



THE DATASHEET OF SR151A220KAATR1

RADIAL LEADS

SkyCap®/SR Series



GENERAL INFORMATION

SR Series

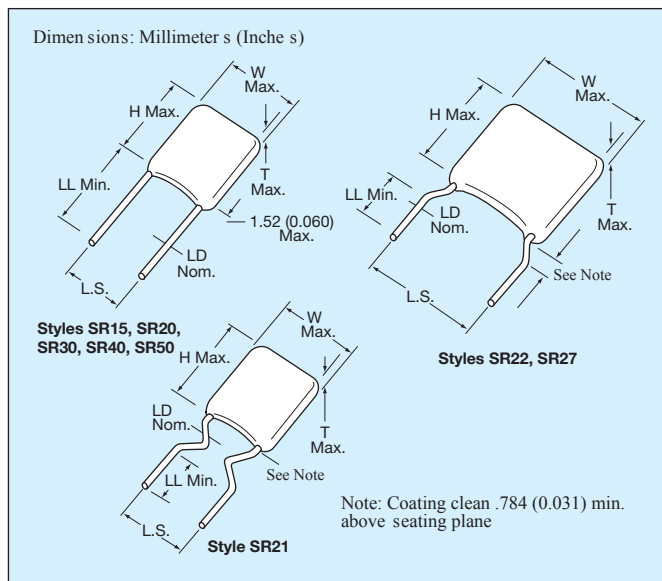
Conformally Coated Radial Leaded MLC

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

SR21

5

E

104

M

A

R

TR1

Style

SR15
SR20
SR21
SR22
SR27
SR30
SR40
SR50

Voltage

5 = 50V
1 = 100V
2 = 200V
9 = 300V
8 = 400V
7 = 500V

Temperature Coefficient

A = C0G (NP0)
C = X7R
E = Z5U

Capacitance

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.)

Capacitance Tolerance

C0G (NP0):
C = $\pm 0.25\text{pF}$
D = $\pm 0.5\text{pF}$
F = $\pm 1\%$ ($>50\text{pF}$ only)
G = $\pm 2\%$ ($>25\text{pF}$ only)
J = $\pm 5\%$
K = $\pm 10\%$
X7R:
J = $\pm 5\%$
K = $\pm 10\%$
M = $\pm 20\%$
Z5U:
M = $\pm 20\%$
Z = $+80\%$ -20%

Failure Rate

A = Not Applicable

Leads

R = RoHS

Packaging

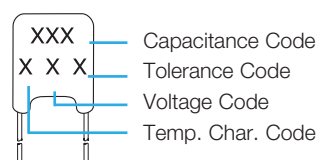
Blank: Bulk Packaging 1.0" minimum of lead length
T: Trimmed leads .230" $\pm$.030"
Bulk packaging
TR1: Tape and Reel Packaging
AP1: Ammopack packaging

See packaging specification pages 33-34

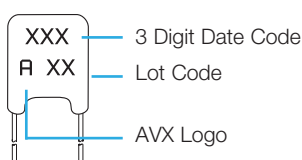


MARKING

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

C0G (NP0) Dielectric



SIZE AND CAPACITANCE SPECIFICATIONS

EIA Characteristic

Dimensions: Millimeters (Inches)

Style	SR15	SR20	SR21	SR22	SR27	SR30	SR40	SR50														
“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			WVDC		
		200	100	50	200	100	50	200	100	50	200	100	50	200	100	50	100	50	100	50	100	50
1.0-9.9	SR151A1R0DAR																					
10	SR151A100KAR																					
15	SR.....A150KAR																					
22	SR.....A220KAR																					
33	SR.....A330KAR																					
39	SR.....A390KAR																					
47	SR.....A470KAR																					
68	SR.....A680KAR																					
100	SR151A101KAR																					
150	SR.....A151KAR																					
220	SR.....A221KAR																					
330	SR.....A331KAR																					
390	SR.....A391KAR																					
470	SR.....A471KAR																					
680	SR.....A681KAR																					
1000	SR211A102KAR																					
1500	SR.....A152KAR																					
2200	SR.....A222KAR																					
3900	SR.....A392KAR																					
4700	SR.....A472KAR																					
6800	SR.....A682KAR																					
8200	SR.....A822KAR																					
10,000	SR.....A103KAR																					
15,000	SR.....A153KAR																					
22,000	SR.....A223KAR																					
33,000	SR.....A333KAR																					
39,000	SR.....A393KAR																					
47,000	SR.....A473KAR																					
68,000	SR.....A683KAR																					
100,000	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

Capacitance ranges available for SR12 and SR07 same as SR15
 SR62 and SR59 same as SR21
 SR64 and SR65 same as SR30
 SR75 same as SR40
 SR13 same as SR21

NOTE: For others voltages, tolerances, electrical specifications and NPO typical characteristics, see the KYOCERA AVX Multilayer Ceramic Leaded Capacitors Catalog.

RADIAL LEADS

X7R Dielectric



SIZE AND CAPACITANCE SPECIFICATIONS

EIA Characteristic

Dimensions: Millimeters (Inches)

	Style	SR15			SR20			SR21			SR22			SR27			SR30			SR40			SR50		
	"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			WVDC			WVDC		
		200	100	50	200	100	50	200	100	50	200	100	50	200	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 uF	SR305C105KAR																								
2.2 uF	SR405C225KAR																								
2.7 uF	SR505C275KAR																								
4.7 uF	SR505C475KAR																								
10.0 uF	SR655C106KAR																								

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

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

RADIAL LEADS

Z5U Dielectric



SIZE AND CAPACITANCE SPECIFICATIONS

EIA Characteristic

Dimensions: Millimeters (Inches)

Style	SR15	SR20	SR21	SR22	SR27	SR30	SR40	SR50									
“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		WVDC		WVDC	
		100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50
10,000	SR155E103ZAR																
47,000	SR.....E473ZAR																
100,000	SR215E104ZAR																
150,000	SR.....E154ZAR																
220,000	SR215E224ZAR																
330,000	SR215E334ZAR																
470,000	SR215E474ZAR																
680,000	SR.....E684ZAR																
1.0 µF	SR.....105ZAR																
1.5 µF	SR30E155ZAR																
2.2 µF	SR30E225ZAR																
3.3 µF	SR30E335ZAR																
4.7 µF	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

Capacitance ranges available for SR12 and SR07 same as SR15
 SR62 and SR59 same as SR21
 SR64 and SR65 same as SR30
 SR75 same as SR40
 SR13 same as SR21

NOTE: For others voltages, tolerances, electrical specifications and NPO typical characteristics, see the KYOCERA AVX Multilayer Ceramic Leaded Capacitors Catalog.

500 VOLT SKYCAPS**

STYLE*	MAXIMUM CAPACITANCE VALUE	
	C0G (NPO)	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

*Consult pages 27 and 28 for style sizes.

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



The Important Information/Disclaimer is incorporated in the catalog where these specifications came from or available online at www.avx.com/disclaimer/ by reference and should be reviewed in full before placing any order.

RADIAL LEADS

SkyCap®/SL Series

GENERAL INFORMATION

SL Series

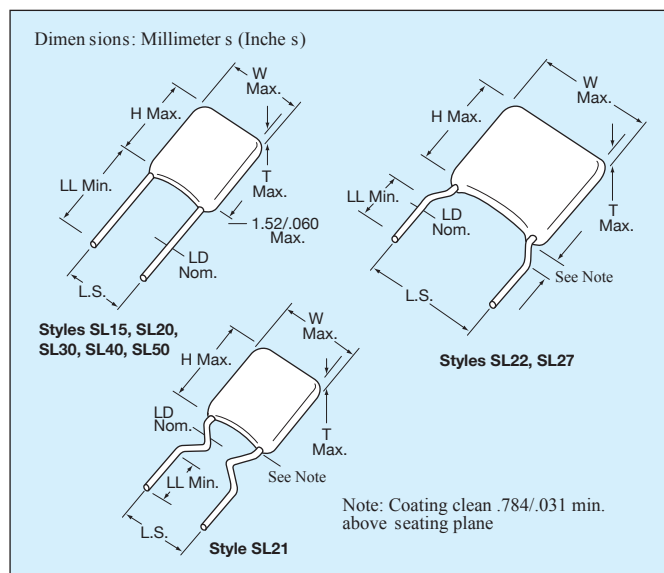
Conformally Coated Radial Leaded MLC

Temperature Coefficients: C0G (NP0), X7R, Z5U

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

Case Material: Epoxy

Lead Material: Solderable Sn/Pb



Drawings are for illustrative purposes only.
Actual lead form shape could vary within stated tolerances based on body size.

HOW TO ORDER

SL21

5

E

104

M

A

B

TR1

Style

SL15
SL20
SL21
SL22
SL27
SL30
SL40
SL50

Voltage

5 = 50V
1 = 100V
2 = 200V
9 = 300V
8 = 400V
7 = 500V

Temperature Coefficient

A = C0G (NP0)
C = X7R
E = Z5U

Capacitance

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.)

Capacitance Tolerance

C0G (NP0):
C = $\pm 0.25\text{pF}$
D = $\pm 0.5\text{pF}$
F = $\pm 1\%$
($>50\text{pF}$ only)
G = $\pm 2\%$
($>25\text{pF}$ only)
J = $\pm 5\%$
K = $\pm 10\%$
X7R:
J = $\pm 5\%$
K = $\pm 10\%$
M = $\pm 20\%$
Z5U:
M = $\pm 20\%$
Z = $+80\%$
-20%

Failure Rate

A = Not Applicable

Leads

B = Leads Sn/Pb Blank:
(Tin lead product)

Packaging

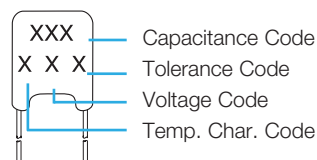
Bulk Packaging 1.0" minimum of lead length
T: Trimmed leads .230" $\pm$.030"
Bulk packaging
TR1: Tape and Reel Packaging
AP1: Ammopack packaging

See packaging specification pages 33-34

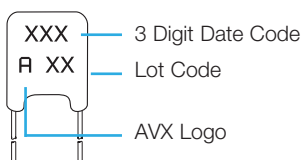
Not RoHS Compliant

MARKING

FRONT



BACK



PACKAGING REQUIREMENTS

	Quantity per Bag
SL15, 20, 21, 22, 27, 30	1000 Pieces
SL40, 50	500 Pieces

Note: SL15, SL20, SL21, SL30, and SL40 available on tape and reel per EIA specifications RS-468. See Pages 33 and 34.

RADIAL LEADS

C0G (NP0) Dielectric

SIZE AND CAPACITANCE SPECIFICATIONS

EIA Characteristic

Dimensions: Millimeters (Inches)

Style	SL15	SL20	SL21	SL22	SL27	SL30	SL40	SL50														
“Insertable”	SL07	SL29	SL59	N/A	N/A	SL65	SL75	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		WVDC		WVDC		WVDC		WVDC		
		200	100	50	200	100	50	200	100	50	200	100	50	200	100	50	100	50	100	50	100	50
1.0-9.9	SL151A1R0DAB																					
10	SL151A100KAB																					
15	SL151A150KAB																					
22	SL151A220KAB																					
33	SL151A330KAB																					
39	SL151A390KAB																					
47	SL151A470KAB																					
68	SL151A680KAB																					
100	SL151A101KAB																					
150	SL151A151KAB																					
220	SL151A221KAB																					
330	SL151A331KAB																					
390	SL151A391KAB																					
470	SL151A471KAB																					
680	SL151A681KAB																					
1000	SL211A102KAB																					
1500	SL151A152KAB																					
2200	SL151A222KAB																					
3900	SL151A392KAB																					
4700	SL151A472KAB																					
6800	SL151A682KAB																					
8200	SL151A822KAB																					
10,000	SL305A103KAB																					
15,000	SL151A153KAB																					
22,000	SL151A223KAB																					
33,000	SL151A333KAB																					
39,000	SL151A393KAB																					
47,000	SL151A473KAB																					
68,000	SL151A683KAB																					
100,000	SL151A104KAB																					

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
 = SL20 only

NOTE: Capacitance ranges available for
 SL12 same as SL15
 SL62 same as SL21
 SL64 same as SL30
 SL89 same as SL21

RADIAL LEADS

X7R Dielectric

SIZE AND CAPACITANCE SPECIFICATIONS

EIA Characteristic

Dimensions: Millimeters (Inches)

Style	SL15			SL20			SL21			SL22			SL27			SL30			SL40			SL50		
“Insertable”	SL07			SL29			SL59			N/A			N/A			SL65			SL75			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 200 100 50			WVDC 200 100 50			WVDC 200 100 50		
470 SL_____C471KAB																								
1000 SL155C102KAB																								
1500 SL_____C152KAB																								
2200 SL_____C222KAB																								
3300 SL_____C332KAB																								
4700 SL_____C472KAB																								
6800 SL_____C682KAB																								
10,000 SL215C103KAB																								
15,000 SL_____C153KAB																								
22,000 SL_____C223KAB																								
33,000 SL_____C333KAB																								
47,000 SL_____C473KAB																								
68,000 SL_____C683KAB																								
100,000 SL215C104KAB																								
150,000 SL_____C154KAB																								
220,000 SL215C224KAB																								
330,000 SL_____C334KAB																								
390,000 SL_____C394KAB																								
470,000 SL305C474KAB																								
1.0 uF SL305C105KAB																								
2.2 uF SL405C225KAB																								
2.7 uF SL505C275KAB																								
4.7 uF SL505C475KAB																								
10.0 uF SL655C106KAB																								

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

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

RADIAL LEADS

Z5U Dielectric

SIZE AND CAPACITANCE SPECIFICATIONS

EIA Characteristic

Dimensions: Millimeters (Inches)

Style	SL15	SL20	SL21	SL22	SL27	SL30	SL40	SL50									
“Insertable”	SL07	SL29	SL59	N/A	N/A	SL65	SL75	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		WVDC		WVDC	
		100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50
10,000	SL155E103ZAB																
47,000	SL.....E473ZAB																
100,000	SL215E104ZAB																
150,000	SL.....E154ZAB																
220,000	SL215E224ZAB																
330,000	SL215E334ZAB																
470,000	SL215E474ZAB																
680,000	SL.....E684ZAB																
1.0 µF	SL.....105ZAB																
1.5 µF	SL30E155ZAB																
2.2 µF	SL30E225ZAB																
3.3 µF	SL30E335ZAB																
4.7 µF	SL30E475ZAB																

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
 = SL20 only

500 VOLT SKYCAPS**

STYLE*	MAXIMUM CAPACITANCE VALUE	
	C0G (NP0)	X7R
SL29	900 pF	.015 µF
SL20	1800 pF	.033 µF
SL28 SL59	900 pF	.015 µF
SL13 SL21	1800 pF	.033 µF
SL30 SL61 SL65	7200 pF	.12 µF
SL40 SL75	.015 µF	.27 µF
SL22	1800 pF	.033 µF
SL27	1800 pF	.033 µF
SL76	.015 µF	.27 µF
SL50	.036 µF	.59 µF

*Consult pages 27 and 28 for style sizes.

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

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

⊖ View [SR151A220KAATR1](#) on WIN SOURCE

⊖ [AVX Corp/Kyocera Corp](#) Information

Optimize Your Supply Chain with WIN SOURCE Solutions

- ✓ Global Sourcing Solution
- ✓ Obsolete Management
- ✓ Cost Control Management
- ✓ Shortage Management
- ✓ Alternative Solution
- ✓ Excess Inventory Management