

RH series

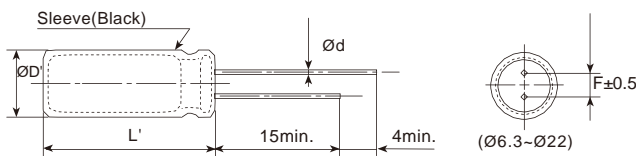
- High frequency, low impedance
- Endurance +105°C 2,000~3,000 hours
- RoHS Compliant



SPECIFICATIONS

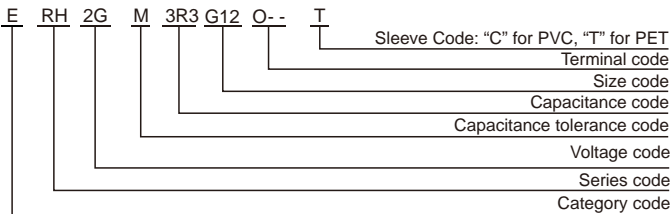
| Items | Characteristics | | | | | | | |
|--|---|-------------------------------------|------|----------------------------------|------|------|----------------|-------------------|
| Category Temperature Range | -40~+105°C(160~400 V _{dc}) | | | -25~+105°C(450 V _{dc}) | | | | |
| Rated Voltage Range | 160~450 V _{dc} | | | | | | | |
| Capacitance Tolerance | ±20%(M) (at 20°C, 120Hz) | | | | | | | |
| Leakage Current | I ≤ 0.02CV or 10μA, whichever is greater. Where, I: Max. leakage current (μA), C: Nominal capacitance (μF), V: Rated voltage (V) (at 20°C after 2 minutes) | | | | | | | |
| Dissipation Factor (tan δ) | Rated Voltage(V _{dc}) | 160 | 200 | 250 | 350 | 400 | 450 | |
| | tan δ (max.) | 0.12 | 0.12 | 0.12 | 0.15 | 0.15 | 0.20 | |
| Low Temperature Characteristics (Max. Impedance Ratio) | Rated Voltage(V _{dc}) | 160 | 200 | 250 | 350 | 400 | 450 | |
| | Z(-25°C)/Z(+20°C) | 3 | 5 | | | 6 | | |
| | Z(-40°C)/Z(+20°C) | 4 | 7 | | | - | | |
| Endurance | The following specifications shall be satisfied when the capacitors are restored to 20°C after DC voltage plus the rated ripple current is applied for a specified period of time at 105°C. | | | | | | | |
| | Capacitance Change | ±20% of the initial value | | | | | Case Dia. (mm) | Load life (hours) |
| | D.F. (tan δ) | 200% of the initial specified value | | | | | ØD 8 | 2,000 |
| | Leakage Current | The initial specified value | | | | | ØD 10 | 3,000 |
| Shelf Life | The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 105°C without voltage applied. | | | | | | | |
| | Capacitance Change | ±20% of the initial value | | | | | | |
| | D.F. (tan δ) | 200% of the initial specified value | | | | | | |
| | Leakage Current | 200% of the initial specified value | | | | | | |

DIMENSIONS[mm]



| ØD | 6.3 | 8 | 10 | 12.5 | 16 | 18 | 22 |
|-----|------------|-----|-----|------|-----|-----|------|
| Ød | 0.5 | 0.5 | 0.6 | 0.6 | 0.8 | 0.8 | 0.8 |
| F | 2.5 | 3.5 | 5.0 | 5.0 | 7.5 | 7.5 | 10.0 |
| ØD' | ØD+0.5max. | | | | | | |
| L' | L+2max. | | | | | | |

PART NUMBERING SYSTEM



RATED RIPPLE CURRENT MULTIPLIERS

Frequency correction factor for ripple current

| Freq.(Hz) | 120 | 1k | 10k | 100k |
|---------------|------|------|------|------|
| Cap.<10 | 0.40 | 0.70 | 0.92 | 1.00 |
| 10 Cap.<100 | 0.56 | 0.83 | 0.95 | 1.00 |
| 100 Cap. 1000 | 0.67 | 0.87 | 0.96 | 1.00 |

The endurance of capacitors is shortened with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced.

RH series

■ STANDARD RATINGS

| WV (Vdc) | Cap (µF) | Size DxL(mm) | tan | Rated ripple current (mA _{RMS} /105°C, 100kHz) | Part Number |
|----------|----------|--------------|------|---|----------------|
| 160(2C) | 2.2 | 6.3x11 | 0.12 | 80 | ERH2CM2R2E11OT |
| | 3.3 | 6.3x11 | 0.12 | 103 | ERH2CM3R3E11OT |
| | 4.7 | 8x12 | 0.12 | 121 | ERH2CM4R7F12OT |
| | 10 | 10x12 | 0.12 | 150 | ERH2CM100G12OT |
| | 22 | 10x16 | 0.12 | 228 | ERH2CM220G16OT |
| | 33 | 10x20 | 0.12 | 293 | ERH2CM330G20OT |
| | 47 | 12.5x20 | 0.12 | 368 | ERH2CM470W20OT |
| | 100 | 12.5x25 | 0.12 | 587 | ERH2CM101W25OT |
| 220 | 16x30 | 0.12 | 883 | ERH2CM221L30OT | |
| 200(2D) | 1 | 5x11 | 0.12 | 50 | ERH2DM010D11OT |
| | 2.2 | 6.3x11 | 0.12 | 77 | ERH2DM2R2E11OT |
| | 3.3 | 6.3x11 | 0.12 | 103 | ERH2DM3R3E11OT |
| | 4.7 | 8x12 | 0.12 | 121 | ERH2DM4R7F12OT |
| | 10 | 10x12 | 0.12 | 152 | ERH2DM100G12OT |
| | 22 | 10x16 | 0.12 | 228 | ERH2DM220G16OT |
| | | 10x20 | 0.12 | 238 | ERH2DM220G20OT |
| | 33 | 10x20 | 0.12 | 319 | ERH2DM330G20OT |
| | | 12.5x20 | 0.12 | 365 | ERH2DM330W20OT |
| | 47 | 12.5x20 | 0.12 | 405 | ERH2DM470W20OT |
| | 56 | 12.5x25 | 0.12 | 476 | ERH2DM560W25OT |
| | 68 | 12.5x25 | 0.12 | 540 | ERH2DM680W25OT |
| | 82 | 10x30 | 0.12 | 574 | ERH2DM820G30OT |
| | 100 | 16x25 | 0.12 | 774 | ERH2DM101L25OT |
| | 120 | 16x25 | 0.12 | 801 | ERH2DM121L25OT |
| | 150 | 18x25 | 0.12 | 908 | ERH2DM151M25OT |
| 180 | 12.5x35 | 0.12 | 948 | ERH2DM181W35OT | |
| 220 | 18x30 | 0.12 | 1032 | ERH2DM221M30OT | |
| 250(2E) | 0.47 | 6.3x11 | 0.12 | 32 | ERH2EMR47E11OT |
| | 1 | 6.3x11 | 0.12 | 59 | ERH2EM010E11OT |
| | 2.2 | 6.3x11 | 0.12 | 77 | ERH2EM2R2E11OT |
| | 3.3 | 8x12 | 0.12 | 106 | ERH2EM3R3F12OT |
| | 4.7 | 8x12 | 0.12 | 124 | ERH2EM4R7F12OT |
| | 10 | 10x12 | 0.12 | 152 | ERH2EM100G12OT |
| | 22 | 10x20 | 0.12 | 244 | ERH2EM220G20OT |
| | 33 | 12.5x20 | 0.12 | 371 | ERH2EM330W20OT |
| | 47 | 12.5x25 | 0.12 | 423 | ERH2EM470W25OT |
| | 56 | 12.5x25 | 0.12 | 472 | ERH2EM560W25OT |
| | 82 | 16x25 | 0.12 | 637 | ERH2EM820L25OT |
| | 100 | 16x30 | 0.12 | 795 | ERH2EM101L30OT |
| 220 | 18x35 | 0.12 | 1085 | ERH2EM221M35OT | |
| 330 | 18x45 | 0.12 | 1182 | ERH2EM331M45OT | |
| 470 | 22x46 | 0.12 | 1290 | ERH2EM471O46OT | |
| 350(2V) | 0.47 | 6.3x11 | 0.15 | 32 | ERH2VMR47E11OT |
| | 1 | 6.3x11 | 0.15 | 59 | ERH2VM010E11OT |
| | 2.2 | 8x12 | 0.15 | 80 | ERH2VM2R2F12OT |
| | 3.3 | 8x12 | 0.15 | 109 | ERH2VM3R3F12OT |
| | | 10x12 | 0.15 | 118 | ERH2VM3R3G12OT |
| | 4.7 | 10x16 | 0.15 | 153 | ERH2VM4R7G16OT |
| | 10 | 10x16 | 0.15 | 179 | ERH2VM100G16OT |
| | 22 | 12.5x25 | 0.15 | 316 | ERH2VM220W25OT |
| | 33 | 16x25 | 0.15 | 365 | ERH2VM330L25OT |
| | 47 | 16x30 | 0.15 | 532 | ERH2VM470L30OT |

| WV (Vdc) | Cap (µF) | Size DxL(mm) | tan | Rated ripple current (mA _{RMS} /105°C, 100kHz) | Part Number |
|----------|----------|--------------|------|---|----------------|
| 400(2G) | 1 | 8x12 | 0.15 | 59 | ERH2GM010F12OT |
| | 2.2 | 8x12 | 0.15 | 91 | ERH2GM2R2F12OT |
| | 3.3 | 8x12 | 0.15 | 125 | ERH2GM3R3F12OT |
| | | 10x12 | 0.15 | 133 | ERH2GM3R3G12OT |
| | 4.7 | 10x12 | 0.15 | 156 | ERH2GM4R7G12OT |
| | 10 | 10x16 | 0.15 | 184 | ERH2GM100G16OT |
| | | 10x20 | 0.15 | 211 | ERH2GM100G20OT |
| | 22 | 12.5x20 | 0.15 | 332 | ERH2GM220W20OT |
| | 27 | 10x30 | 0.15 | 426 | ERH2GM270G30OT |
| | 33 | 10x35 | 0.15 | 498 | ERH2GM330G35OT |
| | | 16x20 | 0.15 | 487 | ERH2GM330L20OT |
| | 39 | 10x40 | 0.15 | 543 | ERH2GM390G40OT |
| | 47 | 12.5x30 | 0.15 | 659 | ERH2GM470W30OT |
| | | 16x25 | 0.15 | 647 | ERH2GM470L25OT |
| | 56 | 10x45 | 0.15 | 725 | ERH2GM560G45OT |
| | | 12.5x35 | 0.15 | 720 | ERH2GM560W35OT |
| | 68 | 12.5x40 | 0.15 | 902 | ERH2GM680W40OT |
| | | 16x30 | 0.15 | 864 | ERH2GM680L30OT |
| | 82 | 12.5x40 | 0.15 | 941 | ERH2GM820W40OT |
| | | 18x30 | 0.15 | 924 | ERH2GM820M30OT |
| 100 | 12.5x50 | 0.15 | 956 | ERH2GM101W50OT | |
| | 18x30 | 0.15 | 935 | ERH2GM101M30OT | |
| 120 | 22x31 | 0.15 | 962 | ERH2GM121O31OT | |
| 150 | 12.5x60 | 0.15 | 1021 | ERH2GM151W60OT | |
| | 22x31 | 0.15 | 1010 | ERH2GM151O31OT | |
| 450(2W) | 1 | 8x12 | 0.20 | 59 | ERH2WM010F12OT |
| | 2.2 | 10x12 | 0.20 | 96 | ERH2WM2R2G12OT |
| | 3.3 | 10x16 | 0.20 | 136 | ERH2WM3R3G16OT |
| | 4.7 | 10x20 | 0.20 | 159 | ERH2WM4R7G20OT |
| | 10 | 12.5x20 | 0.20 | 169 | ERH2WM100W20OT |
| | 18 | 10x30 | 0.20 | 221 | ERH2WM180G30OT |
| | 22 | 16x20 | 0.20 | 338 | ERH2WM220L20OT |
| | 27 | 10x30 | 0.20 | 426 | ERH2WM270G30OT |
| | 33 | 10x35 | 0.20 | 509 | ERH2WM330G35OT |
| | | 16x25 | 0.20 | 504 | ERH2WM330L25OT |
| | 39 | 10x40 | 0.20 | 554 | ERH2WM390G40OT |
| | 47 | 10x45 | 0.20 | 703 | ERH2WM470G45OT |
| | | 12.5x30 | 0.20 | 698 | ERH2WM470W30OT |
| | 56 | 18x25 | 0.20 | 686 | ERH2WM470M25OT |
| | | 12.5x35 | 0.20 | 781 | ERH2WM560W35OT |
| | 68 | 18x25 | 0.20 | 769 | ERH2WM560M25OT |
| | | 12.5x40 | 0.20 | 830 | ERH2WM680W40OT |
| | 82 | 18x30 | 0.20 | 808 | ERH2WM680M30OT |
| | | 12.5x45 | 0.20 | 886 | ERH2WM820W45OT |
| | 82 | 18x30 | 0.20 | 853 | ERH2WM820M30OT |
| 100 | 18x35 | 0.20 | 924 | ERH2WM101M35OT | |
| 120 | 18x40 | 0.20 | 1128 | ERH2WM121M40OT | |
| 150 | 22x40 | 0.20 | 1354 | ERH2WM151O40OT | |
| 220 | 22x46 | 0.20 | 1537 | ERH2WM221O46OT | |

Radial Type