

# F91 Series



## Low ESR, Resin-Molded Chip J-Lead



### FEATURES

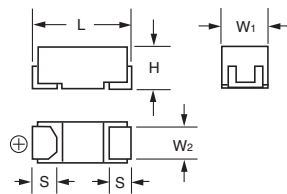
- Compliant to the RoHS2 directive 2011/65/EU
- SMD J-lead
- Low ESR

### APPLICATIONS

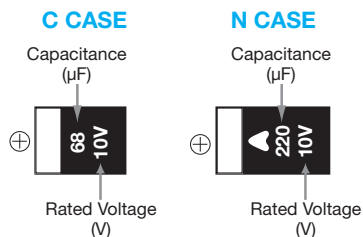
- General medium power DC/DC converters

### CASE DIMENSIONS: millimeters (inches)

Code	L	W <sub>1</sub>	W <sub>2</sub>	H	S
C	6.00 ± 0.20 (0.236 ± 0.008)	3.20 ± 0.20 (0.126 ± 0.008)	2.20 ± 0.10 (0.087 ± 0.004)	2.50 ± 0.20 (0.098 ± 0.008)	1.30 ± 0.20 (0.051 ± 0.008)
N	7.30 ± 0.20 (0.287 ± 0.008)	4.30 ± 0.20 (0.169 ± 0.008)	2.40 ± 0.10 (0.094 ± 0.004)	2.80 ± 0.20 (0.110 ± 0.008)	1.30 ± 0.20 (0.051 ± 0.008)



### MARKING



### HOW TO ORDER

<b>F91</b>	<b>1A</b>	<b>107</b>	<b>M</b>	<b>C</b>	
Type	Rated Voltage	Capacitance Code	Tolerance	Case Size	Packaging
		pF code: 1st two digits represent significant figures, 3rd digit represents multiplier (number of zeros to follow)	K = ±10% M = ±20%	See table above	See page 168 for details

### TECHNICAL SPECIFICATIONS

Item	Performance Characteristics
Category Temperature Range	-55 to +125°C (Rated temperature: +85°C)
Capacitance Tolerance	±20%, ±10% (at 120Hz)
Dissipation Factor	Refer to next page
ESR (100kHz)	Refer to next page
Leakage Current	<ul style="list-style-type: none"> <li>• After 1 minute's application of rated voltage, leakage current at 20°C is not more than 0.01CV or 0.5µA, whichever is greater.</li> <li>• After 1 minute's application of rated voltage, leakage current at 85°C is not more than 0.1CV or 5µA, whichever is greater.</li> <li>• After 1 minute's application of derated voltage, leakage current at 125°C is not more than 0.125CV or 6.3µA, whichever is greater.</li> </ul>
Capacitance Change by Temperature	+15% Max. (at +125°C) +10% Max. (at +85°C) -10% Max. (at -55°C)
Damp Heat (Steady State)	At 40°C, 90 to 95% R.H., 500 hours (No voltage applied) Capacitance Change ..... Within ±10% of the initial value Dissipation Factor ..... Initial specified value or less Leakage Current ..... Initial specified value or less
Temperature Cycles	-55°C / +125°C, 30 minutes each, 5 cycles Capacitance Change ..... Within ±5% of the initial value Dissipation Factor ..... Initial specified value or less Leakage Current ..... Initial specified value or less
Resistance to Soldering Heat	10 seconds reflow at 260°C, 5 seconds immersion at 260°C. Capacitance Change ..... Within ±5% of the initial value Dissipation Factor ..... Initial specified value or less Leakage Current ..... Initial specified value or less
Surge	After application of surge voltage in series with a 33Ω resistor at the rate of 30 seconds ON, 30 seconds OFF, for 1000 successive test cycles at 85°C, capacitors shall meet the characteristic requirements table below. Capacitance Change ..... Within ±5% of the initial value Dissipation Factor ..... Initial specified value or less Leakage Current ..... Initial specified value or less
Endurance	After 2000 hours' application of rated voltage in series with a 3Ω resistor at 85°C, or derated voltage in series with a 3Ω resistor at 125°C, capacitors shall meet the characteristic requirements table below. Capacitance Change ..... Within ±10% of the initial value Dissipation Factor ..... Initial specified value or less Leakage Current ..... Initial specified value or less
Shear Test	After applying the pressure load of 5N for 10±1 seconds horizontally to the center of capacitor side body which has no electrode and has been soldered beforehand on a substrate, there shall be found neither exfoliation nor its sign at the terminal electrode. 5N (0.51kg · f) For 10±1 seconds
Terminal Strength	Keeping a capacitor surface-mounted on a substrate upside down and supporting the substrate at both of the opposite bottom points 45mm apart from the center of capacitor, the pressure strength is applied with a specified jig at the center of substrate so that the substrate may bend by 1mm as illustrated. Then, there shall be found no remarkable abnormality on the capacitor terminals. R230 45 45 1mm

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### CAPACITANCE AND RATED VOLTAGE RANGE (LETTER DENOTES CASE SIZE)

Capacitance		Rated Voltage		
μF	Code	4V (0G)	6.3V (0J)	10V (1A)
68	686			C
100	107		C	C
150	157	C	C	N
220	227	C	C/N	N
330	337	N	N	N
470	477	N	N	
680	687	N		

### RATINGS & PART NUMBER REFERENCE

AVX Part Number	Case Size	Cap (μF)	Rated Voltage (V)	Leakage Current (μA)	Dissipation Factor (%@120Hz)	ESR (mΩ@100kHz)	Ripple Current (mA <sub>rms</sub> @100kHz, 20°C)
<b>4 Volt</b>							
F910G157MCC	C	150	4	6.0	12	250	663
F910G227MCC	C	220	4	8.8	12	250	663
F910G337MNC	N	330	4	13.2	10	100	1225
F910G477MNC	N	470	4	18.8	16	100	1225
F910G687MNC	N	680	4	27.2	18	100	1225
<b>6.3 Volt</b>							
F910J107MCC	C	100	6.3	6.3	8	250	663
F910J157MCC	C	150	6.3	9.5	12	250	663
F910J227MCC	C	220	6.3	13.9	14	250	663
F910J227MNC	N	220	6.3	13.9	10	100	1225
F910J337MNC	N	330	6.3	20.8	14	100	1225
F910J477MNC	N	470	6.3	29.6	16	100	1225
<b>10 Volt</b>							
F911A686MCC	C	68	10	6.8	8	300	606
F911A107MCC	C	100	10	10.0	10	250	663
F911A157MNC	N	150	10	15.0	10	100	1225
F911A227MNC	N	220	10	22.0	12	100	1225
F911A337MNC	N	330	10	33.0	18	100	1225

\* In case of capacitance tolerance ± 10% type, "K" will be put at 9th digit of type numbering system