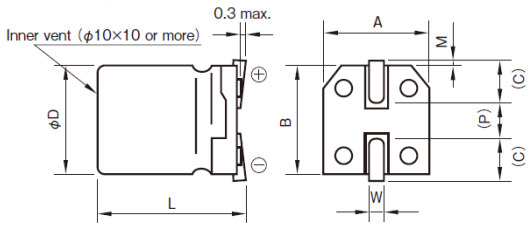
Spec Sheet

Conductive Polymer Hybrid Aluminum Electrolytic Capacitors[HV1] for Automotive (AEC-Q200 Qualified)

RAHV1220M1UDC8002 (Previous PN: HV-50V220MF61Q-R2)



( ) : Reference size

Features

- Item Summary

  22uF±20%, 50V, φ6.3x5.8mm, SMD
- Lifecycle Stage

  Mass Production (Preferred)
- AEC-Q200 qualified
- Standard packaging quantity (minimum)

  Embossed taping 1000 pcs

Products characteristics table

Operating Temp. Range	-55 to +105 ℃
Rated Voltage	50 V
Rated Capacitance	22 uF
Tolerance at rated capacitance	± 20 %
Leakage current (max)	11 uA at 2 min
Tangent of loss angle (tan δ) (max)	0.1
ESR (max)	80 mΩ at 100kHz / 20 ℃
Rated Ripple (max)	1100 mArms at 100kHz / 105 ℃
Impedance ratio___[-25℃/+20℃]	1.5
Impedance ratio___[-55℃/+20℃]	2
Endurance (Applied ripple current) ___[Test time]	5000 hours at 105 ℃
Endurance___[Leakage current]	The initial specified value or less
Endurance___[Capacitance change]	Within ±30% of initial value
Endurance___[tan δ change]	200% or less of the initial specified value
Endurance___[ESR change]	200% or less of the initial specified value
Shelf life___Test time	1000 hours at 105℃ ; Other items are same as the endurance. However, the performance shall be after voltage application treatment (JIS C5101-4).
RoHS Compliance (10 subst.)	Yes
REACH Compliance (253 subst.)	Yes
Soldering	Reflow

External Dimensions

Dimension φD	φ6.3 ±0.5 mm
Dimension L	5.8 ±0.3 mm
Dimension A	6.6 ±0.2 mm
Dimension B	6.6 ±0.2 mm
Dimension (C)	2.7 mm
Dimension (P)	2 mm
Dimension W	0.5 to 0.8 mm
Dimension M	0.4 ±0.3 mm

2026.08.02

The data is reference only. Electrical characteristics vary depending on environment or measurement condition.
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Before making final selection, please check product specification.

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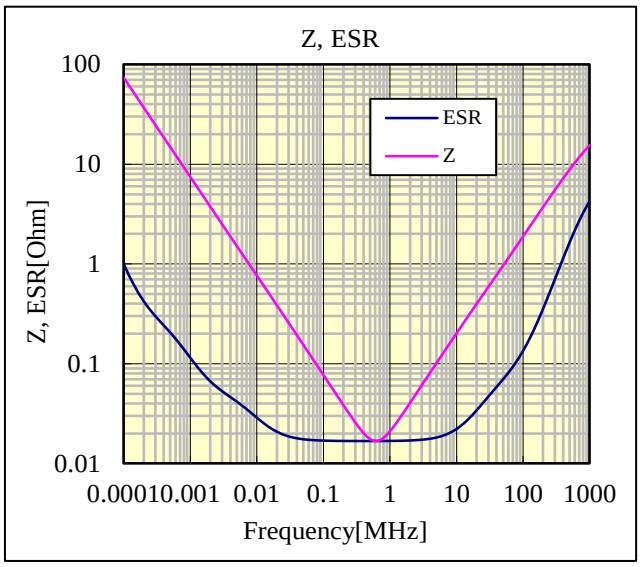
Aluminum Electrolytic Capacitor -Electrical Characteristics Data- 201209

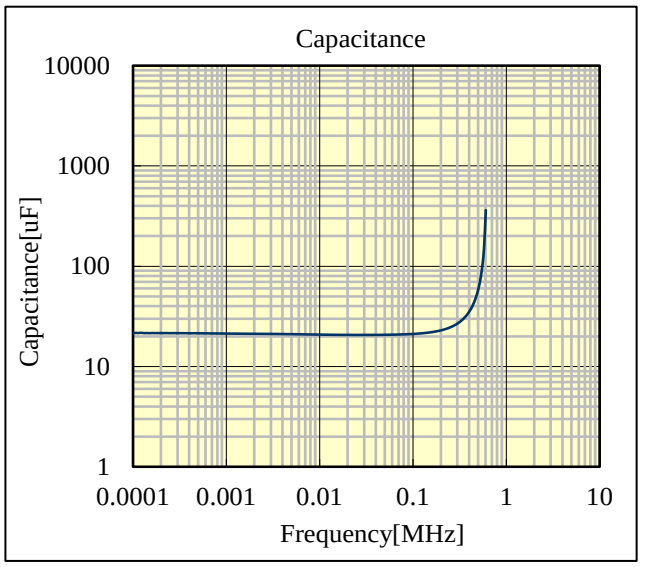
RoHS compliance product

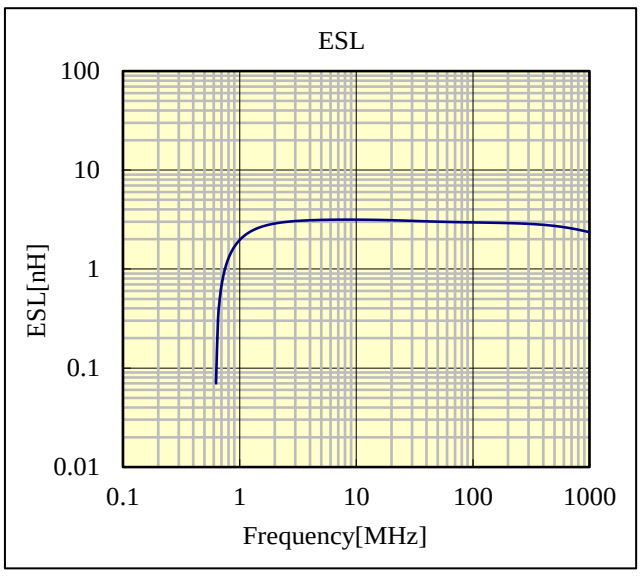
○*RAHV1220M1UDC8002*

22uF+/-20% 50V φ6.3 x 5.8mm SMD
22uF+/-20% 50V φ0.248 x 0.228inch SMD









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⚠ REMINDERS

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Product information in this catalog is as of January 2026. All of the contents specified herein and production status of the products listed in this catalog are subject to change without notice due to technical improvement of our products, etc. Therefore, please check for the latest information carefully before practical application or use of our products.

Please note that TAIYO YUDEN shall not be in any way responsible for any damages and defects in products or equipment incorporating our products, which are caused under the conditions other than those specified in this catalog or individual product specification sheets.

■ Approval of Product Specifications

Please contact TAIYO YUDEN for further details of product specifications as the individual product specification sheets are available. When using our products, please be sure to approve our product specifications or make a written agreement on the product specification with TAIYO YUDEN in advance.

■ Pre-Evaluation in the Actual Equipment and Conditions

Please conduct validation and verification of our products in actual conditions of mounting and operating environment before using our products.

■ Limited Application

1. Equipment Intended for Use

The products listed in this catalog are intended for general-purpose and standard use in the equipment specified in this catalog or the individual product specification sheets, or the equipment approved separately by TAIYO YUDEN. TAIYO YUDEN has the product series intended for use in each equipment. Therefore, when using our products for each equipment, please check available applications specified in this catalog or the individual product specification sheets and use the corresponding products. Please be sure to contact TAIYO YUDEN before using our products for equipment other than those specified in this catalog or the individual product specification sheets.

2. Equipment Requiring Inquiry

Please be sure to contact TAIYO YUDEN for further information before using the products listed in this catalog for the following equipment (excluding intended equipment as specified in this catalog or the individual product specification sheets) which may cause loss of human life, bodily injury, serious property damage and/or serious public impact due to a failure or defect of the products and/or malfunction attributed thereto.

(1) Aviation equipment
(2) Aerospace equipment (artificial satellite, rocket, etc.)
(3) Undersea equipment (submarine repeating equipment, etc.)
(4) Power generation control equipment (nuclear power, hydroelectric power, thermal power plant control system, etc.)
(5) Transportation equipment (train control system, and ship control system, etc.)
(6) Traffic signal equipment
(7) Disaster prevention equipment, crime prevention equipment
(8) Combustion control equipment, explosion control equipment
(9) Military equipment (excluding lethal weapons, weapons of mass destruction and conventional weapons)
(10) Any other equipment requiring high levels of quality and/or reliability equal to the equipment listed above

3. Equipment Prohibited for Use

Please do not incorporate our products into (i) the following equipment requiring extremely high levels of safety and/or reliability, and/or (ii) the following equipment that may hinder the maintenance of international peace and security.

(1) Medical devices classified as GHTF Class D (Japan Class IV), implantable medical devices *
(2) lethal weapons, weapons of mass destruction, conventional weapons
(3) Any other equipment requiring extremely high levels of safety and/or reliability equal to the equipment listed in (1) above

*Notes: Implantable medical devices contain not only internal unit which is implanted in a body, but also external unit which is connected to the internal unit.

4. Limitation of Liability

Please note that unless you obtain prior written consent of TAIYO YUDEN, TAIYO YUDEN shall not be in any way responsible for any damages incurred by you or third parties arising from use of the products listed in this catalog for any equipment that is not intended for use by TAIYO YUDEN, or any equipment requiring inquiry to TAIYO YUDEN or prohibited for use by TAIYO YUDEN as described above.

■ Safety Design

When using our products for high safety and/or reliability-required equipment or circuits, please fully perform safety and/or reliability evaluation. In addition, please install (i) systems equipped with a protection circuit and a protection device and/or (ii) systems equipped with a redundant circuit or other system to prevent an unsafe status in the event of a single fault for a failsafe design to ensure safety.

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