



MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

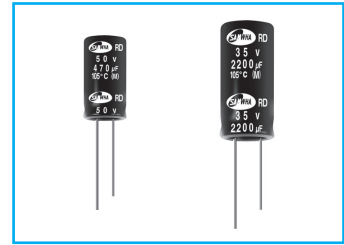
Upgrade

RD

Wide Temperature Range Series

- Standard series for general purpose
- High CV value
- Wide operating temperature range of -55 ~ +105°C
- Complied to the RoHS directive

S
Solvent Proof
WV ≤ 100V

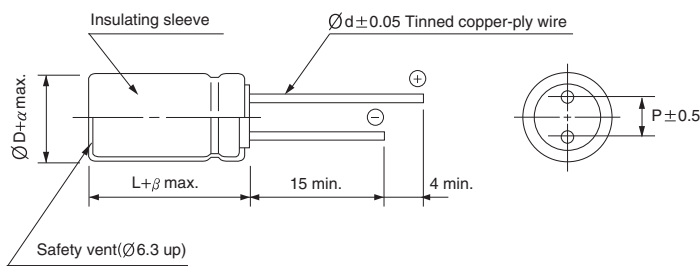


SD → **RD**
Wide temp.

| Item | Characteristics | | | | | | | | | | | |
|--|--|-----------------------------------|------|------|------|--------------|---------------------------------|------|---------|--------------|---------|--|
| Operating temperature range | WV | 6.3 ~ 100 | | | | 160 ~ 450 | | | | 500 | | |
| | Temperature range | -55 ~ +105°C | | | | -40 ~ +105°C | | | | -25 ~ +105°C | | |
| Leakage current max. | WV ≤ 100 | | | | | | WV > 100 | | | | | |
| | I = 0.01CV or 3µA whichever is greater (after 2 min) I = 0.03CV or 4µA whichever is greater (after 1 min) | | | | | | I = 0.02CV + 15µA (after 5 min) | | | | | |
| Capacitance tolerance | ±20% at 120Hz, 20°C | | | | | | | | | | | |
| Dissipation factor max. (at 120Hz, 20°C) | Capacitance > 1000µF : tanδ increases by 0.02 for each 1000µF from below value. | | | | | | | | | | | |
| | WV | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | 160~250 | 350~500 | |
| tanδ | 0.28 | 0.24 | 0.20 | 0.16 | 0.14 | 0.12 | 0.10 | 0.08 | 0.15 | 0.20 | | |
| Low temperature characteristics (Impedance ratio at 120Hz) | WV | 6.3 | 10 | 16 | 25 | 35 | 50~100 | 160 | 200~350 | 400~450 | 500 | |
| | Z-25°C/Z+20°C | 5 | 4 | 3 | 2 | 2 | 2 | 4 | 6 | 10 | 12 | |
| | Z-40°C/Z+20°C | 12 | 10 | 8 | 5 | 4 | 3 | 6 | 8 | 12 | - | |
| Load life (after application of the rated voltage for 2000 hours at 105°C) | Leakage current | Less than specified value | | | | | | | | | | |
| | Capacitance change | Within ±20% of initial value | | | | | | | | | | |
| | tanδ | Less than 200% of specified value | | | | | | | | | | |
| | Life time | ∅D ≤ 8 | | | | ∅D ≥ 10 | | | | | | |
| Shelf life (at 105°C) | After 1000 hours no load test, leakage current, capacitance and tanδ are same as load life value. The measurement shall be performed at 20°C by the KS C IEC 60384 - 4 | | | | | | | | | | | |

● DRAWING

Unit : mm



| ∅D | 5 | 6.3 | 8 | 10 | 12.5 | 16 | 18 | 22 |
|----|-----|-----|-----|-----|------|-----|-----|------|
| P | 2.0 | 2.5 | 3.5 | 5.0 | 5.0 | 7.5 | 7.5 | 10.0 |
| ∅d | 0.5 | 0.5 | 0.6 | 0.6 | 0.6 | 0.8 | 0.8 | 1.0 |
| α | 0.5 | | | | | | | 1.0 |
| β | 1.5 | | 2.0 | | | 3.0 | | |

MINIATURE TYPES

● FREQUENCY COEFFICIENT OF PERMISSIBLE RIPPLE CURRENT

| WV | µF | Frequency | 60Hz | 120Hz | 1kHz | 10kHz | 50kHz | 100kHz ≤ |
|---------|----|-----------|------|-------|------|-------|-------|----------|
| 6.3~100 | | ~ 47 | 0.75 | 1.00 | 1.55 | 2.00 | 2.00 | 2.00 |
| | | 68 ~ 680 | 0.80 | 1.00 | 1.35 | 1.50 | 1.62 | 1.75 |
| | | 820 ~ | 0.85 | 1.00 | 1.15 | 1.15 | 1.32 | 1.50 |
| 160~500 | | ~ 220 | 0.80 | 1.00 | 1.40 | 1.60 | 1.70 | 1.80 |
| | | 330 ~ | 0.90 | 1.00 | 1.13 | 1.15 | 1.32 | 1.50 |

MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

RD series

● DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

| WV Item μF | 6.3 | | 10 | | 16 | | 25 | |
|------------------|--------------|---|--------------|---|--------------|---|--------------|---|
| | ∅D×L (mm) | Ripple current (mA rms) 105°C 120Hz | ∅D×L (mm) | Ripple current (mA rms) 105°C 120Hz | ∅D×L (mm) | Ripple current (mA rms) 105°C 120Hz | ∅D×L (mm) | Ripple current (mA rms) 105°C 120Hz |
| 68 | | | | | | | 5 × 11 | 108 |
| 82 | | | | | | | 6.3 × 11 | 137 |
| 100 | | | | | 5 × 11 | 119 | 6.3 × 11 | 151 |
| 150 | | | 5 × 11 | 134 | 6.3 × 11 | 167 | 6.3 × 11 | 185 |
| 220 | 5 × 11 | 146 | 5 × 11 | 162 | 6.3 × 11 | 203 | 6.3 × 11 | 224 |
| 330 | 6.3 × 11 | 206 | 6.3 × 11 | 228 | 6.3 × 11 | 248 | 8 × 11.5 | 324 |
| 470 | 6.3 × 11 | 246 | 6.3 × 11 | 272 | 8 × 11.5 | 349 | 8 × 11.5 | 386 |
| 680 | 8 × 11.5 | 348 | 8 × 11.5 | 386 | 8 × 11.5 | 420 | 10 × 12.5 | 540 |
| 820 | 8 × 11.5 | 382 | 10 × 12.5 | 493 | 10 × 16 | 587 | 10 × 20 | 708 |
| 1000 | 8 × 11.5 | 422 | 10 × 12.5 | 544 | 10 × 16 | 648 | 10 × 20 | 820 |
| 1500 | 10 × 16 | 621 | 10 × 16 | 680 | 10 × 20 | 797 | 12.5 × 20 | 1017 |
| 2200 | 10 × 16 | 713 | 10 × 16 | 774 | 10 × 20 | 898 | 12.5 × 20 | 1100 |
| | 10 × 20 | 778 | 10 × 20 | 844 | 12.5 × 20 | 1055 | 12.5 × 25 | 1235 |
| 3300 | 12.5 × 16 | 983 | 12.5 × 20 | 1148 | 12.5 × 20 | 1184 | 16 × 25 | 1562 |
| 4700 | 12.5 × 20 | 1219 | 12.5 × 20 | 1272 | 12.5 × 25 | 1459 | 16 × 25 | 1752 |
| | | | 12.5 × 25 | 1421 | 16 × 25 | 1657 | 16 × 31.5 | 1916 |
| 6800 | 12.5 × 25 | 1480 | 16 × 25 | 1737 | 16 × 25 | 1811 | 16 × 35.5 | 2176 |
| | | | | | 16 × 31.5 | 1982 | 18 × 35.5 | 2335 |
| 10000 | 16 × 25 | 1807 | 16 × 31.5 | 2172 | 16 × 31.5 | 2140 | 18 × 35.5 | 2497 |
| 15000 | 16 × 31.5 | 2128 | 16 × 35.5 | 2323 | 18 × 35.5 | 2545 | | |
| | 16 × 35.5 | 2233 | 18 × 35.5 | 2482 | | | | |
| 22000 | 18 × 31.5 | 2411 | | | | | | |

| WV Item μF | 35 | | 50 | | 63 | | 100 | |
|------------------|--------------|---|--------------|---|--------------|---|--------------|---|
| | ∅D×L (mm) | Ripple current (mA rms) 105°C 120Hz | ∅D×L (mm) | Ripple current (mA rms) 105°C 120Hz | ∅D×L (mm) | Ripple current (mA rms) 105°C 120Hz | ∅D×L (mm) | Ripple current (mA rms) 105°C 120Hz |
| 2.2 | | | 5 × 11 | 24 | 5 × 11 | 26 | 5 × 11 | 26 |
| 3.3 | | | 5 × 11 | 29 | 5 × 11 | 32 | 5 × 11 | 32 |
| 4.7 | | | 5 × 11 | 35 | 5 × 11 | 38 | 5 × 11 | 38 |
| 6.8 | | | 5 × 11 | 42 | 5 × 11 | 46 | 5 × 11 | 46 |
| 10 | | | 5 × 11 | 51 | 5 × 11 | 56 | 5 × 11 | 56 |
| 15 | | | 5 × 11 | 62 | 5 × 11 | 68 | 6.3 × 11 | 78 |
| 22 | | | 5 × 11 | 75 | 5 × 11 | 83 | 6.3 × 11 | 95 |
| 33 | | | 5 × 11 | 92 | 6.3 × 11 | 116 | 8 × 11.5 | 139 |
| 47 | 5 × 11 | 96 | 6.3 × 11 | 127 | 6.3 × 11 | 139 | 10 × 12.5 | 190 |
| 68 | 6.3 × 11 | 132 | 8 × 11.5 | 180 | 8 × 11.5 | 197 | 10 × 16 | 251 |
| 82 | 6.3 × 11 | 145 | 8 × 11.5 | 198 | 8 × 11.5 | 216 | 10 × 16 | 290 |
| 100 | 6.3 × 11 | 160 | 8 × 11.5 | 218 | 8 × 11.5 | 239 | 10 × 16 | 304 |
| 150 | 8 × 11.5 | 231 | 8 × 11.5 | 267 | 10 × 12.5 | 340 | 10 × 20 | 406 |
| 220 | 8 × 11.5 | 280 | 10 × 12.5 | 376 | 10 × 16 | 451 | 12.5 × 20 | 564 |
| 330 | 10 × 12.5 | 400 | 10 × 16 | 504 | 10 × 20 | 603 | 16 × 25 | 856 |
| 470 | 10 × 16 | 521 | 10 × 20 | 657 | 12.5 × 20 | 844 | 16 × 25 | 1021 |
| 680 | 10 × 20 | 684 | 12.5 × 20 | 927 | 12.5 × 25 | 1107 | 16 × 31.5 | 1344 |
| 820 | 12.5 × 20 | 880 | 12.5 × 25 | 1050 | 16 × 25 | 1300 | 16 × 35.5 | 1627 |
| 1000 | 12.5 × 20 | 974 | 12.5 × 25 | 1226 | 16 × 25 | 1490 | 18 × 35.5 | 1835 |
| 1500 | 12.5 × 25 | 1136 | 16 × 25 | 1442 | 16 × 35.5 | 1770 | | |
| | 16 × 20 | 1188 | 16 × 31.5 | 1578 | 18 × 31.5 | 1812 | | |
| 2200 | 16 × 25 | 1426 | 16 × 31.5 | 1709 | 16 × 35.5 | 1891 | | |
| 3300 | 16 × 35.5 | 1857 | 16 × 35.5 | 1794 | 18 × 40 | 2689 | | |
| | 18 × 31.5 | 1900 | 18 × 35.5 | 2152 | | | | |
| 4700 | 16 × 35.5 | 2073 | | | | | | |
| | 18 × 35.5 | 2224 | | | | | | |
| 6800 | 18 × 40 | 2510 | | | | | | |



MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

RD series

● DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

| WV Item μF | 160 | | 200 | | 250 | | 350 | |
|------------------|--------------|---|--------------|---|--------------|---|--------------|---|
| | ØD×L (mm) | Ripple current (mA rms) 105°C 120Hz | ØD×L (mm) | Ripple current (mA rms) 105°C 120Hz | ØD×L (mm) | Ripple current (mA rms) 105°C 120Hz | ØD×L (mm) | Ripple current (mA rms) 105°C 120Hz |
| 2.2 | 6.3 × 11 | 23 | 6.3 × 11 | 23 | 6.3 × 11 | 23 | 6.3 × 11 | 23 |
| 3.3 | 6.3 × 11 | 29 | 6.3 × 11 | 29 | 6.3 × 11 | 30 | 8 × 11.5 | 34 |
| 4.7 | 6.3 × 11 | 34 | 6.3 × 11 | 34 | 8 × 11.5 | 40 | 8 × 11.5 | 40 |
| | | | 8 × 11.5 | 40 | | | 10 × 12.5 | 47 |
| 6.8 | 6.3 × 11.5 | 49 | 8 × 11.5 | 49 | 10 × 12.5 | 56 | 10 × 12.5 | 56 |
| | | | 10 × 12.5 | 56 | | | 10 × 16 | 62 |
| 10 | 8 × 11.5 | 59 | 8 × 11.5 | 59 | 10 × 12.5 | 68 | 10 × 16 | 75 |
| | 10 × 12.5 | 68 | 10 × 12.5 | 68 | | | 10 × 16 | 92 |
| 15 | 10 × 12.5 | 84 | 10 × 12.5 | 84 | 10 × 16 | 92 | 10 × 16 | 92 |
| | 10 × 16 | 92 | 10 × 16 | 92 | | | 10 × 20 | 100 |
| 22 | 10 × 12.5 | 102 | 10 × 16 | 111 | 10 × 16 | 111 | 12.5 × 20 | 143 |
| | 10 × 16 | 111 | | | 10 × 20 | 121 | | |
| 33 | 10 × 16 | 136 | 10 × 20 | 149 | 10 × 20 | 149 | 12.5 × 25 | 190 |
| | 10 × 20 | 149 | | | 12.5 × 20 | 175 | | |
| 47 | 10 × 20 | 177 | 12.5 × 20 | 208 | 12.5 × 20 | 203 | 16 × 25 | 252 |
| | 12.5 × 20 | 208 | | | 12.5 × 25 | 227 | | |
| 68 | 12.5 × 25 | 273 | 16 × 20 | 279 | 12.5 × 25 | 267 | 16 × 31.5 | 332 |
| 82 | 12.5 × 25 | 302 | 16 × 25 | 333 | 16 × 25 | 333 | 18 × 31.5 | 391 |
| 100 | 12.5 × 25 | 331 | 16 × 25 | 368 | 16 × 25 | 368 | 18 × 31.5 | 432 |
| 150 | 16 × 25 | 450 | 16 × 25 | 450 | 16 × 31.5 | 450 | 18 × 35.5 | 554 |
| 220 | 16 × 31.5 | 596 | 18 × 31.5 | 641 | 18 × 35.5 | 671 | 22 × 41 | 721 |
| | | | 18 × 35.5 | 671 | 18 × 40 | 694 | | |
| 330 | 18 × 31.5 | 784 | 18 × 40 | 863 | 22 × 41 | 968 | | |
| 470 | 18 × 40 | 1030 | 22 × 41 | 1155 | | | | |
| 680 | 22 × 41 | 1390 | | | | | | |

| WV Item μF | 400 | | 450 | | 500 | |
|------------------|--------------|---|--------------|---|--------------|---|
| | ØD×L (mm) | Ripple current (mA rms) 105°C 120Hz | ØD×L (mm) | Ripple current (mA rms) 105°C 120Hz | ØD×L (mm) | Ripple current (mA rms) 105°C 120Hz |
| 2.2 | 8 × 11.5 | 28 | 8 × 11.5 | 23 | | |
| 3.3 | 8 × 11.5 | 34 | 10 × 12.5 | 33 | | |
| | 10 × 12.5 | 39 | 10 × 16 | 36 | | |
| 4.7 | 10 × 12.5 | 47 | 10 × 12.5 | 39 | 10 × 16 | 59 |
| 6.8 | 10 × 16 | 62 | 10 × 16 | 52 | 10 × 16 | 72 |
| 10 | 10 × 16 | 75 | 10 × 20 | 68 | 12.5 × 25 | 88 |
| | 10 × 20 | 82 | 12.5 × 20 | 80 | | |
| 15 | 12.5 × 20 | 118 | 12.5 × 20 | 96 | 12.5 × 30 | 115 |
| 22 | 12.5 × 20 | 140 | 12.5 × 25 | 127 | 16 × 25 | 159 |
| | 12.5 × 25 | 155 | 16 × 25 | 144 | | |
| 33 | 16 × 25 | 211 | 16 × 25 | 177 | 16 × 31.5 | 207 |
| 47 | 16 × 25 | 252 | 16 × 31.5 | 231 | 18 × 31.5 | 261 |
| 68 | 16 × 31.5 | 332 | 16 × 35.5 | 291 | 18 × 35.5 | 335 |
| | 18 × 31.5 | 356 | | | | |
| 82 | 18 × 31.5 | 391 | 18 × 31.5 | 327 | 18 × 40 | 370 |
| 100 | 18 × 35.5 | 453 | 18 × 40 | | | |
| 150 | 22 × 41 | 596 | | | | |

MINIATURE TYPES

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Aluminium Electrolytic Capacitors - Radial Leaded](#) category:

Click to view products by [Samwha](#) manufacturer:

Other Similar products are found below :

[LXY50VB4.7M-5X11](#) [RFO-100V471MJ7P#](#) [ECE-A1EGE220](#) [1814181](#) [NCD681K10KVY5PF](#) [NEV1000M25EF-BULK](#) [NEV100M35DC](#)
[NEV100M63DE](#) [NEV220M25DD-BULK](#) [NEV.33M100AA](#) [NEV4700M50HB](#) [NEV.47M100AA](#) [NEVH1.0M250AB](#) [NEVH3.3M250BB](#)
[NEVH3.3M450CC](#) [KME50VB100M-8X11.5](#) [SG220M1CSA-0407](#) [ES5107M016AE1DA](#) [ESX472M16B](#) [476CKH100MSA](#) [477RZS050M](#)
[UVX1V101KPA1FA](#) [UVX1V222MHA1CA](#) [KME25VB100M-6.3X11](#) [VTL100S10](#) [VTL470S10](#) [511D336M250EK5D](#) [052687X](#) [ECE-](#)
[A1CF471](#) [EKXG451ELL820MM30S](#) [686CKR050M](#) [NRE-S560M16V6.3X7TBSTF](#) [ERZA630VHN182UP54N](#) [UPL1A331MPH](#)
[NEV1000M6.3DE](#) [NEV100M16CB](#) [NEV100M50DD-BULK](#) [NEV2200M16FF](#) [NEV220M50EE](#) [NEV2.2M50AA](#) [NEV330M63EF](#)
[NEV4700M35HI](#) [NEV4.7M100BA](#) [NEV47M16BA](#) [NEV47M50CB-BULK](#) [NEVH1.0M350AB](#) [NEVH2.2M160AB](#) [NEVH3.3M350BC](#)
[TER330M50GM](#) [477KXM035MGBWSA](#)