



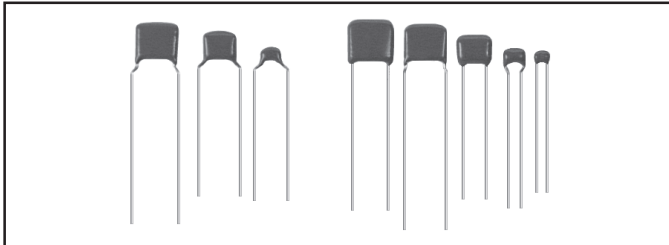
**THE DATASHEET OF  
1C20X7R103K050B**





# Ceramic Capacitors

## Monolythic<sup>®</sup>, Conformal-Coated, Radial Lead



### FEATURES

- EIA characteristics C0G, X7R, Z5U
- Capacitance range 10pF to 4.7μF
- Voltage ratings 50 WVDC to 100 WVDC
- Wide choice of lead spacing

### DIMENSIONAL CONFIGURATIONS [Numbers in brackets indicate millimeters]



Drawing for dimensional purposes only. Exact outline and lead form may vary depending on size and lead spacing.

TYPE	W (Max.)	H (Max.)	T (Max.)	LEAD SIZE		LEAD SPACING (S)					
				AWG NO.	DIA.	.10 [2.54]	.20 [5.08]	.25 [6.35]	.30 [7.62]	.37 [9.40]	.40 [10.16]
9C	.138 [3.505]	.120 [3.048]	.100 [2.540]	26	.016 [.406]	X	—	—	—	—	—
1C	.200 [5.080]	.250 [6.350]	.125 [3.175]	24	.020 [.508]	X	X	X	X	—	—
2C	.300 [7.620]	.300 [7.620]	.157 [3.988]	24	.020 [.508]	—	X	X	X	X	X
3C	.400 [10.160]	.400 [10.160]	.157 [3.988]	24	.020 [.508]	—	X	X	X	X	X
5C	.500 [12.700]	.500 [12.700]	.200 [5.080]	24	.020 [.508]	—	X	X	X	X	X

### HOW TO ORDER

1C	10	Z5U	104	M	050	B												
TYPE	LEAD SPACING CODE	EIA TEMPERATURE CHARACTERISTIC	CAPACITANCE CODE	CAPACITANCE TOLERANCE	DC VOLTAGE RATING	LEAD LENGTH*												
See Dimensional Configurations.	See Dimensional Configurations.		This is expressed in picofarads. The first two digits are the significant figures. The third is the number of zeros to follow.		This is expressed in volts. To complete the three-digit block, zeros precede the voltage rating.	B = Bulk R = Tape and Reel * 1.0 [25.4] minimum lead length.												
		<table border="1"> <thead> <tr> <th>CODE</th> <th>TEMPERATURE RANGE</th> <th>MAX. CAP. CHANGE OVER TEMP. RANGE</th> </tr> </thead> <tbody> <tr> <td>Z5U</td> <td>+ 10°C to + 85°C</td> <td>- 56%, + 22%</td> </tr> <tr> <td>X7R</td> <td>- 55°C to + 125°C</td> <td>± 15%</td> </tr> <tr> <td>C0G</td> <td>- 55°C to + 125°C</td> <td>0 ± 30PPM/°C</td> </tr> </tbody> </table>	CODE	TEMPERATURE RANGE	MAX. CAP. CHANGE OVER TEMP. RANGE	Z5U	+ 10°C to + 85°C	- 56%, + 22%	X7R	- 55°C to + 125°C	± 15%	C0G	- 55°C to + 125°C	0 ± 30PPM/°C				
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K	± 10%	X7R																
M	± 20%	Z5U																

# Types 1C - 9C

Vishay Sprague



## STANDARD PART NUMBERS

### 1C10 SERIES

1C10C0G100J050B	1C10C0G220J050B	1C10C0G330J050B
1C10C0G100J050R	1C10C0G220J050R	1C10C0G330J050R
1C10C0G100J100B	1C10C0G220J100B	1C10C0G330J100B
1C10C0G100J100R	1C10C0G220J100R	1C10C0G330J100R
1C10C0G101J050B	1C10C0G221J050B	1C10C0G331J050B
1C10C0G101J050R	1C10C0G221J050R	1C10C0G331J050R
1C10C0G101J100B	1C10C0G221J100B	1C10C0G331J100B
1C10C0G101J100R	1C10C0G221J100R	1C10C0G331J100R
1C10C0G102J050B	1C10C0G222J050B	1C10C0G332J050B
1C10C0G102J050R	1C10C0G222J050R	1C10C0G332J050R
1C10C0G102J100B	1C10C0G222J100B	1C10C0G332J100B
1C10C0G102J100R	1C10C0G222J100R	1C10C0G332J100R
1C10C0G470J050B	1C10X7R222K100B	1C10Z5U103M050R
1C10C0G470J050R	1C10X7R222K100R	1C10Z5U103M100B
1C10C0G470J100B	1C10X7R223K050B	1C10Z5U103M100R
1C10C0G470J100R	1C10X7R223K050R	1C10Z5U104M050B
1C10C0G471J050B	1C10X7R223K100B	1C10Z5U104M050R
1C10C0G471J050R	1C10X7R223K100R	1C10Z5U104M100B
1C10C0G471J100B	1C10X7R332K050B	1C10Z5U104M100R
1C10C0G471J100R	1C10X7R332K050R	1C10Z5U223M050B
1C10C0G472J050B	1C10X7R332K100B	1C10Z5U223M050R
1C10C0G472J050R	1C10X7R332K100R	1C10Z5U223M100B
1C10X7R102K050B	1C10X7R333K050B	1C10Z5U223M100R
1C10X7R102K050R	1C10X7R333K050R	1C10Z5U224M050B
1C10X7R102K100B	1C10X7R333K100B	1C10Z5U224M050R
1C10X7R102K100R	1C10X7R333K100R	1C10Z5U333M050B
1C10X7R103K050B	1C10X7R333K100R	1C10Z5U333M050R
1C10X7R103K050R	1C10X7R472K050B	1C10Z5U333M100B
1C10X7R103K100B	1C10X7R472K050R	1C10Z5U333M100R
1C10X7R103K100R	1C10X7R472K100B	1C10Z5U334M050B
1C10X7R104K050B	1C10X7R472K100R	1C10Z5U334M050R
1C10X7R104K050R	1C10X7R473K050B	1C10Z5U334M100B
1C10X7R104K100B	1C10X7R473K050R	1C10Z5U473M050B
1C10X7R104K100R	1C10X7R473K100B	1C10Z5U473M050R
1C10X7R222K050B	1C10X7R473K100R	1C10Z5U473M100B
1C10X7R222K050R	1C10Z5U103M050B	1C10Z5U473M100R

### 1C20 SERIES

1C20C0G100J050B	1C20C0G470J050B	1C20X7R333K100B
1C20C0G100J050R	1C20C0G470J050R	1C20X7R333K100R
1C20C0G100J100B	1C20C0G470J100B	1C20X7R472K050B
1C20C0G100J100R	1C20C0G470J100R	1C20X7R472K050R
1C20C0G101J050B	1C20C0G471J050B	1C20X7R472K100B
1C20C0G101J050R	1C20C0G471J050R	1C20X7R472K100R
1C20C0G101J100B	1C20C0G471J100B	1C20X7R473K050B
1C20C0G101J100R	1C20C0G471J100R	1C20X7R473K050R
1C20C0G102J050B	1C20C0G472J050B	1C20X7R473K100B
1C20C0G102J050R	1C20C0G472J050R	1C20X7R473K100R
1C20C0G102J100B	1C20X7R102K050B	1C20Z5U103M050B
1C20C0G102J100R	1C20X7R102K050R	1C20Z5U103M050R
1C20C0G220J050B	1C20X7R102K100B	1C20Z5U103M100B
1C20C0G220J050R	1C20X7R102K100R	1C20Z5U103M100R
1C20C0G220J100B	1C20X7R103K050B	1C20Z5U104M050B
1C20C0G220J100R	1C20X7R103K050R	1C20Z5U104M050R
1C20C0G221J050B	1C20X7R103K100B	1C20Z5U104M100B
1C20C0G221J050R	1C20X7R103K100R	1C20Z5U104M100R
1C20C0G221J100B	1C20X7R104K050B	1C20Z5U104M100R
1C20C0G221J100R	1C20X7R104K050R	1C20Z5U223M050B
1C20C0G222J050B	1C20X7R104K100B	1C20Z5U223M050R



STANDARD PART NUMBERS		
<b>1C20 SERIES (Continued)</b>		
1C20C0G222J050R	1C20X7R104K100R	1C20Z5U223M100B
1C20C0G222J100B	1C20X7R222K050B	1C20Z5U223M100R
1C20C0G222J100R	1C20X7R222K050R	1C20Z5U224M050B
1C20C0G330J050B	1C20X7R222K100B	1C20Z5U224M050R
1C20C0G330J050R	1C20X7R222K100R	1C20Z5U333M050B
1C20C0G330J100B	1C20X7R223K050B	1C20Z5U333M050R
1C20C0G330J100R	1C20X7R223K050R	1C20Z5U333M100B
1C20C0G331J050B	1C20X7R223K100B	1C20Z5U333M100R
1C20C0G331J050R	1C20X7R223K100R	1C20Z5U334M050B
1C20C0G331J100B	1C20X7R332K050B	1C20Z5U334M050R
1C20C0G331J100R	1C20X7R332K050R	1C20Z5U473M050B
1C20C0G332J050B	1C20X7R332K100B	1C20Z5U473M050R
1C20C0G332J050R	1C20X7R332K100R	1C20Z5U473M100B
1C20C0G332J100B	1C20X7R333K050B	1C20Z5U473M100R
1C20C0G332J100R	1C20X7R333K050R	
<b>1C25 SERIES</b>		
1C25C0G100J050B	1C25C0G470J050B	1C25X7R333K100B
1C25C0G100J100B	1C25C0G470J100B	1C25X7R472K050B
1C25C0G101J050B	1C25C0G471J050B	1C25X7R472K100B
1C25C0G101J100B	1C25C0G471J100B	1C25X7R473K050B
1C25C0G102J050B	1C25C0G472J050B	1C25X7R473K100B
1C25C0G102J100B	1C25X7R102K050B	1C25Z5U103M050B
1C25C0G220J050B	1C25X7R102K100B	1C25Z5U103M100B
1C25C0G220J100B	1C25X7R103K050B	1C25Z5U104M050B
1C25C0G221J050B	1C25X7R103K100B	1C25Z5U104M100B
1C25C0G221J100B	1C25X7R104K050B	1C25Z5U223M050B
1C25C0G222J050B	1C25X7R104K100B	1C25Z5U223M100B
1C25C0G222J100B	1C25X7R222K050B	1C25Z5U224M050B
1C25C0G222J100R	1C25X7R222K100B	1C25Z5U224M100B
1C25C0G330J050B	1C25X7R223K050B	1C25Z5U333M050B
1C25C0G330J100B	1C25X7R223K100B	1C25Z5U333M100B
1C25C0G331J050B	1C25X7R332K050B	1C25Z5U334M050B
1C25C0G331J100B	1C25X7R332K100B	1C25Z5U473M050B
1C25C0G332J050B	1C25X7R333K050B	1C25Z5U473M100B
1C25C0G332J100B		
<b>1C30 SERIES</b>		
1C30C0G100J050B	1C30C0G470J050B	1C30X7R333K100B
1C30C0G100J100B	1C30C0G470J100B	1C30X7R472K050B
1C30C0G101J050B	1C30C0G471J050B	1C30X7R472K100B
1C30C0G101J100B	1C30C0G471J100B	1C30X7R473K050B
1C30C0G102J050B	1C30C0G472J050B	1C30X7R473K100B
1C30C0G102J100B	1C30X7R102K050B	1C30Z5U103M050B
1C30C0G220J050B	1C30X7R102K100B	1C30Z5U103M100B
1C30C0G220J100B	1C30X7R103K050B	1C30Z5U104M050B
1C30C0G221J050B	1C30X7R103K100B	1C30Z5U104M100B
1C30C0G221J100B	1C30X7R104K050B	1C30Z5U223M050B
1C30C0G222J050B	1C30X7R104K100B	1C30Z5U223M100B
1C30C0G222J100B	1C30X7R222K050B	1C30Z5U224M050B
1C30C0G222J100R	1C30X7R222K100B	1C30Z5U224M100B
1C30C0G330J050B	1C30X7R223K050B	1C30Z5U333M050B
1C30C0G330J100B	1C30X7R223K100B	1C30Z5U333M100B
1C30C0G331J050B	1C30X7R332K050B	1C30Z5U334M050B
1C30C0G331J100B	1C30X7R332K100B	1C30Z5U473M050B
1C30C0G332J050B	1C30X7R333K050B	1C30Z5U473M100B
1C30C0G332J100B		
<b>2C20 SERIES</b>		
2C20C0G103J050B	2C20X7R224K050R	2C20Z5U105M050B
2C20C0G103J050R	2C20X7R334K050B	2C20Z5U105M050R
2C20X7R105K050B	2C20X7R334K050R	2C20Z5U474M050B
2C20X7R105K050R	2C20X7R474K050B	2C20Z5U474M050R
2C20X7R224K050B	2C20X7R474K050R	

# Types 1C - 9C

Vishay Sprague



STANDARD PART NUMBERS		
<b>2C25 SERIES</b>		
2C25C0G103J050B 2C25X7R105K050B 2C25X7R224K050B	2C25X7R334K050B 2C25X7R474K050B	2C25Z5U105M050B 2C25Z5U474M050B
<b>2C30 SERIES</b>		
2C30C0G103J050B 2C30X7R105K050B 2C30X7R224K050B	2C30X7R334K050B 2C30X7R474K050B	2C30Z5U105M050B 2C30Z5U474M050B
<b>2C37 SERIES</b>		
2C37C0G103J050B 2C37X7R104K050B 2C37X7R105K050B 2C37X7R224K050B	2C37X7R334K050B 2C37X7R474K050B 2C37Z5U104M050B 2C37Z5U105M050B	2C37Z5U224M050B 2C37Z5U334M050B 2C37Z5U474M050B
<b>2C40 SERIES</b>		
2C40C0G103J050B 2C40X7R104K050B 2C40X7R105K050B 2C40X7R224K050B	2C40X7R334K050B 2C40X7R474K050B 2C40Z5U104M050B 2C40Z5U105M050B	2C40Z5U224M050B 2C40Z5U334M050B 2C40Z5U474M050B
<b>3C20 SERIES</b>		
3C20C0G223J050B 3C20C0G223J050R	3C20Z5U225M050B 3C20Z5U225M050R	3C20Z5U335M050B 3C20Z5U335M050R
<b>3C25 SERIES</b>		
3C25C0G223J050B	3C25Z5U225M050B	3C25Z5U333M050B
<b>3C30 SERIES</b>		
3C30C0G223J050B	3C30Z5U225M050B	3C30Z5U335M050B
<b>3C37 SERIES</b>		
3C37C0G223J050B 3C37XR5105K050B	3C37Z5U225M050B	3C37Z5U335M050B
<b>3C40 SERIES</b>		
3C40C0G223J050B 3C40X7R105K050B	3C40Z5U225M050B	3C40Z5U335M050B
<b>5C SERIES</b>		
5C20C0G473J050B 5C25C0G473J050B 5C30C0G473J050B	5C37C0G473J050B 5C37Z5U475M050B	5C40C0G473J050B 5C40Z5U475M050B
<b>9C SERIES</b>		
9C10C0G100J050B 9C10C0G100J100B 9C10C0G101J050B 9C10C0G101J100B 9C10C0G102J050B 9C10C0G220J050B 9C10C0G220J100B 9C10C0G221J050B 9C10C0G330J050B 9C10C0G330J100B 9C10C0G331J050B	9C10C0G331J100B 9C10C0G470J050B 9C10C0G470J100B 9C10C0G471J050B 9C10C0G471J100B 9C10X7R102K050B 9C10X7R102K100B 9C10X7R103K050B 9C10X7R103K100B 9C10X7R222K050B 9C10X7R222K100B	9C10X7R223K050B 9C10X7R332K050B 9C10X7R332K100B 9C10X7R333K050B 9C10X7R472K050B 9C10X7R472K100B 9C10Z5U103M050B 9C10Z5U103M100B 9C10Z5U223M050B 9C10Z5U333M050B 9C10Z5U473M050B

STANDARD PACKAGE INCREMENTS					
B = BULK	MINIMUM	PER PACKAGE	R = T & R	MINIMUM	PER REEL
1C	2000	500	1C	2500	2500
2C	500	500	2C	2000	2000
3C	500	500	3C	1500	1500
5C	250	250	5C	Not Available	—
9C	1500	1500	9C	Not Available	—

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