

SMD Aluminum Capacitors, Enhanced High Temperature Range up to 150 °C, Low Impedance



KEY BENEFITS

- Enhanced high temperature range: up to 150 °C
- Soldering heat resistant acc. to IPC/JEDEC J-STD-020
- Low impedance down to 0.035 Ω (at 20 °C, 100 kHz)
- High ripple current: up to 1.35 A (at 150 °C, 100 kHz)
- Long useful life: up to 2000 hours at 150 °C
- AEC-Q200 qualified

APPLICATIONS

General:

- Equipment operating in high-temperature environments or applications where short time overload is to be expected

Industrial:

- Machinery/automation, motion control, SMPS, energy saving applications, equipment for renewable energy, variable speed pumps, control of high-temperature materials and tools

Automotive:

- Power train, chassis electronics, vehicle dynamics, ABS/ESP, controllers close to engine, turbo chargers, and brakes

RESOURCES

- Datasheet: 160 CLA - <http://www.vishay.com/doc?28405>
- For technical questions contact aluminumcaps1@vishay.com
- Material categorization: For definitions of compliance, please see <http://www.vishay.com/doc?99912>



RoHS
COMPLIANT



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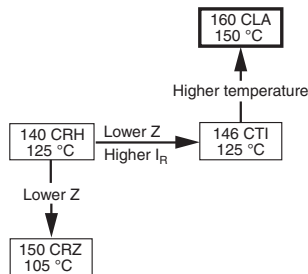


Fig. 1

FEATURES

- Useful life: Up to 2000 h at 150 °C
- High reliability
- Low ESR
- 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
- High temperature reflow soldering according to JEDEC® J-STD-020
- High temperature proof
- Vibration proof, 4-pin version and 6-pin version
- AEC-Q200 qualified
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

APPLICATIONS

- SMD technology, for high temperature reflow soldering
- High temperature environment, high peak load
- Automotive, industrial
- 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 bevelled edges)
- Code indicating group number (A)

PACKAGING

Supplied in blister tape on reel

| QUICK REFERENCE DATA | |
|---|--|
| DESCRIPTION | VALUE |
| Nominal case sizes (L x W x H in mm) | 12.5 x 12.5 x 13 to 18 x 18 x 21 |
| Rated capacitance range, C_R | 47 μF to 3300 μF |
| Tolerance on C_R | $\pm 20\%$ |
| Rated voltage range, U_R | 16 V to 80 V |
| Category temperature range | -55 °C to +150 °C |
| Endurance test at 150 °C | 1000 h to 1500 h |
| Useful life at 150 °C | 1000 h to 2000 h |
| Useful life at 40 °C 1.8 x I_R applied | 300 000 h to 400 000 h |
| Shelf life at 0 V, 150 °C | 1000 h |
| Based on sectional specification | IEC 60384-18/CECC 32300 |
| Climatic category IEC 60068 | 55/150/56 |

| C_R (μF) | U_R (V) | | | | | |
|----------------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | 16 | 25 | 35 | 50 | 63 | 80 |
| 47 | → | → | → | → | 12.5 x 12.5 x 13 | - |
| 68 | → | → | → | → | 12.5 x 12.5 x 13 | 12.5 x 12.5 x 13 |
| 100 | → | → | → | 12.5 x 12.5 x 13 | 12.5 x 12.5 x 13 | 12.5 x 12.5 x 16 |
| 150 | → | → | → | 12.5 x 12.5 x 13 | 12.5 x 12.5 x 16 | 16 x 16 x 16 |
| 220 | → | → | 12.5 x 12.5 x 13 | 12.5 x 12.5 x 16 | 16 x 16 x 16 | 18 x 18 x 16 |
| 330 | → | 12.5 x 12.5 x 13 | 12.5 x 12.5 x 13 | 16 x 16 x 16 | 18 x 18 x 16 | 18 x 18 x 21 |
| 470 | 12.5 x 12.5 x 13 | 12.5 x 12.5 x 13 | 16 x 16 x 16 | 18 x 18 x 16 | 16 x 16 x 21 | - |
| 680 | 12.5 x 12.5 x 13 | 16 x 16 x 16 | 18 x 18 x 16 | 16 x 16 x 21 | 18 x 18 x 21 | - |
| 1000 | 16 x 16 x 16 | 18 x 18 x 16 | 16 x 16 x 21 | 18 x 18 x 21 | - | - |
| 1500 | 18 x 18 x 16 | 16 x 16 x 21 | 18 x 18 x 21 | - | - | - |
| 2200 | 16 x 16 x 21 | 18 x 18 x 21 | - | - | - | - |
| 2700 | 18 x 18 x 21 | - | - | - | - | - |
| 3300 | 18 x 18 x 21 | - | - | - | - | - |

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