

ALUMINUM ELECTROLYTIC CAPACITORS

246 CTI-V

246 CTI-V SMD Aluminum Electrolytic Capacitors with High Ripple Current, High Vibration Capability



KEY BENEFITS

- Soldering heat resistant according to IPC/JEDEC J-STD-020
- Low impedance down to 0.035 Ω at 20 °C, 100 kHz
- High ripple current: up to 1.75 A at 125 °C, 100 kHz
- Long useful life: up to 6000 hours at 125 °C
- AEC-Q200 qualified
- Vibration proof up to 30 g

APPLICATIONS

Industrial:

- Machinery / automation
- Motion control, drives
- SMPS for energy saving applications
- Equipment for renewable energy

Automotive:

- Engine management
- Injection, valve control
- E(H)PS
- ABS / ESP, e-brake
- Active suspension

RESOURCES

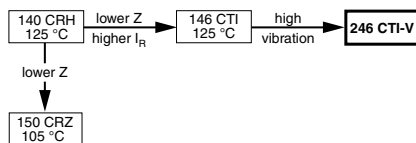
- Datasheet: 246 CTI-V - www.vishay.com/doc?28424
- For technical questions contact aluminumcaps1@vishay.com
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



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| QUICK REFERENCE DATA | |
|--|------------------------------|
| DESCRIPTION | VALUE |
| Nominal case sizes (L x W x H in mm) | 16 x 16 x 16 to 18 x 18 x 21 |
| Rated capacitance range, C _R | 150 μF to 4700 μF |
| Tolerance on C _R | ± 20 % |
| Rated voltage range, U _R | 16 V to 100 V |
| Category temperature range | -55 °C to +125 °C |
| Endurance test at 125 °C | 2000 h to 5000 h |
| Useful life at 125 °C | 2500 h to 6000 h |
| Useful life at 40 °C 1.8 x I _R applied | 350 000 h to 400 000 h |
| Shelf life at 0 V, 125 °C | 1000 h |
| Based on sectional specification | IEC 60384-18 / CECC 32300 |
| Climatic category IEC 60068 | 55 / 125 / 56 |

FEATURES

- Extended useful life: up to 6000 h at 125 °C
- Polarized aluminum electrolytic capacitors, non-solid electrolyte, self healing
- SMD-version with base plate, lead (Pb)-free reflow solderable
- Charge and discharge proof, no peak current limitation
- Advanced temperature reflow soldering according to JEDEC® J-STD-020
- Vibration proof, 6-pin version up to 30 g
- AEC-Q200 qualified
- High reliability
- Low ESR

APPLICATIONS

- SMD technology, for high temperature reflow soldering
- Industrial and professional applications
- Automotive, general industrial, telecom
- Smoothing, filtering, buffering

MARKING

- Rated capacitance (in μF)
- Rated voltage (in V)
- Date code, in accordance with IEC 60062
- Black mark or “-” sign indicating the cathode (the anode is identified by beveled edges)
- Code indicating group number (T)

PACKAGING

Supplied in blister tape on reel

SELECTION CHART FOR C_R, U_R, AND RELEVANT NOMINAL CASE SIZES (L x W x H in mm)

| C _R (μF) | U _R (V) | | | | | | |
|---------------------|------------------------------|------------------------------|--------------|------------------------------|--------------|------------------------------|--|
| | 16 | 25 | 35 | 50 | 63 | 80 | 100 |
| 150 | → | → | → | → | → | → | 16 x 16 x 16 16 x 16 x 21 18 x 18 x 16 |
| 220 | → | → | → | → | → | 16 x 16 x 16 | 16 x 16 x 21 18 x 18 x 16 |
| 330 | → | → | → | → | 16 x 16 x 16 | 16 x 16 x 21 18 x 18 x 16 | 18 x 18 x 21 |
| 470 | → | → | → | 16 x 16 x 16 | 16 x 16 x 16 | 18 x 18 x 16 | - |
| 680 | → | → | 16 x 16 x 16 | 16 x 16 x 16 | 18 x 18 x 16 | - | - |
| 820 | → | → | → | → | 16 x 16 x 21 | - | - |
| 1000 | → | 16 x 16 x 16 | 16 x 16 x 16 | 16 x 16 x 21 18 x 18 x 16 | 18 x 18 x 21 | - | - |
| 1200 | → | → | 18 x 18 x 16 | 18 x 18 x 21 | - | - | - |
| 1500 | 16 x 16 x 16 | 16 x 16 x 16 | 16 x 16 x 21 | - | - | - | - |
| 1800 | → | → | 18 x 18 x 21 | - | - | - | - |
| 2200 | 16 x 16 x 16 | 16 x 16 x 21 18 x 18 x 16 | - | - | - | - | - |
| 2700 | → | 18 x 18 x 21 | - | - | - | - | - |
| 3300 | 16 x 16 x 21 18 x 18 x 16 | - | - | - | - | - | - |
| 3900 | 18 x 18 x 21 | - | - | - | - | - | - |
| 4700 | 18 x 18 x 21 | - | - | - | - | - | - |

6-pin:
≥ Ø 16 mm

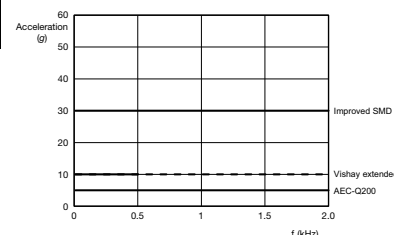
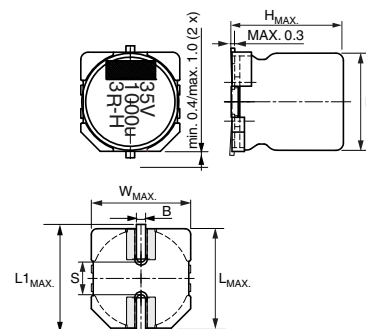


Fig. 5 - Vibration profile

Revision 05-Nov-15

| EXTENDED VIBRATION SPECIFICATIONS | | |
|-----------------------------------|---|--|
| PARAMETER | PROCEDURE | REQUIREMENTS |
| Vibration improvement | From 10 g to 30 g | No visible damage; no leakage of electrolyte; marking legible ΔC/C: ± 5 % with respect to initial measurements |
| Vibration frequency range | 10 Hz to 2 kHz | |
| Vibration profile | <ul style="list-style-type: none"> • Constant sinus sweep • 3 directions • 8 h per direction | |