:

Part Number	Current Rating (A)	Voltage Rating (VAC)	Interrupting Ratings	Nominal DCR (Ω)	Voltage Drop Max. (mV)	Nominal I^2t (A^2s)	Marking (Black)
MF2410F0.500TM	0.50	250	100 A @ 250 VAC 50 A @ 125 VDC	0.206	166	0.11	C
MF2410F0.630TM	0.63	250		0.148	144	0.20	S
MF2410F0.800TM	0.80	250		0.109	139	0.35	H
MF2410F1.000TM	1.00	250		0.084	129	0.62	E
MF2410F1.250TM	1.25	250		0.065	128	1.00	F
MF2410F1.600TM	1.60	250		0.049	127	1.80	T
MF2410F2.000TM	2.00	250		0.038	123	3.00	I

Notes:
- Resistance is measured at ≤10% of rated current and 25℃ ambient.
- Voltage drop is measured at 100% of rated current.
- Melting I^2t is calculated at 0.001 second pre-arcing time.

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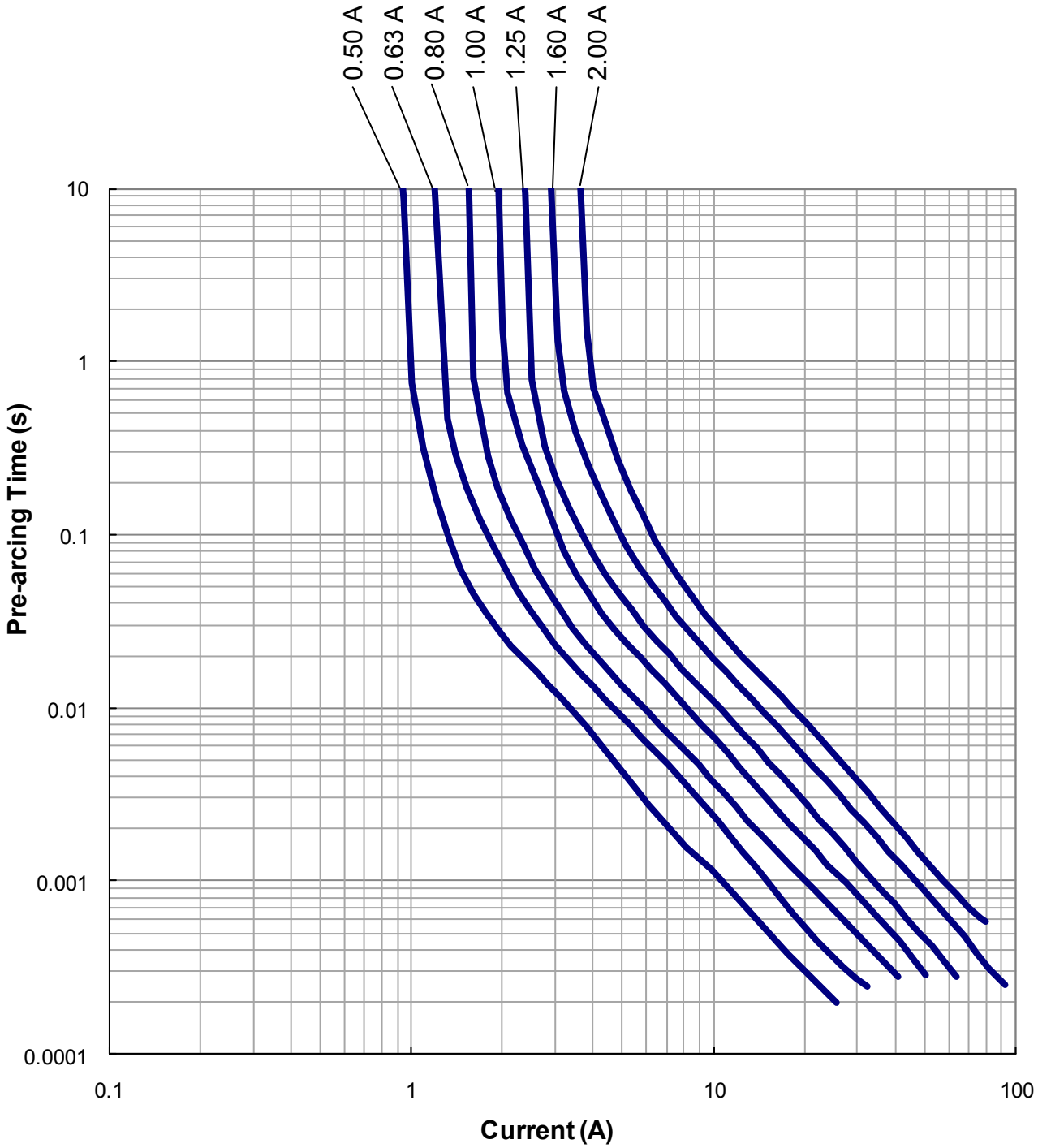
Average Pre-arcing Time Curves:



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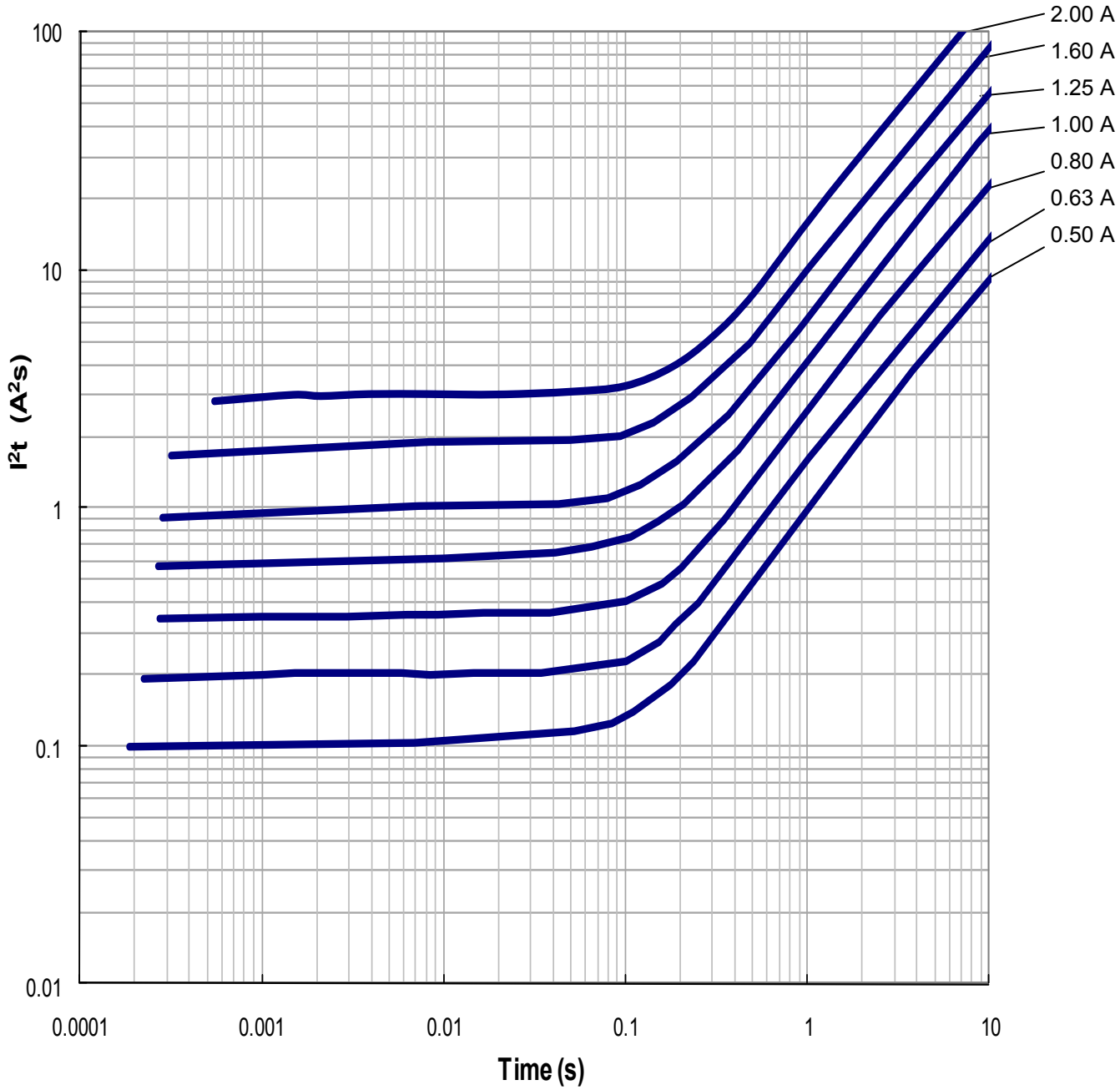
Average I^2t vs. t Curves:



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Product Identification:

MF 2410 F 1.000 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: 1.000 - 1 A

(5) Package code:

T - Tape & Reel

B - Bulk

(6) Marking code: M - with mark

Environmental Tests:

Reliability Test	Test Condition and Requirement	Test Reference
Reflow and Bend	3 reflows at 245°C followed by a 2 mm bend, voltage drop meeting IEC 60127-4, no mechanical damage	Refer to AEM QIQ 048 and QIQ 034
Solderability	245°C , 5~10 seconds, 90% new solder coverage min.	IEC 60127-4
Soldering Heat Resistance	260°C , 10 seconds, voltage drop meeting IEC 60127-4, no mechanical damage, marking remaining legible, no marking color change	IEC 60127-4
Life	25°C , 2000 hours, 10% voltage drop change max.	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 (10 days), 10% DCR change max., no excessive corrosion	MIL-STD-202 Method 106

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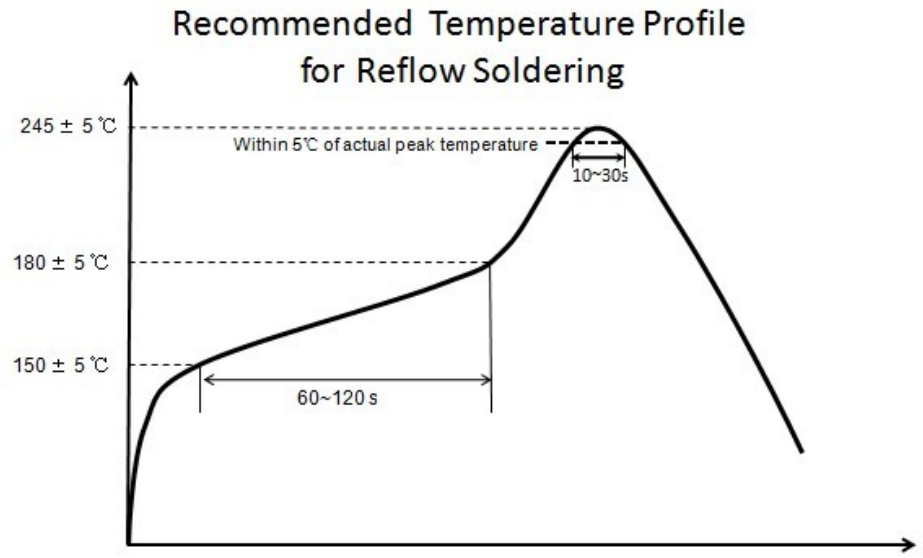
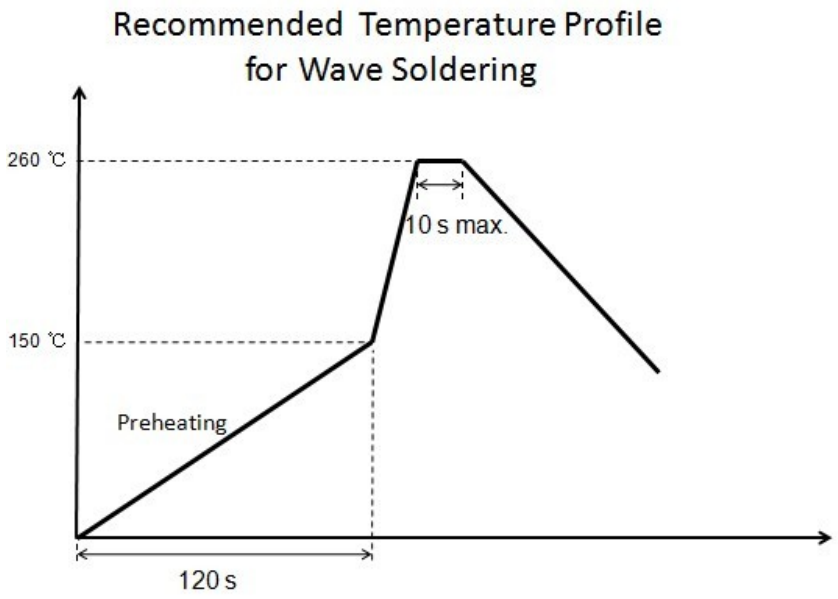
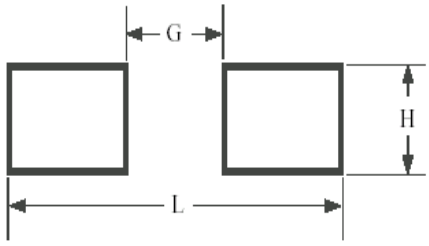
Soldering Temperature Profile:





Recommended Land Pattern:

	Inch	mm
L	0.338	8.60
G	0.118	3.00
H	0.110	2.80



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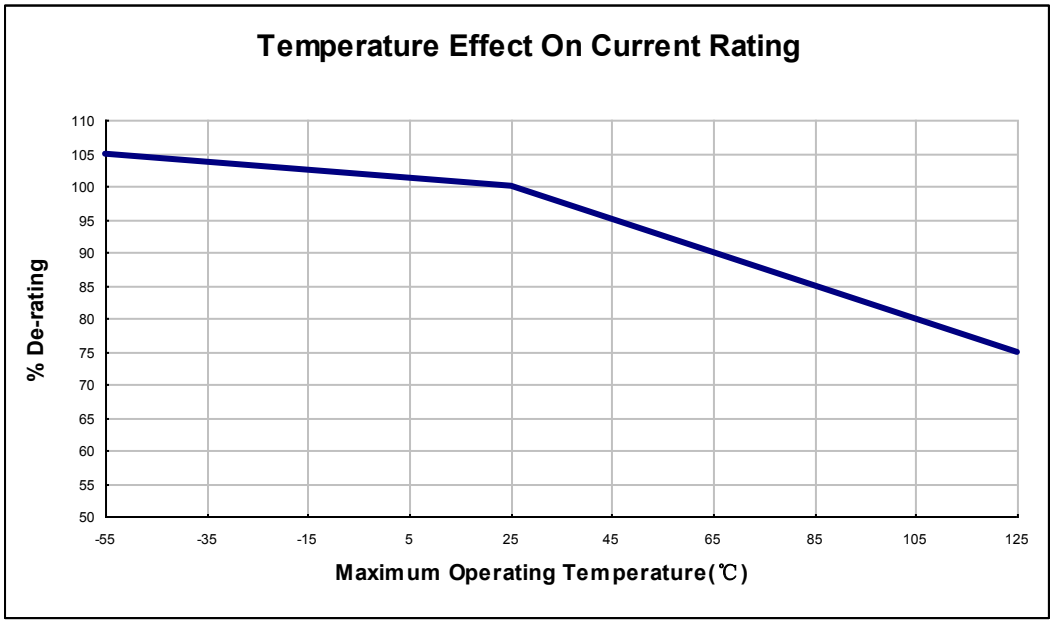
Fuse Selection and Temperature De-rating Guideline:

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".



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

Packaging:

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