

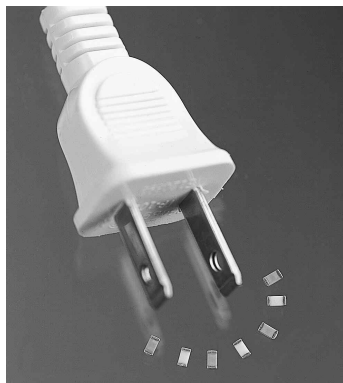
SMT Chip Fuse

Subminiature Surface Mount Fuses

125V AC/DC



3216LV



Catalog Symbol: 3216LV

Voltage Rating: 125V AC/DC**Interrupting Rating:** 50 Amp AC/DC**Physical Size:**

EIA SOCM-3216AC (Equivalent to 1206)

3.2 × 1.6 × 0.90mm

0.126 × 0.063 × 0.035 in.

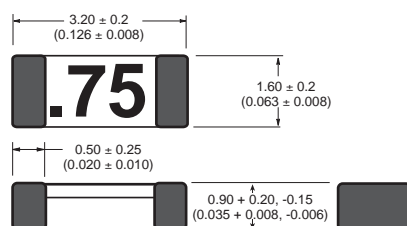
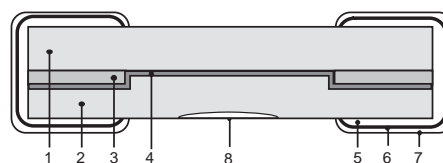
Agency Approvals:

UL Recognized, Std. 248-14, File E19180, Guide JDYX2

CSA Component Acceptance, File 53787, Class 1422-30

General Information:

- Bussmann SMT Chip Fuses utilize thick and thin metal film technologies for superior fusing action and enhanced reliability.
- The fuse element is bonded to a ceramic substrate and encapsulated with glass, providing excellent short-circuit performance and environmental integrity. Predicted reliability of the 3216LV chip fuse is 30 times greater than that of the typical chip capacitor (consult Bussmann for details).
- Substrate and coating thermal expansion coefficients are closely matched to that of FR-4 epoxy-glass circuit board for superior solder joint reliability.
- The end terminations are over-plated with nickel and tin-lead.

Dimensions - mm (inches)**Construction**

Drawing is not to scale.

1. Ceramic Substrate
2. Glass Cover
3. Termination Pad
4. Metal Film Element
5. Silver End Termination
6. Nickel Barrier (5.1-10.2µm)
7. 90/10 Tin-lead Plating (7.6-12.7 µm)
8. Marking

Time-Current Characteristics:

Fast-acting fuse: Will carry 100% of rated current for a minimum of 4 hours, and will open within 5 seconds at 250% of rated current.

Packaging and Ordering Information:

- **Tape and Reel:** Standard 8mm tape, in compliance with EIA-RS481 (equivalent to IEC 286, Part 3).
- Fuses are orientated in embossed pockets with ceramic side facing up to facilitate proper mounting (See "Electrical Characteristics", General Note 4).

| | | |
|--|-----------------------|----------------------|
| | 3216LV | (See Table) |
| | Product Symbol | Rated Current |

Package Code**TR** = 3,000 pieces on tape on a 178mm reel.**TR1** = 15,000 pieces on tape on a 330mm reel.**SP** = 50 pieces on tape in a plastic box.

Contact Bussmann if other package quantities are required.

CE CE logo denotes compliance with European Union Low Voltage Directive (50-1000 VAC, 75-1500 VDC). Refer to BIF document #8002 or contact Bussmann Application Engineering at 314-527-1270 for more information.

Electrical Characteristics

| Part Number (XX=Package Code) | Current Rating (Ampere) | Mark Appearing On Part | Typical Melting Integral @ 50A (A ² * sec) | | Typical Total Clearing Integral @ 50A (A ² * sec) | | Typ. Resistance @ ≤ 10% Rated Current (Ohms) | Typ. Voltage Drop @ Rated Current (Volts) |
|----------------------------------|----------------------------|---------------------------|-------------------------------------------------------------|---------|--------------------------------------------------------------------|-------|----------------------------------------------------|-------------------------------------------------|
| | | | AC | DC | AC | DC | | |
| XX/3216LV-250mA | .250 | .25 | .00016 | .000084 | .00017 | .0001 | 4.50 | 1.4 |
| XX/3216LV-375mA | .375 | White Dot | .001 | .0002 | .0010 | .0009 | 1.80 | .73 |
| XX/3216LV-500mA | .500 | 0.5 | .0014 | .0019 | .0016 | .0026 | 1.15 | .66 |
| XX/3216LV-750mA | .750 | .75 | .0033 | .00095 | .0033 | .0042 | .75 | .63 |
| XX/3216LV-1A | 1 | 1 | .020 | .0084 | .022 | .0098 | .52 | .63 |
| XX/3216LV-1.25A | 1.25 | White Δ | .035 | .021 | .038 | .027 | .40 | .62 |
| XX/3216LV-1.5A | 1.5 | 1.5 | .038 | .024 | .044 | .033 | .26 | .49 |

General Notes:

1. AC interrupting rating, melting integral and total clearing integral measured at 125V, unity power factor.
2. DC interrupting rating, melting integral and total clearing integral measured at 125V with a battery source.
3. Voltage drop measured at 23 ± 3°C ambient temperature with the device mounted on a suitable circuit board trace.
4. It is recommended that fuses be mounted with ceramic (white) side facing up.
5. 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.
6. Contact Bussmann if higher ampere ratings are needed.

SMT Chip Fuse

Subminiature Surface Mount Fuses

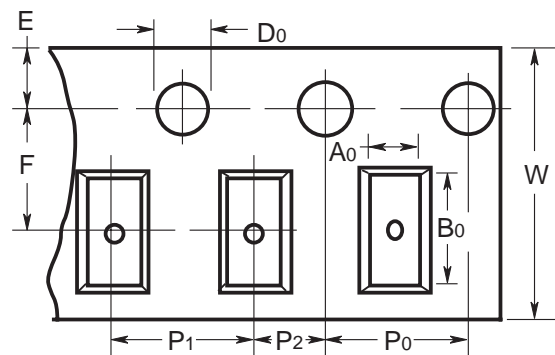
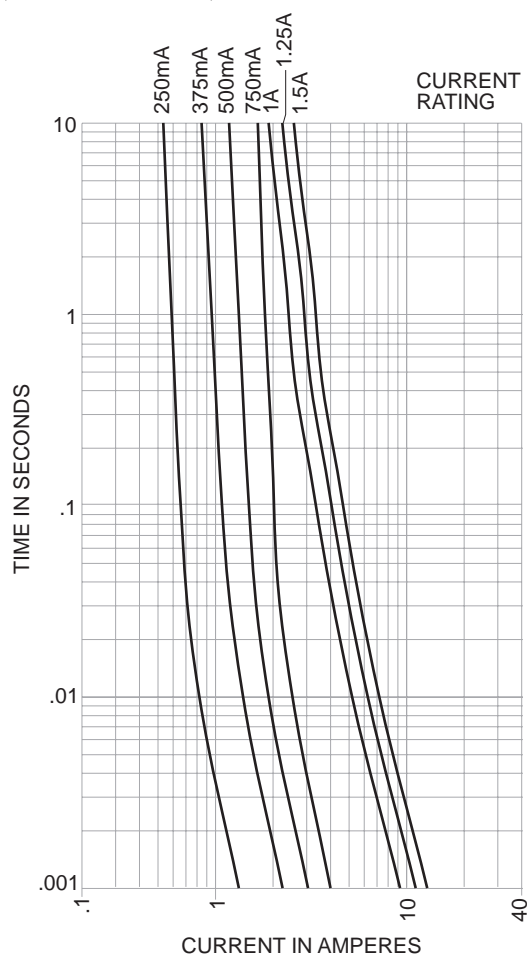
125V AC/DC



3216LV

Time-Current Characteristic Curve

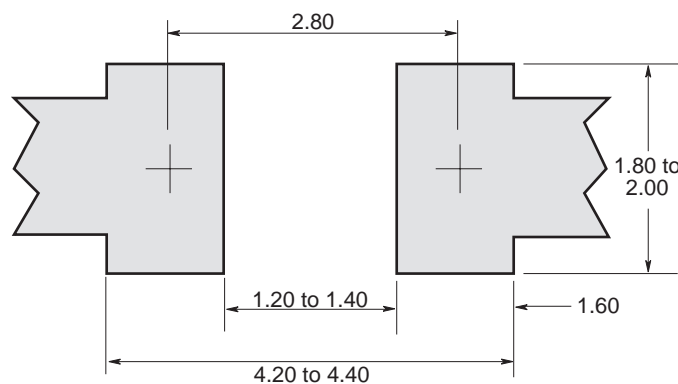
(Full Size Curves Available)



Carrier Dimensions - mm

| | |
|----|------------------|
| W | 8.0 + 0.3 / -0.1 |
| F | 3.5 ± 0.05 |
| E | 1.75 ± 0.1 |
| P2 | 2.0 ± 0.05 |
| P0 | 4.0 ± 0.1 |
| P1 | 4.0 ± 0.1 |
| A0 | 1.73 ± 0.2 |
| B0 | 3.56 ± 0.2 |
| D0 | 1.5 + 0.1 / -0.0 |

Recommended Land Pattern - mm (inches)



NOTE: Trace geometry may affect fuse performance (time-current characteristics \leq 300% of rated current and voltage drop at rated current).

Environmental Specifications

Operating Temperature Range:

-65 to +125°C, with proper derating.

Thermal Shock:

MIL-STD-202, Method 107, Test Condition B (-65 to 125°C), 1000 cycles, fuses soldered to FR-4 glass-epoxy circuit board.

Vibration:

MIL-STD-202, Method 204, Test Condition C (55 to 2000 HZ, 10G).

Solderability:

Withstands 60 seconds above 200°C, 260°C maximum.

Moisture Resistance:

MIL-STD-202, Method 106, 10 day cycle.

Solder Leach Resistance & Terminal Adhesion:

EIA-576 (30 seconds submersion in 260°C tin-lead solder).

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