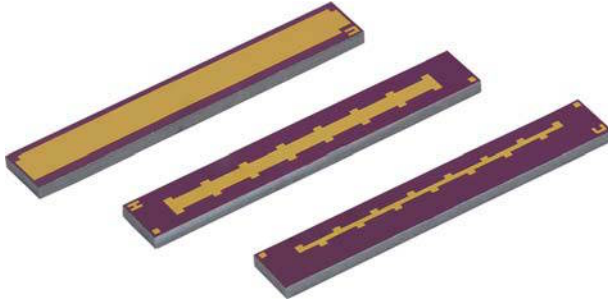


## Thin Film Bar MOS Capacitors



Product may not be to scale

The bar capacitor is a MOS capacitor designed for hybrid assemblies requiring ultra high power rating with miniature case size.

### FEATURES

- Robust MOS construction
- Allows for multiple wire bonds. At the lowest values, case A will accept 7 bonds and case B will accept 15.
- Low D, high Q
- Excellent load life stability

### APPLICATIONS

- Hybrid assemblies
- Low pass LC, RC, or LRC lumped filter
- RF blocking on DC feeds
- Impedance matching
- SiC or GaN high frequency / high power applications

<b>WV (DC) VALUES AND TOLERANCES</b>			
<b>CAPACITOR MODEL</b>	<b>A</b>	<b>B</b>	<b>UNIT</b>
Case Size	1204	2404	
Capacitance Values	5 to 50	10 to 100	pF
Tolerance	5	5	%
DC Working Voltage	100	100	V

<b>STANDARD ELECTRICAL SPECIFICATIONS</b>		
<b>PARAMETER</b>	<b>VALUE</b>	<b>UNIT</b>
Capacitance Range	5 to 100	pF
Absolute Tolerance, 1 kHz <sup>(1)</sup>	Down to $\pm 5$	%
Absolute TCC, -55 ° to 125 °C	$\pm 50$	ppm/°C
Operating Temperature Range	-55 to +150	°C
Operating Voltage	100 max.	V
Dissipation Factor, 1 MHz	0.01 max.	
Absolute Value Stability, 1 kHz, 1000 h, 70 °C, 100 V <sub>DC</sub>	$\pm 0.25$	%
Short Time Overload, 2 x Rated Voltage, 25 °C, 5 s	$\pm 0.25$	%
Thermal Shock, MIL-STD-202, Method 107 F	$\pm 0.25$	%
Moisture Resistance, MIL-STD-202, Method 106*	$\pm 0.25$	%
High Temperature Exposure, 100 h, 150 °C	$\pm 0.25$	%
Low Temperature Operation, -65 °C, 45 min, 100 V <sub>DC</sub>	$\pm 0.25$	%

#### Note

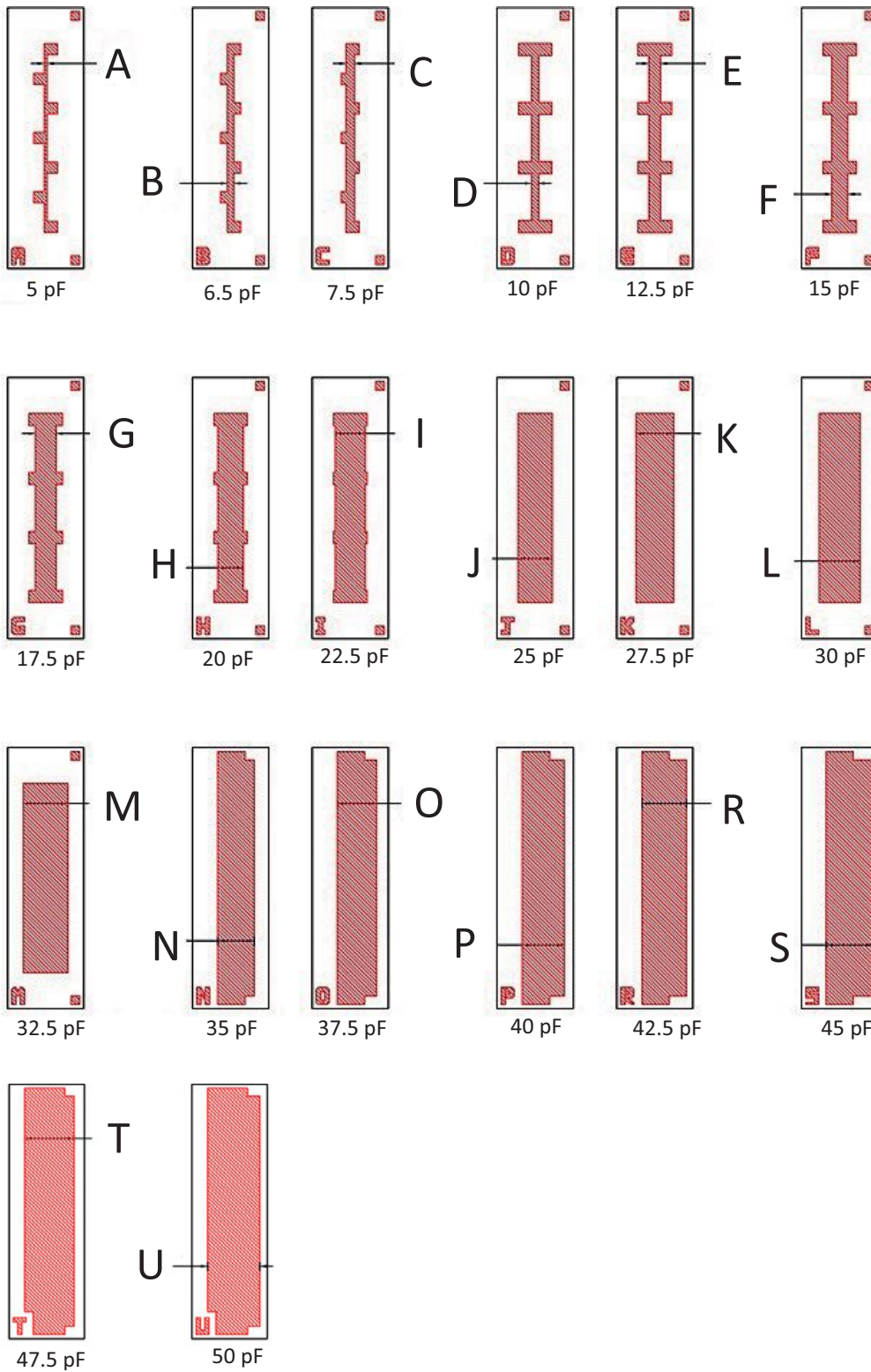
<sup>(1)</sup> See table "Case Size Value and Tolerance".



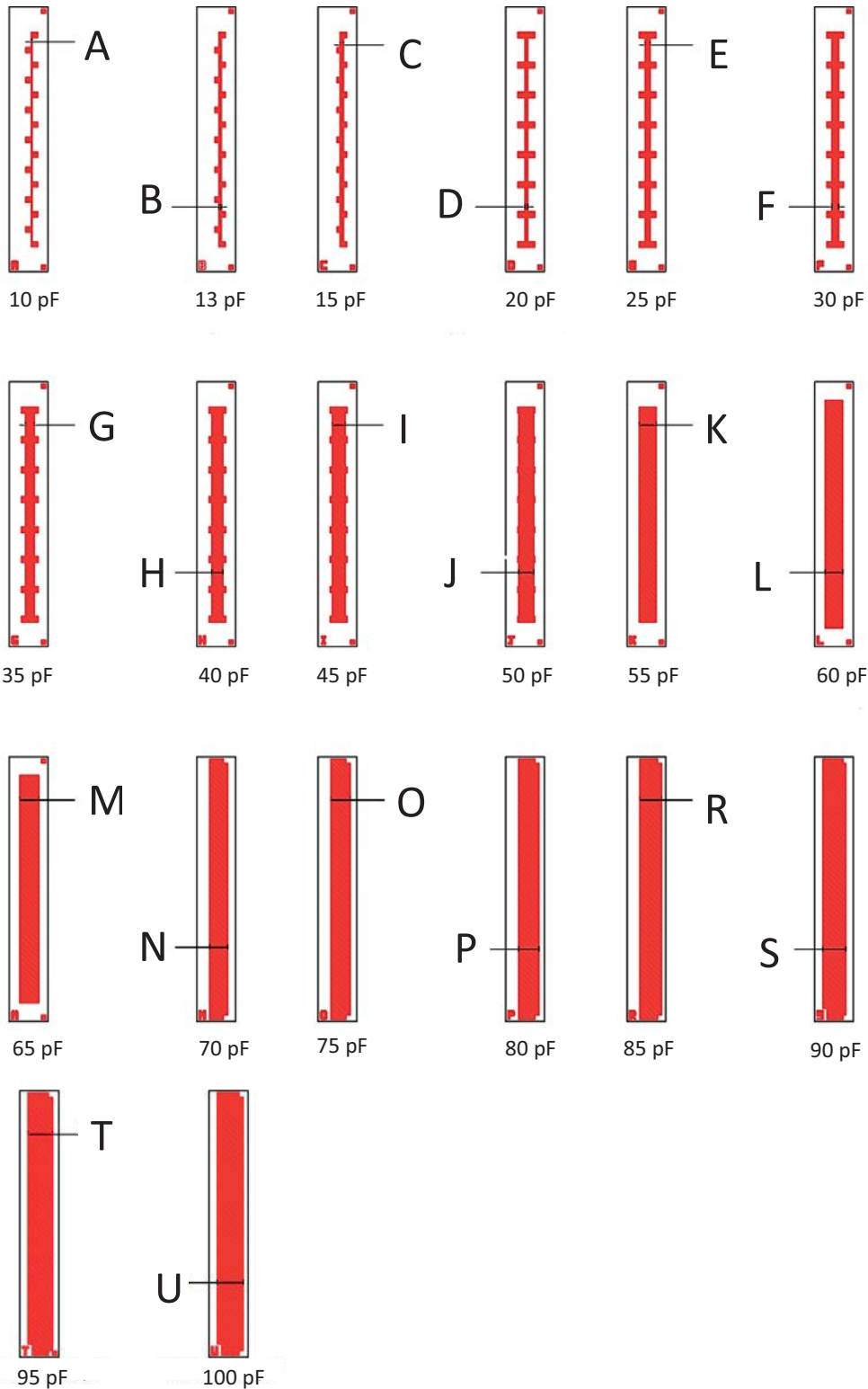
MECHANICAL SPECIFICATIONS	
PARAMETER	VALUE
Chip Substrate Material	Silicon
Dielectric	Silicon dioxide
Top Termination	Au 1 µm min.
Case Size	See table "Case Size Value and Tolerance"
Passivation	None
Number of Pads	1
Back Termination (Epoxy only)	TiW/Au

CASE SIZE VALUE AND TOLERANCE				
NOMINAL VALUE (pF)	CASE TYPE A	CASE TYPE B	BEST TOLERANCE (± %)	MAX. OPERATING VOLTAGE (V)
5	+	-	10	100
7.5	+	-	7	100
10	+	+	5	100
12.5	+	+	5	100
15	+	+	5	100
17.5	+	-	5	100
20	+	+	5	100
22.5	+	-	5	100
25	+	+	5	100
27.5	+	-	5	100
30	+	+	5	100
32.5	+	-	5	100
35	+	+	5	100
37.5	+	-	5	100
40	+	+	5	100
42.5	+	-	5	100
45	+	+	5	100
47.5	+	-	5	100
50	+	+	5	100
55	-	+	5	100
60	-	+	5	100
65	-	+	5	100
70	-	+	5	100
75	-	+	5	100
80	-	+	5	100
85	-	+	5	100
90	-	+	5	100
95	-	+	5	100
100	-	+	5	100

**CASE SIZE A** 0.12" x 0.035"



**CASE SIZE B** 0.24" x 0.035"





GLOBAL PART NUMBER INFORMATION														
Global Part Number: <b>BRCPA1000BKGCS T</b>														
Global Part Number Description: <b>BRCP 3 mm 10 pF 10 % Au C ST</b>														
<b>B</b>	<b>R</b>	<b>C</b>	<b>P</b>	<b>A</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>B</b>	<b>K</b>	<b>G</b>	<b>C</b>	<b>S</b>	<b>T</b>
MODEL	SIZE	CAPACITANCE (pF)	CAPACITANCE MULTIPLIER CODE	TOLERANCE CODE	TERMINATION	VISUAL CLASS	PACKAGING CODE							
<b>BRCP</b> Bar Capacitor	<b>A</b> = 3 mm x 1 mm <b>B</b> = 6 mm x 1 mm	First 4 digits are significant figures of capacitance	<b>C</b> = 0.001 <b>B</b> = 0.01 <b>A</b> = 0.1	<b>J</b> = 5 % <b>K</b> = 10 % <b>M</b> = 20 % <b>L</b> = 25 %	<b>G</b> = Au <b>A</b> = Al	<b>C</b> = Commercial <b>E</b> = Electrical test only <b>H</b> = Class H <b>K</b> = Class K	<b>WS</b> = Waffle pack 100 min., 1 mult <b>FW</b> = Full wafer <b>HW</b> = Half wafer <b>ST</b> = Diced on tape							



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