

MIL-C-20/Radial Leads



HOW TO ORDER

Military Type Designation:

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

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

Part Number Example _____

Style _____

Temperature Characteristic _____

Capacitance Code _____

Capacitance Tolerance _____

Military Failure Rate _____

Stand-off Option _____

MIL Part No. Codes

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

Temperature Characteristic:

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

Capacitance Code:

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 10 pF, use "R" in place of decimal point, e.g., 1R4 = 1.4pF).

Capacitance Tolerance:

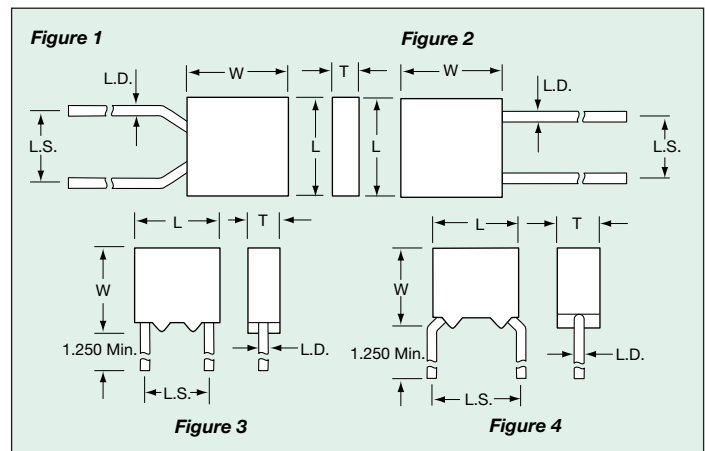
C = ±0.25 pF, D = ±0.5 pF, F = ±1%, G = ±2%,
J = ±5%, K = ±10%

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



To order stand-off option, place "V" at the end of the part number.
For example: CCR05CG332FSV.

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)

MILITARY PART NUMBER IDENTIFICATION

Military Type Designation	Capacitance (pF)	Capacitance Tolerance	WVDC
CC05-CCR05, CC09-CCR09			
CCR05CX1R0_	1.0	C	200
CCR05CX1R1_	1.1	C	200
CCR05CX1R2_	1.2	C	200
CCR05CX1R3_	1.3	C	200
CCR05CX1R5_	1.5	C	200
CCR05CX1R6_	1.6	C	200
CCR05CX1R8_	1.8	C	200
CCR05CX2R0_	2.0	C	200
CCR05CK2R2_	2.2	C	200
CCR05CK2R4_	2.4	C	200
CCR05CK2R7_	2.7	C, D	200
CCR05CK3R0_	3.0	C, D	200
CCR05CK3R3_	3.3	C, D	200
CCR05CK3R6_	3.6	C, D	200
CCR05CK3R9_	3.9	C, D	200

— Add appropriate failure rate level (M, P, R, or S), add V for Stand-off
— Add appropriate cap. tolerance letter

Military Type Designation	Capacitance (pF)	Capacitance Tolerance	WVDC
CC05-CCR05, CC09-CCR09			
CCR05CJ4R3_	4.3	C, D	200
CCR05CJ4R7_	4.7	C, D	200
CCR05CJ5R1_	5.1	C, D	200
CCR05CJ5R6_	5.6	C, D	200
CCR05CJ6R2_	6.2	C, D	200
CCR05CJ6R8_	6.8	C, D	200
CCR05CJ7R5_	7.5	C, D	200
CCR05CH8R2_	8.2	C, D	200
CCR05CH9R1_	9.1	C, D	200
CCR05CH100_	10	G, J	200
CCR05CH110_	11	G, J	200
CCR05CH120_	12	G, J	200
CCR05CH130_	13	G, J	200
CCR05CH150_	15	G, J	200
CCR05CH160_	16	G, J	200

— Add appropriate failure rate level (M, P, R, or S), add V for Stand-off
— Add appropriate cap. tolerance letter

Military Part Number Identification

Military Type Designation	Capacitance (pF)	Capacitance Tolerance	WVDC
CC05-CCR05, CC09-CCR09			
CCR05CH180	18	G, J	200
CCR05CG200	20	G, J	200
CCR05CG220	22	G, J	200
CCR05CG240	24	G, J	200
CCR05CG270	27	F, G, J	200
CCR05CG300	30	F, G, J	200
CCR05CG330	33	F, G, J	200
CCR05CG360	36	F, G, J	200
CCR05CG390	39	F, G, J	200
CCR05CG430	43	F, G, J	200
CCR05CG470	47	F, G, J	200
CCR05CG510	51	F, G, J	200
CCR05CG560	56	F, G, J	200
CCR05CG620	62	F, G, J	200
CCR05CG680	68	F, G, J	200
CCR05CG750	75	F, G, J	200
CCR05CG820	82	F, G, J	200
CCR05CG910	91	F, G, J	200
CCR05CG101	100	F, G, J	200
CCR05CG111	110	F, G, J	200
CCR05CG121	120	F, G, J	200
CCR05CG131	130	F, G, J	200
CCR05CG151	150	F, G, J	200
CCR05CG161	160	F, G, J	200
CCR05CG181	180	F, G, J	200
CCR05CG201	200	F, G, J	200
CCR05CG221	220	F, G, J	200
CCR05CG241	240	F, G, J	200
CCR05CG271	270	F, G, J	200
CCR05CG301	300	F, G, J	200
CCR05CG331	330	F, G, J	200
CCR05CG361	360	F, G, J	100
CCR05CG391	390	F, G, J	100
CCR05CG431	430	F, G, J	100
CCR05CG471	470	F, G, J	100
CCR05CG511	510	F, G, J	100
CCR05CG561	560	F, G, J	100
CCR05CG621	620	F, G, J	100
CCR05CG681	680	F, G, J	100
CCR05CG751	750	F, G, J	100
CCR05CG821	820	F, G, J	100
CCR05CG911	910	F, G, J	100
CCR05CG102	1,000	F, G, J	100
CCR05CG112	1,100	F, G, J	100
CCR05CG122	1,200	F, G, J	100
CCR05CG132	1,300	F, G, J	100
CCR05CG152	1,500	F, G, J	100
CCR05CG162	1,600	F, G, J	100
CCR05CG182	1,800	F, G, J	100
CCR05CG202	2,000	F, G, J	50
CCR05CG222	2,200	F, G, J	50
CCR05CG242	2,400	F, G, J	50
CCR05CG272	2,700	F, G, J	50
CCR05CG302	3,000	F, G, J	50
CCR05CG332	3,300	F, G, J	50
CC06, CCR06			
CCR06CG361	360	F, G, J	200
CCR06CG391	390	F, G, J	200
CCR06CG431	430	F, G, J	200
CCR06CG471	470	F, G, J	200
CCR06CG511	510	F, G, J	200
CCR06CG561	560	F, G, J	200
CCR06CG621	620	F, G, J	200
CCR06CG681	680	F, G, J	200
CCR06CG751	750	F, G, J	200
CCR06CG821	820	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
CC06, CCR06 (cont)			
CCR06CG911	910	F, G, J	200
CCR06CG102	1,000	F, G, J	200
CCR06CG112	1,100	F, G, J	200
CCR06CG122	1,200	F, G, J	200
CCR06CG132	1,300	F, G, J	200
CCR06CG152	1,500	F, G, J	200
CCR06CG162	1,600	F, G, J	200
CCR06CG182	1,800	F, G, J	200
CCR06CG202	2,000	F, G, J	100
CCR06CG222	2,200	F, G, J	100
CCR06CG242	2,400	F, G, J	100
CCR06CG272	2,700	F, G, J	100
CCR06CG302	3,000	F, G, J	100
CCR06CG332	3,300	F, G, J	100
CCR06CG362	3,600	F, G, J	100
CCR06CG392	3,900	F, G, J	100
CCR06CG432	4,300	F, G, J	100
CCR06CG472	4,700	F, G, J	100
CCR06CG512	5,100	F, G, J, K	50
CCR06CG562	5,600	F, G, J, K	50
CCR06CG622	6,200	F, G, J, K	50
CCR06CG682	6,800	F, G, J, K	50
CCR06CG752	7,500	F, G, J, K	50
CCR06CG822	8,200	F, G, J, K	50
CCR06CG912	9,100	F, G, J, K	50
CCR06CG103	10,000	F, G, J, K	50
CCR06CG123	12,000	F, G, J, K	50
CCR06CG153	15,000	F, G, J, K	50
CCR06CG183	18,000	F, G, J, K	50
CC07, CCR07			
CCR07CG222	2,200	F, G, J, K	200
CCR07CG272	2,700	F, G, J, K	200
CCR07CG332	3,300	F, G, J, K	200
CCR07CG392	3,900	F, G, J, K	200
CCR07CG472	4,700	F, G, J, K	200
CCR07CG562	5,600	F, G, J, K	100
CCR07CG682	6,800	F, G, J, K	100
CCR07CG822	8,200	F, G, J, K	100
CCR07CG103	10,000	F, G, J, K	100
CCR07CG123	12,000	F, G, J, K	100
CCR07CG153	15,000	F, G, J, K	50
CCR07CG183	18,000	F, G, J, K	50
CCR07CG223	22,000	F, G, J, K	50
CCR07CG273	27,000	F, G, J, K	50
CCR07CG333	33,000	F, G, J, K	50
CCR07CG393	39,000	F, G, J, K	50
CCR07CG473	47,000	F, G, J, K	50
CCR07CG563	56,000	F, G, J, K	50
CCR07CG683	68,000	F, G, J, K	50
CCR07CG823	82,000	F, G, J, K	50
CCR07CG104	100,000	F, G, J, K	50
CC08, CCR08			
CCR08CG392	3,900	G, J, K	200
CCR08CG472	4,700	G, J, K	200
CCR08CG153	15,000	G, J, K	100
CCR08CG183	18,000	G, J, K	100
CCR08CG563	56,000	G, J, K	50
CCR08CG683	68,000	G, J, K	50

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

Note: For marking information, see page 63.

MARKING

Radials**CC05 & CC09**

CC05 CH 100G	9910 A0 4222
FRONT	BACK

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

CCR05 & CCR09

CCR0 5CH1 00GM	9910 AJ0 4222
FRONT	BACK

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

CC06

CC06 CG 102F	9910A 200V 04222
FRONT	BACK

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

CCR06

CCR06 CG102 FM	9910A J200V 04222
FRONT	BACK

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

CC07

CG 103 G9 AAVX

Characteristic
Capacitance Value
Cap. Tolerance & Year Code (9 for 1999)
Lot Code & Trademark

CCR07

JCG 103 GM9 AAVX

"J" Brand (J) and Characteristic (CG)
Capacitance Value
Cap. Tolerance (G) FR Level (M), & Year Code (9 for 1999)
Lot Code (A); and Trademark (AVX)

CC08

CC08CG 392K AVX 96095 200V 9910A
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Trademark or Manufacturer's Name
Source Code (FSCM)
Voltage, Date Code and Lot Symbol

CCR08

CCR08CG 392KM JAN AVX 96095 200V 9910A
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"JAN" Brand & Trademark or Manufacturer's Name
Source Code (FSCM)
Voltage, Date Code and Lot Symbol

Axials**CC75, CC76**

CG 101 G99 10AAA

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

CCR75, CCR76

JCG 101 GM99 10AAA

"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

CC77C G151F 04222 9910AA

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

CCR77

CCR77C G151FM JO4222 9910AA

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

CC78, CC79

CC78CG 821K AVX 04222 200V 9910AA
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Type Designation
Trademark or Manufacturer's Name
Source Code (FSCM)
Voltage
4 digit Date Code

CCR78, CCR79

CCR78 CG 821KM JAN A 04222 200V 9910AA
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Type Designation
TC
Capacitance Tolerance, Failure Rate
"JAN" Brand, A for AVX
FSCM
Voltage
4 digit Date Code, 2 digit Lot Code