

Radial Leads/SkyCap®/SR Series



GENERAL INFORMATION

AVX SR Series

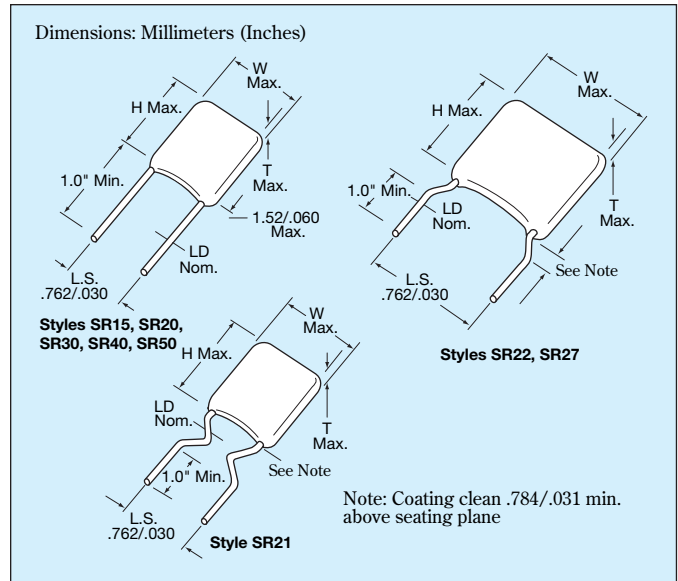
Conformally Coated Radial Ledged MLC

Temperature Coefficients: C0G (NP0), X7R, Z5U

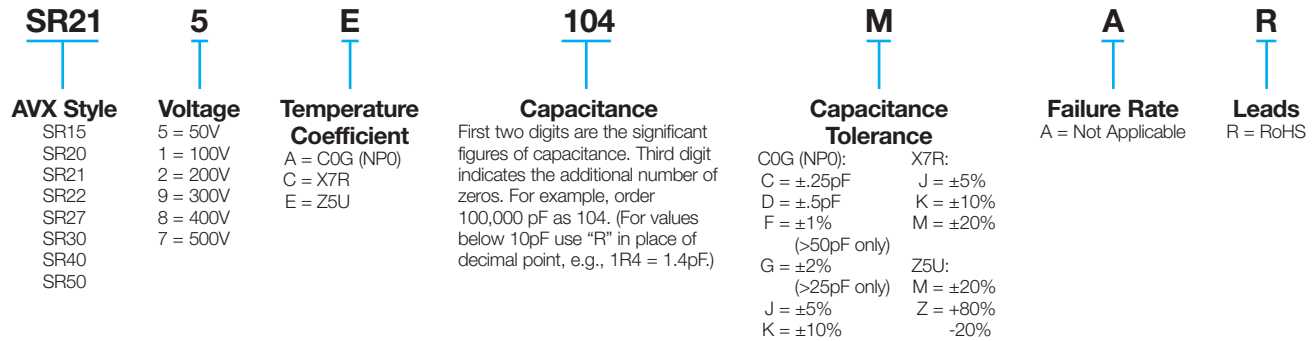
200, 100, 50 Volts (300V, 400V & 500V also available)

Case Material: Epoxy

Lead Material: RoHS Compliant, 100% Tin

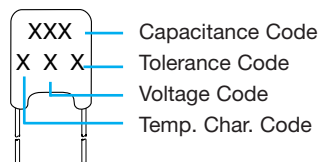


HOW TO ORDER

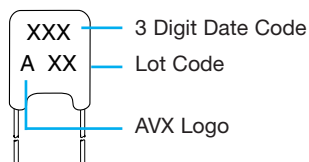


MARKING

FRONT



BACK



PACKAGING REQUIREMENTS

	Quantity per Bag
SR15, 20, 21, 22, 27, 30	1000 Pieces
SR40, 50	500 Pieces

Note: SR15, SR20, SR21, SR30, and SR40 available on tape and reel per EIA specifications RS-468. See Pages 33 and 34.

Radial Leads/SkyCap®/SR Series



C0G (NP0) Dielectric

SIZE AND CAPACITANCE SPECIFICATIONS

EIA Characteristic

Dimensions: Millimeters (Inches)

AVX Style	SR15	SR20	SR21	SR22	SR27	SR30	SR40	SR50
AVX "Insertable"	SR07	SR29	SR59	N/A	N/A	SR65	SR75	N/A
Width (W)	3.81 (.150)	5.08 (.200)	5.08 (.200)	5.08 (.200)	6.604 (.260)	7.62 (.300)	10.16 (.400)	12.70 (.500)
Height (H)	3.81 (.150)	5.08 (.200)	5.08 (.200)	5.08 (.200)	6.35 (.250)	7.62 (.300)	10.16 (.400)	12.70 (.500)
Thickness (T)	2.54 (.100)	3.175 (.125)	3.175 (.125)	3.175 (.125)	4.06 (.160)	3.81 (.150)	3.81 (.150)	5.08 (.200)
Lead Spacing (L.S.)	2.54 (.100)	2.54 (.100)	5.08 (.200)	6.35 (.250)	7.62 (.300)	5.08 (.200)	5.08 (.200)	10.16 (.400)
Lead Diameter (L.D.)	.508 (.020)	.508 (.020)	.508 (.020)	.508 (.020)	.508 (.020)	.508 (.020)	.508 (.020)	.635 (.025)
Cap. in.* Industry Preferred pF Values in Blue	WVDC 200 100 50	WVDC 200 100 50	WVDC 200 100 50	WVDC 200 100 50	WVDC 200 100 50	WVDC 100 50	WVDC 100 50	WVDC 100 50
1.0-9.9 10 15	SR151A1R0DAR SR151A100KAR SR.....A150KAR							
22 33 39	SR.....A220KAR SR.....A330KAR SR.....A390KAR							
47 68 100	SR.....A470KAR SR.....A680KAR SR151A101KAR							
150 220 330	SR.....A151KAR SR.....A221KAR SR.....A331KAR							
390 470 680	SR.....A391KAR SR.....A471KAR SR.....A681KAR							
1000 1500 2200	SR211A102KAR SR.....A152KAR SR.....A222KAR							
3900 4700 6800	SR.....A392KAR SR.....A472KAR SR.....A682KAR							
8200 10,000 15,000	SR.....A822KAR SR305A103KAR SR.....A153KAR							
22,000 33,000 39,000	SR.....A223KAR SR.....A333KAR SR.....A393KAR							
47,000 68,000 100,000	SR.....A473KAR SR.....A683KAR SR.....A104KAR							

For other styles, voltages, tolerances and lead lengths see Part No. Codes or contact factory.

*Other capacitance values available upon special request.

 = Industry preferred values
 = SR20 only

NOTE: Capacitance Ranges available for SR12 same as SR15
 SR62 same as SR21
 SR64 same as SR30
 SR89 same as SR21



Radial Leads/SkyCap®/SR Series



X7R Dielectric

SIZE AND CAPACITANCE SPECIFICATIONS






EIA Characteristic

Dimensions: Millimeters (Inches)

AVX Style	SR15	SR20	SR21	SR22	SR27	SR30	SR40	SR50														
AVX "Insertable"	SR07	SR29	SR59	N/A	N/A	SR65	SR75	N/A														
Width (W)	3.81 (.150)	5.08 (.200)	5.08 (.200)	5.08 (.200)	6.604 (.260)	7.62 (.300)	10.16 (.400)	12.70 (.500)														
Height (H)	3.81 (.150)	5.08 (.200)	5.08 (.200)	5.08 (.200)	6.35 (.250)	7.62 (.300)	10.16 (.400)	12.70 (.500)														
Thickness (T)	2.54 (.100)	3.175 (.125)	3.175 (.125)	3.175 (.125)	4.06 (.160)	3.81 (.150)	3.81 (.150)	5.08 (.200)														
Lead Spacing (L.S.)	2.54 (.100)	2.54 (.100)	5.08 (.200)	6.35 (.250)	7.62 (.300)	5.08 (.200)	5.08 (.200)	10.16 (.400)														
Lead Diameter (L.D.)	.508 (.020)	.508 (.020)	.508 (.020)	.508 (.020)	.508 (.020)	.508 (.020)	.508 (.020)	.635 (.025)														
Cap. in.* pF	Industry Preferred Values in Blue	WVDC			WVDC			WVDC			WVDC			WVDC			WVDC					
		200	100	50	200	100	50	200	100	50	100	50	200	100	50	200	100	50	200	100	50	
470	SR.....C471KAR																					
1000	SR155C102KAR																					
1500	SR.....C152KAR																					
2200	SR.....C222KAR																					
3300	SR.....C332KAR																					
4700	SR.....C472KAR																					
6800	SR.....C682KAR																					
10,000	SR215C103KAR																					
15,000	SR.....C153KAR																					
22,000	SR.....C223KAR																					
33,000	SR.....C333KAR																					
47,000	SR.....C473KAR																					
68,000	SR.....C683KAR																					
100,000	SR215C104KAR																					
150,000	SR.....C154KAR																					
220,000	SR215C224KAR																					
330,000	SR.....C334KAR																					
390,000	SR.....C394KAR																					
470,000	SR305C474KAR																					
1.0 µF	SR305C105KAR																					
2.2 µF	SR405C225KAR																					
2.7 µF	SR505C275KAR																					
4.7 µF	SR505C475KAR																					

For other styles, voltages, tolerances and lead lengths see Part No. Codes or contact factory.

*Other capacitance values available upon special request.

-  = Industry preferred values
-  = SR20 only
-  = Extended range
-  = Extended range, SR20 only
-  = Extended range with 0.150" thickness maximum

NOTE: Capacitance Ranges available for SR12 same as SR15
 SR62 same as SR21
 SR64 same as SR30
 SR89 same as SR21



Radial Leads/SkyCap®/SR Series



Z5U Dielectric

SIZE AND CAPACITANCE SPECIFICATIONS

EIA Characteristic

Dimensions: Millimeters (Inches)

AVX Style	SR15	SR20	SR21	SR22	SR27	SR30	SR40	SR50
AVX "Insertable"	SR07	SR29	SR59	N/A	N/A	SR65	SR75	N/A
Width (W)	3.81 (.150)	5.08 (.200)	5.08 (.200)	5.08 (.200)	6.604 (.260)	7.62 (.300)	10.16 (.400)	12.70 (.500)
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Thickness (T)	2.54 (.100)	3.175 (.125)	3.175 (.125)	3.175 (.125)	4.06 (.160)	3.81 (.150)	3.81 (.150)	5.08 (.200)
Lead Spacing (L.S.)	2.54 (.100)	2.54 (.100)	5.08 (.200)	6.35 (.250)	7.62 (.300)	5.08 (.200)	5.08 (.200)	10.16 (.400)
Lead Diameter (L.D.)	.508 (.020)	.508 (.020)	.508 (.020)	.508 (.020)	.508 (.020)	.508 (.020)	.508 (.020)	.635 (.025)
Cap. in.* Industry Preferred Values in Blue	WVDC 100 50	WVDC 100 50	WVDC 100 50	WVDC 100 50	WVDC 100 50	WVDC 100 50	WVDC 100 50	WVDC 100 50
10,000 47,000 100,000	SR15E103ZAR SR.....E473ZAR SR215E104ZAR							
150,000 220,000 330,000	SR.....E154ZAR SR215E224ZAR SR215E334ZAR							
470,000 680,000	SR215E474ZAR SR.....E684ZAR							
1.0 µF 1.5 µF 2.2 µF	SR.....105ZAR SR30E155ZAR SR30E225ZAR							
3.3 µF 4.7 µF	SR30E335ZAR SR30E475ZAR							

For other styles, voltages, tolerances and lead lengths see Part No. Codes or contact factory.

*Other capacitance values available upon special request.

- = Industry preferred values
- = SR20 only

AVX 500 VOLT SKYCAPS**

STYLE*	MAXIMUM CAPACITANCE VALUE	
	COG (NP0)	X7R
SR29	900 pF	.015 µF
SR20	1800 pF	.033 µF
SR28 SR59	900 pF	.015 µF
SR13 SR21	1800 pF	.033 µF
SR30 SR61 SR65	7200 pF	.12 µF
SR40 SR75	.015 µF	.27 µF
SR22	1800 pF	.033 µF
SR27	1800 pF	.033 µF
SR76	.015 µF	.27 µF
SR50	.036 µF	.59 µF

*Consult pages 27 and 28 for style sizes.

**Voltage rating based on DWV of 150% of rated voltage.



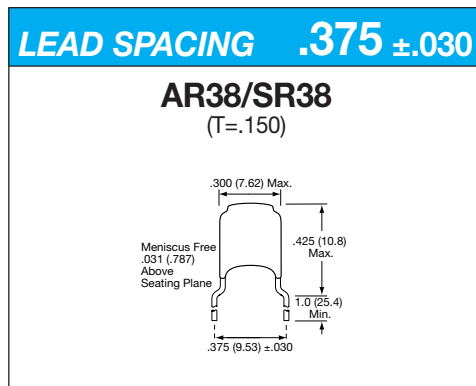
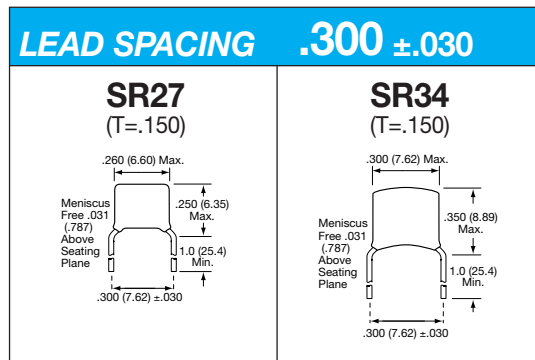
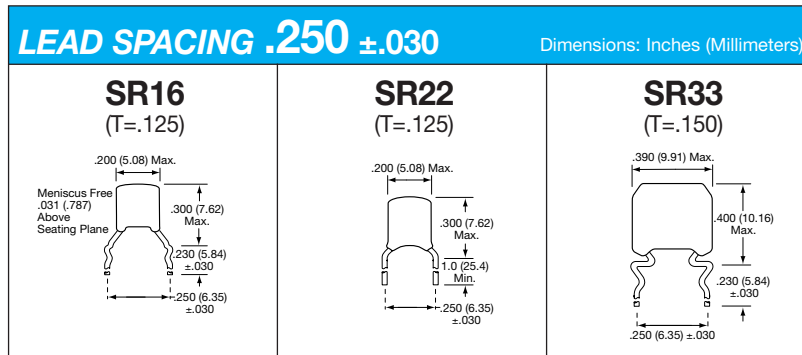
Configurations by Lead Spacing

LEAD SPACING .100 ±.030				Dimensions: Inches (Millimeters)
AR07/SR07* (T=.100) 	AR14/SR14 (T=.100) 	AR15/SR15* (T=.100) 	AR20/SR20* (T=.125) 	
AR29/SR29* (T=.125) 	AR62/SR62* (T=.125) 	SR62-LP* (T=.100) 		

LEAD SPACING .200 ±.030					Dimensions: Inches (Millimeters)
AR12/SR12* (T=.100) 	SR13* (T=.125) 	AR21/SR21* (T=.125) 	SR21-85* (T=.125) 	SR28* (T=.125) 	
AR30/SR30* (T=.150) 	SR30-LP* (T=.150) 	AR32/SR32* (T=.150) 	AR40/SR40* (T=.150) 	AR59/SR59* (T=.125) 	
SR61 (T=.150) 	SR63* (T=.150) 	SR64* (T=.150) 	SR64-LP* (T=.150) 	AR65/SR65* (T=.150) 	

*SL style available in all SR configurations.

Configurations by Lead Spacing



- NOTES:**
1. All leads are #24 AWG unless otherwise noted.
 2. Available in tape and reel packaging(*).
 3. Other styles are also available, contact factory.
 4. (T = XXX) under type designation is maximum thickness in inches.

*SL style available in all SR configurations.

Radial Leads/Packaging

Tape and Reel



GENERAL INFORMATION

1. Standard reel diameter is 355 millimeters (14 inches) maximum.
2. Reeling standard (#1 or #2) should be specified when ordering.

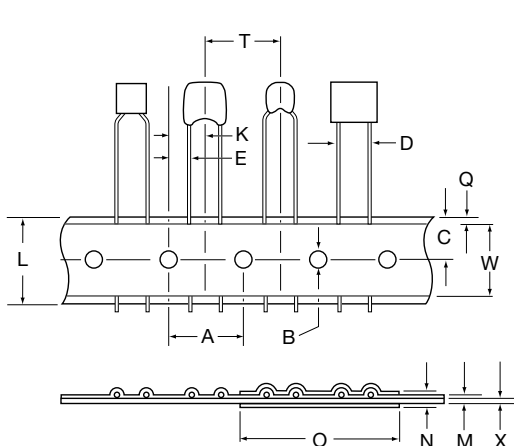
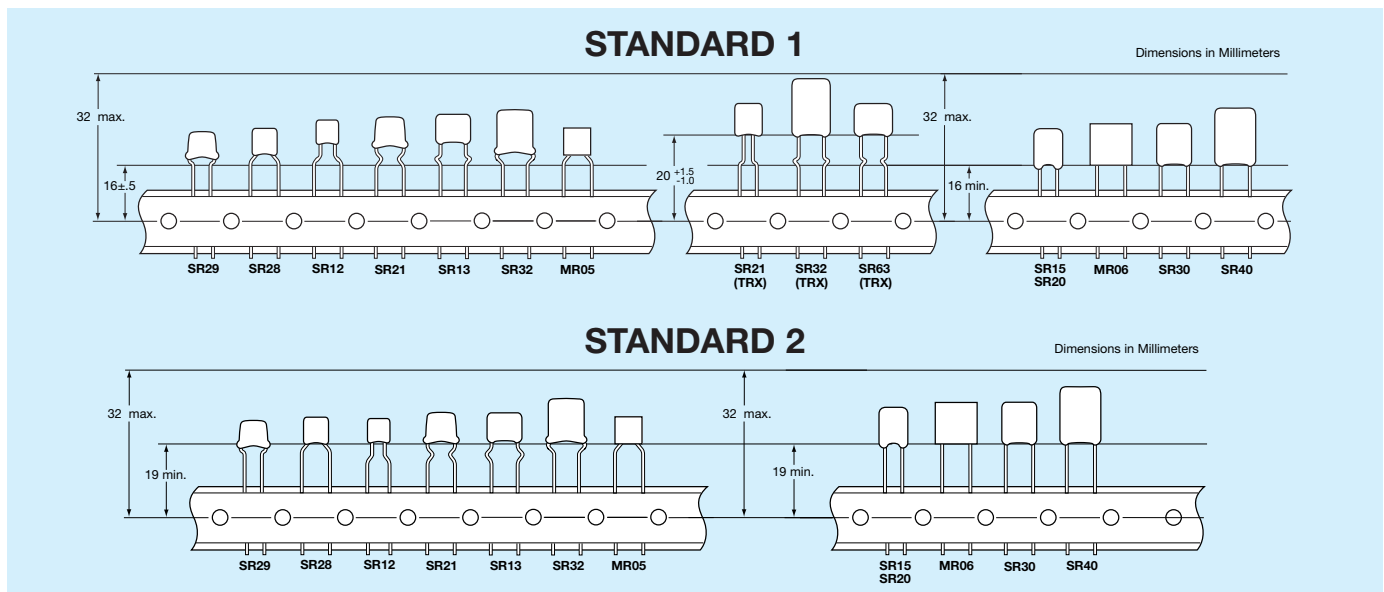
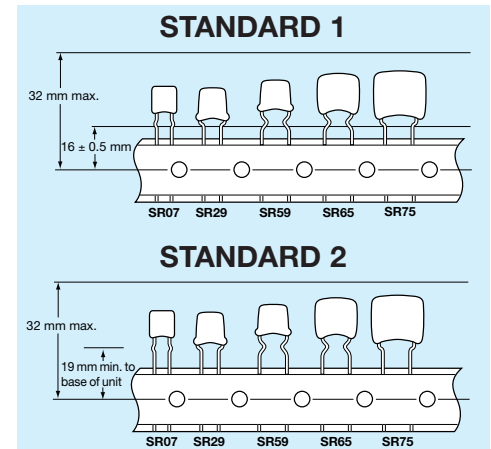
HOW TO ORDER

To specify tape and reel packaging, add TR1, TR2 or TRX to the end of the AVX 12 digit part number.

Examples:

SR215C104KARTR1
 SR305E105MARTR2
 SR215C103JARTRX

THE INSERTABLES

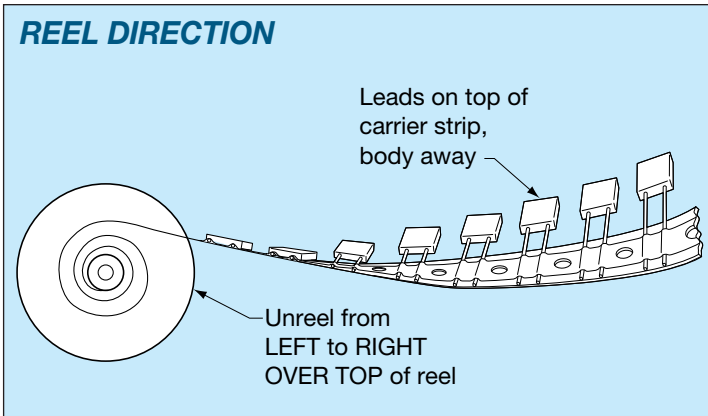


DESCRIPTION

DIMENSIONS (MM)

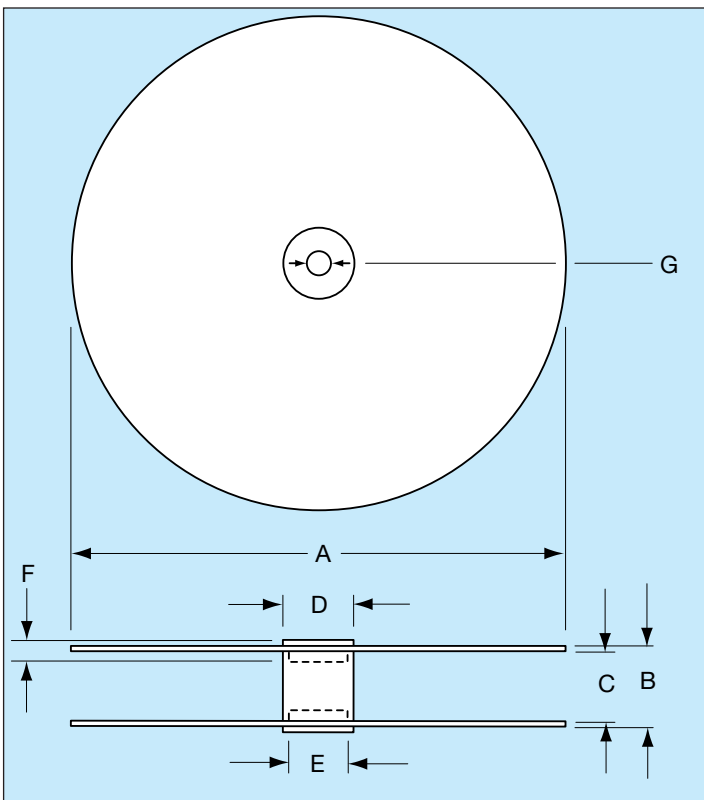
A. Feed Hole Pitch	12.70 ± .20
B. Feed Hole Diameter	3.99 ± .20
C. Feed Hole Location	9.02 ± .51
D. Component Lead Spacing	5.00 ^{+0.79} _{-.20} or 2.54 ^{+0.79} _{-.20}
E. Component Lead Location	3.81 ± .51 or 5.00 ± .51 for 2.54 lead spacing 2.00 maximum
F. Component Lead Protrusion (edge of carrier to cut end of lead)	2.00 maximum
K. Component Body Location	6.35 ± .41
L. Carrier Tape Width	18.01 ^{+1.02} _{-.51}
M. Carrier Tape Assembly Thickness	.71 ± .20
N. Carrier Tape Spliced Thickness	1.42 maximum
O. Carrier Tape Spliced Length	50.80 - 88.90
Q. Adhesive Tape Border	3.00 maximum
R. Component Bent Leads (either direction)	.79 maximum
S. Component Misalignment	.99 maximum
T. Component Pitch	12.70 ± .99
W. Adhesive Tape Width	5.00 minimum
X. Carrier Tape Thickness	.51 ± .10
Y. Cumulative Pitch over 20 Pitches	254 ± 2.00





QUANTITY PER REEL SR/AR	
PART	PCS
SR15, 07, 12	3500
SR20, 21, 23, 28 13, 29, 59, 62, 89	3000
SR30, 32, 40, 63, 64 65, 75	2000
MR05, 06	2500

*SL style available in all SR configurations.



DESCRIPTION	DIMENSIONS (MM)
A – Reel Diameter	304.80 - 355
B – Reel Outside Width	50.80 maximum
C – Reel Inside Width	38.10 - 46.02
D – Core Diameter (O.D.)	102.01 maximum
E – Hub Recess Diameter	86.36 maximum
F – Hub Recess Depth	9.50 minimum
G – Arbor Hole Diameter	25.40 - 30.48

CONVERSION TABLE									
MM	IN	MM	IN	MM	IN	MM	IN	MM	IN
.10	.004	1.52	.060	5.00	.197	9.91	.390	32.00	1.260
.20	.007	2.00	.079	5.08	.200	10.03	.395	38.10	1.500
.38	.015	2.54	.100	6.22	.245	10.16	.400	46.02	1.812
.41	.016	3.00	.118	6.35	.250	11.68	.460	50.80	2.000
.51	.020	3.18	.125	6.60	.260	12.50	.492	86.36	3.400
.71	.028	3.48	.137	6.99	.275	12.70	.500	88.90	3.500
.79	.031	3.81	.150	7.62	.300	16.00	.630	102.01	4.016
.99	.039	3.99	.157	8.89	.350	18.01	.709	254.00	10.000
1.02	.040	4.45	.175	9.02	.355	25.40	1.000	304.80	12.000
1.42	.056	4.98	.196	9.50	.374	30.48	1.200	355.00	14.000

European Detail Specifications



CECC 30-601 & 30-701

SkyCap and Ceralam capacitors are available to European CECC specifications covering three standard dielectric materials: 1B/C0G, 2C1/X7R and 2F4/Y5V. The latter is available only with SkyCap capacitors.

To order use AVX part number with the Failure Rate code of “T” for CECC.

Molded Radial – CECC

1B/A CECC 30 601 009 Issue 1				2C1/C CECC 30 701 007 Issue 1		
	50V	100V	200V	50V	100V	200V
B/MR05	1R0-682	1R0-472	1R0-332	221-224	221-154	221-393
C/MR06	1R0-223	1R0-153	1R0-123	122-105	122-474	122-124

SkyCap – CECC

SR15 = D2	SR20 = D6	SR21 = D7	SR30 = D11	SR40 = D15	SR50 = D14	SR65 = D16
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1B/A CECC 30 601 801 Issue 2					2C1/C CECC 30 701 801 Issue 2				2F4/E CECC 30 701 802 Issue 1	
	50V	100V	200V	500V	50V	100V	200V	500V	50V	100V
SR15	1R0-122	1R0-681	1R0-471	—	221-333	221-273	221-562	—	103-154	103-393
SR20	1R0-682	1R0-392	1R0-392	1R0-152	102-184	102-124	102-333	102-103	103-824	103-224
SR21	1R0-682	1R0-392	1R0-392	1R0-152	102-184	102-124	102-333	102-153	103-824	103-224
SR30	102-273	102-223	102-223	101-472	333-105	333-334	333-124	103-473	104-225	104-684
SR40	103-563	103-393	103-393	—	334-155	334-105	124-274	—	105-156	105-335
SR50	103-104	103-823	103-563	—	104-155	104-185	104-564	—	225-276	225-685
SR65	102-273	102-223	102-103	101-472	333-105	333-334	333-124	103-473	104-225	104-684

