

Part Number: 0466004.

Technology: Fuses

Series: 466

466 Series - SlimLIne® Lead-Free Halogen-Free 1206 Very Fast-Acting Thin-Film Fuse

- Complies with electronic industry environmental standards for lead reduction.
- Product is compatible with lead-free solders and higher temperature profiles.
- Current ratings available up to 7A. If a 7A fuse is required please see the 429 series.
- High performance materials provide improved performance in elevated ambient temperature applications.
- Product is marked on top surface with code to allow amperage-rating identification without testing.
- Low profile for height sensitive applications.
- Flat top surface for pick-and-place operations.
- Element covering material is resistant to industry standard cleaning operations.
- Mounting pad and electrical performance is identical to Littelfuse 429 and 433 Series products.
- Alloy based element construction provides superior inrush withstand characteristics (I2t) over ceramic or glass based 1206 chip fuse products.

Electrical Characteristics

Property	Value
Opening	Very Fast-Acting
Size	1206 (3216)
Amp Rating (A)	4
Voltage Rating (V)	32
Resistance (Ohms)	0.014
I ² t (A ² Sec)	1.024

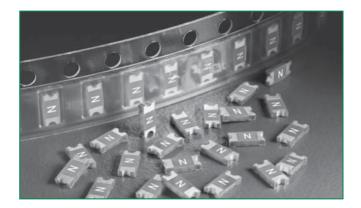
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ROHS M HF 466 Series Fuse







Agency Approvals

AGENCY	AGENCY FILE NUMBER	AMPERE RANGE
. 8	E10480	125MA - 5A
⊕ ®	LR29862	125MA - 5A

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		

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.

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

Features

- 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 applications.
- Flat top surface for pickand-place operations.

- Element covering material is resistant to industry standard cleaning operations.
- Mounting pad and electrical performance is identical to Littelfuse 429 and 433 Series products.
- Alloy based element construction provides superior inrush withstand characteristics (I2t) over ceramic or glass based 1206 chip fuse products.

Applications

Secondary protection for space constrained applications:

- Cell phones
- Battery packs
- Digital cameras
- DVD players
- Hard disk drives.

Electrical Specifications by Item

Ampere	Amp	Max	Interrupting	Nominal Cold	Nominal	Nom	Nom Power	Agency A	Approvals
Rating (A)	Code	Voltage Rating (V)	Rating	Resistance (Ohms)	Melting I²t (A²sec)	Voltage Drop (mV)	Dissipation (W)	!	®
0.125	.125	125		4.000	0.00040	552.66	0.0691	X	X
0.200	.200	125	50A @125 V AC/	1.160	0.00055	254.28	0.0509	Х	X
0.250	.250	125	DC	0.710	0.0010	207.01	0.0518	X	X
0.375	.375	125		0.350	0.0028	169.18	0.0634	Х	X
0.500	.500	63		0.248	0.0060	158.47	0.0792	Х	X
0.750	.750	63		0.111	0.0276	98.65	0.0740	Х	X
1.00	001.	63		0.076	0.0423	89.94	0.0899	X	X
1.25	1.25	63	50A @63 V AC/DC	0.059	0.0640	85.71	0.1071	X	X
1.50	01.5	63		0.048	0.1103	82.97	0.1244	Х	X
1.75	1.75	63		0.039	0.1323	80.73	0.1413	X	X
2.00	002.	63		0.031	0.2326	78.73	0.1575	Х	X
2.50	02.5	32	50A @32 V AC/DC	0.024	0.3516	76.99	0.1925	Х	X
3.00	003.	32		0.020	0.5760	75.99	0.2280	Х	X
4.00	004.	32		0.014	1.024	74.50	0.2980	Х	X
5.00	005.	32		0.011	1.600	73.75	0.3688	Х	X

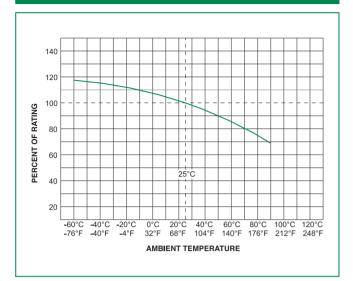
- 1. Measured at 10% of rated current, 25°C.
- 2. Measured at rated voltage

Surface Mount Fuses

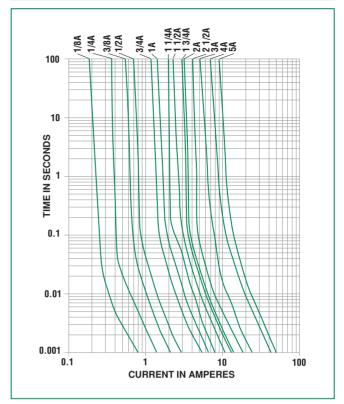
Thin Film > 1206 Size > Very Fast-Acting > 466 Series



Temperature Rerating Curve



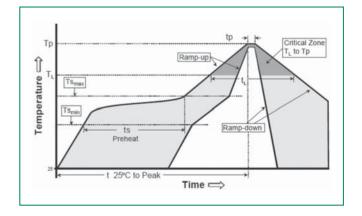
Average Time Current Curves



Soldering Parameters

Reflow Co	ndition	Pb – Free assembly	
-Temperature Min (T _{s(min)})		150°C	
Pre Heat	-Temperature Max (T _{s(max)})	200°C	
	-Time (Min to Max) (t _s)	60 – 180 secs	
Average ra	amp up rate (Liquidus Temp k	5°C/second max	
T _{S(max)} to T _L	- Ramp-up Rate	5°C/second max	
Reflow	-Temperature (T _L) (Liquidus)	217°C	
nellow	-Temperature (t _L)	60 – 150 seconds	
PeakTemp	perature (T _P)	250 ^{+0/-5} °C	
Time with	in 5°C of actual peak ure (t _p)	20 - 40 seconds	
Ramp-dov	vn Rate	5°C/second max	
Time 25°C to peakTemperature (T _p)		8 minutes Max.	
Do not exceed		260°C	

Wave Soldering	260°C, 10 seconds max.
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466 Series 12

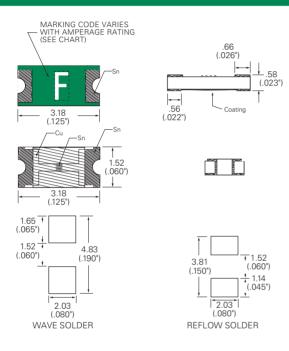
Surface Mount Fuses Thin Film > 1206 Size > Very Fast-Acting > 466 Series

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 rerating curve characteristics.	
Thermal Shock	Withstands 5 cycles of -55°C to 125°C
Humidity	MIL-STD-202F, Method 103B, Condition D

Vibration	Per MIL-STD-202F, Method 201A
Insulation Resistance (After Opening)	Greater than 10,000 ohms
Resistance to Soldering Heat	MIL-STD-202G, Method 210F, Condition D

Dimensions



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	K
1.75	L
002.	N
02.5	0
003.	Р
004.	S
005.	Т

Part Numbering System

0466002.NRHF SERIES -**AMP Code** Refer to Amp Code column in the Electrical Specifications table. The dot is poisitioned before the Packaging Suffix with whole ratings and within the numbering sequence for fractional ratings. Example: .125 amp product is 0466.<u>**125**</u> NR HF (2 amp product shown above). **QUANTITY Code** N = 5000 pcs**PACKAGING Code** R = Tape and Reel **HALOGEN FREE ITEM**

Packaging

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code
8mm Tape and Reel	EIA RS-481-2 (IEC 286, part 3)	5000	NR

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466 Series