# 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<br>RE 012085 | RA 012020<br>RB 012020<br>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



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| 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 | | 0.8 | |
| R#012085BB200##BH1 | | 20 | | | |
| R#012085BB250##BH1 | | 25 | | | |
| R#012085BB300##BH1 | | 30 | | | |
| R#012085BB400##BJ1 | R85 | 40 | | | |
| 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 | | 1.7 | |
| R#012020BB500##BH1 | | 50 | | | |
| R#012020BB600##BH1 | | 60 | | | |
| R#012020BB800##BH1 | | 80 | | | |
| R#012020BB101##BJ1 | R85 | 100 | | | |
| 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**

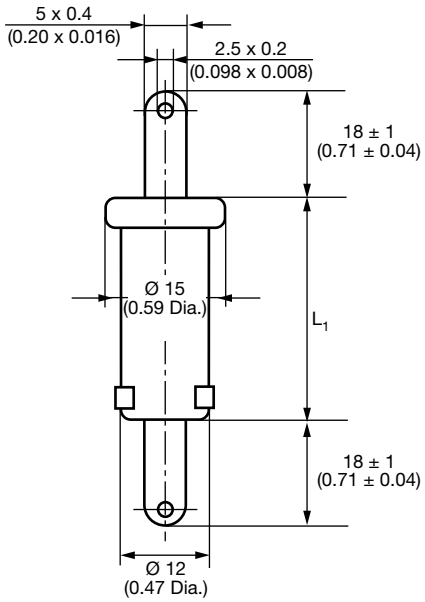
- # 2nd digit: code letter of the terminal version A, B, E (RB 012085 is not available)
- ## 14th to 15th digit: capacitance tolerance code < 10 pF: ± 2 pF = 15, ± 1 pF = 14, ± 0.5 pF = 13
  ≥ 10 pF: ± 20 % = 38, ± 10 % = 36, ± 5 % = 33

[1] The surface temperature during operation must not exceed +100 °C

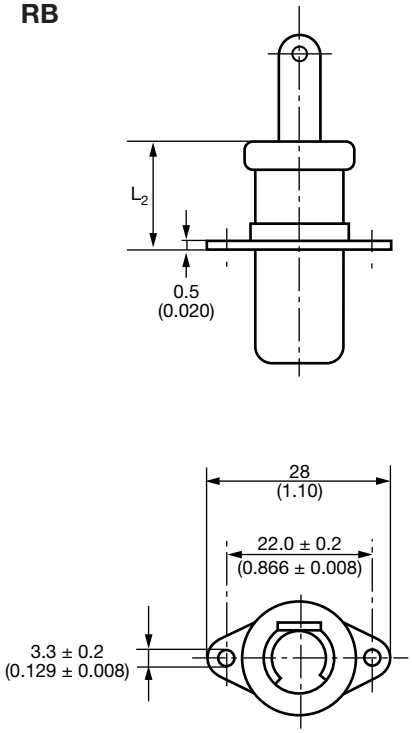

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## DIMENSIONS in millimeters (inches)

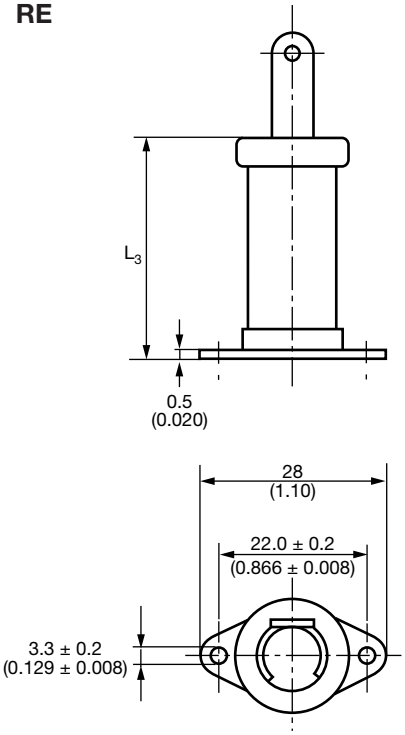
**RA**




**RB**




**RE**




| TYPE | RA 012085<br>RE 012085 | RA 012020<br>RB 012020<br>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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