

# 3216 / No. 441



## UL 248-14, 32V, F

### Time-Current Characteristic

Quick Acting (F)

### Standard

UL 248-14  
CSA C22.2 No. 248.14

### Approvals

cULus Recognized: File No. E 67006

## Features

- Reliable thin film melting element
- Flame resistant ceramic substrate
- Low voltage drop
- Reduced PCB space requirements
- Internationally approved
- Stable thermal characteristics under varying operating temperatures

## WebLinks

### Data Sheet

[www.wickmann.com/products/441.pdf](http://www.wickmann.com/products/441.pdf)

### Approval Certificates

[www.wickmann.com/approvals](http://www.wickmann.com/approvals)

### Time-Current Curve

Page 69  
[www.wickmann.com/itcurves](http://www.wickmann.com/itcurves)

### Packaging

Page 119  
[www.wickmann.com/pack](http://www.wickmann.com/pack)

## Specifications

### Packaging

000: Blister Tape (3000 pcs.)

### Materials

Housing: Ceramic substrate  
Element: Thin film  
Terminals: Tinned, metallized

### Operating Temperature

-40°C to +85°C (consider de-rating)

### Climatic Category

-40°C/+85°C/21 days (IEC 60068-2-1...3)

### Stock Conditions

+10°C to +60°C  
relative humidity ≤ 75% yearly average,  
without dew, maximum value for 30 days-95%

### Vibration Resistance

24 cycles at 15 min. each (IEC 60068-2-6)  
10 - 60Hz at 0.75mm amplitude  
60 - 2000Hz at 10g acceleration

### Solderability

235°C, 2 sec. (IEC 60068-2-58)

### Soldering Heat Resistance

260°C, 10 sec. (IEC 60068-2-58)

### Recommended Solder Glue

Grace Amicon 125 F

### Minimum Cross Section, Copper

Conducting path - 0.1mm<sup>2</sup>  
Thickness - 0.035mm

### Mounting

Solder the fuse with the marked side facing up  
Avoid circuit traces below the fuse

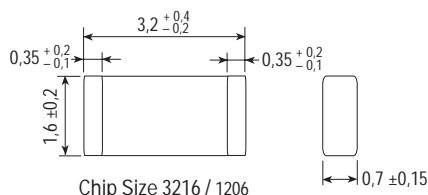
### Marking

Current Rating

### Unit Weight

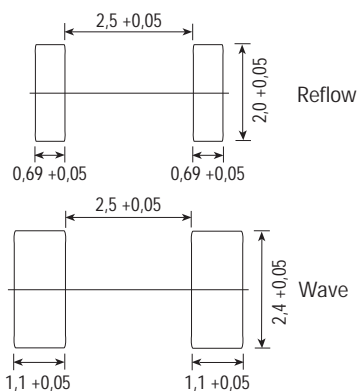
0.04g (approx.)

### Dimensions (mm)




### Pad Layout

Solder the fuse with the marked side facing up






### Limits for Pre-arcing Time

Rated Current	2.5 x I <sub>Rated</sub> 
80mA ... 500mA	< 5s



Permissible continuous operating current is ≤ 70% at ambient temperature of 23°C (73.4°F).

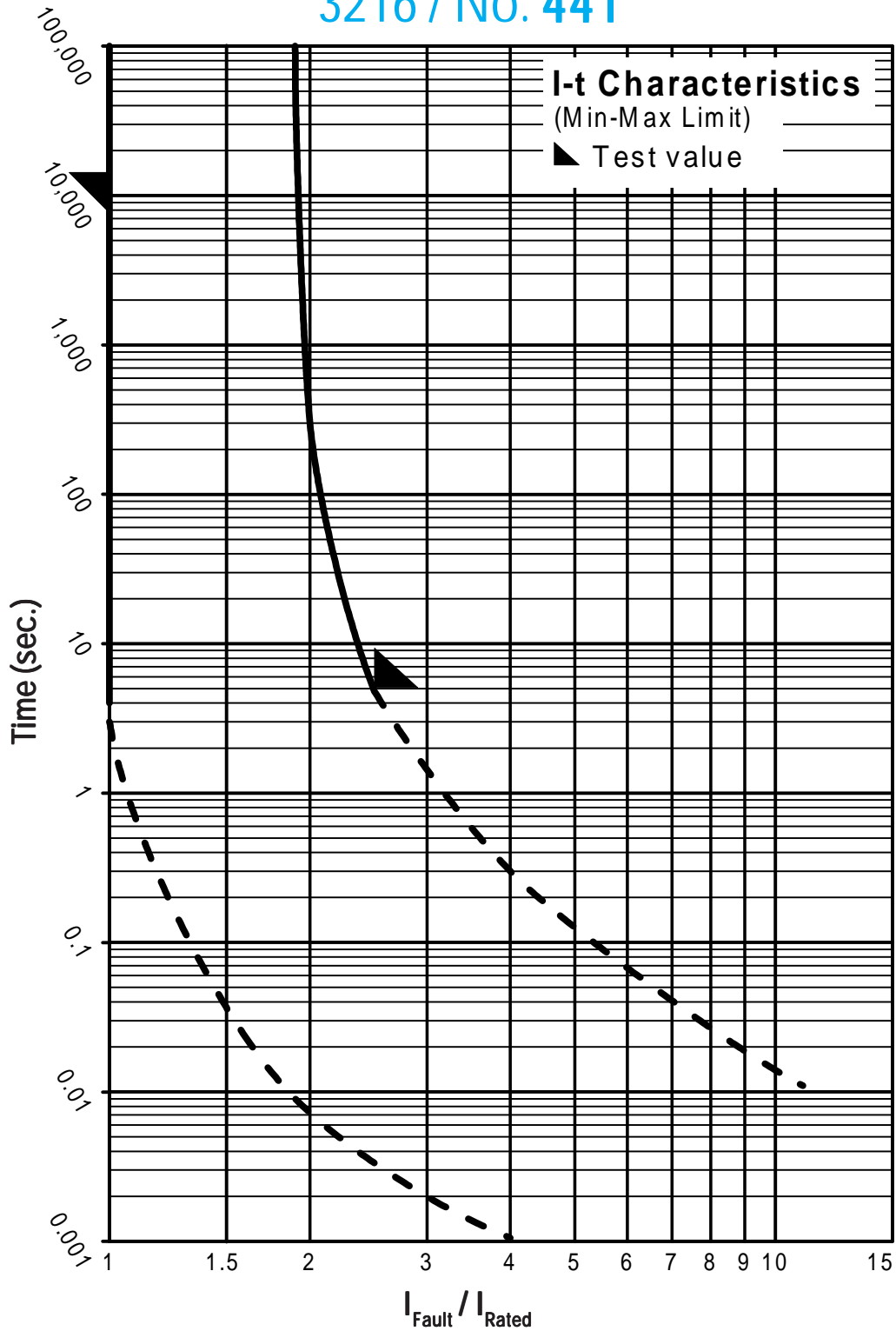
Rated Current <sup>1</sup>	Amp Code	Voltage Rating	Breaking Capacity	Voltage Drop 1.0 x I <sub>Rated</sub>  typ. (mV)	Power Dissipation 1.0 x I <sub>Rated</sub>  max. (mW)	Melting Integral 10 x I <sub>Rated</sub>  max. (A <sup>2</sup> s)	Approvals cURus
80mA	0080	32V		455	52	0.00004	•
125mA	0125	32V		402	75	0.00007	•
160mA	0160	32V	50A / 32VAC/DC	429	96	0.0001	•
200mA	0200	32V	50-60Hz	430	120	0.0005	•
315mA	0315	32V	cos φ = 1.0	222	110	0.0004	•
375mA	0375	32V		220	120	0.0009	•
500mA	0500	32V		210	125	0.002	•

<sup>1</sup> For higher current ratings, see No. 443.

### Order Information

Qty.	Order-Number	Series	Amp Code	Packaging
		441		

# 3216 / No. 441



Contact WICKMANN for individual I-t curves