

## AG300

### General technical data

The reliable BMC mica capacitors of the AG300 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 AG300 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	$1 \times 10^{-3}$	gemessen bei 1 MHz
> 1000 ... 10000pF	$1 \times 10^{-3}$	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

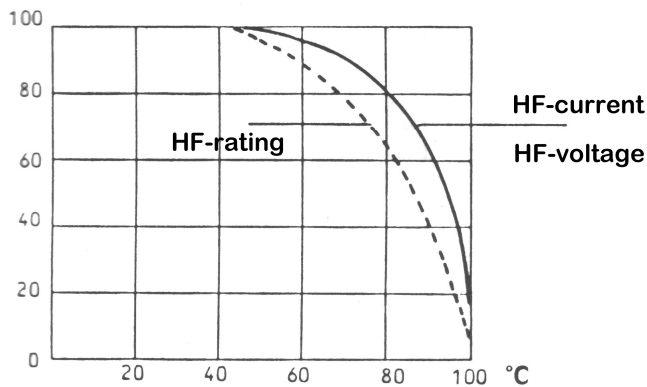
<b>Rated d.c. voltage <math>U_R</math> Permitted a.c. voltage <math>U_{rms^*}</math></b>	V	500	1000/1500/2000/3000
	V/50 Hz	350	500
	*)Sum of d.c. voltage and superimposed peak a.c. voltage must not exceed $U_N$		
<b>Testing voltage</b>	3 $U_N$ for 500V- 2 $U_N$ for $\geq 1000V$ - 3 sec.		
<b>Insulation resistance</b>	$C \leq 50000pF = 100 G\Omega$ at 20°C with 100V- after 1 minute		
<b>Self induction</b>	$\approx 10$ nH measured at 1 mm terminal		
<b>Operating temperature range</b>	- 40°C ... +100°C		
<b>Climatic category</b>	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	$V_{eff}$
AG300 AS	1	6	150	AG300 AW	1	10	150
AG300 BS	1,5	7	150	AG300 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

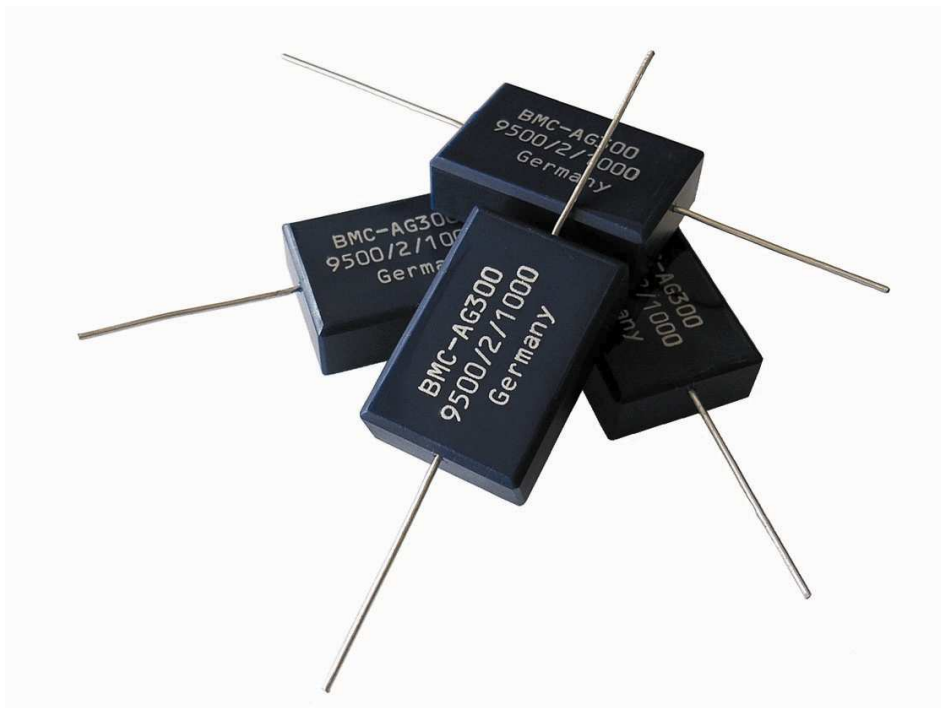


**Marking:**

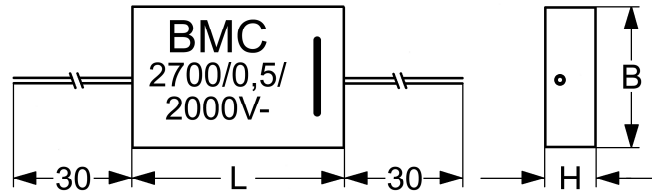
The capacitors are marked with the trademark, the capacitance, the capacitance tolerance, the working voltage and the manufacturing date.

**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 / $\mu$ F					Dimensions in mm (max.)		
	500V-	1000V-	1500V-	2000V-	3000V-	L	B	H
AG300AS AG300AW	1200... 27000	860... 18000	560... 7500	330... 2700	100... 820	36,5	25	7,5
	>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
AG300BS AG300BW	30000... 56000	20000... 30000	6800... 20000	3000... 8200	1000... 2400	46,5	36,5	7,5
	>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:

