

**RoHS HF 458 Series Fuse**

**Description**

The 458 Series Nano<sup>2®</sup> Fuse is an ultra-small, square surface mount fuse designed to support a variety of space constrained overcurrent protection applications. Offering a 1206 size footprint, it is the smallest wire-in-air type surface mount fuse offered by Littelfuse.

**Features**

- Surface Mount Fuse
- Fully compatible with lead free soldering profiles
- RoHS Compliant
- Halogen Free
- Available in ratings of 1 to 10 Amperes

**Agency Approvals**

AGENCY	AGENCY FILE NUMBER	AMPERE RANGE
	E10480	1A-10A

**Electrical Characteristics for Series**

% of Ampere Rating	Opening Time
100%	4 hours, Minimum
250%	5 seconds, Maximum

**Applications**

- Notebook PC
- LCD backlight inverter
- LCD Panel
- DC/DC converter
- Battery Pack
- Car Navigation System
- Network Equipment
- Telecom Equipment
- Electronic Signage
- Portable Consumer Electronics

**Electrical Specifications by Item**

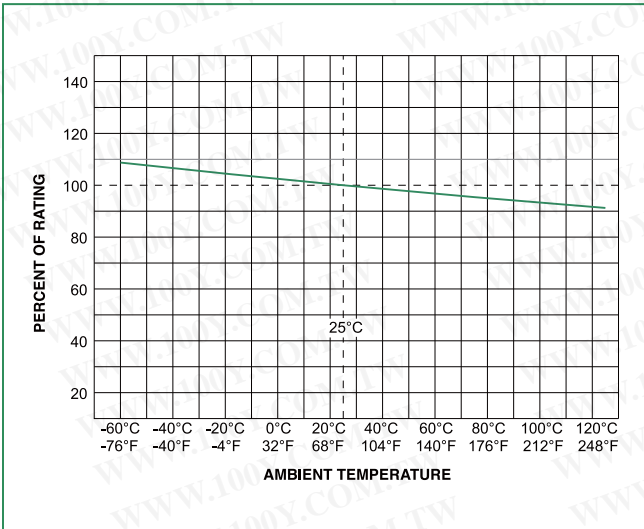
Ampere Rating (A)	Amp Code	Marking	Max Voltage Rating (V)	Interrupting Rating	Nominal Cold Resistance (Ohms)	Nominal Melting I <sup>2</sup> t (A <sup>2</sup> sec)	Agency Approvals
1.0	001.	1	75V	50A @ 75VDC 50A @ 48VAC	0.180	.168	x
1.25	1.25	1.25			0.125	.313	x
1.5	01.5	1.5			0.099	.548	x
1.6	01.6	1.6			0.092	.562	x
2	002.	2			0.0695	.952	x
2.5	02.5	2.5			0.06	1.408	x
3	003.	3			0.049	2.289	x
3.15	3.15	3.15			0.045	2.457	x
3.5	03.5	3.5			0.0375	4.00	x
4	004.	4			0.032	4.832	x
5	005.	5	63V	50A @ 75VDC 50A @ 32VAC	0.027	7.938	x
6.3	06.3	6.3			0.0192	14.37	x
7	007.	7			0.0175	20.48	x
8	008.	8	63V	50A @ 63VDC 50A @ 32VAC	0.0058	9.00	x
10.0	010.	10			0.00465	15.0	x

**Notes:**

1. I<sup>2</sup>t values stated for 8 msec opening time
2. Cold resistance measured at less than 10% of rated current at 25°C.
3. Agency Approval Table Key: X=Approved or Certified, P=Pending and Blank=Not Approved
4. Have special electrical characteristic needs? Contact Littelfuse to learn more about application specific options.

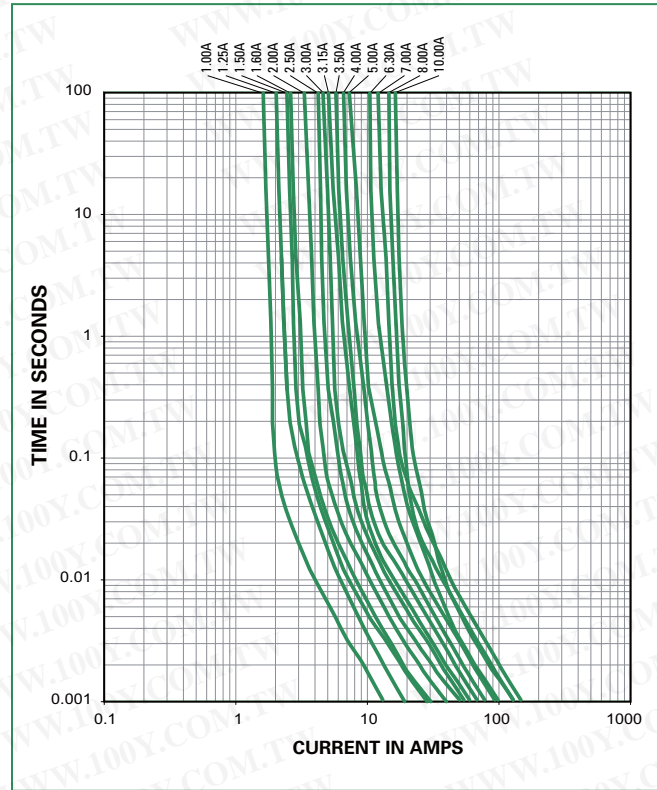
勝特力材料 886-3-5753170  
 勝特力电子(上海) 86-21-34970699  
 勝特力电子(深圳) 86-755-83298787  
[Http://www.100y.com.tw](http://www.100y.com.tw)

### Temperature Derating Curve



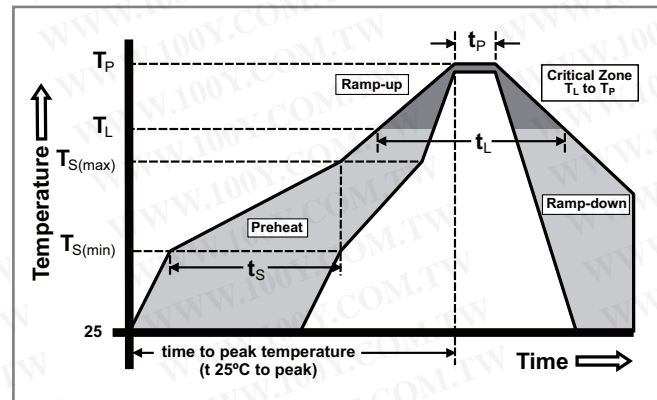
Note:  
 1. Derating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

### Average Time Current Curves



### Soldering Parameters

Reflow Condition		Pb – Free assembly
Pre Heat	- Temperature Min ( $T_{s(min)}$ )	150°C
	- Temperature Max ( $T_{s(max)}$ )	200°C
	- Time (Min to Max) ( $t_s$ )	60 – 120 secs
Average ramp up rate (Liquidus Temp ( $T_L$ ) to peak)		5°C/second max
$T_{s(max)}$ to $T_L$ - Ramp-up Rate		5°C/second max
Reflow	- Temperature ( $T_L$ ) (Liquidus)	217°C
	- Temperature ( $t_L$ )	60 – 90 seconds
Peak Temperature ( $T_p$ )		260 <sup>+0/-5</sup> °C
Time within 5°C of actual peak Temperature ( $t_p$ )		20 – 40 seconds
Ramp-down Rate		5°C/second max
Time 25°C to peak Temperature ( $T_p$ )		8 minutes Max.
Do not exceed		260°C

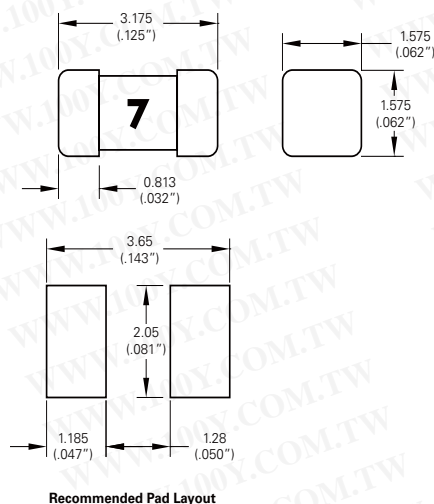


**Product Characteristics**

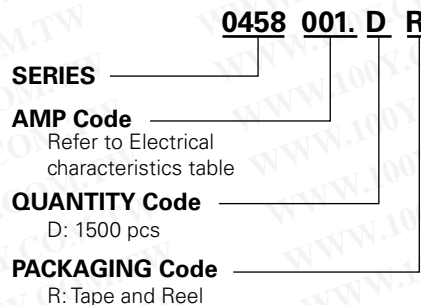
<b>Materials</b>	Body: Ceramic Cap: Gold Plated Brass
<b>Product Marking</b>	Body: Current Rating (Refer to Electrical Characteristic table)
<b>Insulation Resistance</b> (after Opening)	MIL-STD-202, Method 302, Test Condition A (10,000 ohms, Minimum)
<b>Solderability</b>	MIL-STD-202, Method 208
<b>Resistance to Soldering Heat</b>	MIL-STD-202, Method 210, Test Condition B (10 sec at 260°C)
<b>Moisture Sensitivity Level</b>	Level 1

<b>Operating Temperature</b>	-55°C to 125°C with proper derating
<b>Thermal Shock</b>	MIL-STD-202F, Method 107G, Test Condition B (5 cycles -65°C to +125°C)
<b>Vibration</b>	MIL-STD-202F, Method 201A (10-55 Hz)
<b>Moisture Resistance</b>	MIL-STD-202, Method 106, High Humidity (90-98%RH), Heat (65°C)
<b>Salt Spray</b>	MIL-STD-202F, Method 101D, Test Condition B
<b>Shock</b>	MIL-STD-202, Method 213, Test Condition I (100 G's peak for 6 milliseconds)

**Dimensions**



**Part Numbering System**



**Example:**  
1.5 amp product is  
0458 **01.5** D R (1 amp  
product shown above).

**Packaging**

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code
24mm Tape and Reel	EIA-RS 481-1	1500	DR

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