

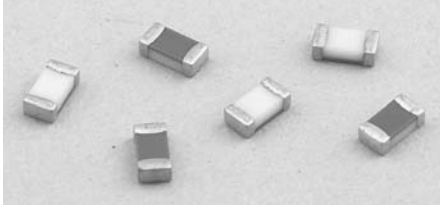


**THE DATASHEET OF
TR/3216FF4.5-R**



3216FF

Fast-acting Chip™ surface mount fuse



Product features

- AEC-Q200 qualified (250 mA to 7 A)
- Fast-acting surface mount fuse
- Ratings up to 30 amps
- Excellent temperature and cycling characteristics
- Compatible with reflow and wave solder

Agency information

- UL Recognition Guide JDYX2 & File E19180.
- CSA Component Acceptance: 053787 C 000 & Class No: 1422 30.
- cURus Recognition File: E19180, Guide JDYX2/ JDYX8

Soldering method

- Wave Immersion: 260 °C, 10 sec max.
- Infrared Reflow: 260 °C, 30 sec max.

Environmental data

- Thermal Shock: MIL-STD-202, Method 107, Test Condition B (-65 °C to +125 °C)
- Vibration: MIL-STD-202, Method 204, Test Condition C (55 Hz - 2 kHz, 10 G)
- Moisture Resistance: MIL-STD-202, Method 106, 10 day cycle
- Solderability: ANSI/J-STD-002, Test B
- Additional resistance to solder heat test: MIL-STD-202G Method 210F Condition A
- Operating Temperature: -55 °C to +125 °C
- AEC-Q200 qualified (250 mA to 7 A)

Ordering

- Specify packaging and product code (i.e., TR/3216FF250-R)

Electrical Characteristics		
Amp Rating	% of Amp Rating	Opening Time
250mA - 30A	100%	4 Hrs. Min.
1.25A - 3A	200%	60 Sec. Max.
250mA - 3A	250%	5 Sec. Max.
4A - 7A	350%	1 Sec. Max.
10A - 30A	350%	5 Sec. Max.

Specifications									
Part Number	Volt Ratings		Interrupting Rating* (amps) AC/DC	Typical DC Cold Resistance (Ω)**	Typical Melt I ² t (A ² S) DC***	Typical Voltage Drop (V)†	Agency Approvals		
	Vac	Vdc					UR	CSA	cURus
3216FF250-R	32	63	50	3.5000	0.00038	1.40	X	X	
3216FF375-R	32	63	50	1.7500	0.00077	0.73	X	X	
3216FF500-R	32	63	50	0.9800	0.00190	0.66	X	X	
3216FF750-R	32	63	50	0.5400	0.0053	0.63	X	X	
3216FF1-R	32	63	50	0.2190	0.030	0.20	X	X	
3216FF1.25-R	32	63	50	0.1700	0.046	0.18	X	X	
3216FF1.5-R	32	63	50	0.1190	0.093	0.18	X	X	
3216FF2-R	32	63	50	0.0660	0.126	0.16	X	X	
3216FF2.5-R	32	63	50	0.0460	0.260	0.14	X	X	
3216FF3-R	32	63	50	0.0360	0.275	0.13	X	X	
3216FF4-R	32	32	50	0.0180	0.337	0.11	X	X	
3216FF4.5-R	32	32	50	0.0160	0.405	0.10	X	X	
3216FF5-R	32	32	50	0.0140	0.534	0.09	X	X	
3216FF6.5-R	32	32	50	0.0086	2.294	0.076	X	X	
3216FF7-R	32	32	50	0.0070	3.623	0.078	X	X	
3216FF10-R		24	150	0.0045	2.0	0.062	X		X
3216FF12-R		24	150	0.0039	7.0	0.070	X		X
3216FF15-R		24	150	0.0031	25.5	0.066	X		X
3216FF20-R		24	150	0.0018	48.6	0.060	X		X
3216FF25-R		24	250	0.0014	32.0	0.057	X		X
3216FF30-R		24	300	0.0012	43.0	0.068	X		X

*AC Interrupting Rating measured at rated voltage with a unity power factor; DC Interrupting Rating measured at rated voltage, time constant of less than 50 microseconds, battery source

**Typical DC Cold Resistance measured at 10% of rated current

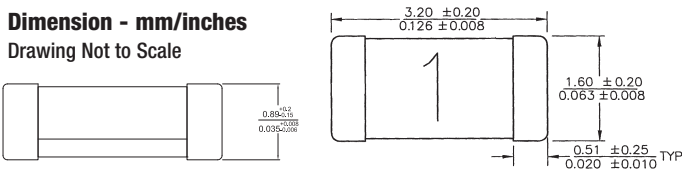
***Typical Melting I²t measured with a battery bank at rated DC voltage, 10x-rated current, not to exceed IR, time constant of calibrated circuit less than 50 microseconds (6.5A - 30A measured at interrupting rating) †Typical Voltage Drop measured at rated current after temperature stabilizes. It is recommended that fuses be mounted with ceramic (white) side facing up.

Device designed to carry rated current for four hours minimum. An operating current of 80% or less of rated current is recommended, with further derating required at elevated ambient temperatures.

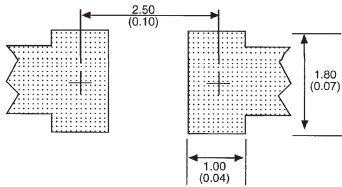


Powering Business Worldwide

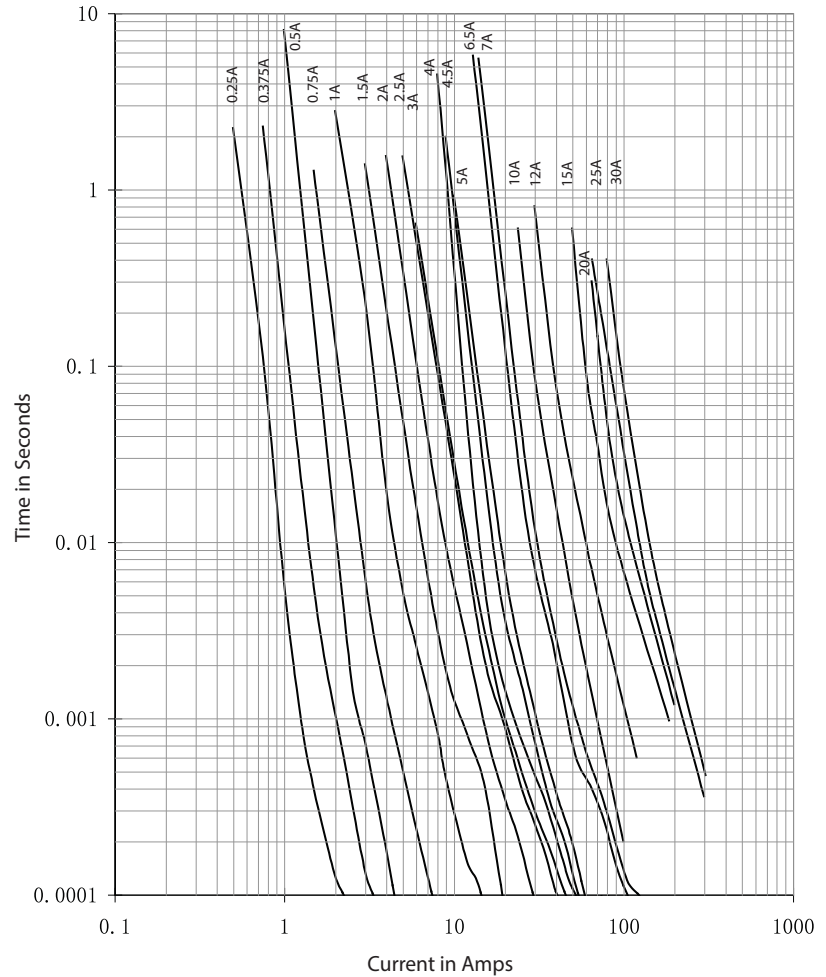
Dimension - mm/inches
Drawing Not to Scale



Recommended Pad Layout - mm (in)



Time-Current Curve



Packaging	
Packaging Code Prefix	Description
TR	3000 fuses on 8mm tape-and-reel on a 7 inch (178mm) reel per EIA Standard RS481

Life Support Policy: Eaton does not authorize the use of any of its products for use in life support devices or systems without the express written approval of an officer of the Company. Life support systems are devices which support or sustain life, and whose failure to perform, when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in significant injury to the user.

Eaton reserves the right, without notice, to change design or construction of any products and to discontinue or limit distribution of any products. Eaton also reserves the right to change or update, without notice, any technical information contained in this bulletin.

Eaton
Electronics Division
1000 Eaton Boulevard
Cleveland, OH 44122
United States
www.eaton.com/electronics

© 2017 Eaton
All Rights Reserved
Printed in USA
Publication No. 3001 BU-SB11302
October 2017

Eaton is a registered trademark.

All other trademarks are property of their respective owners.

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

 [View TR/3216FF4.5-R on WIN SOURCE](#)

 [Eaton Bussmann Information](#)

Optimize Your Supply Chain with WIN SOURCE Solutions

-  Global Sourcing Solution
-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management