

RF Power Tubular Capacitors with Mounting Tags, Class 1 Ceramic



| QUICK REFERENCE DATA | | |
|---------------------------|------------------------|-------------------------------------|
| DESCRIPTION | VALUE | |
| Ceramic Class | 1 | |
| Ceramic Dielectric | R7, R42, R85 | |
| Type | RA 012085 RE 012085 | RA 012020 RB 012020 RE 012020 |
| Voltage (V _p) | 2000 | |
| Min. Capacitance (pF) | 3.0 | 10 |
| Max. Capacitance (pF) | 100 | 400 |
| Mounting | Screw terminal | |

MATERIAL

Capacitor elements made from class 1 ceramic dielectric with noble metal electrodes.

Connection terminals:
made from copper / brass, silver plated.

FINISH

Capacitor body completely protective lacquered.
The contoured insulating rim and the ceramic base are additionally glazed.

MARKING

Type designator, capacitance value and tolerance, rated peak voltage, ceramic material code, production date code, manufacturer logo

FEATURES

- Small size
- High reliability
- Wide range of capacitance values

APPLICATIONS

- Induction and dielectric heating
- Antenna units
- Filter, bypass, and coupling circuits

CAPACITANCE RANGE

3.0 pF to 400 pF

CAPACITANCE TOLERANCE

< 10 pF: ± 2 pF; ± 1 pF; ± 0.5 pF
 ≥ 10 pF: ± 20 %; ± 10 %; ± 5 %

CERAMIC DIELECTRICS

- R7 (TCC + 100 ppm/K)
- R42 (TCC - 250 ppm/K)
- R85 (TCC - 750 ppm/K)

RATED VOLTAGE

2.0 kV_p

DIELECTRIC STRENGTH TEST

200 % of rated AC voltage (50 Hz, 5 minutes)

DISSIPATION FACTOR

R7: max. 0.07 % (1 MHz)
 R42, R85: max. 0.05 % (1 MHz)

INSULATION RESISTANCE

Min. 100 000 MΩ (at 25 °C)

OPERATING TEMPERATURE RANGE

-55 °C to +100 °C



| SAP PART NUMBER AND ELECTRICAL DATA | | | | | |
|-------------------------------------|---------|------------------|----------------------------------|-----------------------------------|-----------------------------------|
| PART NUMBER | CERAMIC | CAP. VALUES (pF) | RATED VOLTAGE (kV _p) | RATED POWER ⁽¹⁾ (kvar) | RATED CURRENT (A _{RMS}) |
| TYPE R. 012085 | | | | | |
| R#012085BB930##BF1 | R7 | 3.0 | 2.0 | 0.7 | 4.0 |
| R#012085BB940##BF1 | | 4.0 | | | |
| R#012085BB950##BF1 | | 5.0 | | | |
| R#012085BB960##BF1 | | 6.0 | | | |
| R#012085BB980##BF1 | | 8.0 | | | |
| R#012085BB100##BF1 | | 10 | | | |
| R#012085BB160##BH1 | R42 | 16 | | | |
| R#012085BB200##BH1 | | 20 | | | |
| R#012085BB250##BH1 | | 25 | | | |
| R#012085BB300##BH1 | | 30 | | | |
| R#012085BB400##BJ1 | R85 | 40 | | 0.8 | |
| R#012085BB500##BJ1 | | 50 | | | |
| R#012085BB600##BJ1 | | 60 | | | |
| R#012085BB800##BJ1 | | 80 | | | |
| R#012085BB101##BJ1 | | 100 | | | |
| TYPE R. 012020 | | | | | |
| R#012020BB100##BF1 | R7 | 10 | 2.0 | 1.4 | 4.0 |
| R#012020BB120##BF1 | | 12 | | | |
| R#012020BB160##BF1 | | 16 | | | |
| R#012020BB200##BF1 | | 20 | | | |
| R#012020BB250##BF1 | | 25 | | | |
| R#012020BB300##BF1 | | 30 | | | |
| R#012020BB400##BH1 | R42 | 40 | | | |
| R#012020BB500##BH1 | | 50 | | | |
| R#012020BB600##BH1 | | 60 | | | |
| R#012020BB800##BH1 | | 80 | | | |
| R#012020BB101##BJ1 | R85 | 100 | | 1.7 | |
| R#012020BB121##BJ1 | | 120 | | | |
| R#012020BB161##BJ1 | | 160 | | | |
| R#012020BB201##BJ1 | | 200 | | | |
| R#012020BB251##BJ1 | | 250 | | | |
| R#012020BB301##BJ1 | | 300 | | | |
| R#012020BB401##BJ1 | | 400 | | | |

Notes

- # 2nd digit: code letter of the terminal version A, B, E (RB 012085 is not available)
- ## 14th to 15th digit: capacitance tolerance code < 10 pF: ± 2 pF = 15, ± 1 pF = 14, ± 0.5 pF = 13
 ≥ 10 pF: ± 20 % = 38, ± 10 % = 36, ± 5 % = 33

(1) The surface temperature during operation must not exceed +100 °C



| DIMENSIONS in millimeters (inches) | | |
|---|--------------------------------|--|
| RA | RB | RE |
| | | |
| TYPE | RA 012085 RE 012085 | RA 012020 RB 012020 RE 012020 |
| Length L ₁ | 8.5 (0.335) | 20 (0.79) |
| Length L ₂ | RB 012085 is not available | 10 ± 1 (0.39 ± 0.04) |
| Length L ₃ | 10 ± 1 (0.39 ± 0.04) | 22 ± 1 (0.87 ± 0.04) |

| RELATED DOCUMENTS | |
|--------------------------|--|
| General Information | www.vishay.com/doc?22071 |



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