



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

Not RoHS Compliant

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)

**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
CCR75-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 73.

**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
CCR76CG821_	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

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

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 73.