

RJ Series

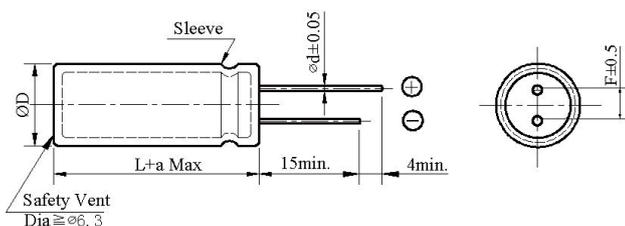
- Long life and High reliability.
- Load life 2,000~5,000 hours at 125°C.
- Suitable for output circuit and input circuit of LED driving power.
- RoHS Compliant



◆ SPECIFICATIONS

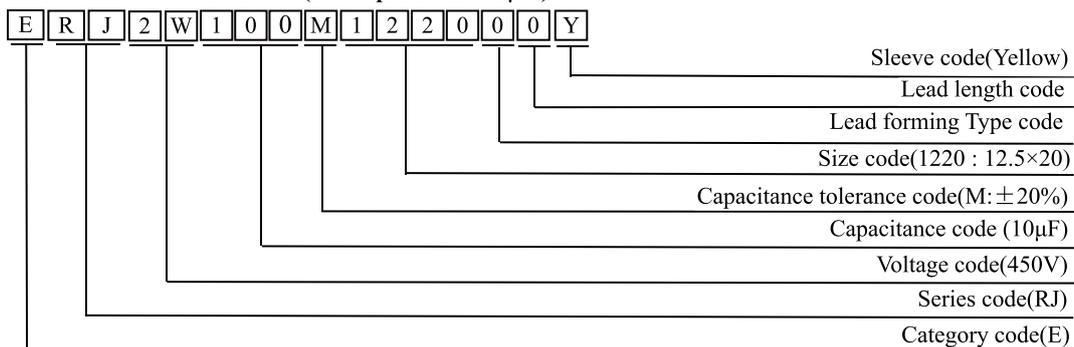
| Item | Performance Characteristics | | | | | | | | | | |
|---|---|-------------------------------|------|------|------|------------------------------|------|------|---------|----------|-------------------|
| Category Temperature Range | -40 ~ +125°C | | | | | | | | | | |
| Working Voltage Range | 10 ~ 100Vdc | | | | | 160 ~ 450Vdc | | | | | |
| Capacitance Range | 4.7 ~ 4,700μF | | | | | 1 ~ 220μF | | | | | |
| Capacitance Tolerance | ±20% (at 20°C and 120Hz) | | | | | | | | | | |
| Dissipation Factor (tanδ) (at 20°C, 120Hz) | Rated Voltage (V) | 10 | 16 | 25 | 35 | 50 | 63 | 100 | 160~250 | 350~450 | |
| | tanδ(Max) | 0.20 | 0.16 | 0.14 | 0.12 | 0.10 | 0.09 | 0.08 | 0.15 | 0.20 | |
| Leakage Current | 10~400Vdc | | | | | 450Vdc | | | | | |
| | I ≤ 0.01CV to 3μA (2minutes) | | | | | I ≤ 0.03CV + 10μA (2minutes) | | | | | |
| Low Temperature Characteristics Impedance Ratio(MAX) | I: Leakage current (μA) C: Rated capacitance (μF) V: Rated voltage (V) | | | | | | | | | | |
| | Rated Voltage (V) | 10 | 16 | 25 | 35 | 50 | 63 | 100 | 160~250 | 350~450 | (at 120Hz) |
| | Z(-25°C)/Z(+20°C) | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 6 | |
| Z(-40°C)/Z(+20°C) | 6 | 4 | 3 | 3 | 3 | 3 | 3 | 6 | 9 | | |
| Endurance | The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied for 2,000~5,000 hours at 125°C. | | | | | | | | | | |
| | Capacitance change | ≅ ±20% of the initial value | | | | | | | | Case Dia | Life time (hours) |
| | Dissipation factor(tanδ) | ≅ 200% of the specified value | | | | | | | | Φ8 | 2,000 |
| | Leakage current | ≅ specified value | | | | | | | | Φ10 | 3,000 |
| Shelf Life | The following requirements shall be satisfied when the capacitor are restored to 20°C after the rated voltage applied for 1,000 hours at 125°C without voltage applied. | | | | | | | | | | |
| | Capacitance change | ≅ ±20% of the initial value | | | | | | | | ≥Φ12.5 | 5,000 |
| | Dissipation factor(tanδ) | ≅ 200% of the specified value | | | | | | | | | |
| | Leakage current | ≅ 200% of the specified value | | | | | | | | | |

◆ DIMENSIONS (mm)



| ΦD | 8 | 10 | 12.5 | 16 | 18 |
|----|-------------|-----|------|-----|-----|
| ΦD | ΦD +0.5 Max | | | | |
| Φd | 0.5/0.6 | 0.6 | 0.6 | 0.8 | 0.8 |
| F | 3.5 | 5.0 | 5.0 | 7.5 | 7.5 |
| a | L+2.0 Max | | | | |

◆ PART NUMBER SYSTEM(Example : 450V 10μF)



RJ Series

◆ Case size & Permissible rated ripple current: (mA rms) at 125°C/100KHz

| Vdc μF | 10 | | 16 | | 25 | |
|-----------|---------|------|---------|------|---------|------|
| | ΦD × L | RC | ΦD × L | RC | ΦD × L | RC |
| 100 | | | 8×12 | 261 | 8×12 | 261 |
| 220 | 8×12 | 261 | 10×12 | 461 | 10×12 | 446 |
| 330 | 8×12 | 276 | 10×12 | 476 | 10×16 | 476 |
| 470 | 10×12 | 476 | 10×16 | 607 | 10×20 | 692 |
| 1000 | 10×20 | 738 | 12.5×20 | 738 | 12.5×25 | 1000 |
| 2200 | 12.5×25 | 1100 | 16×25 | 1100 | 16×30 | 1461 |
| 3300 | 16×25 | 1169 | 16×30 | 1423 | 16×35 | 1615 |
| 4700 | 16×30 | 1423 | | | | |

| Vdc μF | 35 | | 50 | | 100 | |
|-----------|---------|------|---------|------|---------|------|
| | ΦD × L | RC | ΦD × L | RC | ΦD × L | RC |
| 4.7 | | | 8×12 | 100 | 8×12 | 120 |
| 10 | | | 8×12 | 150 | 8×12 | 170 |
| 22 | 8×12 | 78 | 8×12 | 200 | 8×12 | 250 |
| 33 | 8×12 | 105 | 8×12 | 230 | 10×12 | 290 |
| 47 | 8×12 | 148 | 8×12 | 261 | 10×16 | 320 |
| 100 | 8×12 | 261 | 10×12 | 400 | 12.5×20 | 515 |
| 220 | 10×16 | 476 | 10×20 | 684 | 16×25 | 846 |
| 330 | 10×20 | 615 | 12.5×20 | 769 | 16×30 | 1000 |
| 470 | 12.5×20 | 738 | 12.5×25 | 923 | 18×40 | 1230 |
| 1000 | 16×25 | 1100 | 16×30 | 1676 | | |
| 2200 | 16×35 | 1961 | 18×40 | 2153 | | |
| 3300 | 18×35 | 2153 | | | | |

| Vdc μF | 160 | | 200 | | 250 | |
|-----------|---------|------|---------|------|---------|------|
| | ΦD × L | RC | ΦD × L | RC | ΦD × L | RC |
| 2.8 | | | 8×12 | 80 | 8×12 | 80 |
| 3.3 | 8×12 | 88 | 8×12 | 92 | 8×12 | 90 |
| 4.7 | 8×12 | 96 | 8×12 | 100 | 8×16 | 100 |
| 5.6 | 8×16 | 102 | 8×16 | 108 | 8×16 | 120 |
| 6.8 | 8×16 | 110 | 8×16 | 118 | 8×16 | 140 |
| 8.2 | 8×16 | 180 | 10×16 | 180 | 10×16 | 160 |
| 10 | 8×16 | 250 | 10×16 | 250 | 10×16 | 180 |
| 15 | 8×20 | 340 | 10×20 | 358 | 10×20 | 265 |
| 22 | 10×20 | 500 | 10×20 | 525 | 12.5×20 | 380 |
| 33 | 10×20 | 525 | 12.5×20 | 600 | 12.5×20 | 525 |
| 47 | 12.5×20 | 660 | 12.5×25 | 695 | 12.5×25 | 610 |
| 68 | 12.5×25 | 760 | 16×20 | 760 | 16×30 | 720 |
| 100 | 16×25 | 1120 | 16×30 | 1180 | 16×30 | 850 |
| 150 | 18×25 | 1360 | 18×30 | 1430 | 18×35 | 1200 |
| 220 | 18×25 | 1400 | 18×35 | 1700 | | |

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◆ Case size & Permissible rated ripple current: (mA rms) at 125°C/100KHz

| μF | Vdc | 350 | | 400 | | 450 | |
|-----|-----|---------|------|---------|------|---------|------|
| | | ΦD × L | RC | ΦD × L | RC | ΦD × L | RC |
| 1.0 | | 8×12 | 64 | 8×16 | 72 | | |
| 1.5 | | 8×12 | 70 | 8×16 | 84 | 8×16 | 88 |
| 1.8 | | 8×12 | 78 | 8×16 | 85 | 8×16 | 90 |
| 2.2 | | 8×16 | 88 | 10×16 | 92 | 10×16 | 96 |
| 2.8 | | 8×16 | 96 | 10×16 | 100 | 10×16 | 100 |
| 3.3 | | 8×16 | 110 | 10×16 | 110 | 10×16 | 110 |
| 4.7 | | 8×20 | 130 | 10×20 | 130 | 10×20 | 130 |
| 5.6 | | 8×20 | 180 | 12.5×20 | 180 | 12.5×20 | 180 |
| 6.8 | | 10×16 | 220 | 12.5×20 | 232 | 12.5×20 | 232 |
| 8.2 | | 10×20 | 238 | 12.5×20 | 250 | 12.5×20 | 262 |
| 10 | | 10×20 | 280 | 12.5×20 | 294 | 12.5×20 | 320 |
| 15 | | 12.5×20 | 400 | 12.5×25 | 420 | 12.5×25 | 420 |
| 22 | | 12.5×20 | 525 | 16×25 | 560 | 16×25 | 560 |
| 33 | | 16×20 | 630 | 16×30 | 674 | 16×30 | 700 |
| 47 | | 16×25 | 760 | 18×30 | 884 | 18×30 | 880 |
| 68 | | 16×30 | 850 | 18×40 | 1100 | 18×40 | 1000 |
| 100 | | 18×35 | 1300 | 18×50 | 1470 | | |

◆ RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

| Vdc | Frequency (Hz) | | | | |
|-----------|----------------|------|------|------|------|
| | 50 | 120 | 1K | 10K | 100K |
| 10 ~ 100 | 0.20 | 0.45 | 0.70 | 0.80 | 1.00 |
| 160 ~ 450 | 0.25 | 0.50 | 0.80 | 0.90 | 1.00 |