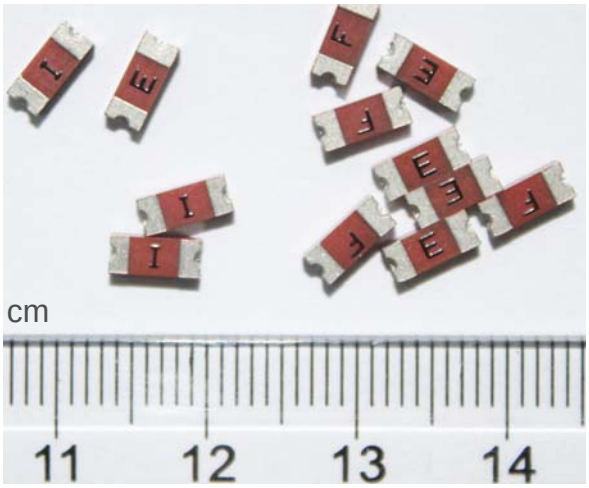
250V UMF for AC Applications: MF2410

Features:

- Extremely small size with 250 VAC rating
- Surface mount fuses in AC applications
- Excellent inrush current withstanding capability
- Operating temperature range: -55°C to +125 °C (with de-rating)
- Complying with IEC 60127-4
- Fiberglass enforced epoxy fuse body
- Copper termination with nickel and tin plating
- Halogen free, RoHS compliant
- 100% lead-free



Interrupting Ratings:

100 A @ 250 VAC; 50 A @ 125 VDC

Time/Current 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

Ordering Information:

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

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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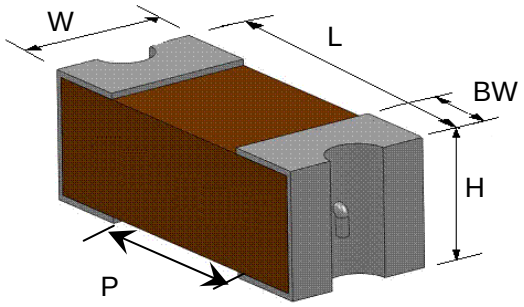
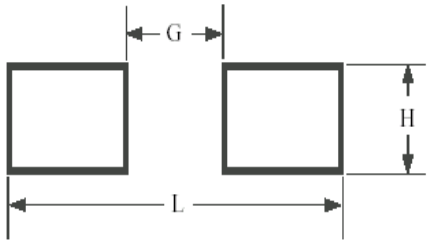
Shape and Dimensions:

	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



Recommended Land Pattern:

	Inch	mm
L	0.338	8.60
G	0.118	3.00
H	0.124	3.15



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

Typical Applications:

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

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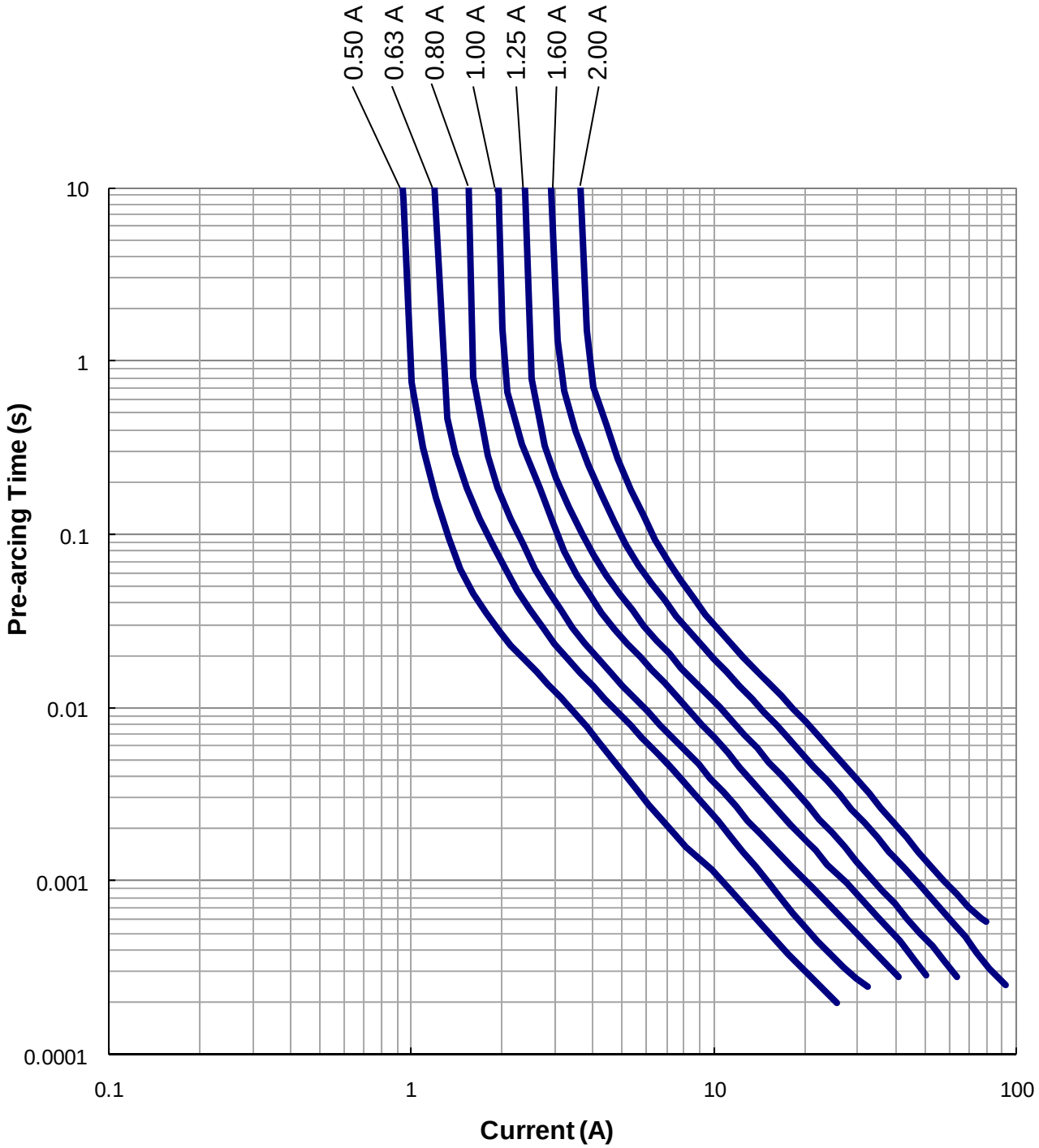
Average Time/Current Curves



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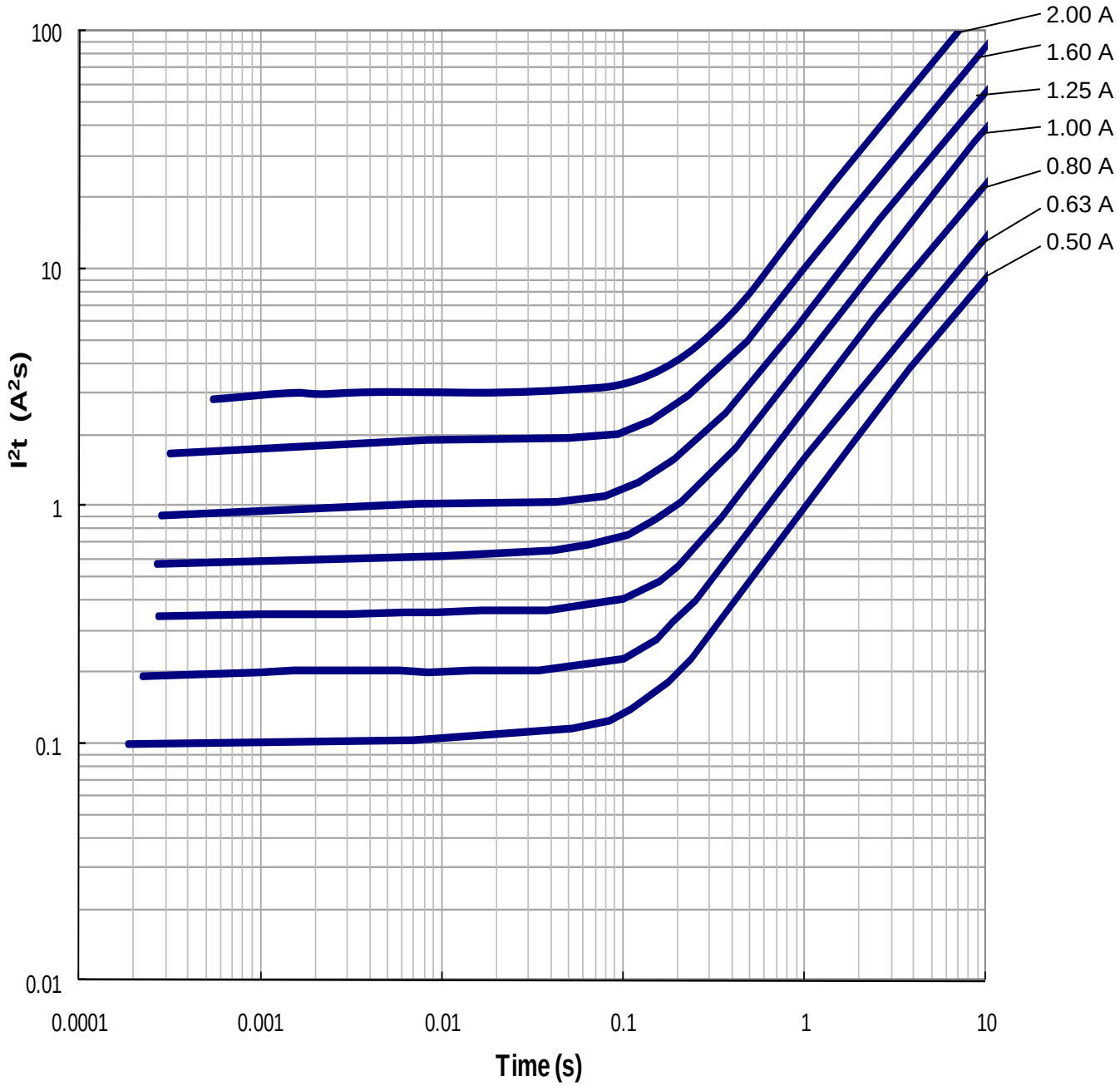
Average I^2t vs. t Curves



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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

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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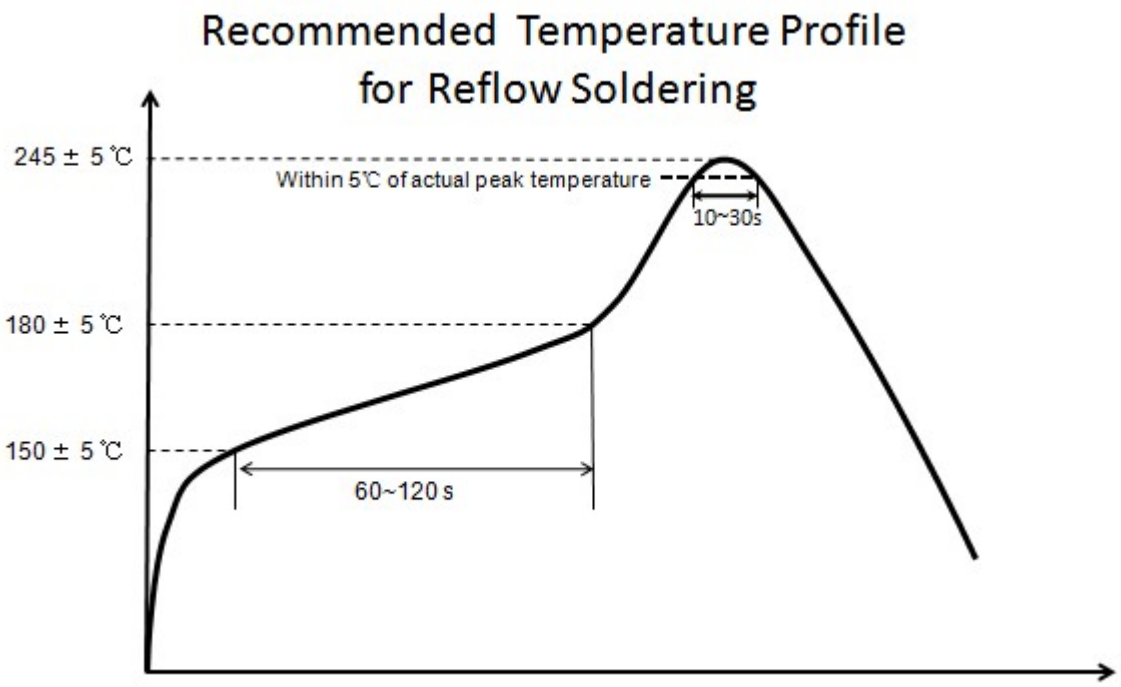
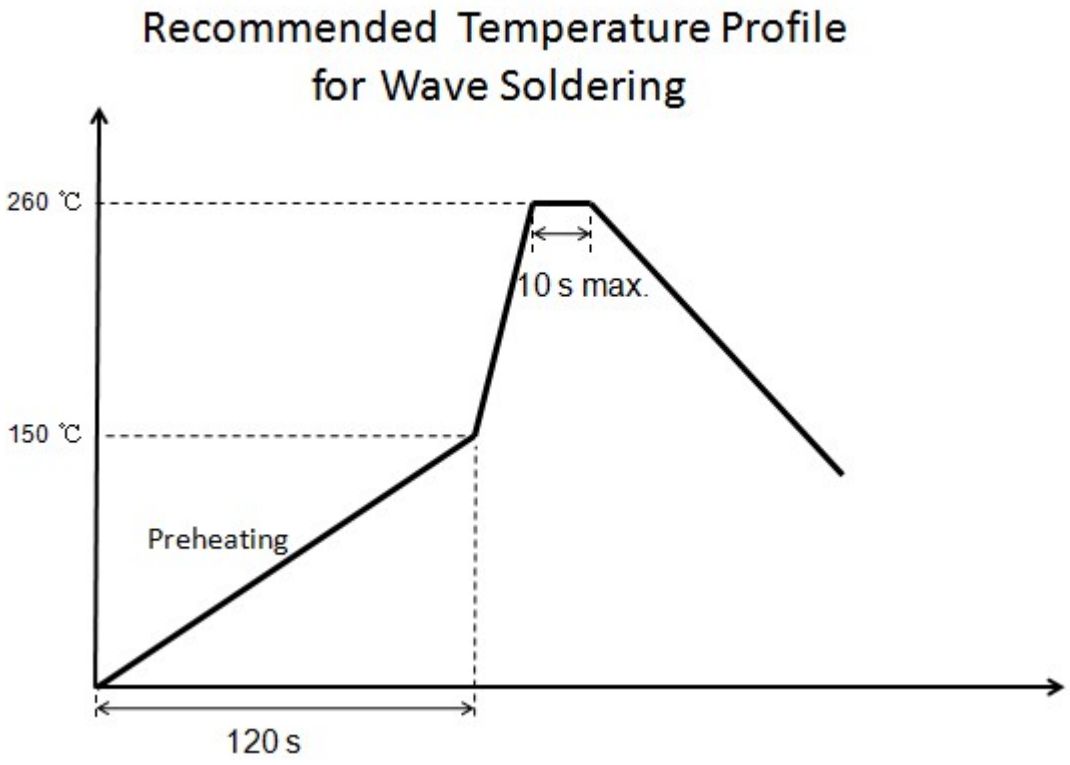
Soldering Temperature profiles





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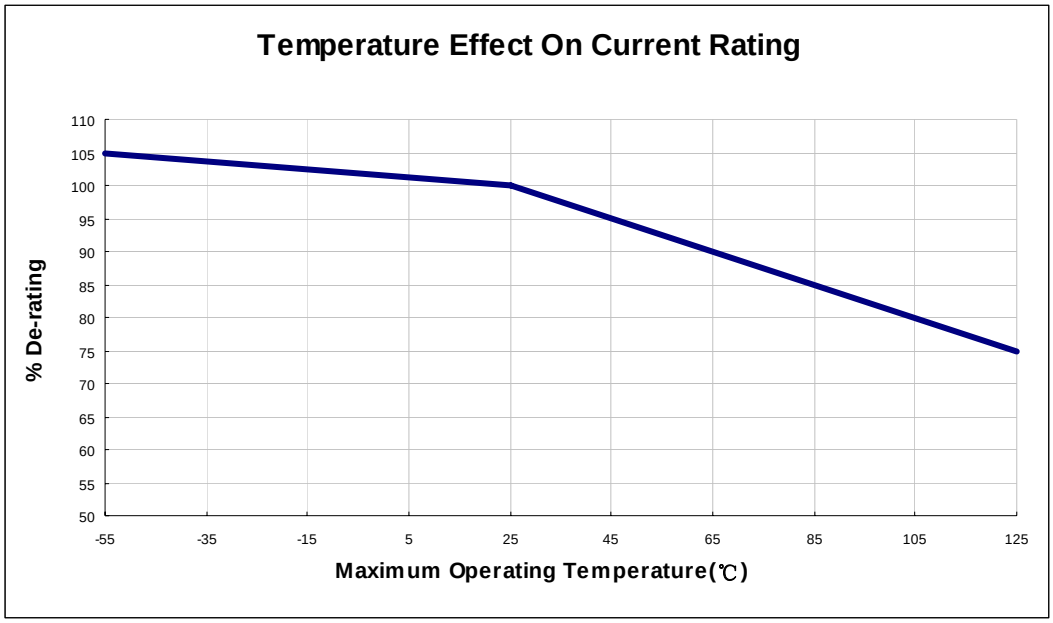
Fuse Selection and Temperature De-rating Guideline

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”.



Packaging Data

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

Storage

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

The maximum relative humidity recommended for storage is 75%. High humidity with high temperature can accelerate the oxidation of the solder plating on the termination and reduce the solderability of the components. The insulation resistance of the ESD suppressors could be reduced if the products are stored in a high humidity environment.

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

The products should 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.