

# Ultra-Miniature 01005 Size Accu-P® **AVX** RF

## Thin-Film RF Microwave Capacitor

### ACCU-P® TECHNOLOGY

The use of silicon oxide, a very low - loss dielectric material, in conjunction with highly conductive electrode metals, results in low ESR and high Q. These high - frequency characteristics change at a slower rate with increasing frequency than for ceramic microwave capacitors.

ACCU-P® meets the fast - growing demand for low - loss (high - Q) capacitors for use in surface mount technology, especially for the wireless communications market at frequencies up to and above 5.8GHz.

ACCU-P® is currently unique in its ability to offer very low capacitance values (0.05 pF) and ultra tight capacitance tolerances ( $\pm 0.01$  pF).



### APPLICATIONS

- RF Modules
- Mobile communications
- Satellite TV
- Global positioning systems
- Filters
- VCO's
- Matching networks

### FEATURES

- Ultra Miniature standard 01005 chip size.
- Ultra tight capacitance tolerances ( $\pm 0.01$  pF).
- Low ESR and high Q at VHF, UHF and microwave frequencies.
- TC  $\pm 30$ ,  $\pm 60$  ppm/ $^{\circ}$ C.
- Nickel/Solder - coated terminations provide excellent solderability and leach resistance.
- High insulation resistance: IR  $\geq 10^{10}$  Ohm.
- Orientation provides high SRF uniformity.
- Repeatable  $C_{EFF}$ , ESR and Q vs. Frequency parameters, both lot to lot and within lots, for increased production yields.

### HOW TO ORDER



**P/N Example: C 0 0 5 Y K 1 R 0 A B S T R**

### QUALITY AND RELIABILITY

Finished parts are tested for standard electrical parameters and visual / mechanical characteristics.

Each production lot is 100% evaluated for:

- Capacitance
- Q Factor
- DWV at  $12.5 \times V_{RATED}$

Each production lot is evaluated on a sample basis for:

- Dimensions
- Insulation Resistance
- Breakdown Voltage
- ESR
- Solderability

In addition, production is periodically evaluated for:

- Mechanical stability
- Endurance (Life)
- Temperature Coefficient
- Accelerated Damp Heat Load (THB)
- Temperature Cycling

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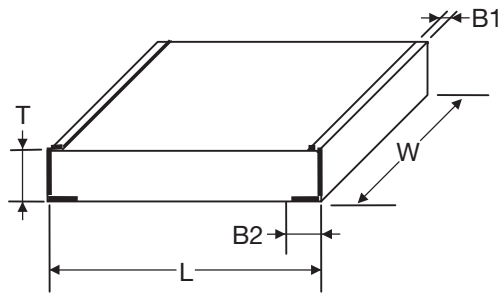
### ACCU-P® 01005 CAPACITANCE RANGE

Capacitance [pF]	Part Number	Tolerances Z = ±0.01pF P = ±0.02pF Q = ±0.03pF A = ±0.05pF	TC J = ±30ppm/°C K = ±60ppm/°C	Voltage (V)
0.05	C005YJR05_BSTR	Z, P, Q, A	J	16
0.10	C005YJ0R1_BSTR	Z, P, Q, A	J	16
0.15	C005YJR15_BSTR	Z, P, Q, A	J	16
0.20	C005YJ0R2_BSTR	Z, P, Q, A	J	16
0.25	C005YJR25_BSTR	Z, P, Q, A	J	16
0.30	C005YJ0R3_BSTR	Z, P, Q, A	J	16
0.35	C005YJR35_BSTR	Z, P, Q, A	J	16
0.40	C005YJ0R4_BSTR	Z, P, Q, A	J	16
0.45	C005YJR45_BSTR	Z, P, Q, A	J	16
0.50	C005YJ0R5_BSTR	Z, P, Q, A	J	16
0.55	C005YJR55_BSTR	P, Q, A	J	16
0.60	C005YJ0R6_BSTR	P, Q, A	J	16
0.65	C005YJR65_BSTR	P, Q, A	J	16
0.70	C005YJ0R7_BSTR	P, Q, A	J	16
0.75	C005YJR75_BSTR	P, Q, A	K	16
0.80	C005YK0R8_BSTR	P, Q, A	K	16
0.85	C005YKR85_BSTR	P, Q, A	K	16

Capacitance [pF]	Part Number	Tolerances Z = ±0.01pF P = ±0.02pF Q = ±0.03pF A = ±0.05pF	TC J = ±30ppm/°C K = ±60ppm/°C	Voltage (V)
0.90	C005YK0R9_BSTR	P, Q, A	K	16
0.95	C005YKR95_BSTR	P, Q, A	K	16
1.00	C005YK1R0_BSTR	P, Q, A	K	16
1.10	C005YK1R1_BSTR	P, Q, A	K	16
1.20	C005YK1R2_BSTR	P, Q, A	K	16
1.30	C005YK1R3_BSTR	P, Q, A	K	16
1.40	C005YK1R4_BSTR	P, Q, A	K	16
1.50	C005YK1R5_BSTR	P, Q, A	K	16
1.60	C005YK1R6_BSTR	P, Q, A	K	16
1.70	C005YK1R7_BSTR	P, Q, A	K	16
1.80	C005YK1R8_BSTR	P, Q, A	K	16
1.90	C005YK1R9_BSTR	P, Q, A	K	16
2.00	C005YK2R0_BSTR	P, Q, A	K	16
2.10	C005YK2R1_BSTR	P, Q, A	K	16
2.20	C005YK2R2_BSTR	P, Q, A	K	16
2.30	C005YK2R3_BSTR	P, Q, A	K	16
2.40	C005YK2R4_BSTR	P, Q, A	K	16

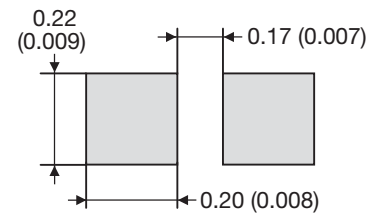
Intermediate capacitance values are available

### DIMENSIONS - mm (inches)



L	0.405 ± 0.020 (0.016 ± 0.001)
W	0.215 ± 0.020 (0.0085 ± 0.001)
T	0.145 ± 0.020 (0.006 ± 0.001)
B	Top (B1): 0.0 +0.10/-0.0 (0.0 +0.004/-0.0) Bottom (B2): 0.10 ± 0.03 (0.004 ± 0.001)

### RECOMMENDED PAD LAYOUT - mm (inches)



### PACKAGING SPECIFICATION - mm (inches)

**Standard Packaging:** 5,000 / 10,000 / 20,000pcs in 4" / 7" reels

**Materials:** Reel – Polystyrene

Tape – Paper: 8.00 (0.315)

Component pitch: 2.00 (0.079)

