

F91 Series



Low ESR, Resin-Molded Chip J-Lead



FEATURES

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

APPLICATIONS

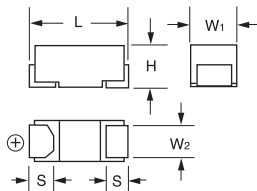
- General medium power DC/DC convertors



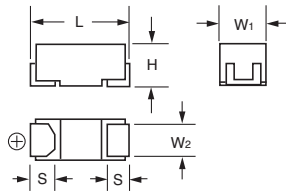
CASE DIMENSIONS: millimeters (inches)

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

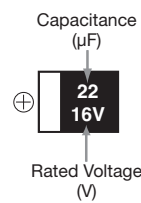


C, N CASE

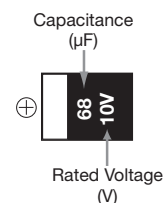


MARKING

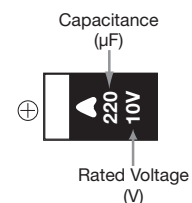
B CASE



C CASE



N CASE



HOW TO ORDER

F91	1A	107	M	C	
Type	Rated Voltage	Capacitance Code pF code: 1st two digits represent significant figures, 3rd digit represents multiplier (number of zeros to follow)	Tolerance K = ±10% M = ±20%	Case Size See table above	Packaging See Tape & Reel Packaging Section

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		Rated Voltage						
µF	Code	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

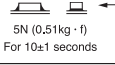
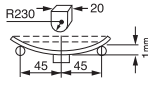
RATINGS & PART NUMBER REFERENCE

AVX Part No.	Case Size	Capacitance (µF)	Rated Voltage (V)	DCL (µA)	DF @ 120Hz (%)	ESR @ 100kHz (mΩ)	100kHz RMS Current (mA) 20°C	MSL
4 Volt								
F910G157#CC	C	150	4	6.0	12	250	663	1
F910G227#CC	C	220	4	8.8	12	250	663	1
F910G337#NC	N	330	4	13.2	10	100	1225	1
F910G477#NC	N	470	4	18.8	16	100	1225	1
F910G687#NC	N	680	4	27.2	18	100	1225	1
6.3 Volt								
F910J107#CC	C	100	6.3	6.3	8	250	663	1
F910J157#CC	C	150	6.3	9.5	12	250	663	1
F910J227#CC	C	220	6.3	13.9	14	250	663	1
F910J227#NC	N	220	6.3	13.9	10	100	1225	1
F910J337#NC	N	330	6.3	20.8	14	100	1225	1
F910J477#NC	N	470	6.3	29.6	16	100	1225	1
10 Volt								
F911A476#BA	B	47	10	4.7	8	500	412	1
F911A686#CC	C	68	10	6.8	8	300	606	1
F911A107#CC	C	100	10	10.0	10	250	663	1
F911A157#NC	N	150	10	15.0	10	100	1225	1
F911A227#NC	N	220	10	22.0	12	100	1225	3
F911A337#NC	N	330	10	33.0	18	100	1225	3
16 Volt								
F911C226#BA	B	22	16	3.5	8	950	299	1
F911C336#BA	B	33	16	5.3	8	950	299	1
F911C336#CC	C	33	16	5.3	6	400	524	1
F911C476#NC	N	47	16	7.6	6	150	1000	1
F911C107#NC	N	100	16	16	10	100	1225	3
20 Volt								
F911D156#CC	C	15	20	3	6	450	494	1
F911D336#NC	N	33	20	6.6	6	200	866	1
F911D476#NC	N	47	20	9.4	8	200	866	1
25 Volt								
F911E106#CC	C	10	25	2.5	6	450	494	1
F911E226#NC	N	22	25	5.5	6	200	866	1
F911E336#NC	N	33	25	8.3	8	200	866	1
F911E476#NC	N	47	25	11.8	8	250	775	1
35 Volt								
F911V685#CC	C	6.8	35	2.4	6	600	428	1
F911V106#NC	N	10	35	3.5	6	300	707	1
F911V156#NC	N	15	35	5.3	6	300	707	1
F911V226#NC	N	22	35	7.7	8	300	707	1

#: "M" for ±20% tolerance, "K" for ±10% tolerance.

Moisture Sensitivity Level (MSL) is defined according to J-STD-020.

QUALIFICATION TABLE

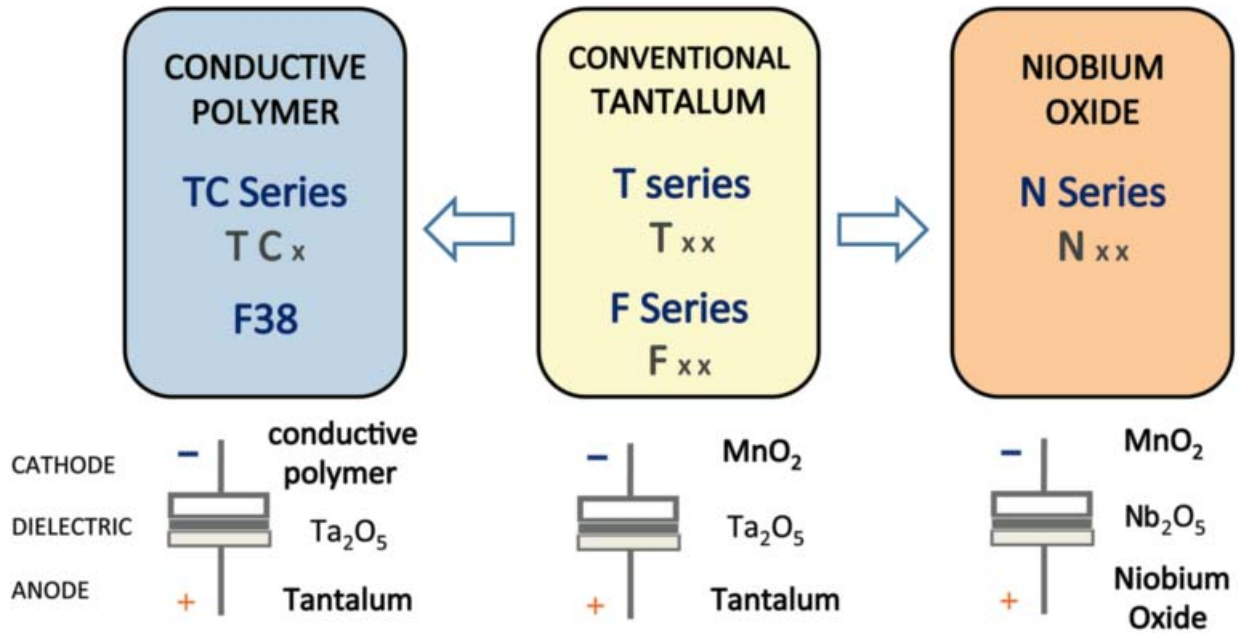
TEST	F91 series (Temperature range -55°C to +125°C)	
	Condition	
Damp Heat (Steady State)	At 40°C, 90 to 95% R.H., 500 hours (No voltage applied) Capacitance Change Within ±10% of the initial value Dissipation Factor Initial specified value or less Leakage Current Initial specified value or less	
Temperature 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 in the table above. 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 in the table above. 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. 	
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. 	

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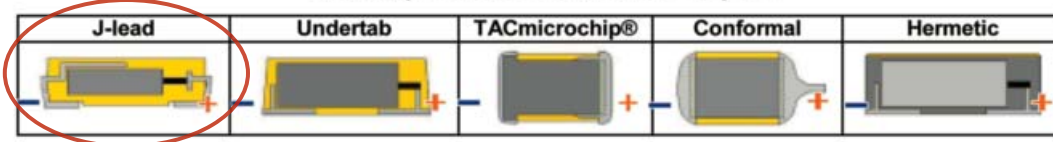


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AVX SOLID ELECTROLYTE CAPACITOR ROADMAP



Five Capacitor Construction Styles



SERIES LINE UP: CONVENTIONAL SMD MnO₂

