

F91-AJ6 Series

Low ESR, Resin-Molded Chip - Automotive Product Range



FEATURES

- Compliant to the RoHS3 directive 2015/863/EU
- Compliant to AEC-Q200
- 100% Surge Current Tested

APPLICATIONS

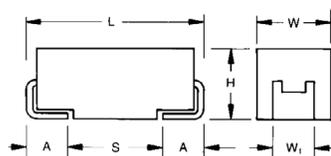
- Cabin Electronics
- Infotainment



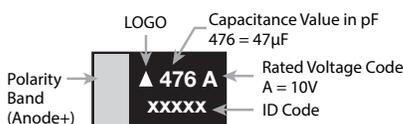
CASE DIMENSIONS: millimeters (inches)

Code	EIA Code	EIA Metric	L ± 0.20 (0.008)	W ± 0.20 (0.008)	H ± 0.20 (0.008)	W ₁ ± 0.20 (0.008)	A ± 0.30 (0.012)	S Min.
A	1206	3216-18	3.20 (0.126)	1.60 (0.063)	1.60 (0.063)	1.20 (0.047)	0.80 (0.031)	1.10 (0.043)
B	1210	3528-21	3.50 (0.138)	2.80 (0.110)	1.90 (0.075)	2.20 (0.087)	0.80 (0.031)	1.40 (0.055)
N	2917	7343-31	7.30 (0.287)	4.30 (0.169)	2.90 (0.114)	2.40 (0.094)	1.30 (0.051)	4.40 (0.173)

W₁ dimension applies to the termination width for a dimensional area only



A, B, N CASE



4V	G	16V	C	35V	V
6.3V	J	20V	D		
10V	A	25V	E		

*Capacitance code of "P" case products are as shown below.

HOW TO ORDER

F91
Type

1C
Rated Voltage

226
Capacitance Code
pF code: 1st two digits represent significant figures, 3rd digit represents multiplier (number of zeros to follow)

M
Tolerance
K = ±10%
M = ±20%

B
Case Size
See table above


Packaging
See Tape & Reel Packaging Section

AJ6
Tolerance
K = ±10%
M = ±20%

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	6.3V (0J)	10V (1A)	16V (1C)
10	106		A	A
22	226	A	A	B
33	336		B	B
47	476	A,B	B	
100	107	B		N
220	227		N	

Released ratings

*1: ΔC/C Marked “**”

Item	All Case (%)
Damp Heat	±10
Temperature cycles	±10
Resistance soldering heat	±10
Surge	±10
Endurance	±10

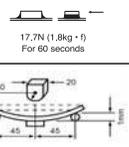
RATINGS & PART NUMBER REFERENCE

Part Number	Case Size	Capacitance (μF)	Rated Voltage (V)	DCL (μA)	DF @ 120Hz (%)	ESR @ 100kHz (mΩ)	100kHz RMS Current (mA)			*1 ΔC/C (%)	MSL
							25°C	85°C	125°C		
6.3 Volt											
F910J226#AAAJ6	A	22	6.3	1.4	8	1250	245	220	98	*	3
F910J476#AAAJ6	A	47	6.3	3.0	18	1250	245	220	98	*	3
F910J476#BAAJ6	B	47	6.3	3.0	6	500	412	371	165	*	3
F910J107#BAAJ6	B	100	6.3	6.3	14	450	435	391	174	*	3
10 Volt											
F911A106#AAAJ6	A	10	10	1.0	6	1500	224	201	89	*	3
F911A226#AAAJ6	A	22	10	2.2	12	1250	245	220	98	*	3
F911A336#BAAJ6	B	33	10	3.3	8	700	348	314	139	*	3
F911A476#BAAJ6	B	47	10	4.7	8	500	412	371	165	*	3
F911A227#NCAJ6	N	220	10	22.0	12	100	1225	1102	490	*	3
16 Volt											
F911C106#AAAJ6	A	10	16	1.6	6	1500	224	201	89	*	3
F911C226#BAAJ6	B	22	16	3.5	8	950	299	269	120	*	3
F911C336#BAAJ6	B	33	16	5.3	8	950	299	269	120	*	3
F911C107#NCAJ6	N	100	16	16.0	10	100	1225	1102	490	*	3

#: "M" for ±20% tolerance, "K" for ±10% tolerance. Moisture Sensitivity Level (MSL) is defined according to J-STD-020.

QUALIFICATION TABLE

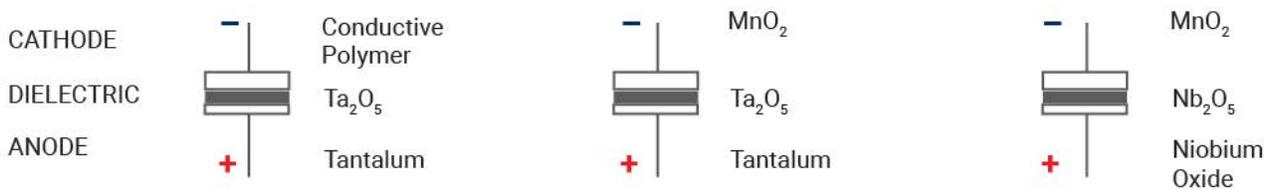
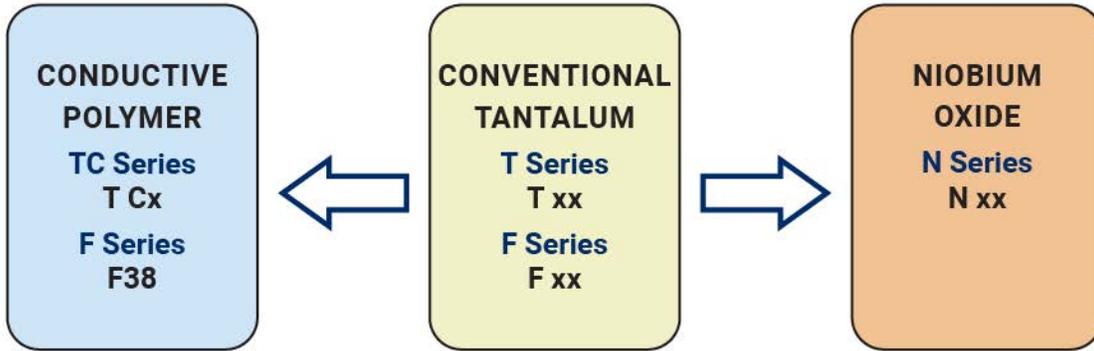
TEST	F91-AJ6 series (Temperature range -55°C to +125°C)	
	Condition	
Damp Heat (Steady State)	At 40°C, 90 to 95% R.H., 500 hours (No voltage applied) Capacitance Change Refer to the table above (*1) Dissipation Factor Initial specified value or less Leakage Current Initial specified value or less	
Load Humidity	After 1000 hour's application of rated voltage in series with a 33Ω resistor at 85°C, 85% R.H., capacitors meet the characteristics requirements table below. Capacitance Change Refer to the table above (*1) Dissipation Factor Initial specified value or less Leakage Current 125% or less than the initial specified value	
Temperature Cycles	At -55°C / +125°C, 30 minutes each, 1000 cycles Capacitance Change Refer to the table above (*1) Dissipation Factor Initial specified value or less Leakage Current Initial specified value or less	
Resistance to Soldering Heat	10 seconds reflow at 260°C, 10 seconds immersion at 260°C. Capacitance Change Refer to the table above (*1) 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 Refer to the table above (*1) 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 30 resistor at 125°C, capacitors shall meet the characteristic requirements in the table above. Capacitance Change Refer to the table above (*1) Dissipation Factor Initial specified value or less Leakage Current Initial specified value or less	
Shear Test	After applying the pressure load of 17.7N for 60 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 the substrate so that substrate may bend by 1mm as illustrated. Then, there shall be found no remarkable abnormality on the capacitor terminals.	
Failure Rate	1% per 1000 hours at 85°C, V _R with 0.1Ω/V series impedance, 60% confidence level.	



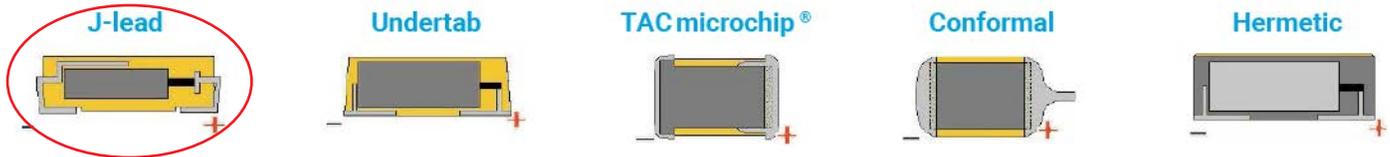
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SOLID ELECTROLYTIC CAPACITOR ROADMAP



FIVE CAPACITOR CONSTRUCTION STYLES



SERIES LINE UP : CONVENTIONAL SMD MnO_2

