

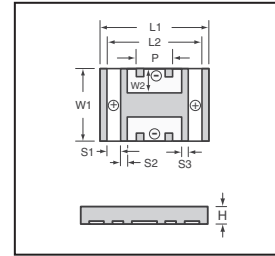
nichicon **NEW!** Decoupling Capacitors for High Frequency



Features:

- Higher Capacitance • Low ESR, High Ripple Current
- Resin-molded chip • Designed for surface mounting on high density PC boards • Load life of 1000 hours at 105°C

Case Code	Dimensions in mm								
	L1	L2	W1	W2	H	S1	S2	S3	P
D	8.5±0.2	7.3±0.2	5.3±0.2	1.3±0.3	2.0Max.	0.9±0.2	0.6±0.2	0.5±0.2	3.3±0.2
F	16.7±0.2	15.6±0.2	12.1±0.2	3.3±0.2	2.5Max.	1.5±0.1	1.3±0.1	1.5±0.2	7.0±0.2



Rated Voltage	Cap. (µF)	Capacitance Tolerance	Case Code	Leakage Current (µA)	Dissipation Factor (% @120Hz)	E.S.R. (mΩ@100kHz)	Digi-Key Part No.	Price Each			Nichicon Part No.
								10	100	1000	
2.5	220	±20%	D	55	5	20.0	493-3120-ND	3.19	2.42	1.92	F110E227MDL
	600	±20%	F	150	10	5.0	493-3116-ND	6.76	5.12	4.06	F110E607MFK
	1200	±20%	F	300	10	5.0	493-3117-ND	7.05	5.34	4.24	F110E128MFK
4	100	±20%	D	40	5	20.0	493-3121-ND	3.19	2.42	1.92	F110G107MDL
	800	±20%	F	320	10	5.0	493-3118-ND	6.76	5.12	4.06	F110G807MFK
	47	±20%	D	30	5	20.0	493-3122-ND	3.19	2.42	1.92	F110J476MDL
6.3	600	±20%	F	378	10	5.0	493-3119-ND	6.76	5.12	4.06	F110J607MFK

Solid Tantalum Electrolytic Chip Capacitors (SMT)

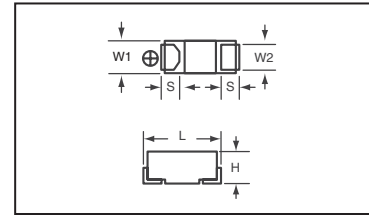


Features:

- F93 – Standard Series**
 - General purpose rectangular resin molded chip • Low ESR/Impedance, excellent high frequency characteristics
 - Excellent humidity resistance
- F91 – Low ESR Series**
 - Rectangular resin molded chip • Low ESR
- F92 – Compact Series**
 - Low profile, rectangular resin molded chip • Excellent high frequency characteristics • Excellent humidity resistance
- F97 – High Reliability Series**
 - Rectangular resin molded chip • Soldering heat resistance • Superior humidity and environment resistance • High reliability

Specification:
• Operating Temperature Range: -55°C – 125°C

Case Code	Dimensions in mm				
	L	W1	W2	H	S
A (F93 / 97)	3.2±0.2	1.6±0.2	1.2±0.1	1.6±0.1	0.8±0.2
A (F92)	3.2±0.2	1.6±0.2	1.2±0.1	1.1±0.1	0.8±0.2
B	3.5±0.2	2.8±0.2	2.2±0.1	1.9±0.2	0.8±0.2
C	6.0±0.2	3.2±0.2	2.2±0.1	2.5±0.2	1.3±0.2
N	7.3±0.2	4.3±0.2	2.4±0.1	2.8±0.2	1.3±0.2
P	2.0±0.2	1.25±0.1	0.9±0.1	1.1±0.1	0.5±0.2



Rated Voltage	Cap. (µF)	Capacitance Tolerance	Case Size	Leakage Current (µA)	Dissipation Factor (% @120Hz)	E.S.R. (Ω@100kHz)	Digi-Key Part No.	Cut Tape Pricing		Digi-Key Part No.	Tape and Reel		Nichicon Part No.
								10	100		Qty.	Pricing	
F93 – Standard Series													
6.3	3.3	±20%	A	0.5	6	4.5	493-2346-1-ND	1.55	13.26	493-2346-2-ND	2,000	63.00/M	F930J335MAA
	4.7	±20%	A	0.5	6	4.0	493-2347-1-ND	1.59	13.65	493-2347-2-ND	2,000	65.00/M	F930J475MAA
	6.8	±20%	A	0.5	6	3.5	493-2348-1-ND	1.64	14.04	493-2348-2-ND	2,000	67.00/M	F930J685MAA
	10	±20%	A	0.6	6	3.0	493-2340-1-ND	1.64	14.04	493-2340-2-ND	2,000	67.00/M	F930J106MAA
	15	±20%	A	0.9	8	2.9	493-2341-1-ND	1.79	15.30	493-2341-2-ND	2,000	73.00/M	F930J156MAA
	22	±20%	B	0.9	6	2.0	493-2342-1-ND	2.00	17.16	493-2342-2-ND	2,000	82.00/M	F930J156MBA
	15	±20%	A	1.4	8	2.5	493-2343-1-ND	1.87	15.99	493-2343-2-ND	2,000	76.00/M	F930J226MAA
	22	±20%	B	1.4	6	1.9	493-2344-1-ND	2.14	18.33	493-2344-2-ND	2,000	87.00/M	F930J226MBA
	47	±20%	B	3.0	8	1.0	493-2348-1-ND	2.78	23.79	493-2348-2-ND	2,000	107.00/M	F930J476MBA
	68	±20%	C	4.3	8	0.8	493-2350-1-ND	4.50	38.58	493-2350-2-ND	500	115.50	F930J686MCC
220	±20%	N	13.9	10	0.5	493-2345-1-ND	8.32	71.28	493-2345-2-ND	500	202.00	F930J227MNC	
10	2.2	±20%	A	0.5	6	5.0	493-2356-1-ND	1.55	13.26	493-2356-2-ND	2,000	63.00/M	F931A225MAA
	3.3	±20%	A	0.5	6	4.5	493-2358-1-ND	1.55	13.26	493-2358-2-ND	2,000	63.00/M	F931A335MAA
	4.7	±20%	A	0.5	6	4.0	493-2361-1-ND	1.47	12.60	493-2361-2-ND	2,000	60.00/M	F931A475MAA
	10	±20%	A	1.0	6	3.0	493-2351-1-ND	1.40	12.00	493-2351-2-ND	2,000	57.00/M	F931A106MAA
	10	±20%	B	1.0	6	2.1	493-2352-1-ND	2.00	17.16	493-2352-2-ND	2,000	82.00/M	F931A106MBA
	15	±20%	B	1.5	6	2.0	493-2354-1-ND	2.14	18.33	493-2354-2-ND	2,000	87.00/M	F931A156MBA
	22	±20%	B	2.2	8	1.9	493-2357-1-ND	2.10	18.00	493-2357-2-ND	2,000	86.00/M	F931A226MBA
	33	±20%	B	3.3	8	1.4	493-2359-1-ND	2.91	24.93	493-2359-2-ND	2,000	112.00/M	F931A336MBA
	47	±20%	C	3.3	6	1.1	493-2360-1-ND	4.23	36.24	493-2360-2-ND	500	108.50	F931A336MCC
	47	±20%	C	4.7	8	0.9	493-2362-1-ND	4.50	38.58	493-2362-2-ND	500	115.50	F931A476MCC
16	68	±20%	N	6.8	6	0.6	493-2363-1-ND	6.41	54.96	493-2363-2-ND	500	155.50	F931A686MNC
	100	±20%	N	10.0	10	0.6	493-2353-1-ND	7.07	60.60	493-2353-2-ND	500	171.50	F931A107MNC
	150	±20%	N	15.0	10	0.6	493-2355-1-ND	8.43	72.24	493-2355-2-ND	500	204.50	F931A157MNC
	1.5	±20%	A	0.5	4	7.5	493-2364-1-ND	1.55	13.26	493-2364-2-ND	2,000	63.00/M	F931C105MAA
	1.5	±20%	A	0.5	6	6.0	493-2366-1-ND	1.55	13.26	493-2366-2-ND	2,000	63.00/M	F931C155MAA
	2.2	±20%	A	0.5	6	5.0	493-2368-1-ND	1.47	12.60	493-2368-2-ND	2,000	60.00/M	F931C225MAA
	3.3	±20%	A	0.5	6	4.5	493-2370-1-ND	1.47	12.60	493-2370-2-ND	2,000	60.00/M	F931C335MAA
	4.7	±20%	A	0.8	6	4.0	493-2372-1-ND	1.47	12.60	493-2372-2-ND	2,000	60.00/M	F931C475MAA
	6.8	±20%	A	1.1	6	3.5	493-2374-1-ND	1.68	14.43	493-2374-2-ND	2,000	69.00/M	F931C685MAA
	6.8	±20%	B	1.1	6	2.5	493-2375-1-ND	2.00	17.16	493-2375-2-ND	2,000	82.00/M	F931C685MBA
20	10	±20%	B	1.6	6	2.0	493-2365-1-ND	2.09	17.94	493-2365-2-ND	2,000	85.00/M	F931C106MBA
	15	±20%	B	2.4	8	2.0	493-2367-1-ND	2.28	19.50	493-2367-2-ND	2,000	93.00/M	F931C156MBA
	22	±20%	C	3.5	6	1.1	493-2369-1-ND	4.23	36.24	493-2369-2-ND	500	108.50	F931C226MCC
	33	±20%	C	5.3	8	1.1	493-2371-1-ND	4.50	38.58	493-2371-2-ND	500	115.50	F931C336MCC
	47	±20%	N	7.5	8	0.7	493-2373-1-ND	6.09	52.23	493-2373-2-ND	500	148.00	F931C476MNC
	68	±20%	N	10.9	8	0.6	493-2376-1-ND	7.19	61.59	493-2376-2-ND	500	174.50	F931C686MNC
	1.5	±20%	A	0.5	6	6.3	493-2378-1-ND	1.55	13.26	493-2378-2-ND	2,000	63.00/M	F931D155MAA
	2.2	±20%	A	0.5	6	5.0	493-2380-1-ND	1.47	12.60	493-2380-2-ND	2,000	60.00/M	F931D225MAA
	3.3	±20%	A	0.7	6	4.5	493-2382-1-ND	1.91	16.38	493-2382-2-ND	2,000	78.00/M	F931D335MAA
	4.7	±20%	A	0.9	6	4.0	493-2384-1-ND	2.42	20.70	493-2384-2-ND	2,000	98.00/M	F931D475MAA
25	4.7	±20%	B	0.9	6	2.8	493-2385-1-ND	2.42	20.70	493-2385-2-ND	2,000	98.00/M	F931D475MBA
	6.8	±20%	B	1.4	6	2.5	493-2386-1-ND	2.55	21.84	493-2386-2-ND	2,000	98.00/M	F931D685MBA
	10	±20%	B	2.0	6	2.1	493-2377-1-ND	3.34	28.62	493-2377-2-ND	2,000	129.00/M	F931D106MBA
	15	±20%	C	3.0	6	1.2	493-2379-1-ND	4.23	36.24	493-2379-2-ND	500	108.50	F931D156MCC
	22	±20%	C	4.4	8	1.1	493-2381-1-ND	4.50	38.58	493-2381-2-ND	500	115.50	F931D226MCC
	33	±20%	N	6.6	6	0.7	493-2383-1-ND	6.41	54.96	493-2383-2-ND	500	155.50	F931D336MNC
	.68	±20%	A	0.5	4	7.6	493-2394-1-ND	1.55	13.26	493-2394-2-ND	2,000	63.00/M	F931E684MAA
	1	±20%	A	0.5	4	7.5	493-2387-1-ND	1.55	13.26	493-2387-2-ND	2,000	63.00/M	F931E105MAA
	1.5	±20%	A	0.5	6	6.7	493-2389-1-ND	1.59	13.65	493-2389-2-ND	2,000	65.00/M	F931E155MAA
	2.2	±20%	A	0.6	6	6.3	493-2390-1-ND	1.68	14.43	493-2390-2-ND	2,000	69.00/M	F931E225MAA
35	3.3	±20%	B	0.8	6	3.1	493-2392-1-ND	2.55	21.84	493-2392-2-ND	2,000	98.00/M	F931E335MBA
	4.7	±20%	B	1.2	6	2.8	493-2393-1-ND	2.67	22.92	493-2393-2-ND	2,000	103.00/M	F931E475MBA
	6.8	±20%	C	1.7	6	1.8	493-2395-1-ND	3.91	33.51	493-2395-2-ND	500	100.50	F931E685MCC
	10	±20%	C	2.5	6	1.5	493-2388-1-ND	4.23	36.24	493-2388-2-ND	500	108.50	F931E106MCC
	22	±20%	N	5.5	6	0.7	493-2391-1-ND	6.28	53.79	493-2391-2-ND	500	152.50	F931E226MNC
	47	±20%	A	0.5	4	10.0	493-2402-1-ND	1.55	13.26	493-2402-2-ND	2,000	63.00/M	F931V474MAA
	68	±20%	A	0.5	4	7.6	493-2404-1-ND	1.55	13.26	493-2404-2-ND	2,000	63.00/M	F931V684MAA
	1	±20%	A	0.5	4	7.5	493-2396-1-ND	1.59	13.65	493-2396-2-ND	2,000	65.00/M	F931V105MAA
	1.5	±20%	A	0.5	6	7.5	493-2398-1-ND	1.47	12.60	493-2398-2-ND	2,000	60.00/M	F931V155MAA
	2.2	±20%	B	0.8	6	3.8	493-2400-1-ND	2.07	17.				

nichicon Solid Tantalum Electrolytic Chip Capacitors (SMT) (Cont.)



Rated Voltage	Cap. (µF)	Capacitance Tolerance	Case Size	Leakage Current (µA)	Dissipation Factor (% @ 120Hz)	E.S.R. (Ω @ 100kHz)	Digi-Key Part No.	Cut Tape Pricing		Digi-Key Part No.	Tape and Reel		Nichicon Part No.
								10	100		Qty.	Pricing	
F91 - Low ESR Series													
6.3	100	±20%	C	6.3	10	.250	493-2309-1-ND	9.03	77.37	493-2309-2-ND	500	206.50	F910J107MCC
	150	±20%	N	9.5	10	.100	493-2310-1-ND	13.42	115.05	493-2310-2-ND	500	307.00	F910J157MNC
	220	±20%	N	13.9	10	.100	493-2311-1-ND	13.69	117.30	493-2311-2-ND	500	313.00	F910J227MNC
10	47	±20%	C	4.7	8	.400	493-2314-1-ND	9.03	77.37	493-2314-2-ND	500	206.50	F911A476MCC
	100	±20%	N	10	10	.100	493-2312-1-ND	13.42	115.05	493-2312-2-ND	500	307.00	F911A107MNC
	150	±20%	N	15.0	10	.100	493-2313-1-ND	13.69	117.30	493-2313-2-ND	500	313.00	F911A157MNC
16	33	±20%	C	5.3	8	.400	493-2315-1-ND	9.03	77.37	493-2315-2-ND	500	206.50	F911C336MCC
	47	±20%	N	7.5	6	.150	493-2316-1-ND	12.08	103.50	493-2316-2-ND	500	276.00	F911C476MNC
	15	±20%	C	3	6	.450	493-2317-1-ND	9.03	77.37	493-2317-2-ND	500	206.50	F911D156MCC
20	33	±20%	N	6.6	6	.200	493-2318-1-ND	13.42	115.05	493-2318-2-ND	500	307.00	F911D336MNC
	10	±20%	C	2.5	6	.450	493-2319-1-ND	11.17	95.70	493-2319-2-ND	500	255.00	F911E106MCC
	22	±20%	N	5.5	6	.200	493-2320-1-ND	13.42	115.05	493-2320-2-ND	500	307.00	F911E226MNC
25	33	±20%	N	8.3	8	.200	493-2321-1-ND	13.42	115.05	493-2321-2-ND	500	307.00	F911E336MNC
	6.8	±20%	C	2.4	6	.600	493-2325-1-ND	9.03	77.37	493-2325-2-ND	500	206.50	F911V685MCC
	10	±20%	N	3.5	6	.300	493-2322-1-ND	13.42	115.05	493-2322-2-ND	500	307.00	F911V106MNC
35	15	±20%	N	5.3	6	.300	493-2323-1-ND	13.42	115.05	493-2323-2-ND	500	307.00	F911V156MNC
	22	±20%	N	7.7	8	.300	493-2324-1-ND	13.42	115.05	493-2324-2-ND	500	307.00	F911V226MNC
	15	±20%	N	7.7	8	.300	493-2324-1-ND	13.42	115.05	493-2324-2-ND	500	307.00	F911V226MNC
F92 - Compact Series													
4	2.2	±20%	P	0.5	8	12.0	493-2326-1-ND	2.37	20.28	493-2326-2-ND	3,000	96.00/M	F920G225MPA
	22	±20%	P	0.9	20	5.0	493-2327-1-ND	3.47	29.70	493-2327-2-ND	3,000	134.00/M	F920G226MPA
6.3	1.5	±20%	P	0.5	8	12.0	493-2329-1-ND	2.37	20.28	493-2329-2-ND	3,000	96.00/M	F920J155MPA
	10	±20%	P	0.6	10	6.0	493-2328-1-ND	3.33	28.50	493-2328-2-ND	3,000	128.00/M	F920J106MPA
10	1	±20%	P	0.5	8	12.0	493-2330-1-ND	2.66	22.80	493-2330-2-ND	3,000	103.00/M	F921A105MPA
	2.2	±20%	P	0.5	8	12.0	493-2331-1-ND	4.59	39.30	493-2331-2-ND	3,000	173.00/M	F921A225MPA
	3.3	±20%	P	0.5	8	12.0	493-2332-1-ND	3.37	28.86	493-2332-2-ND	3,000	130.00/M	F921A335MPA
	4.7	±20%	P	0.5	8	6.0	493-2333-1-ND	4.73	40.50	493-2333-2-ND	3,000	178.00/M	F921A475MPA
16	.68	±20%	P	0.5	8	12.0	493-2335-1-ND	2.46	21.06	493-2335-2-ND	3,000	95.00/M	F921C684MPA
	1	±20%	P	0.5	8	12.0	493-2334-1-ND	2.50	21.45	493-2334-2-ND	3,000	97.00/M	F921C105MPA
	0.1	±20%	A	0.5	4	10.0	493-2336-1-ND	1.73	14.82	493-2336-2-ND	2,500	70.00/M	F921V104MAA
35	.15	±20%	A	0.5	4	10.0	493-2337-1-ND	1.73	14.82	493-2337-2-ND	2,500	70.00/M	F921V154MAA
	.22	±20%	A	0.5	4	10.0	493-2338-1-ND	1.73	14.82	493-2338-2-ND	2,500	70.00/M	F921V224MAA
	.33	±20%	A	0.5	4	10.0	493-2339-1-ND	1.81	15.48	493-2339-2-ND	2,500	74.00/M	F921V334MAA
	.33	±20%	A	0.5	4	10.0	493-2339-1-ND	1.81	15.48	493-2339-2-ND	2,500	74.00/M	F921V334MAA
F97 - High Reliability Series													
6.3	3.3	±20%	A	0.5	6	4.5	493-2407-1-ND	1.73	14.82	493-2407-2-ND	2,000	70.00/M	F970J335MAA
	6.8	±20%	B	0.5	6	2.5	493-2409-1-ND	3.37	28.89	493-2409-2-ND	2,000	130.00/M	F970J685MBA
	22	±20%	C	1.4	6	1.1	493-2406-1-ND	6.13	52.50	493-2406-2-ND	500	149.00	F970J226MCC
	47	±20%	N	3.0	6	0.7	493-2408-1-ND	7.44	63.75	493-2408-2-ND	500	180.50	F970J476MNC
	68	±20%	N	4.3	6	0.6	493-2410-1-ND	6.72	57.60	493-2410-2-ND	500	163.00	F970J686MNC
10	2.2	±20%	A	0.5	6	5.0	493-2412-1-ND	3.82	32.70	493-2412-2-ND	2,000	155.00/M	F971A225MAA
	4.7	±20%	B	0.5	6	2.8	493-2414-1-ND	3.37	28.89	493-2414-2-ND	2,000	130.00/M	F971A475MBA
	15	±20%	C	1.5	6	1.2	493-2411-1-ND	6.13	52.50	493-2411-2-ND	500	149.00	F971A156MCC
	33	±20%	N	3.3	6	0.7	493-2413-1-ND	7.44	63.75	493-2413-2-ND	500	180.50	F971A336MNC
	47	±20%	N	4.7	6	0.7	493-2415-1-ND	6.72	57.60	493-2415-2-ND	500	163.00	F971A476MNC
16	1.5	±20%	A	0.5	4	7.5	493-2416-1-ND	3.28	28.14	493-2416-2-ND	2,000	127.00/M	F971C105MAA
	3.3	±20%	B	0.5	4	6.3	493-2418-1-ND	1.73	14.82	493-2418-2-ND	2,000	70.00/M	F971C155MAA
	4.7	±20%	B	0.8	6	2.8	493-2422-1-ND	2.96	25.38	493-2422-2-ND	2,000	114.00/M	F971C475MBA
	10	±20%	C	1.6	6	1.5	493-2417-1-ND	6.13	52.50	493-2417-2-ND	500	149.00	F971C106MCC
	.33	±20%	N	5.3	6	0.7	493-2419-1-ND	7.44	63.75	493-2419-2-ND	500	180.50	F971C226MNC
20	68	±20%	A	0.5	4	7.6	493-2425-1-ND	3.28	28.14	—	—	—	F971D684MAA
	2.2	±20%	B	0.5	6	3.8	493-2424-1-ND	3.37	28.89	493-2424-2-ND	2,000	130.00/M	F971D225MBA
	6.8	±20%	C	1.4	6	1.8	493-2426-1-ND	6.13	52.50	493-2426-2-ND	500	149.00	F971D685MCC
	15	±20%	N	3.0	6	0.7	493-2423-1-ND	7.44	63.75	493-2423-2-ND	500	180.50	F971D156MNC
	.47	±20%	A	0.5	4	10.0	493-2429-1-ND	3.28	28.14	493-2429-2-ND	2,000	127.00/M	F971E474MAA
25	1.5	±20%	B	0.5	4	4.0	493-2428-1-ND	3.37	28.89	493-2428-2-ND	2,000	130.00/M	F971E155MBA
	4.7	±20%	C	1.2	6	1.8	493-2430-1-ND	6.13	52.50	493-2430-2-ND	500	149.00	F971E475MCC
	10	±20%	N	2.5	6	1.0	493-2427-1-ND	7.44	63.75	493-2427-2-ND	500	180.50	F971E106MNC
	.1	±20%	A	0.5	4	15.0	493-2431-1-ND	3.28	28.14	493-2431-2-ND	2,000	127.00/M	F971V104MAA
35	.15	±20%	A	0.5	4	15.0	493-2433-1-ND	3.28	28.14	493-2433-2-ND	2,000	127.00/M	F971V154MAA
	.22	±20%	A	0.5	4	12.0	493-2435-1-ND	3.28	28.14	493-2435-2-ND	2,000	127.00/M	F971V224MAA
	.33	±20%	A	0.5	4	12.0	493-2437-1-ND	3.28	28.14	493-2437-2-ND	2,000	127.00/M	F971V334MAA
	.47	±20%	B	0.5	4	5.0	493-2439-1-ND	3.37	28.89	493-2439-2-ND	2,000	130.00/M	F971V474MBA
	.68	±20%	B	0.5	4	5.0	493-2441-1-ND	3.37	28.89	493-2441-2-ND	2,000	130.00/M	F971V684MBA
	1	±20%	B	0.5	4	4.0	493-2432-1-ND	3.37	28.89	493-2432-2-ND	2,000	130.00/M	F971V105MBA
	1.5	±20%	C	0.5	4	2.0	493-2434-1-ND	4.41	37.80	493-2434-2-ND	750	151.50	F971V155MCMBA
	2.2	±20%	C	0.8	6	2.0	493-2436-1-ND	5.25	45.00	493-2436-2-ND	500	127.50	F971V225MCC
	3.3	±20%	C	1.2	6	2.0	493-2438-1-ND	6.13	52.50	493-2438-2-ND	500	149.00	F971V335MCC
	4.7	±20%	N	1.6	6	1.0	493-2440-1-ND	7.22	61.89	493-2440-2-ND	500	175.50	F971V475MNC
	6.8	±20%	N	2.4	6	1.0	493-2442-1-ND	7.44	63.75	493-2442-2-ND	500	180.50	F971V685MNC

F

Solid Tantalum Electrolytic Chip Capacitors (SMT) — Frameless™



Features:

- F95 Series:** • Low profile, small rectangular conformal coated chip • Low ESR/Impedance, excellent high frequency characteristics • Soldering heat resistance
- F98 Series:** • Small and low profile resin molded chip • High density mounting • High capacitance

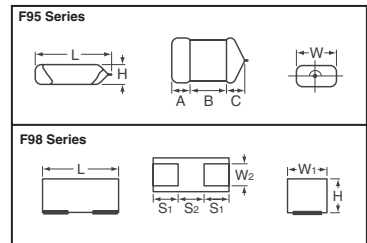
Specification:

- Operating Temperature Range: -55°C - 125°C

Applications:

- Mobile phones • Mobile audio players • USB drives
- Flash memory cards • PCMCIA/PC cards • Medical
- Modems • MP3 players

Case Code	F95 Series — Dimensions in mm					
	L	W	H	A	B	C
P	2.2 ±0.3	1.25 ±0.3	1.0 ±0.2	0.6 ±0.3	0.8 ±0.3	0.8 ±0.3
Q	3.2 ±0.2	1.6 ±0.2	0.8 ±0.2	0.8 ±0.2	1.2 ±0.2	0.8 ±0.2
S	3.2 ±0.3	1.6 ±0.3	1.0 ±0.2	0.8 ±0.3	1.2 ±0.3	0.8 ±0.3
A	3.2 ±0.3	1.7 ±0.3	1.4 ±0.2	0.8 ±0.3	1.2 ±0.3	0.8 ±0.3
T	3.5 ±0.2	2.7 ±0.2	1.0 ±0.2	0.8 ±0.2	1.2 ±0.2	1.1 ±0.2
B	3.3 ±0.3	2.7 ±0.3	1.8 ±0.2	0.8 ±0.3	1.2 ±0.3	1.1 ±0.3



Case Code	F98 Series — Dimensions in mm					
	L	W1	W2	H	S1	S2
M	1.6 ±0.1	0.85 ±0.1	0.65 ±0.1	0.8 ±0.1	0.5 ±0.1	0.6 ±0



Rated Voltage	Cap. (µF)	Capacitance Tolerance	Case Size	Leakage Current (µA)	Dissipation Factor (% @ 120Hz)	E.S.R. (Ω @ 100kHz)	Digi-Key Part No.	Cut Tape Pricing		Digi-Key Part No.	Tape and Reel		Nichicon Part No.	
								10	100		Qty.	Pricing		
4	47	±20%	A	1.9	8	0.6	493-2892-1-ND	5.81	49.80	493-2892-2-ND	2,500	219.00/M	F950G476MAAAQ2	
	68	±20%	S	2.7	10	0.8	493-2893-1-ND	6.79	58.20	493-2893-2-ND	2,500	256.00/M	F950G686MSAAQ2	
	68	±20%	A	2.7	10	0.5	493-2894-1-ND	6.02	51.60	493-2894-2-ND	2,500	227.00/M	F950G686MAAAQ2	
	100	±20%	S	4.0	14	0.8	493-2895-1-ND	7.74	66.30	493-2895-2-ND	2,500	292.00/M	F950G107MSAAQ2	
	100	±20%	A	4.0	12	0.5	493-2896-1-ND	7.74	66.30	493-2896-2-ND	2,500	292.00/M	F950G107MAAAQ2	
	150	±20%	B	6.0	14	0.4	493-2897-1-ND	12.08	103.50	493-2897-2-ND	2,000	449.00/M	F950G157MBAAQ2	
	220	±20%	S	8.8	25	0.8	493-2898-1-ND	7.74	66.30	493-2898-2-ND	2,500	292.00/M	F950G227MSAAQ2	
	220	±20%	T	8.8	25	0.6	493-2899-1-ND	10.57	90.60	493-2899-2-ND	2,500	393.00/M	F950G227MTAAQ2	
	220	±20%	B	8.8	16	0.4	493-2900-1-ND	17.50	150.00	493-2900-2-ND	2,000	638.00/M	F950G227MBAQ2	
	6.3	10	±20%	P	0.6	8	2.0	493-2901-1-ND	3.78	32.40	493-2901-2-ND	3,000	146.00/M	F950J106MPAAQ2
15		±20%	P	0.9	10	1.8	493-2902-1-ND	4.94	42.30	493-2902-2-ND	3,000	186.00/M	F950J156MPAAQ2	
22		±20%	P	1.4	14	1.1	493-2903-1-ND	5.08	43.50	493-2903-2-ND	3,000	191.00/M	F950J226MPAAQ2	
33		±20%	P	2.1	14	1.1	493-2904-1-ND	5.18	44.40	493-2904-2-ND	3,000	195.00/M	F950J336MPAAQ2	
33		±20%	Q	2.1	10	2.0	493-2905-1-ND	5.78	49.50	493-2905-2-ND	2,500	218.00/M	F950J336MQAAQ2	
33		±20%	S	2.1	10	1.0	493-2906-1-ND	6.55	56.10	493-2906-2-ND	2,500	247.00/M	F950J336MSAAQ2	
33		±20%	A	2.1	8	0.8	493-2907-1-ND	5.29	45.30	493-2907-2-ND	2,500	199.00/M	F950J336MAAAQ2	
47		±20%	P	3.0	20	1.1	493-2908-1-ND	5.18	44.40	493-2908-2-ND	3,000	195.00/M	F950J476MPAAQ2	
47		±20%	Q	3.0	10	1.1	493-2909-1-ND	5.43	46.50	493-2909-2-ND	2,500	205.00/M	F950J476MQAAQ2	
47		±20%	S	3.0	10	0.9	493-2910-1-ND	6.79	58.20	493-2910-2-ND	2,500	256.00/M	F950J476MSAAQ2	
47		±20%	A	3.0	10	0.6	493-2911-1-ND	6.19	52.80	493-2911-2-ND	2,500	232.00/M	F950J476MAAAQ2	
68		±20%	S	4.3	14	0.9	493-2912-1-ND	7.70	66.00	493-2912-2-ND	2,500	290.00/M	F950J686MSAAQ2	
68		±20%	A	4.3	12	0.5	493-2913-1-ND	6.76	57.90	493-2913-2-ND	2,500	255.00/M	F950J686MAAAQ2	
100		±20%	A	6.3	14	0.5	493-2914-1-ND	8.68	74.40	493-2914-2-ND	2,500	327.00/M	F950J107MAAAQ2	
100		±20%	T	6.3	14	0.6	493-2915-1-ND	7.18	61.50	493-2915-2-ND	2,500	271.00/M	F950J107MTAAQ2	
100		±20%	B	6.3	14	0.4	493-2916-1-ND	12.11	103.80	493-2916-2-ND	2,000	450.00/M	F950J107MBAAQ2	
150		±20%	B	9.5	18	0.4	493-2917-1-ND	17.50	150.00	493-2917-2-ND	2,000	638.00/M	F950J157MBAAQ2	
220		±20%	B	13.9	30	0.4	493-2918-1-ND	17.50	150.00	493-2918-2-ND	2,000	638.00/M	F950J227MBAAQ2	
10		3.3	±20%	P	0.5	8	5.0	493-2919-1-ND	2.91	24.90	493-2919-2-ND	3,000	112.00/M	F951A335MPAAQ2
		4.7	±20%	P	0.5	8	4.0	493-2920-1-ND	3.15	27.00	493-2920-2-ND	3,000	122.00/M	F951A475MPAAQ2
	6.8	±20%	P	0.7	8	4.0	493-2921-1-ND	3.78	32.40	493-2921-2-ND	3,000	146.00/M	F951A685MPAAQ2	
	10	±20%	P	1.0	8	3.0	493-2922-1-ND	4.97	42.60	493-2922-2-ND	3,000	187.00/M	F951A106MPAAQ2	
	15	±20%	P	1.5	10	3.0	493-2923-1-ND	5.08	43.50	493-2923-2-ND	3,000	191.00/M	F951A156MPAAQ2	
	22	±20%	P	2.2	14	3.0	493-2924-1-ND	5.08	43.50	493-2924-2-ND	3,000	191.00/M	F951A226MPAAQ2	
	22	±20%	Q	2.2	10	2.0	493-2925-1-ND	4.48	38.40	493-2925-2-ND	2,500	173.00/M	F951A226MQAAQ2	
	22	±20%	S	2.2	10	1.1	493-2926-1-ND	6.51	55.80	493-2926-2-ND	2,500	246.00/M	F951A226MSAAQ2	
	22	±20%	A	2.2	6	0.9	493-2927-1-ND	5.81	49.80	493-2927-2-ND	2,500	219.00/M	F951A226MAAAQ2	
	33	±20%	S	3.3	10	1.1	493-2928-1-ND	6.79	58.20	493-2928-2-ND	2,500	256.00/M	F951A336MSAAQ2	
	33	±20%	A	3.3	10	0.8	493-2929-1-ND	6.02	51.60	493-2929-2-ND	2,500	227.00/M	F951A336MAAAQ2	
	47	±20%	A	4.7	10	0.8	493-2930-1-ND	6.97	59.70	493-2930-2-ND	2,500	263.00/M	F951A476MAAAQ2	
	47	±20%	T	4.7	12	0.8	493-2931-1-ND	7.18	61.50	493-2931-2-ND	2,500	271.00/M	F951A476MTAAQ2	
	47	±20%	B	4.7	8	0.4	493-2932-1-ND	6.97	59.70	493-2932-2-ND	2,000	263.00/M	F951A476MBAAQ2	
	68	±20%	B	6.8	12	0.4	493-2933-1-ND	12.11	103.80	493-2933-2-ND	2,000	450.00/M	F951A686MBAAQ2	
	100	±20%	B	10.0	14	0.4	493-2934-1-ND	17.50	150.00	493-2934-2-ND	2,000	638.00/M	F951A107MBAAQ2	
	16	1	±20%	P	0.5	8	8.0	493-2935-1-ND	2.49	21.30	493-2935-2-ND	3,000	96.00/M	F951C105MPAAQ2
		1.5	±20%	P	0.5	8	8.0	493-2936-1-ND	2.49	21.30	493-2936-2-ND	3,000	96.00/M	F951C155MPAAQ2
		2.2	±20%	P	0.5	8	6.0	493-2937-1-ND	2.91	24.90	493-2937-2-ND	3,000	112.00/M	F951C225MPAAQ2
		3.3	±20%	P	0.5	8	6.0	493-2938-1-ND	3.15	27.00	493-2938-2-ND	3,000	122.00/M	F951C335MPAAQ2
4.7		±20%	P	0.8	10	4.0	493-2939-1-ND	3.78	32.40	493-2939-2-ND	3,000	146.00/M	F951C475MPAAQ2	
10		±20%	P	1.6	10	4.0	493-2940-1-ND	5.18	44.40	493-2940-2-ND	3,000	195.00/M	F951C106MPAAQ2	
10		±20%	Q	1.6	8	3.0	493-2941-1-ND	4.94	42.30	493-2941-2-ND	2,500	186.00/M	F951C106MQAAQ2	
10		±20%	S	1.6	8	2.0	493-2942-1-ND	5.71	48.90	493-2942-2-ND	2,500	215.00/M	F951C106MSAAQ2	
10		±20%	A	1.6	6	1.4	493-2943-1-ND	6.16	52.81	493-2943-2-ND	2,500	232.00/M	F951C106MAAAQ2	
15		±20%	A	2.4	8	1.4	493-2944-1-ND	6.51	55.80	493-2944-2-ND	2,500	246.00/M	F951C156MAAAQ2	
22		±20%	Q	3.5	12	3.0	493-2945-1-ND	5.29	45.30	493-2945-2-ND	2,500	199.00/M	F951C226MQAAQ2	
22		±20%	A	3.5	8	1.4	493-2946-1-ND	7.25	62.10	493-2946-2-ND	2,500	273.00/M	F951C226MAAAQ2	
22		±20%	T	3.5	8	1.4	493-2947-1-ND	7.00	60.00	493-2947-2-ND	2,500	264.00/M	F951C226MTAAQ2	
22		±20%	B	3.5	6	0.5	493-2948-1-ND	6.02	51.60	493-2948-2-ND	2,000	227.00/M	F951C226MBAAQ2	
33		±20%	B	5.3	6	0.5	493-2949-1-ND	6.97	59.70	493-2949-2-ND	2,000	263.00/M	F951C336MBAAQ2	
47		±20%	B	7.5	10	0.6	493-2950-1-ND	12.11	103.80	493-2950-2-ND	2,000	450.00/M	F951C476MBAAQ2	
20		2.2	±20%	P	0.5	6	6.0	493-2951-1-ND	3.50	30.00	493-2951-2-ND	3,000	135.00/M	F951D225MPAAQ2
		2.2	±20%	S	0.5	6	5.0	493-2952-1-ND	2.84	24.30	493-2952-2-ND	2,500	109.00/M	F951D225MSAAQ2
		3.3	±20%	A	0.7	6	2.0	493-2953-1-ND	3.78	32.40	493-2953-2-ND	2,500	146.00/M	F951D335MAAAQ2
		4.7	±20%	S	0.9	6	4.0	493-2954-1-ND	5.71	48.90	493-2954-2-ND	2,500	215.00/M	F951D475MSAAQ2
	4.7	±20%	A	0.9	6	1.5	493-2955-1-ND	4.97	42.60	493-2955-2-ND	2,500	187.00/M	F951D475MAAAQ2	
	6.8	±20%	A	1.4	8	1.5	493-2956-1-ND	5.08	43.50	493-2956-2-ND	2,500	191.00/M	F951D685MAAAQ2	
	10	±20%	A	2.0	8	1.5	493-2957-1-ND	6.90	59.10	493-2957-2-ND	2,500	260.00/M	F951D106MAAAQ2	
	10	±20%	B	2.0	6	0.8	493-2958-1-ND	5.81	49.80	493-2958-2-ND	2,000	219.00/M	F951D106MBAAQ2	
	22	±20%	B	4.4	8	0.8	493-2959-1-ND	6.02	51.60	493-2959-2-ND	2,000	227.00/M	F951D226MBAAQ2	
	25	1	±20%	P	0.5	6	8.0	493-2960-1-ND	3.26	27.90	493-2960-2-ND	3,000	126.00/M	F951E105MPAAQ2
1		±20%	S	0.5	6	8.0	493-2961-1-ND	2.62	22.49	493-2961-2-ND	2,500	101.00/M	F951E105MSAAQ2	
1.5		±20%	S	0.5	6	7.0	493-2962-1-ND	2.84	24.30	493-2962-2-ND	2,500	109.00/M	F951E155MSAAQ2	
2.2		±20%	S	0.6	6	7.0	493-2963-1-ND	4.45	38.10	493-2963-2-ND	2,500	171.00/M	F951E225MSAAQ2	
2.2		±20%	A	0.6	6	3.2	493-2964-1-ND	3.78	32.40	493-2964-2-ND	2,500	146.00/M	F951E225MAAAQ2	
3.3		±20%	A	0.8	6	2.8	493-2965-1-ND	4.94	42.30	493-2965-2-ND	2,500	186.00/M	F951E335MAAAQ2	
4.7		±20%	S	1.2	8	4.0	493-2966-1-ND	5.71	48.90	493-2966-2-ND	2,500	215.00/M	F951E475MSAAQ2	
4.7		±20%	A	1.2	8	2.0	493-2967-1-ND	5.08	43.50	493-2967-2-ND	2,500	191.00/M	F951E475MAAAQ2	
10		±20%	B	2.5	6	0.9	493-2968-1-ND	6.02	51.60	493-2968-2-ND	2,000	227.00/M	F951E106MBAAQ2	
35		1	±20%	S	0.5	6	8.0	493-2969-1-ND						