CHMV(3.9V)Series

Moisture-proof glue Series

www.cda-cap.com

FEATURES

- High power,high energy density
- Low leakage current, long life
- Plastic, Moisture Resistant Version
- High Reliability

APPLICATIONS

- Consumer electronics
- GSM/GPRS Pulse Applications
- Back up power
- Stand alone or augment existing
- energy/power source

OPERATING TEMPERATURE RANGE

- Lifetime:(3.9 V, 1,000 hours @T:+85 °C)
- Long cycle life,maintenance-free

GENERAL SPECIFICATIONS

Item	Performance
Storage temperature	-40°C to +65°C
Capacitance range	0.47F to 5.0F
Capacitance tolerance	-20%to+50%; +0%to+100%; -10%to+30%
Rated voltage	3.9 V
Surge voltage	5.2 V
Temperature characteristics	Capacitance change: Within ±30% of initial measured value at +25°C Internal resistance: Within ±300% of initial measured value at +25°C
High temperature load time	After 65°C 5000 hours (at:3.9V): Capacitance change: ±30% of initial rated value Internal resistance: Within 2 times of initial specified value
Projected cycle life (From rated voltage to 1/2 rated voltage at 25°C)	After 500,000 cycles: Capacitance change: Within ±30 % of initial rated value Internal resistance: Within 2 times of initial specified value
Humidity characteristic	Relative humidity: 90%~95% /Duration of testing:1000 hrs /Temperature:85±2°C(at 5.0V) Capacitance change: Within ±30 % of initial rated value Internal resistance: Within 2 times of initial specified value
Vibration resistance	Amplitude:1.5mm /Frequency:10~55Hz /Duration of testing:6 hrs Capacitance change: Within ±30 % of initial rated value Internal resistance: Within 2 times of initial specified value
Shelf life	After 15 years at 25°C without load, the capacitor shall meet the specified endurance limits.

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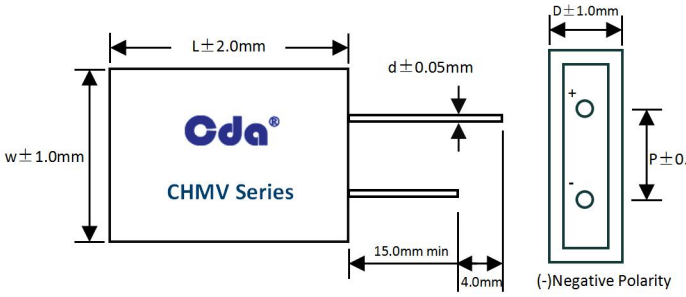
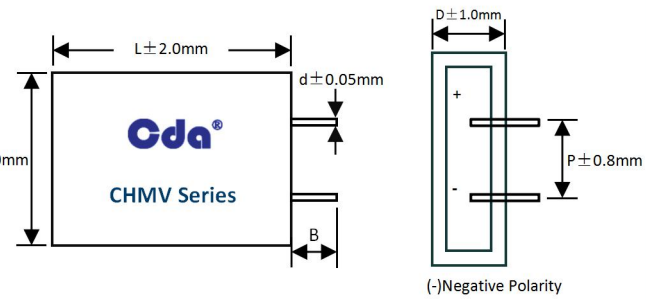
DIMENSIONS(3.9V)

L Type:



H Type: RADIAL BENT LEAD



For version with bent leads

D(mm)	d(mm)	P(mm)	B(mm)
9	0.6	11.5	2.0
12	0.6	15.5	2.0

STANDARD PRODUCTS

Part Number	Rated Voltage (V)	Rated Cap. (F)	Size ΦWxDxL (mm)	Max.ESR ESRAC (1kHz/mΩ)	Maximum Endurance Current(A)	Maximum Peak Current(A)	Maximum Leakage Current (72hrs/mA)	Power Density (W/Kg)	Maximum Energy (W.h)	Energy Density (Wh/kg)
CHMV-3R9L474R-TW	3.9	0.47	18X9X16	380	0.26	0.75	0.003	541	0.0020	0.51
CHMV-3R9L105R-TW		1.0	18X9X20	250	0.44	1.59	0.007	1096	0.0042	0.98
CHMV-3R9L155R-TW		1.5	18X9X24	200	0.54	2.24	0.012	1179	0.0063	1.15
CHMV-3R9L255R-TW		2.5	23X12X25	180	0.75	3.45	0.020	1114	0.0105	1.16
CHMV-3R9L305R-TW		3.0	23X12X25	170	0.75	3.50	0.023	1078	0.0135	1.55
CHMV-3R9L355R-TW		3.5	23X12X25	160	0.79	3.65	0.023	1078	0.0147	1.57
CHMV-3R9L505R-TW		5.0	23X12X29	150	1.17	5.35	0.028	2063	0.0147	2.70

SAFETY RECOMMENDATIONS

WARNINGS

• To Avoid Short Circuit, after usage or test, SuperCapacitors voltage needs to discharge to ≤ 0.1V
• Do not Apply Overvoltage, Reverse Charge, Burn or Heat Higher than 150°C, explosion-proof valve may break open
• Do not Press, Damage or disassemble the SuperCapacitor, housing could heat to high temperature causing Burns
• If you observe Overheating or Burning Smell from the capacitor disconnect Power immediately, and do not touch

REGULATORY

• MSDS
• RoHS Compliant
• Reach Compliant

TRANSPORTATION

Not subjected to US DOT or IATA regulations
UN3499, <10Wh, Non-Hazardous Goods
International shipping description –
"Electronic Products – Capacitor"

PRECAUTIONS FOR WELDING

When soldering supercapacitors to a PCB, the temperature & time that the body of the supercapacitor sees during soldering can have a negative effect on performance. We advise following these guidelines:
• Do not immerse the supercapacitors in solder. Only the leads should come in contact with the solder.
• Ensure that the body of the supercapacitor is never in contact with the molten solder, the PCB or other components during soldering.
• Excessive temperatures or excessive temperature cycling during soldering may cause the safety vent to burst or the case to shrink or crack, potentially damaging the PCB or other com-ponents, and significantly reduce the life of the capacitor.

HAND SOLDERING

Keep distance between the supercapacitor body and the tip of the soldering iron and the tip should never touch the body of the ca-pacitor. Contact between supercapacitor body and soldering iron will cause extensive damage to the supercapacitor, and change its electrical properties. It is recommended that the soldering iron temperature should be less than 350°C, and contact time should be limited to less than 4 seconds. Too much exposure to terminal heat during soldering can cause heat to transfer to the body of the supercapacitor, potentially damaging the electrical properties of the supercapacitor.

TRANSPORTATION

Only use wave soldering on Radial type supercapacitors. The PCB should be preheated only from the bottom and for less than 60 seconds, with temperature at, or below, 100°C on the top side of the board for PCBs equal to or greater than 0.8 mm thick.

Solder Temperature (ºC)	Suggested Solder Time (s)	Maximum Solder Time (s)
220	7	9
240	7	9
250	5	7
260	3	5

REFLOW SOLDERING

Infrared or conveyor over reflow techniques can be used on these supercapacitors. Do not use a traditional reflow oven with-out clear rated reflow temperature for supercapacitors.