F92 Series

Resin-Molded Chip, Low Profile J-Lead



FEATURES

- Compliant to the RoHS2 directive 2011/65/EU
- SMD J-lead
- Low profile case sizes

APPLICATIONS

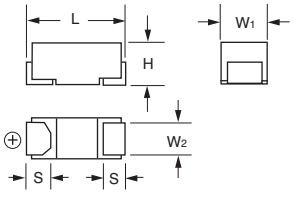
- Handheld electronics
- USB accessories

LEAD-FREE
LEAD-FREE COMPATIBLE COMPONENT

RoHS COMPLIANT

CASE DIMENSIONS: millimeters (inches)

Code	EIA Code	EIA Metric	L	W_1	W_2	H	S
A	1206	3216-12	3.20 ± 0.20 (0.126 ± 0.008)	1.60 ± 0.20 (0.063 ± 0.008)	1.20 ± 0.10 (0.047 ± 0.004)	1.10 ± 0.10 (0.043 ± 0.004)	0.80 ± 0.20 (0.031 ± 0.008)
B	1311	3428-12	3.40 ± 0.20 (0.134 ± 0.008)	2.80 ± 0.20 (0.110 ± 0.008)	2.30 ± 0.10 (0.091 ± 0.004)	1.10 ± 0.10 (0.043 ± 0.004)	0.80 ± 0.20 (0.031 ± 0.008)
P	0805	2012-12	2.00 ± 0.20 (0.079 ± 0.008)	1.25 ± 0.10 (0.049 ± 0.004)	0.90 ± 0.10 (0.035 ± 0.004)	1.10 ± 0.10 (0.043 ± 0.004)	0.50 ± 0.20 (0.020 ± 0.008)



MARKING

P CASE

*Rated Capacitance Code



Rated Voltage Code

A CASE

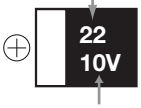
Rated Capacitance Code



Rated Voltage Code

B CASE

Rated Capacitance (µF)



Rated Voltage (V)

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

F92	0J	106	M	P	□	LZT
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	**Specification Suffix** Rated temperature 60ºC only

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	**P Case**	**A, B Case**
	+20% Max. at +125ºC	+15% Max. at +125°C
	+15% Max. at +85ºC	+10% Max. at +85°C
	-15% Max. at -55ºC	-10% Max. at -55°C

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CAPACITANCE AND RATED VOLTAGE RANGE (LETTER DENOTES CASE SIZE)

Capacitance		Rated Voltage							*Cap Code
µF	Code	4V (0G)	6.3V (0J)	10V (1A)	16V (1C)	20V (1D)	25V (1E)	35V (1V)	
0.22	224							A	J
0.33	334							A	N
0.47	474				P	A/P		A	S
0.68	684				P	A			W
1.0	105			P	P	A/P	A/P	A	A
1.5	155			P	P	A			E
2.2	225		P	P	A/P	A	A/B	B	J
3.3	335	P	P	A/P	A			B	N
4.7	475	P	P	A/P	A/B	A(M)/B	A/B		S
6.8	685	P	P	A/P	B				w
10	106	A/P	A/P	A/P(M)	A/B	B			a
15	156	P	A/P(M)	A					e
22	226	A/P(M)	A/P(M)	A/B	B				J
33	336	A/P(M)	A/B	B					n
47	476	A/B	A/B	B					s
68	686	A(M)/B							w
100	107	A(M)/B	A(M)**/B						A
150	157	B(M)							E
220	227								J

Released ratings (M tolerance only)

**Rated temperature 60ºC only. Please contact AVX when you need detail spec.

Please contact to your local AVX sales office when these series are being designed in your application.

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RATINGS & PART NUMBER REFERENCE

AVX Part No.	Case Size	Capacitance (µF)	Rated Voltage (V)	DCL (µA)	DF @ 120Hz (%)	ESR @ 100kHz (Ω)	*1 ΔC/C (%)	MSL
4 Volt								
F920G335MPA	P	3.3	4	0.5	8	12.0	*	1
F920G475MPA	P	4.7	4	0.5	8	6.0	*	1
F920G685MPA	P	6.8	4	0.5	10	6.0	*	1
F920G106MAA	A	10	4	0.5	8	4.0	*	1
F920G106MPA	P	10	4	0.5	10	6.0	*	1
F920G156MPA	P	15	4	0.6	10	5.0	*	1
F920G226MAA	A	22	4	0.9	12	2.8	*	1
F920G226MPA	P	22	4	0.9	20	5.0	*	1
F920G336MAA	A	33	4	1.3	12	2.8	*	1
F920G336MPA	P	33	4	1.3	20	4.0	*	1
F920G476MAA	A	47	4	1.9	18	2.8	*	1
F920G476MBA	B	47	4	1.9	12	1.7	*	1
F920G686MAA	A	68	4	2.7	25	2.8	±15	1
F920G686MBA	B	68	4	2.7	18	1.5	*	1
F920G107MAA	A	100	4	4.0	30	2.8	±15	1
F920G107MBA	B	100	4	4.0	18	1.3	*	1
F920G157MBA	B	150	4	6.0	25	1.3	±15	1
6.3 Volt								
F920J225MPA	P	2.2	6.3	0.5	8	12.0	*	1
F920J335MPA	P	3.3	6.3	0.5	8	12.0	*	1
F920J475MPA	P	4.7	6.3	0.5	8	6.0	*	1
F920J685MPA	P	6.8	6.3	0.5	10	6.0	*	1
F920J106MAA	A	10	6.3	0.6	8	4.0	*	1
F920J106MPA	P	10	6.3	0.6	10	6.0	*	1
F920J156MAA	A	15	6.3	0.9	8	4.0	*	1
F920J156MPA	P	15	6.3	0.9	10	6.0	*	1
F920J226MAA	A	22	6.3	1.4	12	2.8	*	1
F920J226MPA	P	22	6.3	1.4	20	5.0	*	1
F920J336MAA	A	33	6.3	2.1	12	2.8	*	1
F920J336MBA	B	33	6.3	2.1	12	1.7	*	1
F920J476MAA	A	47	6.3	3.0	18	2.8	±15	1
F920J476MBA	B	47	6.3	3.0	12	1.7	*	3
F920J107MAALZT	A	100	6.3	63.0	40	3.0	±20	3
F920J107MBA	B	100	6.3	6.3	20	1.3	±15	1
10 Volt								
F921A105MPA	P	1	10	0.5	8	12.0	*	1
F921A155MPA	P	1.5	10	0.5	8	12.0	*	1
F921A225MPA	P	2.2	10	0.5	8	12.0	*	1
F921A335MAA	A	3.3	10	0.5	6	7.0	*	1
F921A335MPA	P	3.3	10	0.5	8	12.0	*	1
F921A475MAA	A	4.7	10	0.5	6	4.0	*	1
F921A475MPA	P	4.7	10	0.5	8	6.0	*	1
F921A685MAA	A	6.8	10	0.7	6	4.0	*	1
F921A685MPA	P	6.8	10	0.7	8	6.0	*	1
F921A106MAA	A	10	10	1.0	8	4.0	*	1
F921A106MPA	P	10	10	1.0	14	6.0	*	1
F921A156MAA	A	15	10	1.5	8	4.0	*	1
F921A226MAA	A	22	10	2.2	14	4.0	±15	1
F921A226MBA	B	22	10	2.2	8	1.9	*	3
F921A336MBA	B	33	10	3.3	12	1.9	*	1
F921A476MBA	B	47	10	4.7	18	1.9	±15	1
16 Volt								
F921C474MPA	P	0.47	16	0.5	8	20.0	*	1
F921C684MPA	P	0.68	16	0.5	8	12.0	*	1
F921C105MPA	P	1	16	0.5	8	12.0	*	1
F921C155MPA	P	1.5	16	0.5	8	12.0	*	1
F921C225MAA	A	2.2	16	0.5	6	7.0	*	1
F921C225MPA	P	2.2	16	0.5	8	12.0	*	1
F921C335MAA	A	3.3	16	0.5	6	7.0	*	1
F921C475MAA	A	4.7	16	0.8	6	7.0	*	1
F921C475MBA	B	4.7	16	0.8	6	3.0	*	1
F921C685MBA	B	6.8	16	1.1	6	3.0	*	1
F921C106MAA	A	10	16	1.6	8	7.0	±15	1
F921C106MBA	B	10	16	1.6	6	2.0	*	1
F921C226MBA	B	22	16	3.5	12	2.0	±15	1
20 Volt								
F921D474MAA	A	0.47	20	0.5	4	10.0	*	1
F921D474MPA	P	0.47	20	0.5	8	20.0	*	1
F921D684MAA	A	0.68	20	0.5	4	10.0	*	1
F921D105MAA	A	1	20	0.5	4	10.0	*	1
F921D105MPA	P	1	20	0.5	8	20.0	*	1
F921D155MAA	A	1.5	20	0.5	6	7.4	*	1
F921D225MAA	A	2.2	20	0.5	6	7.0	*	1
F921D475MAA	A	4.7	20	0.9	10	7.0	±10	1
F921D475MBA	B	4.7	20	0.9	6	3.0	*	1
F921D106MBA	B	10	20	2.0	8	3.0	±10	1
25 Volt								
F921E105MAA	A	1	25	0.5	6	10.0	*	1
F921E105MPA	P	1	25	0.5	8	20.0	*	1
F921E225MAA	A	2.2	25	0.6	8	10.0	±15	1
F921E225MBA	B	2.2	25	0.6	6	4.0	*	1
F921E475MAA	A	4.7	25	1.2	10	7.0	±10	1
F921E475MBA	B	4.7	25	1.2	6	3.0	*	1
35 Volt								
F921V224MAA	A	0.22	35	0.5	4	10.0	*	1
F921V334MAA	A	0.33	35	0.5	4	10.0	*	1
F921V474MAA	A	0.47	35	0.5	4	10.0	*	1
F921V105MAA	A	1	35	0.5	6	10.0	*	1
F921V225MBA	B	2.2	35	0.8	6	4.0	±10	1
F921V335MBA	B	3.3	35	1.2	10	4.0	±10	1

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

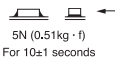
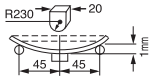
Moisture Sensitivity Level (MSL) is defined according to J-STD-020.

*1: ΔC/C Marked "∗"

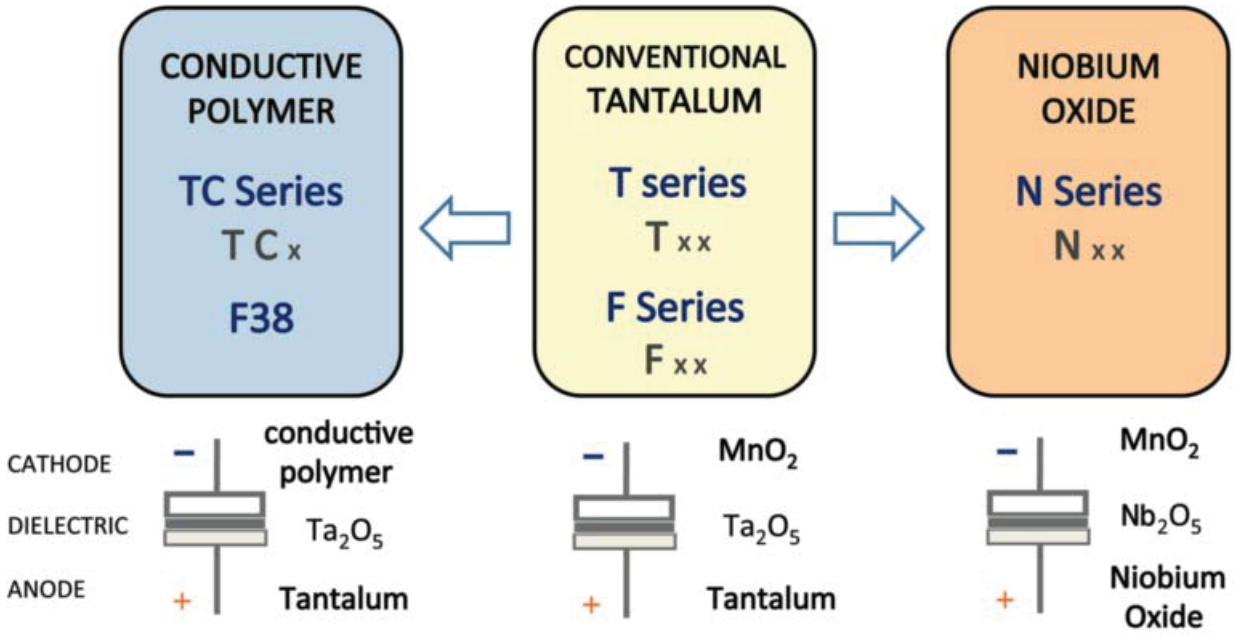
Item	P Case (%)	A, B Case (%)
Damp Heat	±20	±10
Temperature cycles	±10	±5
Resistance soldering heat	±10	±5
Surge	±10	±5
Endurance	±10	±10

We can consider the type of compliance to AEC-Q200.
Please contact to your local AVX sales office
when these series are being designed in your application.

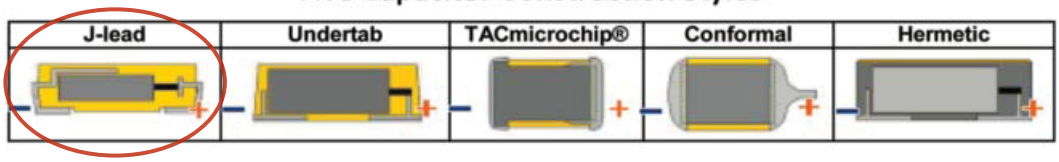
QUALIFICATION TABLE

TEST	F92 series (Temperature range -55ºC to +125ºC)	
	Condition	
	P Case	**A, B Case**
Damp Heat (Steady State)	At 40°C, 90 to 95% R.H., 500 hours (No voltage applied)	
	Capacitance Change ..... Refer to page 27 (*1) Dissipation Factor ..... 150% or less than the initial specified value Leakage Current ..... Initial specified value or less	Refer to page 27 (*1) Initial specified value or less Initial specified value or less
Temperature Cycles	-55°C / +125°C, 30 minutes each, 5 cycles	
	Capacitance Change ..... Refer to page 27 (*1) Dissipation Factor ..... 150% or less than the initial specified value Leakage Current ..... Initial specified value or less	Refer to page 27 (*1) Initial specified value or less Initial specified value or less
Resistance to Soldering Heat	10 seconds reflow at 260°C, 5 seconds immersion at 260°C.	
	Capacitance Change ..... Refer to page 27 (*1) Dissipation Factor ..... 150% or less than the initial specified value Leakage Current ..... Initial specified value or less	Refer to page 27 (*1) Initial specified value or less Initial specified value or less
Surge	After application of surge voltage in series with a 33Ω (For "P" case: 1kΩ) resistor at the rate of 30 seconds ON, 30 seconds OFF, for 1000 successive test cycles at 85ºC, capacitors shall meet the characteristic requirements in the table above.	
	Capacitance Change ..... Refer to page 27 (*1) Dissipation Factor ..... 150% or less than the initial specified value Leakage Current ..... Initial specified value or less	Refer to page 27 (*1) Initial specified value or less 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 ..... Refer to page 27 (*1) Dissipation Factor ..... 150% or less than the initial specified value Leakage Current ..... Initial specified value or less	Refer to page 27 (*1) Initial specified value or less 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. 	

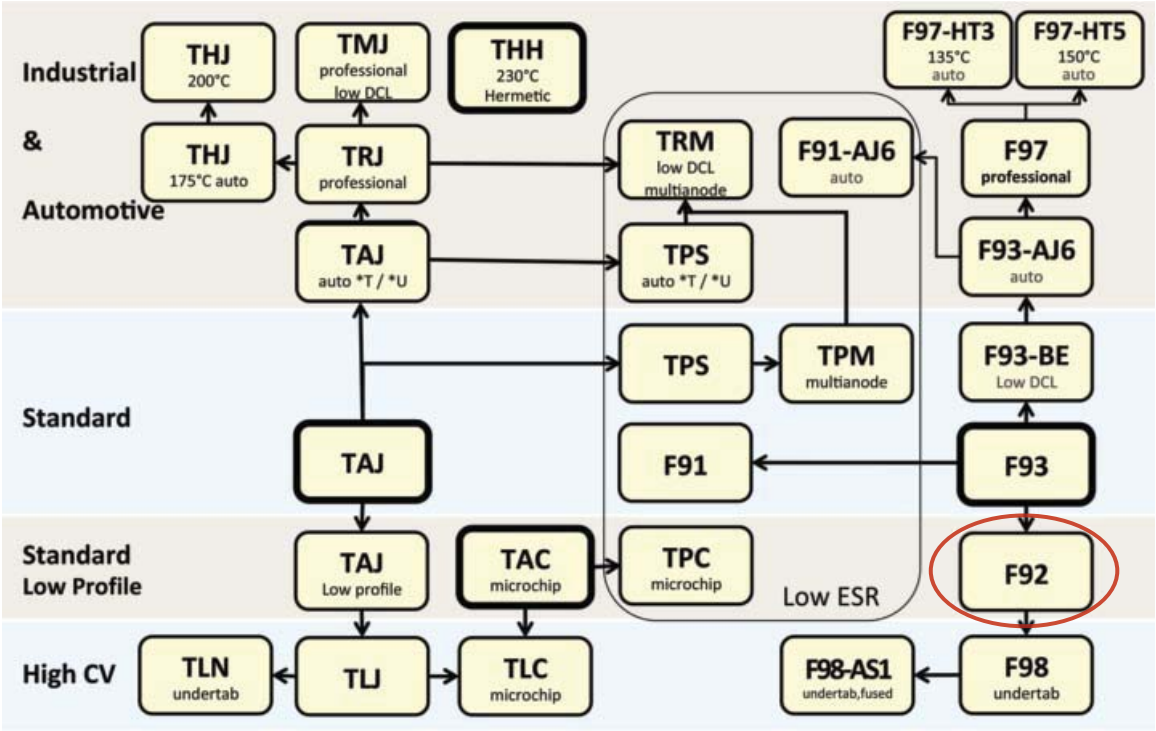
AVX SOLID ELECTROLYTIC CAPACITOR ROADMAP



Five Capacitor Construction Styles



SERIES LINE UP: CONVENTIONAL SMD MnO_2



Unikeyic Electronics

Global Electronic Components Distributor

Click to view pricing, inventory, delivery, and lifecycle information:

AVX:

ESD55C473K4T2A22 SCMR18J604SSBA0 06035F473K4T2A 069175701601000 08055A272JAT2A
06035A100KAT2A 08052C152K4T2A 06031C472JAT2A 12101C475K4Z2A TAJC226K016RNJ
06035A151FAT2A AEA1010471M025R LMXS101DN220LTAS NJ28MA0302F 12061C472KAT2A
TAJC107M006RNJ 04025A820FAT2A 04025G103ZAT2A 06031A120JAT4A 06031A330FAT2A
06035C151KAT2A 0201ZD103KAT2A 1004112-B002 109159002101916 1210YD106KAT2A
TLJR476M006R3200 VC080514C300DP 009176004722906 08052C331KAT2A F931A226MBA