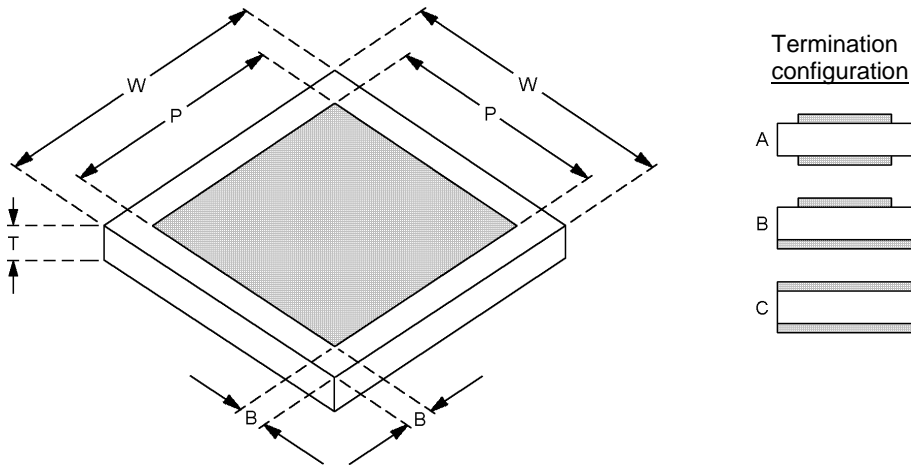


PERFORMANCE SPECIFICATION SHEET

CAPACITORS, CHIP, SINGLE LAYER, FIXED UNENCAPSULATED,
CERAMIC DIELECTRIC, ESTABLISHED RELIABILITY,
STYLE CPCR01 (HIGH FREQUENCY)

This specification sheet is approved for use by all Departments
and Agencies of the Department of Defense.

The requirements for acquiring the product described herein
shall consist of this specification sheet and [MIL-PRF-49464](#).



Dimensions (inches)				
Case code	W	T	Nominal P	Minimum B
B	.012 ± .002	.005 ± .002	.009	.0005
C	.015 ± .002	.005 ± .002	.011	.001
D	.017 ± .002	.005 ± .002	.013	.001
E	.020 ± .002	.005 ± .002	.016	.001
F	.022 ± .002	.005 ± .002	.018	.001
G	.025 ± .002	.005 ± .002	.021	.001
H	.027 ± .002	.005 ± .002	.023	.001
J	.030 ± .002	.005 ± .002	.026	.001
K	.035 ± .005	.005 ± .002	.031	.001

Inches	mm	Inches	mm
.0005	0.01	.018	0.46
.001	0.03	.020	0.51
.002	0.05	.021	0.53
.005	0.13	.022	0.56
.009	0.23	.023	0.58
.011	0.28	.025	0.64
.012	0.30	.026	0.66
.013	0.33	.027	0.69
.015	0.38	.030	0.76
.016	0.41	.031	0.79
.017	0.43	.035	0.89

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Alternate configurations are allowable if they fall within the envelope given and the performance characteristics are not affected.

FIGURE 1. CPCR01 capacitors.

REQUIREMENTS:

Dimensions and configuration: See [figure 1](#).

Case type: Single layer, unencapsulated, with and without buried electrodes inside.

Termination configuration: A, B, or C as shown in [figure 1](#).

Termination finish:

H: A minimum of 100 microinches of 99.99 percent gold, on both sides. This is suitable for gold wire bonding and conductive epoxy or AuSn eutectic die attachment.

Capacitance: See [tables I, II, and III](#).

Rated voltage: See [tables I, II, and III](#).

Capacitance tolerance: See [tables I, II, and III](#).

Operating temperature range: -55°C to +125°C.

Temperature coefficient, case code, minimum and maximum capacitance: See [tables I, II, and III](#).

TABLE I. Temperature coefficient F capacitor characteristics.

Part or Identifying Number (PIN) 1/	Cap. (pF)	Volt. (dc)	Temp. coeff.	Case sizes										Tolerance		
				B	C	D	E	F	G	H	J	K				
				12	15	17	20	22	25	27	30	35				
M49464F010R9-AB-H-	0.9	16	F	B												A,B,C,D
M49464F011R8-AC-H-	1.8	16	F		C											A,B,C,D
M49464F012R0-AD-H-	2.0	16	F			D										A,B,C,D
M49464F012R2-AD-H-	2.2	16	F			D										B,C,D
M49464F013R0-AE-H-	3.0	16	F				E									B,C,D
M49464F013R3-A--H-	3.3	16	F				E	F								B,C,D
M49464F013R6-AF-H-	3.6	16	F					F								B,C,D
M49464F013R9-AG-H-	3.9	16	F						G							B,C,D
M49464F014R3-A--H-	4.3	16	F						G	H						B,C,D
M49464F014R7-AH-H-	4.7	16	F							H						B,C,D
M49464F017R5-AJ-H-	7.5	16	F								J					B,C,D
M49464F01100-AK-H-	10	16	F									K				J,K,M
M49464F010R6-BB-H-	0.6	25	F	B												A,B,C,D
M49464F010R7-BB-H-	0.7	25	F	B												A,B,C,D
M49464F010R8-BB-H-	0.8	25	F	B												A,B,C,D
M49464F011R2-BC-H-	1.2	25	F		C											A,B,C,D
M49464F011R5-B--H-	1.5	25	F		C	D										A,B,C,D
M49464F011R8-BD-H-	1.8	25	F			D										A,B,C,D
M49464F012R0-BE-H-	2.0	25	F				E									A,B,C,D
M49464F012R2-B--H-	2.2	25	F				E	F								B,C,D
M49464F012R4-B--H-	2.4	25	F				E	F								B,C,D
M49464F012R7-B--H-	2.7	25	F				E	F	G	H						B,C,D
M49464F013R0-B--H-	3.0	25	F					F	G	H						B,C,D
M49464F013R3-B--H-	3.3	25	F					F	G	H						B,C,D
M49464F013R6-B--H-	3.6	25	F						G	H						B,C,D
M49464F013R9-BH-H-	3.9	25	F							H						B,C,D
M49464F014R7-BJ-H-	4.7	25	F								J					B,C,D
M49464F015R1-BJ-H-	5.1	25	F								J					B,C,D

See footnotes at end of table.

TABLE I. Temperature coefficient F capacitor characteristics. – Continued.

Part or Identifying Number (PIN) ^{1/}	Cap. (pF)	Volt. (dc)	Temp. coeff.	Case sizes											Tolerance
				B	C	D	E	F	G	H	J	K			
				12	15	17	20	22	25	27	30	35			
M49464F015R6-BJ-H-	5.6	25	F										J		B,C,D
M49464F016R2-BJ-H-	6.2	25	F										J		B,C,D
M49464F016R8-B--H-	6.8	25	F										J	K	B,C,D
M49464F017R5-BK-H-	7.5	25	F											K	B,C,D
M49464F018R2-BK-H-	8.2	25	F											K	B,C,D
M49464F019R1-BK-H-	9.1	25	F											K	B,C,D
M49464F010R1-CB-H-	0.1	50	F	B											A,B,C,D
M49464F010R2-CB-H-	0.2	50	F	B											A,B,C,D
M49464F010R3-CB-H-	0.3	50	F	B											A,B,C,D
M49464F010R4-CB-H-	0.4	50	F	B											A,B,C,D
M49464F010R5-CB-H-	0.5	50	F	B											A,B,C,D
M49464F010R6-CC-H-	0.6	50	F		C										A,B,C,D
M49464F010R7-C--H-	0.7	50	F		C	D									A,B,C,D
M49464F010R8-C--H-	0.8	50	F		C	D									A,B,C,D
M49464F010R9-C--H-	0.9	50	F		C	D									A,B,C,D
M49464F011R0-C--H-	1.0	50	F		C	D	E								A,B,C,D
M49464F011R2-C--H-	1.2	50	F			D	E	F							A,B,C,D
M49464F011R5-C--H-	1.5	50	F				E	F	G	H					A,B,C,D
M49464F011R8-C--H-	1.8	50	F				E	F	G	H					A,B,C,D
M49464F012R0-C--H-	2.0	50	F					F	G	H					A,B,C,D
M49464F012R2-C--H-	2.2	50	F						G	H					B,C,D
M49464F012R4-C--H-	2.4	50	F						G	H		J			B,C,D
M49464F012R7-CJ-H-	2.7	50	F									J			B,C,D
M49464F013R0-CJ-H-	3.0	50	F									J			B,C,D
M49464F013R3-C--H-	3.3	50	F									J	K		B,C,D
M49464F013R6-C--H-	3.6	50	F									J	K		B,C,D
M49464F013R9-C--H-	3.9	50	F									J	K		B,C,D
M49464F014R3-C--H-	4.3	50	F									J	K		B,C,D
M49464F014R7-CK-H-	4.7	50	F										K		B,C,D
M49464F015R1-CK-H-	5.1	50	F										K		B,C,D
M49464F015R6-CK-H-	5.6	50	F										K		B,C,D
M49464F016R2-CK-H-	6.2	50	F										K		B,C,D
M49464F010R1-DC-H-	0.1	100	F		C										A,B,C,D
M49464F010R2-D--H-	0.2	100	F		C	D	E	F	G	H					A,B,C,D
M49464F010R3-D--H-	0.3	100	F		C	D	E	F	G	H					A,B,C,D
M49464F010R4-D--H-	0.4	100	F		C	D	E	F	G	H					A,B,C,D
M49464F010R5-D--H-	0.5	100	F		C	D	E	F	G	H					A,B,C,D
M49464F010R6-D--H-	0.6	100	F			D	E	F	G	H		J			A,B,C,D
M49464F010R7-D--H-	0.7	100	F				E	F	G	H		J			A,B,C,D
M49464F010R8-D--H-	0.8	100	F				E	F	G	H		J	K		A,B,C,D
M49464F010R9-D--H-	0.9	100	F				E	F	G	H		J	K		A,B,C,D
M49464F011R0-D--H-	1.0	100	F					F	G	H		J	K		A,B,C,D
M49464F011R2-D--H-	1.2	100	F						G	H		J	K		A,B,C,D
M49464F011R5-D--H-	1.5	100	F									J	K		A,B,C,D
M49464F011R8-D--H-	1.8	100	F									J	K		A,B,C,D
M49464F012R0-D--H-	2.0	100	F									J	K		A,B,C,D
M49464F012R2-D--H-	2.2	100	F									J	K		B,C,D
M49464F012R4-DK-H-	2.4	100	F										K		B,C,D
M49464F012R7-DK-H-	2.7	100	F										K		B,C,D
M49464F013R0-DK-H-	3.0	100	F										K		B,C,D

^{1/} Complete PIN shall include additional symbols to indicate capacitance tolerance, case code (where several case codes are available), termination configuration code (A, B, or C), and failure rate level (M, P, R, or S).

TABLE II. Temperature coefficient G capacitor characteristics.

Part or Identifying Number (PIN) <u>1/</u>	Cap. (pF)	Volt. (dc)	Temp. coeff.	Case sizes											Tolerance		
				B	C	D	E	F	G	H	J	K					
				12	15	17	20	22	25	27	30	35					
M49464G012R7-AB-H-	2.7	16	G	B													B,C,D
M49464G015R1-AC-H-	5.1	16	G		C												B,C,D
M49464G015R6-AC-H-	5.6	16	G		C												B,C,D
M49464G016R2-AD-H-	6.2	16	G			D											B,C,D
M49464G016R8-AD-H-	6.8	16	G				D										B,C,D
M49464G019R1-AE-H-	9.1	16	G					E									B,C,D
M49464G01100-AF-H-	10	16	G						F								J,K,M
M49464G01120-AG-H-	12	16	G							G							J,K,M
M49464G01150-AH-H-	15	16	G								H						J,K,M
M49464G01220-AJ-H-	22	16	G									J					J,K,M
M49464G01240-AJ-H-	24	16	G									J					J,K,M
M49464G01330-AK-H-	33	16	G													K	J,K,M
M49464G01360-AK-H-	36	16	G													K	J,K,M
M49464G011R8-BB-H-	1.8	25	G	B													A,B,C,D
M49464G012R0-BB-H-	2.0	25	G	B													A,B,C,D
M49464G012R2-BB-H-	2.2	25	G	B													B,C,D
M49464G012R4-BB-H-	2.4	25	G	B													B,C,D
M49464G013R3-BC-H-	3.3	25	G		C												B,C,D
M49464G013R6-BC-H-	3.6	25	G		C												B,C,D
M49464G013R9-BC-H-	3.9	25	G		C												B,C,D
M49464G014R3-B--H-	4.3	25	G		C		D										B,C,D
M49464G014R7-B--H-	4.7	25	G		C		D										B,C,D
M49464G015R1-BD-H-	5.1	25	G			D											B,C,D
M49464G015R6-BD-H-	5.6	25	G			D											B,C,D
M49464G016R2-B--H-	6.2	25	G					E									B,C,D
M49464G016R8-B--H-	6.8	25	G					E	F								B,C,D
M49464G017R5-B--H-	7.5	25	G					E	F	G							B,C,D
M49464G018R2-B--H-	8.2	25	G					E	F	G	H						B,C,D
M49464G019R1-B--H-	9.1	25	G					E	F	G	H						B,C,D
M49464G01100-B--H-	10	25	G							G	H						J,K,M
M49464G01120-BH-H-	12	25	G								H						J,K,M
M49464G01150-BJ-H-	15	25	G									J					J,K,M
M49464G01180-BJ-H-	18	25	G									J					J,K,M
M49464G01200-BJ-H-	20	25	G									J					J,K,M
M49464G01220-BK-H-	22	25	G													K	J,K,M
M49464G01240-BK-H-	24	25	G													K	J,K,M
M49464G01270-BK-H-	27	25	G													K	J,K,M
M49464G01300-BK-H-	30	25	G													K	J,K,M
M49464G010R6-CB-H-	0.6	50	G	B													A,B,C,D
M49464G010R7-CB-H-	0.7	50	G	B													A,B,C,D
M49464G010R8-CB-H-	0.8	50	G	B													A,B,C,D
M49464G010R9-CB-H-	0.9	50	G	B													A,B,C,D
M49464G011R0-CB-H-	1.0	50	G	B													A,B,C,D
M49464G011R2-CB-H-	1.2	50	G	B													A,B,C,D
M49464G011R5-CB-H-	1.5	50	G	B													A,B,C,D
M49464G011R8-CC-H-	1.8	50	G		C												A,B,C,D
M49464G012R0-CC-H-	2.0	50	G		C												A,B,C,D
M49464G012R2-C--H-	2.2	50	G		C		D										B,C,D
M49464G012R4-C--H-	2.4	50	G		C		D										B,C,D
M49464G012R7-C--H-	2.7	50	G		C		D										B,C,D
M49464G013R0-C--H-	3.0	50	G		C		D	E									B,C,D
M49464G013R3-C--H-	3.3	50	G				D	E	F								B,C,D
M49464G013R6-C--H-	3.6	50	G				D	E	F								B,C,D

See footnotes at end of table.

TABLE II. Temperature coefficient G capacitor characteristics. – Continued.

Part or Identifying Number (PIN) ^{1/}	Cap. (pF)	Volt. (dc)	Temp. coeff.	Case sizes											Tolerance		
				B	C	D	E	F	G	H	J	K					
				12	15	17	20	22	25	27	30	35					
M49464G013R9-C--H-	3.9	50	G			D	E	F	G								B,C,D
M49464G014R3-C--H-	4.3	50	G				E	F	G	H							B,C,D
M49464G014R7-C--H-	4.7	50	G				E	F	G	H							B,C,D
M49464G015R1-C--H-	5.1	50	G				E	F	G	H							B,C,D
M49464G015R6-C--H-	5.6	50	G				E	F	G	H							B,C,D
M49464G016R2-C--H-	6.2	50	G						G	H							B,C,D
M49464G016R8-C--H-	6.8	50	G						G	H							B,C,D
M49464G017R5-C--H-	7.5	50	G							H		J					B,C,D
M49464G018R2-CJ-H-	8.2	50	G									J					B,C,D
M49464G019R1-CJ-H-	9.1	50	G									J					B,C,D
M49464G01100-CJ-H-	10	50	G									J					J,K,M
M49464G01120-C--H-	12	50	G									J		K			J,K,M
M49464G01150-CK-H-	15	50	G											K			J,K,M
M49464G01180-CK-H-	18	50	G											K			J,K,M
M49464G01200-CK-H-	20	50	G											K			J,K,M
M49464G010R6-DC-H-	0.6	100	G		C												A,B,C,D
M49464G010R7-D--H-	0.7	100	G		C	D											A,B,C,D
M49464G010R8-D--H-	0.8	100	G		C	D											A,B,C,D
M49464G010R9-D--H-	0.9	100	G		C	D											A,B,C,D
M49464G011R0-D--H-	1.0	100	G		C	D	E										A,B,C,D
M49464G011R2-D--H-	1.2	100	G		C	D	E	F									A,B,C,D
M49464G011R5-D--H-	1.5	100	G		C	D	E	F	G	H							A,B,C,D
M49464G011R8-D--H-	1.8	100	G			D	E	F	G	H							A,B,C,D
M49464G012R0-D--H-	2.0	100	G			D	E	F	G	H							A,B,C,D
M49464G012R2-D--H-	2.2	100	G				E	F	G	H							B,C,D
M49464G012R4-D--H-	2.4	100	G				E	F	G	H		J					B,C,D
M49464G012R7-D--H-	2.7	100	G				E	F	G	H		J					B,C,D
M49464G013R0-D--H-	3.0	100	G					F	G	H		J					B,C,D
M49464G013R3-D--H-	3.3	100	G						G	H		J		K			B,C,D
M49464G013R6-D--H-	3.6	100	G						G	H		J		K			B,C,D
M49464G013R9-D--H-	3.9	100	G							H		J		K			B,C,D
M49464G014R3-D--H-	4.3	100	G									J		K			B,C,D
M49464G014R7-D--H-	4.7	100	G									J		K			B,C,D
M49464G015R1-D--H-	5.1	100	G									J		K			B,C,D
M49464G015R6-D--H-	5.6	100	G									J		K			B,C,D
M49464G016R2-D--H-	6.2	100	G									J		K			B,C,D
M49464G016R8-D--H-	6.8	100	G									J		K			B,C,D
M49464G017R5-DK-H-	7.5	100	G											K			B,C,D
M49464G018R2-DK-H-	8.2	100	G											K			B,C,D
M49464G019R1-DK-H-	9.1	100	G											K			B,C,D
M49464G01100-DK-H-	10	100	G											K			J,K,M

^{1/} Complete PIN shall include additional symbols to indicate capacitance tolerance, case code (where several case codes are available), termination configuration code (A, B, or C), and failure rate level (M, P, R, or S).

TABLE III. Temperature coefficient W capacitor characteristics.

Part or Identifying Number (PIN) <u>1/</u>	Cap. (pF)	Volt. (dc)	Temp. coeff.	Case sizes											Tolerance								
				B	C	D	E	F	G	H	J	K											
				12	15	17	20	22	25	27	30	35											
M49464W01820-AB-H-	82	16	W	B																			K,M
M49464W01121-AC-H-	120	16	W		C																		K,M
M49464W01151-AD-H-	150	16	W			D																	K,M
M49464W01201-AE-H-	200	16	W				E																K,M
M49464W01221-AE-H-	220	16	W				E																K,M
M49464W01241-AE-H-	240	16	W				E																K,M
M49464W01271-AE-H-	270	16	W				E																K,M
M49464W01301-AF-H-	300	16	W					F															K,M
M49464W01331-AF-H-	330	16	W					F															K,M
M49464W01361-AG-H-	360	16	W						G														K,M
M49464W01391-AG-H-	390	16	W						G														K,M
M49464W01431-AH-H-	430	16	W							H													K,M
M49464W01511-AJ-H-	510	16	W								J												K,M
M49464W01561-AJ-H-	560	16	W								J												K,M
M49464W01621-AJ-H-	620	16	W								J												K,M
M49464W01681-AJ-H-	680	16	W								J												K,M
M49464W01751-A--H-	750	16	W								J											K	K,M
M49464W01821-AK-H-	820	16	W									K											K,M
M49464W01911-AK-H-	910	16	W									K											K,M
M49464W01102-AK-H-	1000	16	W									K											K,M
M49464W01620-BB-H-	62	25	W	B																			K,M
M49464W01680-BB-H-	68	25	W	B																			K,M
M49464W01750-BB-H-	75	25	W	B																			K,M
M49464W01910-BC-H-	91	25	W		C																		K,M
M49464W01101-BC-H-	100	25	W		C																		K,M
M49464W01121-BD-H-	120	25	W			D																	K,M
M49464W01181-BE-H-	180	25	W				E																K,M
M49464W01201-BF-H-	200	25	W					F															K,M
M49464W01221-BF-H-	220	25	W					F															K,M
M49464W01241-BF-H-	240	25	W					F															K,M
M49464W01271-BF-H-	270	25	W					F															K,M
M49464W01301-BG-H-	300	25	W						G														K,M
M49464W01331-BG-H-	330	25	W						G														K,M
M49464W01361-BH-H-	360	25	W							H													K,M
M49464W01391-BH-H-	390	25	W							H													K,M
M49464W01471-BJ-H-	470	25	W								J												K,M
M49464W01681-BK-H-	680	25	W									K											K,M
M49464W016R2-CB-H-	6.2	50	W	B																			K,M
M49464W016R8-CB-H-	6.8	50	W	B																			K,M
M49464W017R5-CB-H-	7.5	50	W	B																			K,M
M49464W018R2-CB-H-	8.2	50	W	B																			K,M
M49464W019R1-CB-H-	9.1	50	W	B																			K,M
M49464W01100-CB-H-	10	50	W	B																			K,M
M49464W01120-CB-H-	12	50	W	B																			K,M
M49464W01150-CB-H-	15	50	W	B																			K,M
M49464W01180-CB-H-	18	50	W	B																			K,M
M49464W01200-CB-H-	20	50	W	B																			K,M
M49464W01220-CB-H-	22	50	W	B																			K,M
M49464W01240-CB-H-	24	50	W	B																			K,M

See footnotes at end of table.

TABLE III. Temperature coefficient W capacitor characteristics. – Continued.

Part or Identifying Number (PIN) ^{1/}	Cap. (pF)	Volt. (dc)	Temp. coeff.	Case sizes										Tolerance
				B	C	D	E	F	G	H	J	K		
				12	15	17	20	22	25	27	30	35		
M49464W01121-D--H-	120	100	W								H	J	K	K,M
M49464W01151-D--H-	150	100	W									J	K	K,M
M49464W01181-D--H-	180	100	W									J	K	K,M
M49464W01201-D--H-	200	100	W									J	K	K,M
M49464W01221-DK-H-	220	100	W										K	K,M
M49464W01241-DK-H-	240	100	W										K	K,M
M49464W01271-DK-H-	270	100	W										K	K,M
M49464W01301-DK-H-	300	100	W										K	K,M

^{1/} Complete PIN shall include additional symbols to indicate capacitance tolerance, case code (where several case codes are available), termination configuration code (A, B, or C), and failure rate level (M, P, R, or S).

Changes from previous issue. The margins of this specification are marked with vertical lines to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

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 NASA - NA

Preparing activity:
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Review activities:
 Army - AT, AV, MI
 Navy - AS, MC
 Air Force - 19, 99

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <http://assist.daps.dla.mil/>.