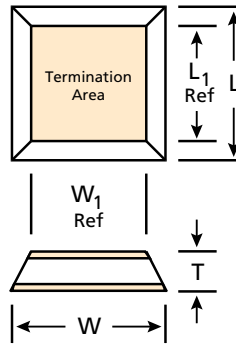
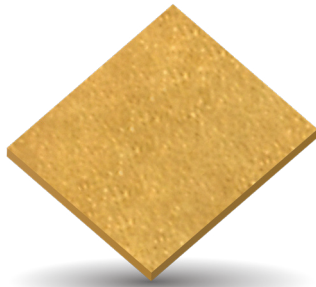


# 111 Series Microcaps®

## General Specifications



Case Size	Ref. W <sub>1</sub> or L <sub>1</sub>
S	.014 (.356)
T	.019 (.483)
U	.030 (.762)
X	.045 (1.14)
Y	.065 (1.65)
Z	.085 (2.16)

T depends upon capacitance value.

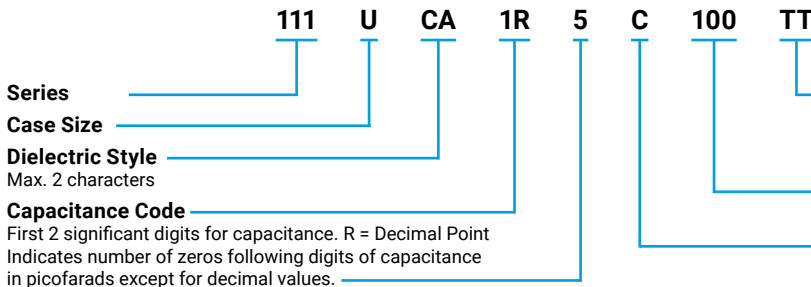
### GENERAL DESCRIPTION

111 SERIES MILLIMETER WAVELENGTH MICROCAP® – The beveled edges featured in the 111 Series minimize the potential for cracking due to mechanical or thermal shock. The longer path along the beveled edge also provides additional protection against arc-over.

### SELECTION GUIDE

Case Size		S			T			U			X			Y			Z		
Dimensions (L&W nom.)		.018 (.457) ± .003 (.076)			.025 (.635) ± .005 (.127)			.035 (.889) ± .005 (.127)			.050 (1.27) ± .010 (.254)			.070 (1.78) ± .010 (.254)			.090 (2.29) ± .010 (.254)		
Min. Thickness (T)		.0045 (.114)			.0045 (.114)			.0045 (.114)			.0045 (.114)			.0045 (.114)			.0045 (.114)		
Max. Thickness (T)		.012 (.305)			.012 (.305)			.012 (.305)			.012 (.305)			.012 (.305)			.012 (.305)		
		Capacitance (pF)			Capacitance (pF)			Capacitance (pF)			Capacitance (pF)			Capacitance (pF)			Capacitance (pF)		
Dielectric	K	Min.	Max.	Tol.	Min.	Max.	Tol.	Min.	Max.	Tol.	Min.	Max.	Tol.	Min.	Max.	Tol.	Min.	Max.	Tol.
A	14	0.1	0.2	A, B	0.2	0.4	A, B	0.4	0.9	A, B, C	0.6	2	B, C	1.3	3.6	B, C	2.4	5.6	B, C
BB	31	0.3	0.4	A, B, C	0.4	1.0	B, C	0.8	1.8	B, C, D	1.3	4.3	C, D	3	8.2	C, D	5.1	13	D, J, K, M
CA	62	0.5	0.9	B, C, D	0.8	2	C, D	1.5	3.9	C, D	2.7	9.1	D, J, K, M	6.2	16	D, J, K, M	10	24	G, J, K, M
CC	130	0.9	2.0	C, D	1.5	4.3	D, K, M	3.3	8.2	D, J, K, M	5.6	18	J, K, M	12	33	J, K, M	22	56	G, J, K, M
DA	165	1.2	2.4	C, D	2.0	5.6	D, K, M	4.3	10	D, J, K, M	7.5	24	J, K, M	15	43	J, K, M	27	68	G, J, K, M
DB	200	1.5	3.0	D, K, M	2.4	6.8	D, K, M	5.1	12	J, K, M	9.1	30	J, K, M	20	51	J, K, M	33	82	G, J, K, M
HC	420	2.4	5.6	K, M	4.3	12	K, M	9.1	22	J, K, M	15	47	J, K, M	33	91	J, K, M	56	150	G, J, K, M
EA	650	4.7	10	K, M	7.5	22	K, M	16	39	J, K, M	27	91	J, K, M	62	160	J, K, M	110	270	G, J, K, M
EC	650	4.7	10	K, M	7.5	22	K, M	16	39	J, K, M	27	91	J, K, M	62	160	J, K, M	110	270	G, J, K, M
J	1100	7.5	15	K, M	15	36	K, M	27	68	J, K, M	47	160	J, K, M	100	300	J, K, M	180	470	J, K, M
F	2000	15	27	K, M	27	68	K, M	51	120	J, K, M	91	300	J, K, M	200	510	J, K, M	330	820	J, K, M
GA	4000	33	68	K, M	56	150	K, M	110	270	J, K, M	200	680	J, K, M	430	1200	J, K, M	750	1800	J, K, M
G	6000	47	91	M	75	180	M	150	360	M	270	820	M	560	1600	M	1000	2400	M
K	9000	62	120	M	110	270	M	220	510	M	390	1200	M	820	2200	M	1500	3300	M
L	16,000	110	220	M	180	510	M	390	910	M	680	2200	M	1500	3900	M	2400	6200	M

### HOW TO ORDER



#### Termination Code

TT = Titanium Tungsten/Nickel/Gold (standard)  
TX = Titanium Tungsten/Gold  
TG = Titanium Tungsten/Nickel/Gold (non-standard)

#### WVDC (in Volts)

3 significant digits, 100 Volts is standard

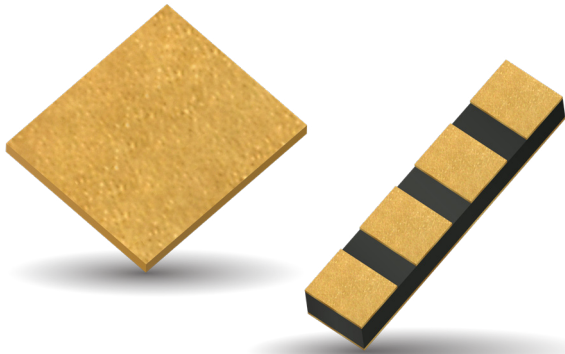
#### Capacitance Tolerance

Code	A (pF)	B (pF)	C (pF)	D (pF)	F (%)	G (%)	J (%)	K (%)	M (%)
Tol.	± 0.05	± 0.1	± 0.25	± 0.5	± 1	± 2	± 5	± 10	± 20

The above part number refers to a 111 series, case size U, CA dielectric, 1.5 pF, with a capacitance tolerance of C (±0.25 pF), 100 WVDC, with thin film gold termination

# 111 Series Microcaps®

## General Specifications



### FEATURE

- Broadband applications up to 100 GHz
- Rugged construction
- Ultra-high Q
- Standard capacitance range 0.04 to 10,000 pF
- Dielectric constants from 14 to 25,000
- Voltage ratings up to 100 WVDC
- Low cost
- All SLC products are RoHS compliant

### ELECTRICAL CHARACTERISTICS

Operating Frequency	up to 100 GHz
Resonant Frequency	See curve
Insulation Resistance	1x10 <sup>11</sup> Ohms min @ +25°C and rated voltage
Voltage Rating	Up to 100 WVDC (for higher ratings, contact factory)
Dielectric	250% of voltage rating for 5 seconds Impervious to static discharge

### MECHANICAL CHARACTERISTICS

Resistance to Solvents: KYOCERA AVX's dielectrics are virtually unaffected by moisture and commonly used cleaning solvents.

Bond Strength: All terminations meet or exceed MIL-STD-883 Method 2019 for Die Shear Strength. Wire bondability meets or exceeds ML-C-49464 Para. 3.12 and MIL-STD-883 Method 2011.

### TERMINATION

**TT:** Titanium Tungsten/Nickel/Gold  
(>100 μ-in. Au, over 1500 ±200 Å Ni, over 500 ±100 Å TiW) (Standard)

**TX:** Titanium Tungsten/Gold  
(>100 μ-in. Au, over 500 ±100 Å TiW)

**TG:** Titanium Tungsten/Nickel/Gold  
(>150 μ-in. Au, over 1500 ±200 Å Ni, over 500 ±100 Å TiW) (Non-Standard)

Contact KYOCERA AVX for alternate termination styles.

### ENVIRONMENTAL CHARACTERISTICS

Operating Temperature: Refer to TCC data on pages 6 and 7 for temperature limits.

### ADDITIONAL ENVIRONMENTAL CHARACTERISTICS

KYOCERA AVX Capacitors are designed and manufactured to meet or exceed the environmental limits as defined in MIL-C-49464.

