

PMR205

RoHS
Compliant

- RC unit, metallized paper with integrated resistor
- 0.1 – 1.0 μF , 22 - 680 Ω , 125 VAC, +85 $^{\circ}\text{C}$

- Small dimensions
- High dU/dt capability.
- Excellent self-healing properties.
Ensures long life even when subjected to frequent overvoltages.
- Self-extinguishing encapsulation.
- Good resistance to ionisation due to impregnated dielectric.
- The impregnated paper ensures excellent stability giving outstanding reliability properties, especially in applications having continuous operation.

TYPICAL APPLICATIONS

RC unit for use in DC and AC applications for:

- contact protection
- interference suppression of contacts
- transient suppression

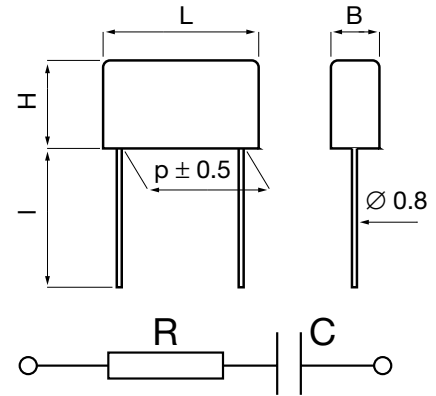
CONSTRUCTION

Single layer metallized paper. Encapsulated and impregnated in self-extinguishing material meeting the requirements of UL 94V-0. The resistance in the metal layer is utilized as series resistance, integrated resistor.

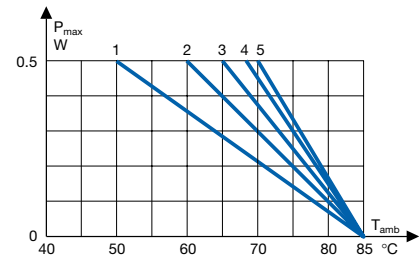
TECHNICAL DATA

| | |
|------------------------------|---|
| Rated voltage | 250 VDC, 125 VAC |
| Capacitance range | 0.1–1.0 μF |
| Capacitance tolerance | $\pm 20\%$ |
| Resistance range | 22 – 680 Ω |
| Resistance tolerance | $\pm 30\%$ |
| Peak pulse voltage | 375 V |
| Temperature range | -40 to +85 $^{\circ}\text{C}$ |
| Climatic category | 40/085/56/B |
| Series resistance | The series resistance is defined at 1 kHz for RC $\geq 50 \mu\text{s}$ and at 100 kHz for RC $< 50 \mu\text{s}$. |
| Insulation resistance | $\geq 3000 \text{ M}\Omega$ for C $\leq 0.33 \mu\text{F}$ $\geq 1000 \text{ s}$ for C $> 0.33 \mu\text{F}$ Measured at 100 VDC after 60 s, +23 $^{\circ}\text{C}$ |
| Power ratings | The average losses may reach 0.5 W provided the surface temperature does not exceed + 85 $^{\circ}\text{C}$. For maximum permitted power dissipation v temperature, see derating curves. |

| Curve | Dimensions |
|-------|------------|
| 1 | B = 5.2 |
| 2 | B = 7.3 |
| 2 | B = 7.8 |
| 3 | B = 7.6 |
| 4 | B = 9.0 |
| 5 | B = 11.3 |



I: standard: 30 +5/-0 mm (code R30)
option: short leads, tolerance +0/-1 mm (standard 6 mm, code R06)
Other lead lengths on request.



Maximum allowable power dissipation vs ambient temperature and case sizes.

ENVIRONMENTAL TEST DATA

| | | | |
|----------------------|-------------------------|--|---|
| Vibration | IEC 60068-2-6, Test Fc | 3 directions at 2 hour each 10 – 500 Hz at 0.75 mm or 98 m/s ² | No visible damage, No open or short circuit |
| Bump | IEC 60068-2-29, Test Eb | 4000 bumps at 390 m/s ² | No visible damage, No open or short circuit |
| Solderability | IEC 60068-2-20, Test Ta | Solder globule method | Wetting time < 1 s |
| Humidity | IEC 60068-2-3, Test Ca | +40 $^{\circ}\text{C}$ and 90 – 95% R.H. | 56 days |

ARTICLE TABLE

| Capacitance µF | Resistance Ω | Max dimensions in mm | | | | Quantity per package | | | Weight g | Article code |
|-------------------|-----------------|----------------------|------|------|------|----------------------|------------|-------------------|-------------|---------------------|
| | | B | H | L | p | R30 pcs | R06 pcs | reel taped pcs | | |
| 0.10 | 33 | 5.2 | 10.5 | 18.5 | 15.2 | 500 | 1000 | 600 | 1.7 | PMR205AB6100M033R30 |
| 0.10 | 47 | 5.2 | 10.5 | 18.5 | 15.2 | 500 | 1000 | 600 | 1.7 | PMR205AB6100M047R30 |
| 0.10 | 100 | 5.2 | 10.5 | 18.5 | 15.2 | 500 | 1000 | 600 | 1.7 | PMR205AB6100M100R30 |
| 0.10 | 220 | 5.2 | 10.5 | 18.5 | 15.2 | 500 | 1000 | 600 | 1.7 | PMR205AB6100M220R30 |
| 0.15 | 68 | 5.2 | 10.5 | 18.5 | 15.2 | 500 | 1000 | 600 | 1.7 | PMR205AB6150M068R30 |
| 0.15 | 100 | 5.2 | 10.5 | 18.5 | 15.2 | 500 | 1000 | 600 | 1.7 | PMR205AB6150M100R30 |
| 0.22 | 47 | 7.3 | 13.0 | 18.5 | 15.2 | 400 | 800 | 400 | 3.0 | PMR205AB6220M047R30 |
| 0.22 | 100 | 7.3 | 13.0 | 18.5 | 15.2 | 400 | 800 | 400 | 3.0 | PMR205AB6220M100R30 |
| 0.22 | 220 | 7.3 | 13.0 | 18.5 | 15.2 | 400 | 800 | 400 | 3.0 | PMR205AB6220M220R30 |
| 0.22 | 330 | 7.3 | 13.0 | 18.5 | 15.2 | 400 | 800 | 400 | 3.0 | PMR205AB6220M330R30 |
| 0.22 | 470 | 7.3 | 13.0 | 18.5 | 15.2 | 400 | 800 | 400 | 3.0 | PMR205AB6220M470R30 |
| 0.25 | 200 | 7.3 | 13.0 | 18.5 | 15.2 | 400 | 800 | 400 | 3.0 | PMR205AB6250M200R30 |
| 0.25 | 350 | 7.3 | 13.0 | 18.5 | 15.2 | 400 | 800 | 400 | 3.0 | PMR205AB6250M350R30 |
| 0.25 | 600 | 7.3 | 13.0 | 18.5 | 15.2 | 400 | 800 | 400 | 3.0 | PMR205AB6250M600R30 |
| 0.33 | 47 | 7.8 | 13.5 | 18.5 | 15.2 | 400 | 800 | 400 | 3.3 | PMR205AB6330M047R30 |
| 0.47 | 22 | 7.6 | 14.0 | 24.0 | 20.3 | 250 | 1500 | 250 | 4.0 | PMR205AC6470M022R30 |
| 0.47 | 33 | 7.6 | 14.0 | 24.0 | 20.3 | 250 | 1500 | 250 | 4.0 | PMR205AC6470M033R30 |
| 0.47 | 47 | 7.6 | 14.0 | 24.0 | 20.3 | 250 | 1500 | 250 | 4.0 | PMR205AC6470M047R30 |
| 0.47 | 68 | 7.6 | 14.0 | 24.0 | 20.3 | 250 | 1500 | 250 | 4.0 | PMR205AC6470M068R30 |
| 0.47 | 100 | 7.6 | 14.0 | 24.0 | 20.3 | 250 | 1500 | 250 | 4.0 | PMR205AC6470M100R30 |
| 0.47 | 150 | 7.6 | 14.0 | 24.0 | 20.3 | 250 | 1500 | 250 | 4.0 | PMR205AC6470M150R30 |
| 0.47 | 220 | 7.6 | 14.0 | 24.0 | 20.3 | 250 | 1500 | 250 | 4.0 | PMR205AC6470M220R30 |
| 0.47 | 330 | 7.6 | 14.0 | 24.0 | 20.3 | 250 | 1500 | 250 | 4.0 | PMR205AC6470M330R30 |
| 0.47 | 470 | 9.0 | 15.0 | 24.0 | 20.3 | 200 | 1200 | 250 | 5.0 | PMR205AC6470M470R30 |
| 0.47 | 680 | 11.3 | 16.5 | 24.0 | 20.3 | 150 | 1000 | 180 | 7.0 | PMR205AC6470M680R30 |
| 1.0 | 33 | 10.6 | 16.1 | 30.5 | 25.4 | 150 | 1000 | | 8.6 | PMR205AE7100M033R30 |
| 1.0 | 47 | 11.3 | 16.5 | 24.0 | 20.3 | 150 | 1000 | | 7.0 | PMR205AC7100M047R30 |
| 1.0 | 68 | 11.3 | 16.5 | 24.0 | 20.3 | 150 | 1000 | | 7.0 | PMR205AC7100M068R30 |
| 1.0 | 100 | 11.3 | 16.5 | 24.0 | 20.3 | 150 | 1000 | | 7.0 | PMR205AC7100M100R30 |
| 1.0 | 150 | 11.3 | 16.5 | 24.0 | 20.3 | 150 | 1000 | | 7.0 | PMR205AC7100M150R30 |
| 1.0 | 220 | 11.3 | 16.5 | 24.0 | 20.3 | 150 | 1000 | | 7.0 | PMR205AC7100M220R30 |

ORDERING INFORMATION

The article code for the standard part is given in the article table.
For other options, see page 12.

MARKING

- RIFA
- RIFA article code
- RC unit
- Rated capacitance and resistance
- Rated voltage
- MP, for metallized paper
- Climatic category according to IEC 60068-1, appendix A
- Passive flammability class
- Circuit diagram
- Manufacturing code (year, month)