

F91 Series



Low ESR, Resin-Molded Chip J-Lead



FEATURES

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



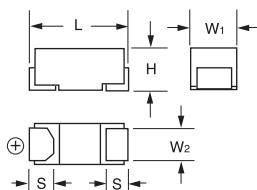
APPLICATIONS

- General medium power DC/DC convertors

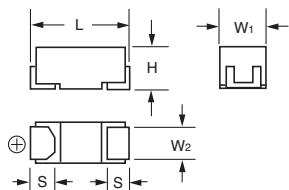
CASE DIMENSIONS: millimeters (inches)

Code	EIA Code	EIA Metric	L	W ₁	W ₂	H	S
B	1210	3528-21	3.50 ± 0.20 (0.126 ± 0.008)	2.80 ± 0.20 (0.110 ± 0.008)	2.20 ± 0.10 (0.087 ± 0.004)	1.90 ± 0.20 (0.075 ± 0.008)	0.80 ± 0.20 (0.031 ± 0.008)
C	2312	6032-27	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	2917	7343-30	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)

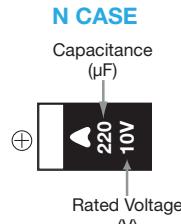
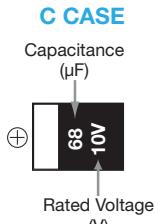
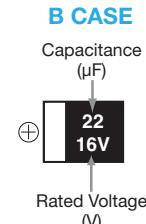
B CASE



C, N CASE



MARKING



HOW TO ORDER

F91	1A	107	M	C	
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)

TECHNICAL SPECIFICATIONS

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:		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.
		After 1 minute's application of rated voltage, leakage current at 85°C is not more than 0.1CV or 5μA, whichever is greater.
		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.
Capacitance Change By Temperature		+15% Max. at +125°C
		+10% Max. at +85°C
		-10% Max. at -55°C

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CAPACITANCE AND RATED VOLTAGE RANGE (LETTER DENOTES CASE SIZE)

Capacitance μF	Code	Rated Voltage						
		4V (0G)	6.3V (0J)	10V (1A)	16V (1C)	20V (1D)	25V (1E)	35V (1V)
6.8	685							C
10	106						C	N
15	156					C		N
22	226				B		N	N
33	336				B/C	N	N	
47	476			B	N	N	N	
68	686			C				
100	107		C	C	N			
150	157	C	C	N				
220	227	C	C/N	N				
330	337	N	N	N				
470	477	N	N					
680	687	N						

Released ratings

RATINGS & PART NUMBER REFERENCE

AVX Part No.	Case Size	Capacitance μF	Rated Voltage (V)	DCL (μA)	DF @ 120Hz (%)	ESR @ 100kHz (mΩ)	100kHz RMS Current (mA)		MSL
							20°C	20°C	
4 Volt									
F910G157MCC	C	150	4	6.0	12	250	663	1	
F910G227MCC	C	220	4	8.8	12	250	663	1	
F910G337MNC	N	330	4	13.2	10	100	1225	1	
F910G477MNC	N	470	4	18.8	16	100	1225	1	
F910G687MNC	N	680	4	27.2	18	100	1225	1	
6.3 Volt									
F910J107MCC	C	100	6.3	6.3	8	250	663	1	
F910J157MCC	C	150	6.3	9.5	12	250	663	1	
F910J227MCC	C	220	6.3	13.9	14	250	663	1	
F910J227MNC	N	220	6.3	13.9	10	100	1225	1	
F910J337MNC	N	330	6.3	20.8	14	100	1225	1	
F910J477MNC	N	470	6.3	29.6	16	100	1225	1	
10 Volt									
F911A476MBA	B	47	10	4.7	8	500	412	1	
F911A686MCC	C	68	10	6.8	8	300	606	1	
F911A107MCC	C	100	10	10.0	10	250	663	1	
F911A157MNC	N	150	10	15.0	10	100	1225	1	
F911A227MNC	N	220	10	22.0	12	100	1225	3	
F911A337MNC	N	330	10	33.0	18	100	1225	3	
16 Volt									
F911C226MBA	B	22	16	3.5	8	950	299	1	
F911C336MBA	B	33	16	5.3	8	950	299	1	
F911C336MCC	C	33	16	5.3	6	400	524	1	
F911C476MNC	N	47	16	7.6	6	150	1000	1	
F911C107MNC	N	100	16	16	10	100	1225	3	
20 Volt									
F911D156MCC	C	15	20	3	6	450	494	1	
F911D336MNC	N	33	20	6.6	6	200	866	1	
F911D476MNC	N	47	20	9.4	8	200	866	1	
25 Volt									
F911E106MCC	C	10	25	2.5	6	450	494	1	
F911E226MNC	N	22	25	5.5	6	200	866	1	
F911E336MNC	N	33	25	8.3	8	200	866	1	
F911E476MNC	N	47	25	11.8	8	250	775	1	
35 Volt									
F911V685MCC	C	6.8	35	2.4	6	600	428	1	
F911V106MNC	N	10	35	3.5	6	300	707	1	
F911V156MNC	N	15	35	5.3	6	300	707	1	
F911V226MNC	N	22	35	7.7	8	300	707	1	

* In case of capacitance tolerance ± 10% type, "K" will be put at 9th digit of type numbering system
Moisture Sensitivity Level (MSL) is defined according to J-STD-020.

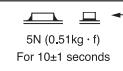
F91 Series



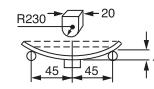
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QUALIFICATION TABLE

TEST	F91 series (Temperature range -55°C to +125°C) Condition
Damp Heat (Steady State)	At 40°C, 90 to 95% R.H., 500 hours (No voltage applied) Capacitance Change Within $\pm 10\%$ 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 $\pm 5\%$ 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 $\pm 5\%$ 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 in the table above. Capacitance Change Within $\pm 5\%$ 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 in the table above. Capacitance Change Within $\pm 10\%$ 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.
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.



5N (0.51kg · f)
For 10±1 seconds

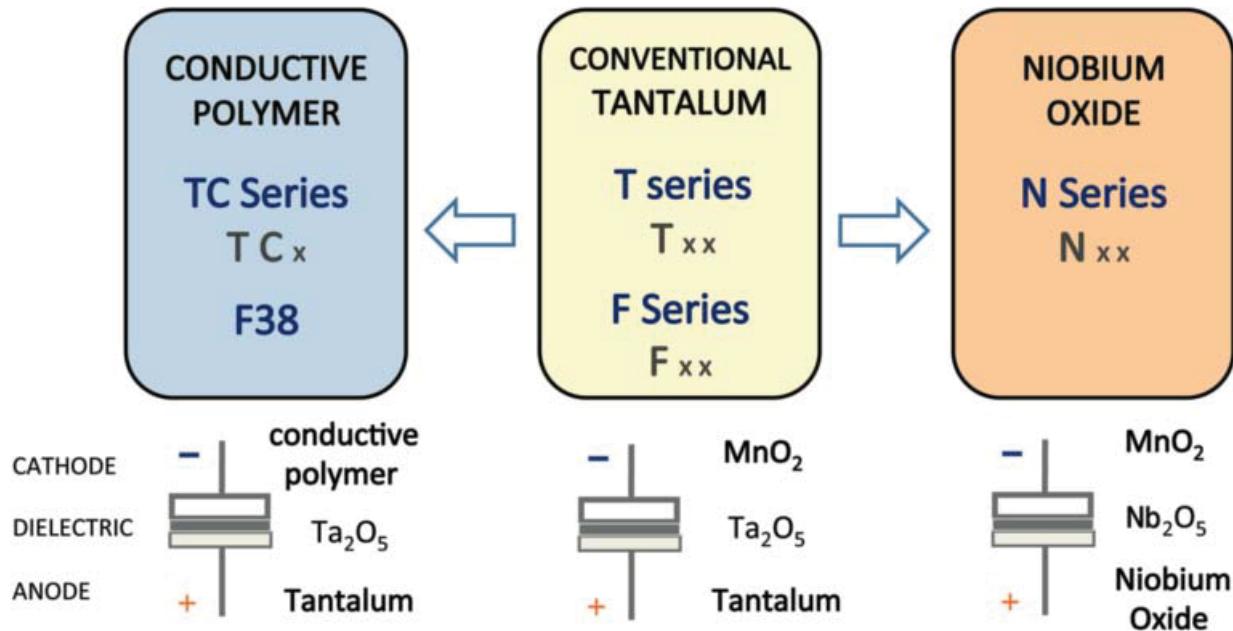


F91 Series

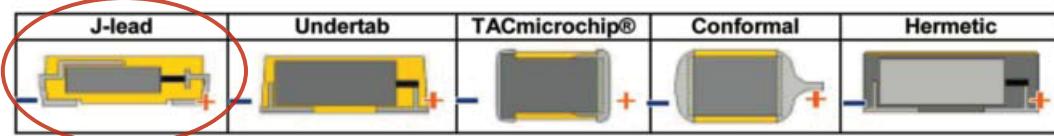


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AVX SOLID ELECTROLYTIC CAPACITOR ROADMAP



Five Capacitor Construction Styles



SERIES LINE UP: CONVENTIONAL SMD MnO_2

