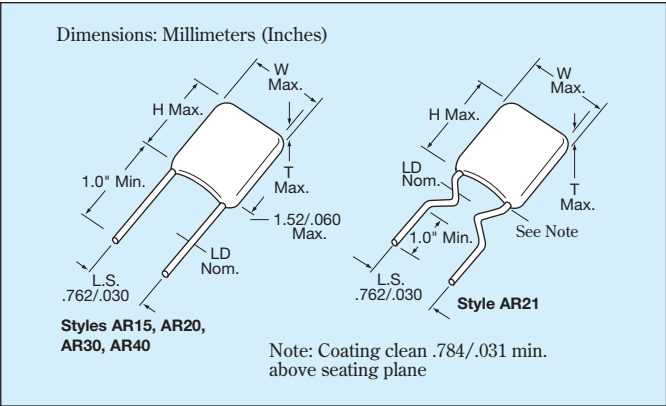


Radial Leads/AR Series



GENERAL INFORMATION

AVX AR Series
Conformally Coated Radial Leaded MLC
Temperature Coefficients: C0G (NP0), X7R, X8R
200, 100, 50 Volts
Case Material: Epoxy
Lead Material: Solderable
Qualified: to AEC-Q200
Temperature Range: up to 150°C



HOW TO ORDER

AR21	5	F	104	M	4	R
AVX Style	Voltage	Temperature Coefficient	Capacitance	Capacitance Tolerance	Failure Rate	Leads
	5 = 50V 1 = 100V 2 = 200V	A = C0G (NP0) C = X7R F = X8R	First two digits are the significant figures of capacitance. Third digit indicates the additional number of zeros. For example, order 100,000 pF as 104. (For values below 10pF use "R" in place of decimal point, e.g., 1R4 = 1.4pF.)	COG (NP0): C = $\pm 25\text{pF}$ D = $\pm 5\text{pF}$ F = $\pm 1\%$ ($>50\text{pF}$ only) G = $\pm 2\%$ ($>25\text{pF}$ only) J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$	4 = AEC-Q200	T = Trimmed Leads .230" $\pm$.030" A = Long Leads 1.0" minimum (Other lead lengths are available, contact AVX) R = RoHS Long Lead 1.0" minimum

MARKING

FRONT	BACK
XXX — Capacitance Code X X X — Tolerance Code Voltage Code Temp. Char. Code	XXX — 3 Digit Date Code A XX — Lot Code AVX Logo

PACKAGING REQUIREMENTS

	Quantity per Bag
AR15, 20, 21, 30	1000 Pieces
AR40	500 Pieces

Note: AR15, AR20, AR21, AR30, and AR40 available on tape and reel per EIA specifications RS-468. See pages 29 and 30.



Radial Leads/AR Series

C0G (NP0) Dielectric



SIZE AND CAPACITANCE SPECIFICATIONS

EIA Characteristic		Dimensions: Millimeters (Inches)								
AVX Style		AR15			AR20			AR21		
AVX "Insertable"		AR07			AR29			AR59		
Width (W)		3.81 (.150)			5.08 (.200)			5.08 (.200)		
Height (H)		3.81 (.150)			5.08 (.200)			5.08 (.200)		
Thickness (T)		2.54 (.100)			3.175 (.125)			3.175 (.125)		
Lead Spacing (L.S.)		2.54 (.100)			2.54 (.100)			5.08 (.200)		
Lead Diameter (L.D.)		.508 (.020)			.508 (.020)			.508 (.020)		
Cap. (*)	Industry Preferred Values in Blue	WVDC			WVDC			WVDC		
		200	100	50	200	100	50	200	100	50
1R0	AR-----A1R0D4R									
100	AR-----A100K4R									
150	AR-----A150K4R									
220	AR-----A220K4R									
330	AR-----A330K4R									
390	AR-----A390K4R									
470	AR-----A470K4R									
680	AR-----A680K4R									
101	AR-----A101K4R									
151	AR-----A151K4R									
221	AR-----A221K4R									
331	AR-----A331K4R									
391	AR-----A391K4R									
471	AR-----A471K4R									
681	AR-----A681K4R									
102	AR-----A102K4R									
152	AR-----A152K4R									
222	AR-----A222K4R									
392	AR-----A392K4R									
472	AR-----A472K4R									
682	AR-----A682K4R									
822	AR-----A822K4R									

(*) First two digits are the significant figures of capacitance. Third digit indicates the additional number of zeros.

Other series available: AR12, AR14, AR62, AR89.



Radial Leads/AR Series

X7R Dielectric



SIZE AND CAPACITANCE SPECIFICATIONS

EIA Characteristic		Dimensions: Millimeters (Inches)									
AVX Style		AR15		AR20		AR21		AR30		AR40	
AVX "Insertable"		AR07		AR29		AR59		AR65		AR75	
Width (W)		3.81 (.150)		5.08 (.200)		5.08 (.200)		7.62 (.300)		10.16 (.400)	
Height (H)		3.81 (.150)		5.08 (.200)		5.08 (.200)		7.62 (.300)		10.16 (.400)	
Thickness (T)		2.54 (.100)		3.175 (.125)		3.175 (.125)		3.81 (.150)		3.81 (.150)	
Lead Spacing (L.S.)		2.54 (.100)		2.54 (.100)		5.08 (.200)		5.08 (.200)		5.08 (.200)	
Lead Diameter (L.D.)		.508 (.020)		.508 (.020)		.508 (.020)		.508 (.020)		.508 (.020)	
Cap. (*)	Industry Preferred Values in Blue	WVDC 100 50		WVDC 100 50		WVDC 100 50		WVDC 100 50		WVDC 100 50	
471	AR____C471K4R										
681	AR____C681K4R										
102	AR____C102K4R										
152	AR____C152K4R										
222	AR____C222K4R										
392	AR____C392K4R										
472	AR____C472K4R										
682	AR____C682K4R										
822	AR____C822K4R										
103	AR____C103K4R										
153	AR____C153K4R										
223	AR____C223K4R										
333	AR____C333K4R										
393	AR____C393K4R										
473	AR____C473K4R										
683	AR____C683K4R										
104	AR____C104K4R										
224	AR____C224K4R										
334	AR____C334K4R										
474	AR____C474K4R										
684	AR____C684K4R										
105	AR____C105K4R										

(*) First two digits are the significant figures of capacitance. Third digit indicates the additional number of zeros.

Other series available: AR12, AR14, AR62, AR89, AR32, AR38.



Radial Leads/AR Series



X8R Dielectric

SIZE AND CAPACITANCE SPECIFICATIONS

EIA Characteristic		Dimensions: Millimeters (Inches)					
AVX Style		AR20			AR21		
AVX "Insertable"		AR29			AR59		
Width (W)		5.08 (.200)			5.08 (.200)		
Height (H)		5.08 (.200)			5.08 (.200)		
Thickness (T)		3.175 (.125)			3.175 (.125)		
Lead Spacing (L.S.)		2.54 (.100)			5.08 (.200)		
Lead Diameter (L.D.)		.508 (.020)			.508 (.020)		
Cap. (*)	Industry Preferred Values in Blue	WVDC			WVDC		
		200	100	50	200	100	50
102	AR.....F102K4R						
103	AR.....F103K4R						
104	AR.....F104K4R						

(*) First two digits are the significant figures of capacitance. Third digit indicates the additional number of zeros.

Other series available: AR14, AR62, AR89.



SkyCap®/AR Series

Configurations by Lead Spacing



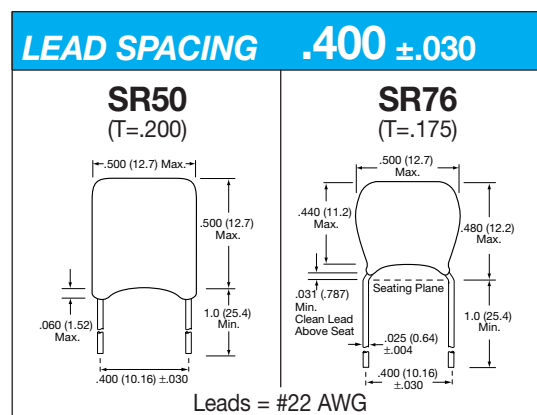
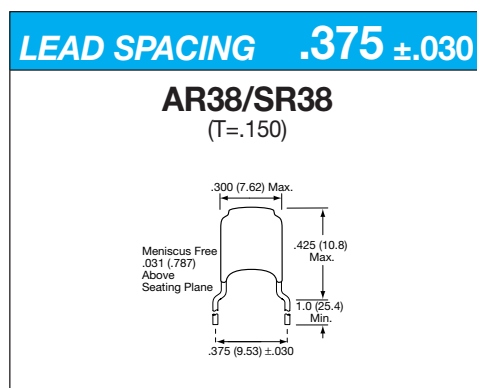
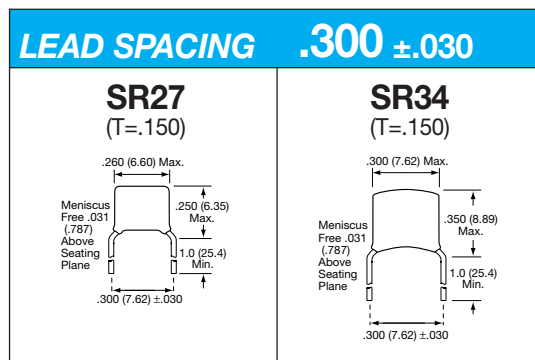
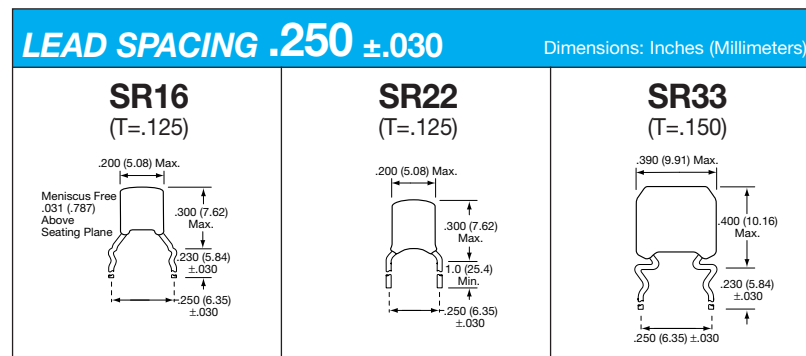
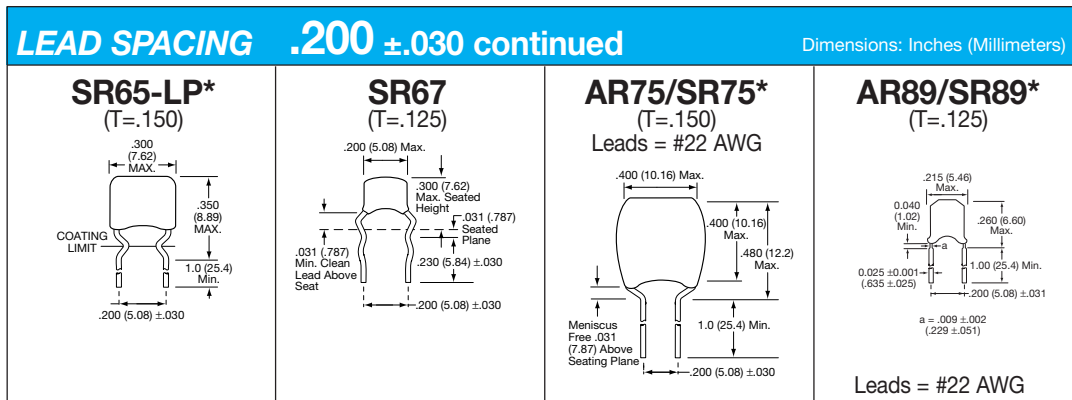
LEAD SPACING .100 ±.030				Dimensions: Inches (Millimeters)
AR07/SR07* (T=.100)	AR14/SR14 (T=.100)	AR15/SR15* (T=.100)	AR20/SR20* (T=.125)	
AR29/SR29* (T=.125)	AR62/SR62* (T=.125) Leads = #22 AWG	SR62-LP* (T=.100) Leads = #22 AWG		

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) Leads = #22 AWG	SR64-LP* (T=.150) Leads = #22 AWG	AR65/SR65* (T=.150)	



SkyCap®/AR Series

Configuration 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.

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.

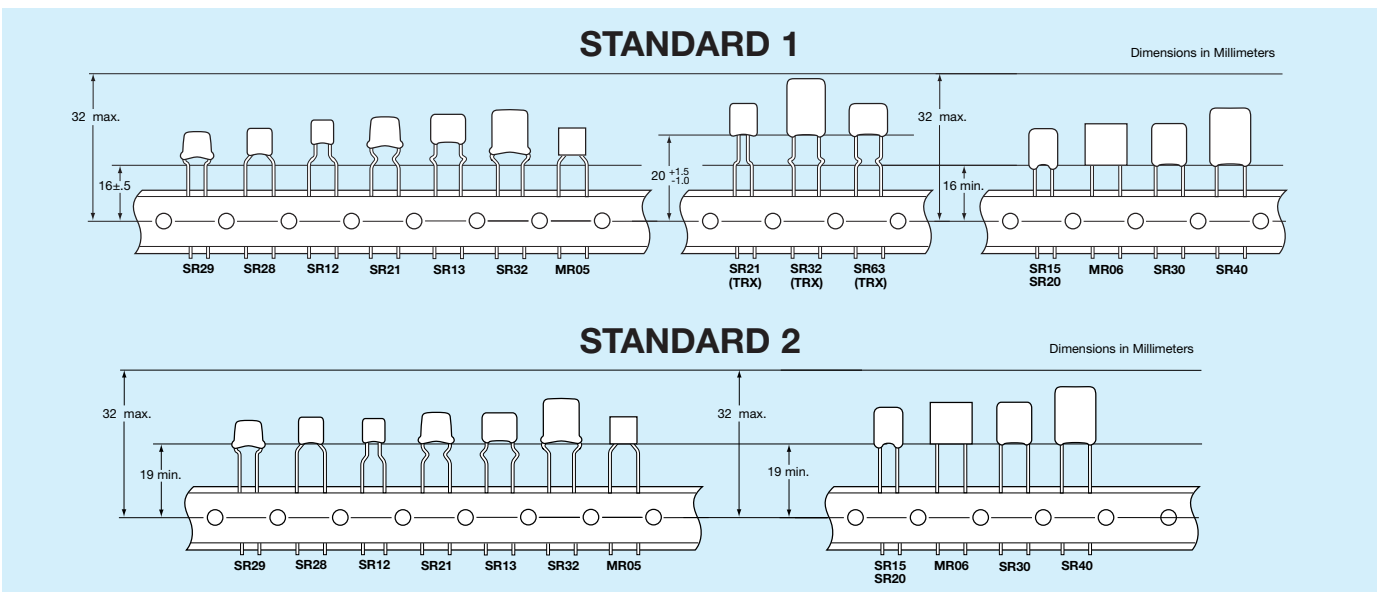
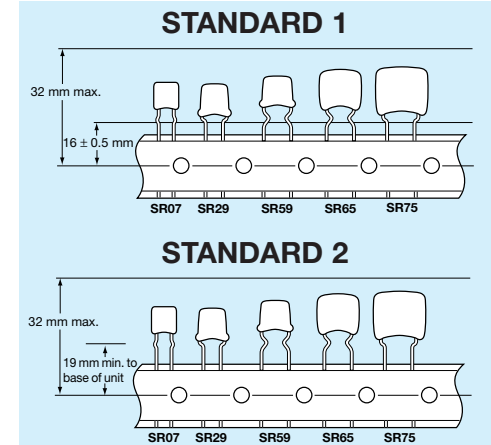
HOW TO ORDER

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

Examples:

SR215C104KAATR1
SR305E105MAATR2
SR215C103JAATRX

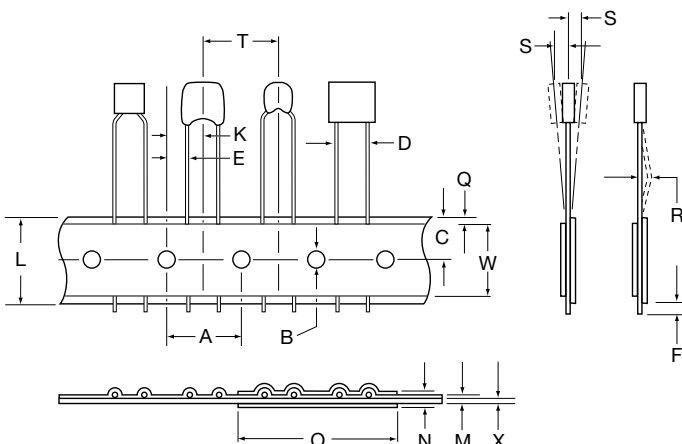
THE INSERTABLES



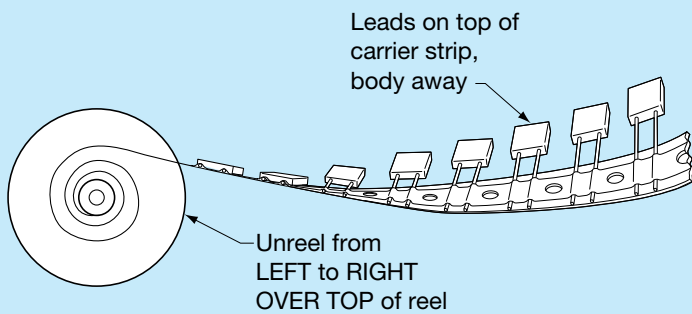
DESCRIPTION

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 ^{+.79} _{-.20} or 2.54 ^{+.79} _{-.20}
E. Component Lead Location	3.81 ± .51 or 5.00 ± .51 for 2.54 lead spacing
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

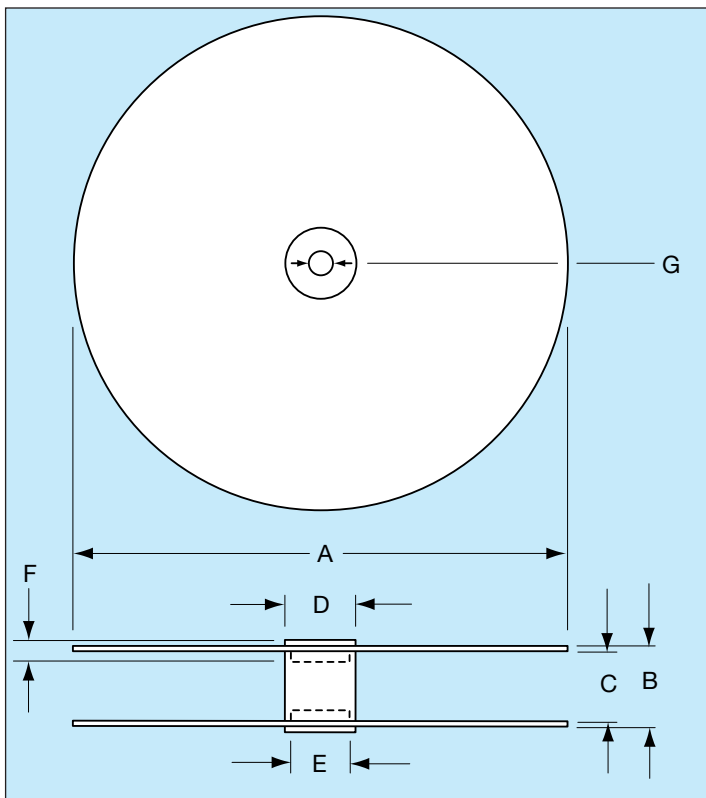


REEL DIRECTION



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



DESCRIPTION

A – Reel Diameter
B – Reel Outside Width
C – Reel Inside Width
D – Core Diameter (O.D.)
E – Hub Recess Diameter
F – Hub Recess Depth
G – Arbor Hole Diameter

DIMENSIONS (MM)

304.80 - 355
50.80 maximum
38.10 - 46.02
102.01 maximum
86.36 maximum
9.50 minimum
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