

F95 Series



Standard Conformal Coated Chip



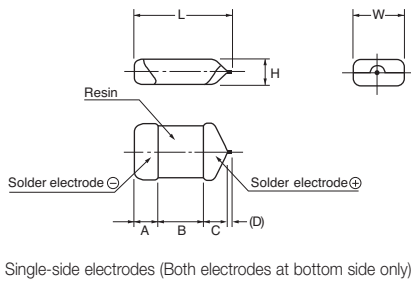
FEATURES

- Compliant to the RoHS2 directive 2011/65/EU
- For high frequency
- SMD Conformal
- Small and high CV



APPLICATIONS

- Smartphone
- Tablet PC
- Wireless module
- e-book



CASE DIMENSIONS: millimeters (inches)

Code	L	W	H	A	B	C	D*
A	3.20±0.30 (0.126±0.012)	1.70±0.30 (0.067±0.008)	1.40±0.20 (0.055±0.008)	0.80±0.30 (0.031±0.012)	1.20±0.30 (0.047±0.012)	0.80±0.30 (0.031±0.012)	0.20 (0.008)
B	3.50±0.20 (0.138±0.012)	2.80±0.20 (0.110±0.012)	1.80±0.20 (0.031±0.008)	0.80±0.30 (0.031±0.012)	1.20±0.30 (0.047±0.012)	1.10±0.30 (0.043±0.012)	0.20 (0.008)
P	2.20±0.30 (0.087±0.012)	1.25±0.30 (0.049±0.012)	1.00±0.20 (0.039±0.008)	0.60±0.30 (0.024±0.012)	0.80±0.30 (0.031±0.012)	0.80±0.30 (0.031±0.012)	0.20 (0.008)
Q	3.20±0.20 (0.126±0.008)	1.60±0.20 (0.063±0.008)	0.80±0.20 (0.031±0.008)	0.80±0.20 (0.031±0.008)	1.20±0.20 (0.047±0.008)	0.80±0.20 (0.031±0.008)	0.20 (0.008)
R	2.20±0.30 (0.087±0.012)	1.25±0.30 (0.049±0.012)	0.65 max. (0.026 max.)	0.60±0.30 (0.024±0.012)	0.80±0.30 (0.031±0.012)	0.50 min. (0.020 min.)	0.20 (0.008)
S	3.20±0.30 (0.126±0.012)	1.60±0.30 (0.063±0.008)	1.00±0.20 (0.039±0.008)	0.80±0.30 (0.031±0.012)	1.20±0.30 (0.047±0.012)	0.80±0.30 (0.031±0.012)	0.20 (0.008)
T	3.50±0.20 (0.138±0.012)	2.70±0.20 (0.106±0.012)	1.00±0.20 (0.039±0.008)	0.80±0.20 (0.031±0.008)	1.20±0.20 (0.047±0.008)	1.10±0.30 (0.043±0.012)	0.20 (0.008)

*D dimension only for reference

HOW TO ORDER

F95	0G	337	M	A		AQ2
Type	Rated Voltage	Capacitance Code	Tolerance	Case Size	Packaging	Single Face Electrode
		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 Tape & Reel Packaging Section	

TECHNICAL SPECIFICATIONS

Category Temperature Range:	-55 to +125°C
Rated Temperature:	+85°C
Capacitance Tolerance:	±20%, ±10% at 120Hz, R & P Case ±20%
Dissipation Factor:	Refer to next page
ESR 100kHz:	Refer to next page
Leakage Current:	Refer to next page Provided that: After 1 minute's application of rated voltage, leakage current at 85°C 10 times or less than 20°C specified value. After 1 minute's application of rated voltage, leakage current at 125°C 12.5 times or less than 20°C specified value.
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)
1.0	105						R	P/S
1.5	155							
2.2	225					P	P/R	A
3.3	335							
4.7	475				P/R	A/S	A/P/Q/S	B
6.8	685						Q*/S*	
10	106			P/R	A/P/Q/S	A/B/S	A/B/T*	
15	156			P	A/S			
22	226		R	A/P/Q/S	A/B/Q/S/T	B		
33	336		P/R*	A/P/Q/S	A*/B/T			
47	476	R*	P	A/B/P/Q*/S/T	B			
68	686		P	B				
100	107	A/P/S	A/B/P/Q/S/T	A/B/S*/T				
150	157	B/P	B					
220	227	A/B/P*/Q/S/T	A*/B/S*/T*					
330	337	A/B/P*/S*/T	B					
470	477	A*/B/P*/T*	B*					
680	687	T*						

Available Ratings

*Codes under development – subject to change

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)	*2 DCL (µA)	DF (%) @ 120Hz	ESR (Ω) @ 100kHz	*1 ΔC/C (%)
4 Volt							
F950G107MAAAQ2	A	100	4	4.0	12	0.5	*
F950G107MPAAQ2	P	100	4	4.0	30	1.2	±15
F950G107MSAAQ2	S	100	4	4.0	14	0.8	*
F950G157MBAAQ2	B	150	4	6.0	14	0.4	*
F950G157MPAAQ2	P	150	4	12.0	31	1.1	±20
F950G227MAAAQ2	A	220	4	8.8	25	0.8	±15
F950G227MBAAQ2	B	220	4	8.8	16	0.4	*
F950G227MQAAQ2	Q	220	4	8.8	30	1.5	±20
F950G227MSAAQ2	S	220	4	8.8	30	0.8	±15
F950G227MTAAQ2	T	220	4	8.8	25	0.6	*
F950G337MAAAQ2	A	330	4	13.2	40	0.8	±20
F950G337MBAAQ2	B	330	4	13.2	30	0.6	±15
F950G337MTAAQ2	T	330	4	13.2	40	0.8	±20
F950G477MBAAQ2	B	470	4	18.8	40	0.4	±20
6.3 Volt							
F950J336MPAAQ2	P	33	6.3	2.1	14	1.1	*
F950J226MRAAQ2	R	22	6.3	1.4	20	2.0	±20
F950J476MPAAQ2	P	47	6.3	3.0	20	1.1	±15
F950J686MPAAQ2	P	68	6.3	4.3	25	1.2	±15
F950J107MAAAQ2	A	100	6.3	6.3	14	0.5	*
F950J107MBAAQ2	B	100	6.3	6.3	14	0.4	*
F950J107MPAAQ2	P	100	6.3	12.6	35	1.2	±20
F950J107MQAAQ2	Q	100	6.3	6.3	30	1.1	±20
F950J107MSAAQ2	S	100	6.3	6.3	20	0.9	±15
F950J107MTAAQ2	T	100	6.3	6.3	14	0.6	*
F950J157MBAAQ2	B	150	6.3	9.5	18	0.4	*
F950J227MBAAQ2	B	220	6.3	13.9	30	0.4	*
F950J337MBAAQ2	B	330	6.3	20.8	35	0.6	±20
10 Volt							
F951A106MPAAQ2	P	10	10	1.0	8	3.0	*
F951A106MRAAQ2	R	10	10	1.0	18	3.0	±20
F951A156MPAAQ2	P	15	10	1.5	10	3.0	*
F951A226MAAAQ2	A	22	10	2.2	6	0.9	*
F951A226MPAAQ2	P	22	10	2.2	14	3.0	*
F951A226MQAAQ2	Q	22	10	2.2	10	2.0	*
F951A226MSAAQ2	S	22	10	2.2	10	1.1	*
F951A336MAAAQ2	A	33	10	3.3	10	0.8	*
F951A336MPAAQ2	P	33	10	3.3	20	3.0	±15
F951A336MQAAQ2	Q	33	10	3.3	18	3.0	±15
F951A336MSAAQ2	S	33	10	3.3	10	1.1	*
F951A476MAAAQ2	A	47	10	4.7	10	0.8	*
F951A476MBAAQ2	B	47	10	4.7	8	0.4	*
F951A476MPAAQ2	P	47	10	4.7	30	3.0	±20
F951A476MSAAQ2	S	47	10	4.7	14	1.1	±15

AVX Part No.	Case Size	Capacitance (µF)	Rated Voltage (V)	*2 DCL (µA)	DF (%) @ 120Hz	ESR (Ω) @ 100kHz	*1 ΔC/C (%)
F951A476MTAAQ2	T	47	10	4.7	12	0.8	*
F951A686MBAAQ2	B	68	10	6.8	12	0.4	*
F951A107MAAAQ2	A	100	10	10.0	35	1.0	±15
F951A107MBAAQ2	B	100	10	10.0	14	0.4	*
F951A107MTAAQ2	T	100	10	10.0	20	0.6	±15
16 Volt							
F951C475MPAAQ2	P	4.7	16	0.8	10	4.0	*
F951C475MRAAQ2	R	4.7	16	0.8	12	6.0	±20
F951C106MAAAQ2	A	10	16	1.6	6	1.4	*
F951C106MPAAQ2	P	10	16	1.6	10	4.0	*
F951C106MQAAQ2	Q	10	16	1.6	8	3.0	*
F951C106MSAAQ2	S	10	16	1.6	8	2.0	*
F951C156MAAAQ2	A	15	16	2.4	8	1.4	*
F951C156MSAAQ2	S	15	16	2.4	8	2.0	*
F951C226MAAAQ2	A	22	16	3.5	8	1.4	*
F951C226MBAAQ2	B	22	16	3.5	6	0.5	*
F951C226MQAAQ2	Q	22	16	3.5	12	3.0	*
F951C226MSAAQ2	S	22	16	3.5	10	2.0	±15
F951C226MTAAQ2	T	22	16	3.5	8	1.4	*
F951C336MBAAQ2	B	33	16	5.3	8	0.5	*
F951C336MTAAQ2	T	33	16	5.3	11	1.5	±10
F951C476MBAAQ2	B	47	16	7.5	10	0.6	*
20 Volt							
F951D225MPAAQ2	P	2.2	20	0.5	6	6.0	*
F951D475MAAAQ2	A	4.7	20	0.9	6	1.5	*
F951D475MSAAQ2	S	4.7	20	0.9	8	4.0	*
F951D106MAAAQ2	A	10	20	2.0	8	1.5	*
F951D106MBAAQ2	B	10	20	2.0	6	0.8	*
F951D106MSAAQ2	S	10	20	2.0	10	4.0	±10
F951D226MBAAQ2	B	22	20	4.4	8	0.8	*
25 Volt							
F951E105MRAAQ2	R	1	25	0.5	10	10.0	±10
F951E225MPAAQ2	P	2.2	25	0.6	8	6.0	±15
F951E225MRAAQ2	R	2.2	25	0.6	15	15.0	±20
F951E475MAAAQ2	A	4.7	25	1.2	8	2.0	*
F951E475MPAAQ2	P	4.7	25	1.2	10	8.0	±15
F951E475MQAAQ2	Q	4.7	25	1.2	10	4.0	±15
F951E475MSAAQ2	S	4.7	25	1.2	8	4.0	*
F951E106MAAAQ2	A	10	25	2.5	12	2.0	±15
F951E106MBAAQ2	B	10	25	2.5	6	0.9	*
35 Volt							
F951V105MPAAQ2	P	1	35	0.5	8	10.0	±10
F951V105MSAAQ2	S	1	35	0.5	6	8.0	*
F951V225MAAAQ2	A	2.2	35	0.8	6	4.4	*
F951V475MBAAQ2	B	4.7	35	1.7	6	1.6	*

1: ΔC/C Marked “”

Item	All Case (%)
Damp Heat	±10
Temperature cycles	±5
Resistance soldering heat	±5
Surge	±5
Endurance	±10

*2: Leakage Current

After 1 minute's application of rated voltage, leakage current at 20°C.

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

QUALIFICATION TABLE

TEST	F95 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 page 35 (*1) Dissipation Factor Initial specified value or less Leakage Current Initial specified value or less	
Temperature Cycles	At -55°C / +125°C, 30 minutes each, 5 cycles Capacitance Change Refer to page 35 (*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 page 35 (*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 page 35 (*1) Dissipation Factor Initial specified value or less Leakage Current Initial specified value or less	
Endurance	After 2000 hours' application of rated voltage at 85°C, capacitors shall meet the characteristic requirements in the table above. Capacitance Change Refer to page 35 (*1) 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.	