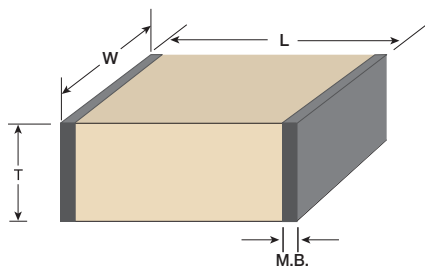


# COMMERCIAL & HIGH RELIABILITY PART NUMBERS RF, MICROWAVE & POWER

## Specifications

ELECTRICAL SPECIFICATIONS	UP Dielectric Code: UP	P90 Dielectric Code: P90	NPO Dielectric Code: NPO	X7R Dielectric Code: X7R	Testing Method MIL-STD-55681
Temperature Coefficient of Capacitance, 0 Volt	0 ± 30 ppm/°C	90 ± 20 ppm/°C	0 ± 30 ppm/°C	± 15%	Para 3.23
Typical Q	20,000	20,000	2,000	80 (1kHz)	
Rated Operating Temperature Range	-55° to +125° C	-55° to +125° C	-55° to +125° C	-55° to +125° C	Para 3.14
Capacitance up to 1000pF	1 MHz, 1.0 V AC RMS	1 MHz, 1.0 V AC RMS	1 MHz, 1.0 V AC RMS		Para 3.7
Capacitance >1000pF	1 kHz, 1.0 V AC RMS	1 kHz, 1.0 V AC RMS	1 kHz, 1.0 V AC RMS	1 kHz, 1.0 V AC RMS	
Dissipation Factor, max.	0.05% max.	0.05% max.	0.15% max.	2.5% max.	Para 3.8
Insulation Resistance @ +25° C at WVDC	1,000,000 MΩ min.	1,000,000 MΩ min.	100,000 MΩ min.	1,000 MΩ Farad	Para 3.9
Insulation Resistance @ +125° C at WVDC	100,000 MΩ min.	100,000 MΩ min.	10,000 MΩ min.	100 MΩ Farad	Para 3.12
Dielectric Withstanding Voltage (DWV)	250% of WVDC ≤ 300V 200% of WVDC = 500V	250% of WVDC ≤ 300V 200% of WVDC = 500V	250% of WVDC ≤ 300V 200% of WVDC = 500V	250% of WVDC ≤ 300V 200% of WVDC = 500V	
Aging Effects	None	None	None	2.5% max/decade hr	



### Capacitance Codes for Multilayer Capacitor

**First Two Digits** = Significant Figures of Capacitance in Picofarads

**Third Digit** = Additional Number of Zeros

**Example:**  
 100 = 10 pF  
 102 = 1,000 pF  
 104 = 100,000 pF

### Capacitance Tolerance Codes

Code	Tolerance	Cap Range
A	± 0.05 pF	< 10 pF
B	± 0.1 pF	< 10 pF
C	± 0.25 pF	< 10 pF
D	± 0.5 pF	< 10 pF
E	± 0.5%	≥ 10 pF
F	± 1%	≥ 10 pF
G	± 2%	≥ 10 pF
J	± 5%	≥ 10 pF
K	± 10%	≥ 10 pF
M	± 20%	≥ 10 pF

### Termination Codes

Code	RoHS Comp.	Typical Application	Termination Build up	Recommended Reflow Temp.
T	Yes	Solder Reflow	100% Tin Plated Nickel Barrier Silver Base	220°C to 260°C Typical*
N	No	Solder Reflow	90% Tin/10% Lead Plated Nickel Barrier Silver Base	220°C to 260°C Typical*
P	Yes	Conductive Epoxy Non-Magnetic	Palladium-Silver	Cure Epoxy as per Manufacturer's Spec.
G	Yes	Conductive Epoxy, Wire Bondable	50 μ" Gold Typical Nickel Barrier Silver Base	Cure Epoxy as per Manufacturer's Spec.

### Working Voltage

Code	WVDC	Code	WVDC
2	50	9	1000
3	100	N	1500
A	150	P	2000
4	200	Q	2500
&	250	R	3000
5	300	S	3600
6	500	U	5000
#	800	+	7200

### Packaging Codes

1 = Tape and Reel  
 5 = Waffle Pack

### RoHS

Code	Compliant
N	No
R	Legacy (Ended 2012)
C	Yes (Started 1/2013)

Presidio's UP capacitors can be upscreened to SPACE LEVEL testing. Consult the factory for details. Some voltage derating may apply.

## COMMERCIAL PART NUMBER EXAMPLE (How to Order)

0505	UP	101	K	2	T	1	C	A
Size	Dielectric (See Above)	Capacitance	Capacitance Tolerance	Voltage	Termination	Packaging	RoHS Compliant	Design-In Code (See Page 19)



PRESIDIO COMPONENTS, INC.

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# A WORD TO THE DESIGN ENGINEER

After the design work is done, outsourcing manufacturing on a global basis is a management option. At Presidio Components, we are striving for complete customer satisfaction which includes “after” service for all of our products.

We added a “Design In” locator code for quick traceability, if needed. Please select your location from the list below and add the appropriate code at the end of the part number.

If you need assistance give us a call at **(858) 578-9390** or email us at **info@presidiocomponents.com**.

## UNITED STATES

## OUTSIDE THE UNITED STATES

USA	Code	USA	Code	Americas	Code	Europe	Code
Alabama	G	Nebraska	P	Canada	R	Austria	3
Alaska	P	Nevada, North	B	Mexico	R	Belgium	1
Arizona	D	Nevada, South	C	Caribbean	R	Denmark	5
Arkansas	P	New Hampshire	L	Central America	R	Finland	5
California, North	B	New Jersey	J	South America	R	France	2
California, South	C	New Mexico	D			Germany	3
Colorado	E	New York, Metro	J	<b>Pacific Rim</b>		Ireland	6
Connecticut	L	New York, Upstate	K	Australia	S	Italy	4
Delaware	I	North Carolina	G	China	T	Luxembourg	1
District of Columbia	H	North Dakota	O	Japan	U	Netherlands	1
Florida	G	Ohio	M	Korea, South	V	Norway	5
Georgia	G	Oklahoma	P	Malaysia	W	Sweden	5
Hawaii	P	Oregon	A	Singapore	X	Switzerland	3
Idaho	A	Pennsylvania	I	Other Pacific Rim Countries	Y	United Kingdom	6
Illinois	N	Rhode Island	L			Other European Countries	7
Indiana	M	South Carolina	G			<b>Other</b>	
Iowa	O	South Dakota	O			India	Z
Kansas	P	Tennessee	G			Israel	8
Kentucky	M	Texas	F			Rest of World	9
Louisiana	P	Utah	E				
Maine	L	Vermont	L				
Maryland	H	Virginia	H				
Massachusetts	L	Washington	A				
Michigan	N	West Virginia	P				
Minnesota	O	Wisconsin, East	N				
Mississippi	G	Wisconsin, West	O				
Missouri	N	Wyoming	E				
Montana	A						

**PART NUMBER EXAMPLE:**  
**0505UP101JAT1CA**

**PART DESCRIPTION:** Ceramic Capacitor,  
 0505, Ultra-Porcelain™, 100pF ± 5%,  
 150 VDC, Tin, Tape and Reel, RoHS,  
 Design-In Code A for Washington State.