

Additional Information





Resources

Accessories

Samples

Agency Approvals

Agency	Agency File Number	Ampere Range
71	E10480	0.125 A - 5 A
S∰-	29862	0.125 A - 5 A
Œ	NA	0.125 A - 2 A
UK CA	NA	0.125 A - 2 A
Δ	J50518280	0.125 A - 5 A

Description

The 466 Series Fast-Acting Surface Mount Fuse (SMF) is a small (1206 size) thin-film device designed for secondary protection of circuits used in space constrained applications such as hand-held portable electronic devices.

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Lead-free, Halogen-free and

Recognized to UL/CSA/NMX

Conforms to EN 60127-1 and

for the European Market

suitability for the UK Market

UKCA Mark indicates

248-1 and UL/CSA/NMX 248-

RoHS compliant

EN 60127-7

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This series is 100% lead-free and meets the requirements of the RoHS directive. New Halogen-Free 466 Series fuses are available to order using the "HF" suffix. See Part Numbering section for additional information.

Features & Benefits

- Product is compatible with lead-free solders and higher temperature profiles
- Product is marked on top surface with code to allow amperage rating identification without testing
- Low profile for height sensitive CE Mark indicates suitability applications
- Flat top surface for pick-andplace operations
- Element-covering material is resistant to industry standard cleaning operations

Applications

Cell phones

Battery packs

- Secondary protection for space constrained applications:
 - DVD players
 - Hard disk drives
- Digital cameras

Electrical Characteristics for Series

% of Ampere Rating	Opening Time at 25°C
100%	4 hours, Minimum
200%	5 sec., Maximum
300%	0.2 sec., Maximum

Electrical Specifications by Item

Ampere		Max		Nominal Cold No	Nominal Nom	Nom Power	Agency Approvals					
Rating (A)	ing Code Voltage Rating (V) Resistance Melting Voltage I A) (Ohms) I ² t (A ² sec) Drop (mV)	Dissipation (W)	Œ	UK CA	\triangle	77	∰ ≀					
0.125	.125	125		3.925	0.00064	634.37	0.0793	х	х	х	х	х
0.200	.200	125	50A @ 125VAC/	1.100	0.00055	254.28	0.0509	х	х	х	х	х
0.250	.250	125	VDC	0.691	0.0022	207.01	0.0518	х	х	х	х	х
0.375	.375	125		0.351	0.0045	169.18	0.0634	х	х	х	х	х
0.500	.500	63		0.248	0.0060	158.47	0.0792	х	х	х	х	х
0.750	.750	63		0.106	0.0276	98.65	0.0740	х	х	х	х	х
1.00	001.	63		0.075	0.0423	79.97	0.0800	х	х	х	х	х
1.25	1.25	63	50A @ 63VAC/VDC	0.057	0.0640	85.71	0.1071	х	х	х	х	х
1.50	01.5	63		0.046	0.1103	82.97	0.1244	х	х	х	х	х
1.75	1.75	63		0.038	0.1835	80.73	0.1413	х	х	х	х	х
2.00	002.	63		0.030	0.2326	78.73	0.1575	х	х	х	х	х
2.50	02.5	32		0.023	0.3516	76.99	0.1925	-	-	х	х	х
3.00	003.	32	50A @ 32VAC/VDC	0.019	0.5760	75.99	0.2280	-	-	х	х	х
4.00	004.	32		0.014	1.024	74.50	0.2980	-	-	х	х	х
5.00	005.	32		0.011	1.600	73.75	0.3688	-	-	х	х	х



Fuse Datasheet

Temperature Re-rating Curve



Note:

1. Re-rating depicted in this curve is in addition to the standard re-rating of 25% for continuous operation.

Example: For continuous operation at 70 degrees celsius, the fuse should be rerated as follows: $I = (0.75)(0.80)I_{BAT} = (0.60)I_{BAT}$

2. The temperature derating curve represents the nominal conditions. For questions about temperature derating curve, please consult Littelfuse technical support for assistance.

Average Time Current Curves



Reflow Con	dition	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 – 180 seconds		
Average Rau to peak)	mp-up Rate (Liquidus Temp (T _L)	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 – 150 seconds		
Peak Tempe	rature (T _P)	260 ^{+0/-5} °C		
Time within (t _p)	5°C of actual peak Temperature	20 – 40 seconds		
Ramp-dowr	n Rate	5°C/second max.		
Time 25°C t	o peak Temperature (T _P)	8 minutes max.		
Do not exce	ed	260°C		

Soldering Parameters



Wave Soldering

260°C, 10 seconds max.



Fuse Datasheet

Product Characteristics

Materials	Body: Advanced High Temperature Substrate Terminations: 100% Tin over Nickel over Copper Element Cover Coat: Conformal Coating				
Operating	– 55°C to 90°C.				
Temperature	Consult temperature re-rating curve chart.				
Thermal Shock	Withstands 5 cycles of –55°C to 125°C				
Humidity	MIL-STD-202, Method 103, Condition D				
Vibration	MIL-STD-202, Method 201				
Insulation Resistance (After Opening)	Greater than 10,000 ohms				
Resistance to Soldering Heat	MIL-STD-202, Method 210, Condition D				

Part Marking System

Amp Code	Marking Code
.125	В
.200	С
.250	D
.375	E
.500	F
.750	G
001.	Н
1.25	J
01.5	К
1.75	L
002.	Ν
02.5	0
003.	Р
004.	S
005.	т

Dimensions mm (in)



Part Numbering System

0466002.NRHF

SERIES —

AMP Code ________ Refer to Amp Code column in the Electrical Specifications table. The dot is positioned before the Packaging Suffix with whole ratings and within the numbering sequence for fractional ratings.

QUANTITY CODE

N = 5000 pcs

PACKAGING Code

R = Tape and Reel

'HF' SUFFIX

Halogen-free

Example

0.125 amp product is 0466.125NRHF (2 amp product shown above).

Packaging

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code
8mm Tape and Reel	EIA-481, IEC 60286-3	5000	NR

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