

AG310

General technical data

The reliable BMC mica capacitors of the AG310 series are manufactured with a larger capacitance range up to 0,51 µF and higher voltages up to 3kV d.c. We offer axial wire leads or wide band terminals and different ways of termination. A special vacuum impregnation guarantees especially low ionization features. The epoxy coating ensures climatic and mechanical strength. The capacitor's characteristics are a good long-term stability, minimum losses and small temperature coefficient of the capacitance. To achieve a higher current carrying capacity the AG310 AW & BW types are terminated with a low resistant metallization. We deliver very tight capacitance tolerances up to 0,5%. The rated voltages apply to a temperature range of -40°C to +100°C

Application:

The AG300/310 BMC mica capacitors types are well proven over a long period for the following applications:

- ◆ continuous resonant circuits
- ◆ filters
- ◆ diplexer and timing elements for RF- and LF-engineering
- ◆ processing and generating of signals with high voltage and step impulse edges (i.e. pulse former, pulse forming networks, anti-interference devices)
- ◆ low-loss circuits in low power electronic
- ◆ especially good current carrying capacity for special terminated types with a metalization of low resistance
- ◆ electronic instruments of high stability for flight electronics
- ◆ control and communication engineering
- ◆ medical technology
- ◆ data processing
- ◆ navigation
- ◆ security and alarm devices

Climatic category: according to DIN 40400

Working voltage: -40°C to +100°C

Qualification:

The technical values are based on:

- IEC-384-5
- IEC-68
- DIN 40400
- DIN 40046
- MIL-C-5

The independent final control station examines all parameters to guarantee the high quality level of the BMC production.

Temporal capacitance change: $\frac{\Delta C}{C} > 0,1\%$ after one year operation

Temperature coefficient of capacitance: according to DIN and MIL

| Characteristic | Temperature coefficient ppm/°C | Drift |
|----------------|--------------------------------|-----------------|
| D | - 100 ... + 100 | ± 0,3% |
| E | - 20 ... + 100 | ± 0,1%, + 0,1% |
| F | - 0 ... + 70 | ± 0,05%, + 0,1% |
| G | - 20 ... + 50 | ± 0,05%, + 0,1% |

Dissipation factor according to DIN 41120 and VDE 0560 part 19

| | | |
|-----------------------|----------------------|---------------------|
| 100 ... 1000pF | 1×10^{-3} | gemessen bei 1 MHz |
| > 1000 ... 10000pF | 1×10^{-3} | gemessen bei 10 kHz |
| > 10000 ... >100000pF | $0,5 \times 10^{-3}$ | gemessen bei 10 MHz |
| > 100000pF | $0,5 \times 10^{-3}$ | gemessen bei 1 kHz |

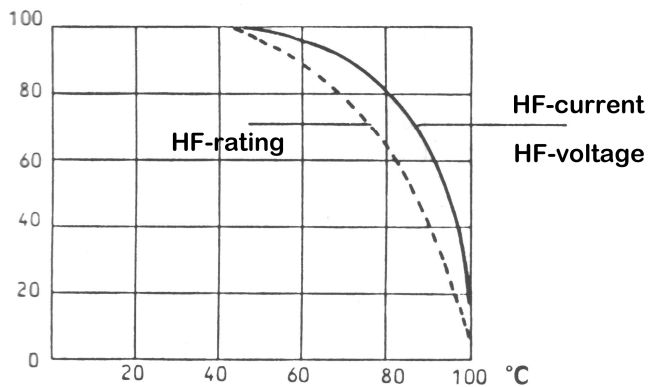
| | | | |
|---|--|----------|---------------------|
| Rated d.c. voltage U_R Permitted a.c. voltage U_{rms*} | V | 500 | 1000/1500/2000/3000 |
| | V/50 Hz | 350 | 500 |
| | *)Sum of d.c. voltage and superimposed peak a.c. voltage must not exceed U_N | | |
| Testing voltage | 3 U_N for 500V- 2 U_N for $\geq 1000V$ - 3 sec. | | |
| Insulation resistance | $C \leq 50000pF = 100 G\Omega$ at 20°C with 100V- after 1 minute | | |
| Self induction | ≈ 10 nH measured at 1 mm terminal | | |
| Operating temperature range | - 40°C ... +100°C | | |
| Climatic category | DIN 40040 IEC 68 | G 040 | M D 100 021 |

Peak RF-load measured at room temperature and 1 MHz.

| Standard termination | | | | Termination of low resistance | | | |
|----------------------|-----|---|-----------|-------------------------------|-----|----|-----------|
| Type | kVA | A | V_{eff} | Type | kVA | A | V_{eff} |
| AG310 AS | 1 | 6 | 150 | AG310 AW | 1 | 10 | 150 |
| AG310 BS | 1,5 | 7 | 150 | AG310 BW | 1,5 | 12 | 150 |

The load is limited by the smallest value ever tabled for each style.

Fig.1: HF-load against ambient temperature



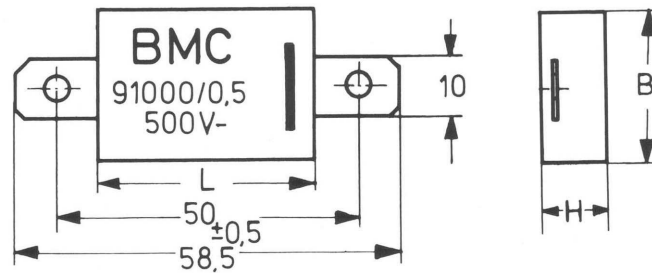
Marking:

The capacitors are marked with the trademark, the capacitance, the capacitance tolerance, the working voltage and the manufacturing date.

Marking of the outer coating: according to DIN 41313

Lead style: tinned copper wire 1 mm dia;
for higher frequencies brass-tabs;

Dimensions



| Type | Capacitance range in pF / μ F | | | | | Dimensions in mm (max.) | | | | |
|----------------------|-----------------------------------|--------------------|--------------------|--------------------|--------------------|-------------------------|------|------|----|------|
| | 500V- | 1000V- | 1500V- | 2000V- | 3000V- | L | B | H | E | A |
| AG300 AS AG300 AW | 1200... 27000 | 860... 18000 | 560... 7500 | 330... 2700 | 100... 820 | 36,5 | 25 | 7,5 | 50 | 58,3 |
| | >27000... 91000 | >18000... 56000 | >7500... 22000 | >2700... 9100 | >820... 2700 | | | 9,5 | | |
| | >91000... 0,12 | >56000... 0,082 | >22000... 36000 | >9100... 16000 | >2700... 4300 | | | 11,5 | | |
| | >0,12... 0,18 | >0,082... 0,1 | >36000... 47000 | >16000... 22000 | >4300... 6200 | | | 13,5 | | |
| | >0,18... 0,22 | >0,1... 0,13 | >47000... 62000 | | | | | 15,5 | | |
| AG300 BS AG300 BW | 30000... 56000 | 20000... 30000 | 6800... 20000 | 3000... 8200 | 1000... 2400 | 46,5 | 36,5 | 7,5 | 60 | 68,3 |
| | >56000... 0,18 | >30000... 0,082 | >20000... 59000 | >8200... 27000 | >2400... 8200 | | | 9,5 | | |
| | >0,18... 0,27 | >0,082... 0,15 | >59000 0,1 | >27000... 43000 | >8200... 15000 | | | 11,5 | | |
| | >0,27... 0,39 | >0,15... 0,22 | >0,1... 0,15 | >43000... 62000 | >15000... 22000 | | | 13,5 | | |
| | >0,39... 0,51 | >0,22... 0,33 | >0,15... 0,22 | | | | | 15,5 | | |

Capacitance tolerance: $\pm 0,5\%$, $\pm 1\%$, $\pm 2\%$, $\pm 5\%$, $\pm 10\%$

Ordering information:

