

HOW TO ORDER

Military Type Designation:

Established Reliability = CCR05, CCR06, CCR07, CCR08, CCR09

Non-Established Reliability = CC05, CC06, CC07, CC08, CC09

CCR06

Style

CC = Identifies temperature compensating, ceramic dielectric, fixed capacitors.
R = Identifies Established Reliability parts
06 = Numbers identify shape and dimension

CG

Temperature Characteristic

Permissible capacitance change from capacitance at +25°C in ppm/°C

Characteristic	Temp.
CX	1/ 1/-
CK	±250 ppm/°C +246.25, -326.25
CJ	±120 ppm/°C +116.25, -166.25
CH	±60 ppm/°C +55.00, -91.25
CG	±30 ppm/°C +27.50, -53.75

- 1/ Not practically measurable.
2/ The ppm/°C values for -55°C were calculated by dividing ppm by negative 80°C.

183

Capacitance

First two digits are the significant figures of capacitance. Third digit indicates the additional number of zeros. For example, order 18,000 pF as 183. (For values below 10pF use "R" in place of decimal point, e.g., 1R4 = 1.4pF.)

J

Capacitance Tolerance

C = ±0.25pF
D = ±0.5pF
F = ±1%
G = ±2%
J = ±5%
K = ±10%

R

Military Failure Rate

M = 1% per 1000 hours
P = 0.1% per 1000 hours
R = 0.01% per 1000 hours
S = 0.001% per 1000 hours

(V)

Standoff Option

To order standoff option, place "V" at the end of the part number.
Example:
CCR05CG332FSV

PACKAGING REQUIREMENTS

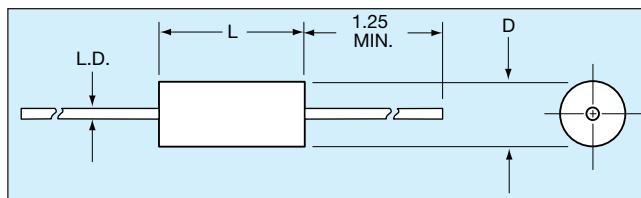
Packaging: CCR0X: 100 pcs/bag; CC0X: 1000 pcs/bag

SIZE SPECIFICATIONS

Dimensions: Millimeters (Inches)

Per MIL Spec	Case Size				
	Length (L)	Width (W)	Thickness (T)	Lead Spacing (L.S.)	Lead Diameter (L.D.)
CCR05/CC05 Figures 1, 4	4.83±.25 (.190±.010)	4.83±.25 (.190±.010)	2.29±.25 (.090±.010)	5.08±.38 (.200±.015)	.64±.05 (.025±.002)
CCR06/CC06 Figures 2, 3	7.37±.25 (.290±.010)	7.37±.25 (.290±.010)	2.29±.25 (.090±.010)	5.08±.38 (.200±.015)	.64±.05 (.025±.002)
CCR07/CC07 Figure 2	12.19±.51 (.480±.020)	12.19±.51 (.480±.020)	3.56±.25 (.140±.010)	10.16±.51 (.400±.020)	.64±.05 (.025±.002)
CCR08/CC08 Figure 2	12.19±.51 (.480±.020)	12.19±.51 (.480±.020)	6.1±.25 (.240±.010)	10.16±.51 (.400±.020)	.64±.05 (.025±.002)
CCR09/CC09 Figure 2	4.83±.25 (.190±.010)	4.83±.25 (.190±.010)	2.29±.25 (.090±.010)	2.54±.38 (.100±.015)	.64±.05 (.025±.002)

MIL-PRF-20/Axial Leads



HOW TO ORDER

Military Type Designation:

Established Reliability = CCR75, CCR76, CCR77, CCR78, CCR79

Non-Established Reliability = CC75, CC76, CC77, CC78, CC79

CCR76



Style
CC = Identifies temperature compensating, ceramic dielectric, fixed capacitors.
R = Identifies Established Reliability parts.
76 = Numbers identify shape and dimension.

CG



Temperature Characteristic

Permissible capacitance change from capacitance at +25°C in ppm/°C	
Characteristic	Temp.
CX	1/ +125°C
	1/ -55°C 2/
CK	±250 ppm/°C +125°C
	+246.25, -326.25 -55°C 2/
CJ	±120 ppm/°C +125°C
	+116.25, -166.25 -55°C 2/
CH	±60 ppm/°C +125°C
	+55.00, -91.25 -55°C 2/
CG	±30 ppm/°C +125°C
	+27.50, -53.75 -55°C 2/

- 1/ Not practically measurable.
2/ The ppm/°C values for -55°C were calculated by dividing ppm by negative 80°C.

102



Capacitance

First two digits are the significant figures of capacitance. Third digit indicates the additional number of zeros. For example, order 1,000 pF as 102. (For values below 10pF use "R" in place of decimal point, e.g., 1R8 = 1.8pF.)

K



Capacitance Tolerance

C = ±0.25pF
D = ±0.5pF
F = ±1%
G = ±2%
J = ±5%
K = ±10%

R



Military Failure Rate

M = 1% per 1000 hours
P = 0.1% per 1000 hours
R = 0.01% per 1000 hours
S = 0.001% per 1000 hours

PACKAGING REQUIREMENTS

Packaging:

Bulk

CCR75/CC75, CCR76/CC76, CCR77/CC77, 100 pcs/bag
CCR78/CC78, CCR79/CC79 50 pcs/bag

Tape & Reel

CCR75/CC75, CCR76/CC76	5000 pcs/reel
CCR77/CC77	3000 pcs/reel
CCR78/CC78	950 pcs/reel
CCR79/CC79	650 pcs/reel

SIZE SPECIFICATIONS

Dimensions: Millimeters (Inches)

Per MIL Spec	Case Size		
	Length (L)	Diameter (D)	Lead Diameter (L.D.)
MIL-PRF-20			
CCR75 CC75	4.07±.25 (.160±.010)	2.29±.25 (.090±.010)	.48±.05 (.019±.002)
CCR76 CC76	6.35±.25 (.250±.010)	2.29±.25 (.090±.010)	.48±.05 (.019±.002)
CCR77 CC77	9.91±.25 (.390±.010)	3.56±.25 (.140±.010)	.63±.05 (.025±.002)
CCR78 CC78	12.7±.51 (.500±.020)	6.35±.38 (.250±.015)	.63±.05 (.025±.002)
CCR79 CC79	17.53±.51 (.690±.020)	8.89±.51 (.350±.020)	.63±.05 (.025±.002)



MIL-PRF-20/Axial Leads



MILITARY PART NUMBER IDENTIFICATION CC75 THRU CC79 AND CCR75 THRU CCR79

Military Type Designation	Capacitance (pF)	Capacitance Tolerance	WVDC
CC75-CCR75			
CCR75CX1R0	1.0	C	200
CCR75CX1R1	1.1	C	200
CCR75CX1R2	1.2	C	200
CCR75CX1R3	1.3	C	200
CCR75CX1R5	1.5	C	200
CCR75CX1R6	1.6	C	200
CCR75CX1R8	1.8	C	200
CCR75CX2R0	2.0	C	200
CCR75CK2R2	2.2	C	200
CCR75CK2R4	2.4	C	200
CCR75CK2R7	2.7	C, D	200
CCR75CK3R0	3.0	C, D	200
CCR75CK3R3	3.3	C, D	200
CCR75CK3R6	3.6	C, D	200
CCR75CK3R9	3.9	C, D	200
CCR75CJ4R3	4.3	C, D	200
CCR75CJ4R7	4.7	C, D	200
CCR75CJ5R1	5.1	C, D	200
CCR75CJ5R6	5.6	C, D	200
CCR75CJ6R2	6.2	C, D	200
CCR75CJ6R8	6.8	C, D	200
CCR75CJ7R5	7.5	C, D	200
CCR75CH8R2	8.2	C, D	200
CCR75CH9R1	9.1	C, D	200
CCR75CH100	10	G, J	200
CCR75CH110	11	G, J	200
CCR75CH120	12	G, J	200
CCR75CH130	13	G, J	200
CCR75CH150	15	G, J	200
CCR75CH160	16	G, J	200
CCR75CH180	18	G, J	200
CCR75CG200	20	F, G, J	200
CCR75CG220	22	F, G, J	200
CCR75CG240	24	F, G, J	200
CCR75CG270	27	F, G, J	200
CCR75CG300	30	F, G, J	200

Add appropriate failure rate level (M, P, R or S)
Add appropriate cap. tolerance letter

Military Type Designation	Capacitance (pF)	Capacitance Tolerance	WVDC
CC75-CCR75			
CCR75CG330	33	F, G, J	200
CCR75CG360	36	F, G, J	200
CCR75CG390	39	F, G, J	200
CCR75CG430	43	F, G, J	200
CCR75CG470	47	F, G, J	200
CCR75CG510	51	F, G, J	200
CCR75CG560	56	F, G, J	200
CCR75CG620	62	F, G, J	200
CCR75CG680	68	F, G, J	200
CCR75CG750	75	F, G, J	200
CCR75CG820	82	F, G, J	100
CCR75CG910	91	F, G, J	100
CCR75CG101	100	F, G, J	100
CCR75CG111	110	F, G, J	100
CCR75CG121	120	F, G, J	100
CCR75CG131	130	F, G, J	100
CCR75CG151	150	F, G, J	100
CCR75CG161	160	F, G, J	100
CCR75CG181	180	F, G, J	100
CCR75CG201	200	F, G, J	100
CCR75CG221	220	F, G, J	100
CCR75CG241	240	F, G, J	100
CCR75CG271	270	F, G, J	50
CCR75CG301	300	F, G, J	50
CCR75CG331	330	F, G, J	50
CCR75CG361	360	F, G, J	50
CCR75CG391	390	F, G, J	50
CCR75CG431	430	F, G, J	50
CCR75CG471	470	F, G, J	50
CCR75CG511	510	F, G, J	50
CCR75CG561	560	F, G, J	50
CCR75CG621	620	F, G, J	50
CCR75CG681	680	F, G, J	50

Add appropriate failure rate level (M, P, R or S)
Add appropriate cap. tolerance letter

Note: For marking information, see page 72.

MIL-PRF-20/Axial Leads



MILITARY PART NUMBER IDENTIFICATION CC75 THRU CC79 AND CCR75 THRU CCR79

Military Type Designation	Capacitance (pF)	Capacitance Tolerance	WVDC
CC76, CCR76			
CCR76CG820	82	F, G, J	200
CCR76CG910	91	F, G, J	200
CCR76CG101	100	F, G, J	200
CCR76CG111	110	F, G, J	200
CCR76CG121	120	F, G, J	200
CCR76CG131	130	F, G, J	200
CCR76CG271	270	F, G, J	100
CCR76CG301	300	F, G, J	100
CCR76CG331	330	F, G, J	100
CCR76CG361	360	F, G, J	100
CCR76CG391	390	F, G, J	100
CCR76CG431	430	F, G, J	100
CCR76CG471	470	F, G, J	100
CCR76CG511	510	F, G, J	100
CCR76CG561	560	F, G, J	100
CCR76CG621	620	F, G, J	100
CCR76CG681	680	F, G, J	100
CCR76CG751	750	F, G, J	50
CCH76CG821	820	F, G, J	50
CCR76CG911	910	F, G, J	50
CCR76CG102	1,000	F, G, J	50
CC77, CCR77			
CCR77CG151	150	F, G, J	200
CCR77CG161	160	F, G, J	200
CCR77CG181	180	F, G, J	200
CCR77CG201	200	F, G, J	200
CCR77CG221	220	F, G, J	200
CCR77CG241	240	F, G, J	200
CCR77CG271	270	F, G, J	200
CCR77CG301	300	F, G, J	200
CCR77CG331	330	F, G, J	200
CCR77CG361	360	F, G, J	200
CCR77CG391	390	F, G, J	200
CCR77CG431	430	F, G, J	200
CCR77CG471	470	F, G, J	200
CCR77CG511	510	F, G, J	200
CCR77CG561	560	F, G, J	200
CCR77CG621	620	F, G, J	200
CCR77CG681	680	F, G, J	200
CCR77CG751	750	F, G, J	100
CCR77CG821	820	F, G, J	100
CCR77CG911	910	F, G, J	100
CCR77CG102	1,000	F, G, J	100
CCR77CG112	1,100	F, G, J	100
CCR77CG122	1,200	F, G, J	100
CCR77CG132	1,300	F, G, J	100
CCR77CG152	1,500	F, G, J	100
CCR77CG162	1,600	F, G, J	100
CCR77CG182	1,800	F, G, J	100
CCR77CG202	2,000	F, G, J	100
CCR77CG222	2,200	F, G, J	100
CCR77CG242	2,400	F, G, J	50
CCR77CG272	2,700	F, G, J	50

Add appropriate failure rate level (M, P, R or S)
Add appropriate cap. tolerance letter

Note: Complete type designation will include the appropriate capacitance tolerance in the 11th digit. For CC styles, delete 3rd and 12th digits.

Note: For marking information, see page 72.

Military Type Designation	Capacitance (pF)	Capacitance Tolerance	WVDC
CC77, CCR77 (cont)			
CCR77CG302	3,000	F, G, J	50
CCR77CG332	3,300	F, G, J	50
CCR77CG362	3,600	F, G, J	50
CCR77CG392	3,900	F, G, J	50
CCR77CG432	4,300	F, G, J	50
CCR77CG472	4,700	F, G, J	50
CCR77CG512	5,100	F, G, J, K	50
CCR77CG562	5,600	F, G, J, K	50
CC78, CCR78			
CCR78CG821	820	F, G, J, K	200
CCR78CG102	1,000	F, G, J, K	200
CCR78CG122	1,200	F, G, J, K	200
CCR78CG152	1,500	F, G, J, K	200
CCR78CG182	1,800	F, G, J, K	200
CCR78CG222	2,200	F, G, J, K	200
CCR78CG272	2,700	F, G, J, K	200
CCR78CG332	3,300	F, G, J, K	200
CCR78CG392	3,900	F, G, J, K	100
CCR78CG472	4,700	F, G, J, K	100
CCR78CG562	5,600	F, G, J, K	100
CCR78CG682	6,800	F, G, J, K	100
CCR78CG822	8,200	F, G, J, K	100
CCR78CG103	10,000	F, G, J, K	100
CCR78CG123	12,000	F, G, J, K	100
CCR78CG153	15,000	F, G, J, K	50
CCR78CG183	18,000	F, G, J, K	50
CCR78CG223	22,000	F, G, J, K	50
CCR78CG273	27,000	F, G, J, K	50
CC79, CCR79			
CCR79CG392	3,900	F, G, J, K	200
CCR79CG472	4,700	F, G, J, K	200
CCR79CG562	5,600	F, G, J, K	200
CCR79CG682	6,800	F, G, J, K	200
CCR79CG822	8,200	F, G, J, K	200
CCR79CG103	10,000	F, G, J, K	200
CCR79CG153	15,000	F, G, J, K	100
CCR79CG183	18,000	F, G, J, K	100
CCR79CG223	22,000	F, G, J, K	100
CCR79CG273	27,000	F, G, J, K	100
CCR79CG333	33,000	F, G, J, K	100
CCR79CG393	39,000	F, G, J, K	100
CCR79CG473	47,000	F, G, J, K	50
CCR79CG563	56,000	F, G, J, K	50
CCR79CG683	68,000	F, G, J, K	50
CCR79CG823	82,000	F, G, J, K	50

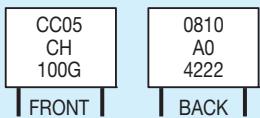
Add appropriate failure rate level (M, P, R or S)
Add appropriate cap. tolerance letter



MARKING

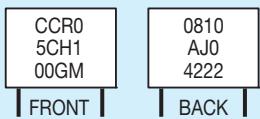
Radials

CC05 & CC09



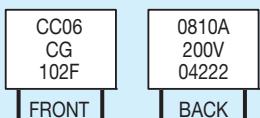
Date Code
A=Lot Letter
0=1st Digit of AVX FSCM #
4222=Last four digits of AVX FSCM #

CCR05 & CCR09



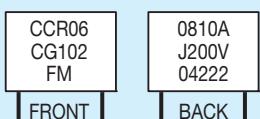
Date Code
A=Lot Letter
J="J" or "JAN" Brand
0=1st Digit of AVX FSCM #
4222=Last four digits of AVX FSCM #

CC06



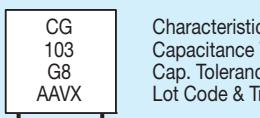
Date Code & Lot Letter
200V=Rated Voltage
04222=AVX FSCM #

CCR06



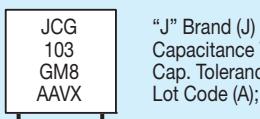
Date Code & Lot Letter
J="J" or "JAN" Brand
200V=Rated Voltage
04222=AVX FSCM #

CC07



Characteristic
Capacitance Value
Cap. Tolerance & Year Code (8 for 2008)
Lot Code & Trademark

CCR07



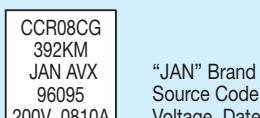
"J" Brand (J) and Characteristic (CG)
Capacitance Value
Cap. Tolerance (G) FR Level (M), & Year Code (8 for 2008)
Lot Code (A); and Trademark (AVX)

CC08



Trademark or Manufacturer's Name
Source Code (FSCM)
Voltage, Date Code and Lot Symbol

CCR08



"JAN" Brand & Trademark or Manufacturer's Name
Source Code (FSCM)
Voltage, Date Code and Lot Symbol

Axials

CC75, CC76



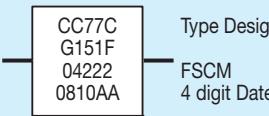
Characteristic
Capacitance Value
Cap. Tolerance & 2 digit Year Code
2 digit Week, 2 digit Lot Code, A for AVX

CCR75, CCR76



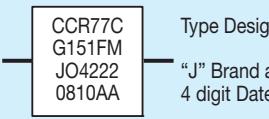
"J" Brand (J) and Characteristic (CG)
Capacitance Value
Cap. Tolerance (G) FR Level (M), & 2 digit Year Code
2 digit Week, A for AVX

CC77



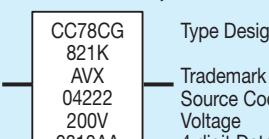
Type Designation
FSCM
4 digit Date Code, 2 digit Lot Code

CCR77



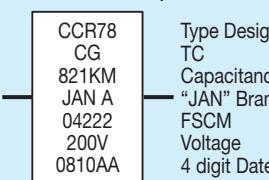
Type Designation
"J" Brand and FSCM
4 digit Date Code, 2 digit Lot Code

CC78, CC79



Type Designation
Trademark or Manufacturer's Name
Source Code (FSCM)
Voltage
4 digit Date Code

CCR78, CCR79



Type Designation
TC
Capacitance Tolerance, Failure Rate
"JAN" Brand, A for AVX
FSCM
Voltage
4 digit Date Code, 2 digit Lot Code