

# F91 Series



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



### FEATURES

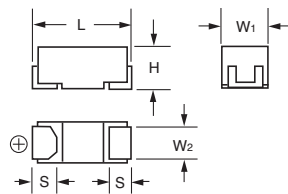
- Compliant to the RoHS directive (2002/95/EC)
- SMD J-lead
- Low ESR

### APPLICATIONS

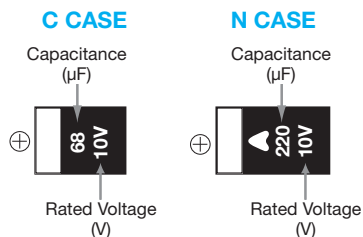
- General medium power DC/DC converters

### CASE DIMENSIONS: millimeters (inches)


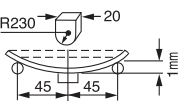
Code	L	W <sub>1</sub>	W <sub>2</sub>	H	S
C	6.00 ± 0.20 (0.236 ± 0.008)	3.20 ± 0.20 (0.126 ± 0.008)	2.20 ± 0.10 (0.087 ± 0.004)	2.50 ± 0.20 (0.098 ± 0.008)	1.30 ± 0.20 (0.051 ± 0.008)
N	7.30 ± 0.20 (0.287 ± 0.008)	4.30 ± 0.20 (0.169 ± 0.008)	2.40 ± 0.10 (0.094 ± 0.004)	2.80 ± 0.20 (0.110 ± 0.008)	1.30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



### MARKING



### 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 (0.51 kg · 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. 

### 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 163 for details

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### CAPACITANCE AND RATED VOLTAGE, $V_R$ (VOLTAGE CODE) RANGE (LETTER DENOTES CASE SIZE)

Capacitance		Rated Voltage		
$\mu\text{F}$	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 ( $\mu\text{F}$ )	Rated Voltage (V)	Leakage Current ( $\mu\text{A}$ )	Dissipation Factor (%@120Hz)	ESR (m $\Omega$ @100kHz)
<b>4 Volt</b>						
F910G157MCC	C	150	4	6.0	12	250
F910G227MCC	C	220	4	8.8	12	250
F910G337MNC	N	330	4	13.2	10	100
F910G477MNC	N	470	4	18.8	16	100
F910G687MNC	N	680	4	27.2	18	100
<b>6.3 Volt</b>						
F910J107MCC	C	100	6.3	6.3	8	250
F910J157MCC	C	150	6.3	9.5	12	250
F910J227MCC	C	220	6.3	13.9	14	250
F910J227MNC	N	220	6.3	13.9	10	100
F910J337MNC	N	330	6.3	20.8	14	100
F910J477MNC	N	470	6.3	29.6	16	100
<b>10 Volt</b>						
F911A686MCC	C	68	10	6.8	8	300
F911A107MCC	C	100	10	10.0	10	250
F911A157MNC	N	150	10	15.0	10	100
F911A227MNC	N	220	10	22.0	12	100
F911A337MNC	N	330	10	33.0	18	100

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