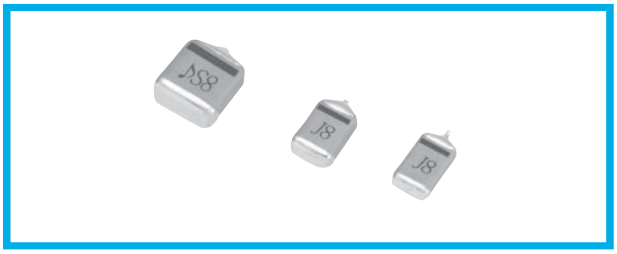
AUDIO F95 Series

Conformal Coated Chip Optimized for Audio Applications

FRAMELESS™

For SMD | Smaller | For High Frequency | For Audio Use

- Compliant to the RoHS directive (2002/95/EC).



■Applications

- Mobile Audio Player
- Smartphone
- Mobile phone
- Wireless Microphone System

■Feature

- Rich sound in the bass register and clear sound,Materials are strictly selected to achieve high level sound. F95 series has no lead-frame, and no vibration factor.
- Low ESR, Low ESL
- Line up miniature size and high capacitance, necessary to mobile design.

■Type numbering system (Example : 4V 220µF)

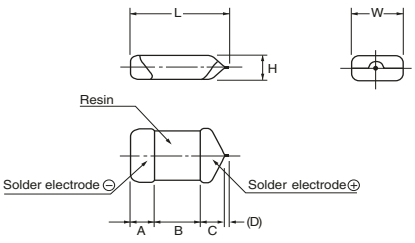
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
F	9	5	0	G	2	2	7	M	S		A	M	1	Q	2

- 16: Single face electrode
- 12–14: AUDIO series code
- 11: Taping code (Refer to page 333 for details)
- 10: Case code
- 9: Capacitance tolerance
- 6–8: Rated capacitance
- 4–5: Rated voltage
- 1–3: Series

■Specifications

Item	Performance Characteristics
Category Temperature Range	−55 to +125°C (Rated temperature : +85°C)
Capacitance Tolerance	±20%, ±10% (at 120Hz)
Dissipation Factor (at 120Hz)	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)
Damp Heat (Steady State)	At 40°C, 90 to 95% R.H., For 500 hours (No voltage applied) Capacitance Change ····· Refer to next page (*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, For 5 cycles, Capacitance Change ····· Refer to next page (*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 next page (*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 table below. Capacitance Change ····· Refer to next page (*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 table below. Capacitance Change ····· Refer to next page (*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. 5N (0.51kg • f) For 10 ± 1 seconds
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. R230 20 45 45 1mm

■Drawing



Single-side electrodes
(Both electrodes at bottom side only)

■ Dimensions

(mm)

Case code	L	W	H	A	B	C	(D)
P	2.2 ± 0.3	1.25 ± 0.3	1.0 ± 0.2	0.6 ± 0.3	0.8 ± 0.3	0.8 ± 0.3	(0.2)
S	3.2 ± 0.3	1.6 ± 0.3	1.0 ± 0.2	0.8 ± 0.3	1.2 ± 0.3	0.8 ± 0.3	(0.2)
A	3.2 ± 0.3	1.7 ± 0.3	1.4 ± 0.2	0.8 ± 0.3	1.2 ± 0.3	0.8 ± 0.3	(0.2)
T	3.5 ± 0.2	2.7 ± 0.2	1.0 ± 0.2	0.8 ± 0.2	1.2 ± 0.2	1.1 ± 0.2	(0.2)
B	3.5 ± 0.2	2.8 ± 0.2	1.8 ± 0.2	0.8 ± 0.3	1.2 ± 0.3	1.1 ± 0.2	(0.2)

D dimension only for reference

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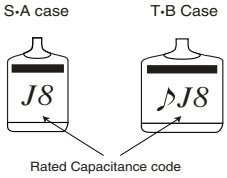
■ Standard Ratings

Cap. (μF) \ V	4	6.3	10
Code	0G	0J	1A
68	S	S	B
100	S	S • T	B
150	S	(A)	
220	(P) • S • T	(A) • (T) • B	
330	T	B	
470	(T) • B	(B)	
680	(T) • (B)		

( ) The series in parentheses are being developed.

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

■ Marking



μF	68	100	150	220	330	470	680
code	W7	A8	E8	J8	N8	S8	W8

P case - No marking on part.

■ Standard Ratings

Rated Volt	Rated Capacitance (μF)	Case code	Part Number	*2 Leakage Current (μA)	Disspation Factor (%@120Hz)	ESR (Ω@100kHz)	*1 ΔC/C (%)
4V	68	S	F950G686MSAAM1Q2	2.7	10	0.8	*
	100	S	F950G107MSAAM1Q2	4.0	14	0.8	*
	150	S	F950G157MSAAM1Q2	6.0	22	0.8	±15
	220	S	F950G227MSAAM1Q2	8.8	30	0.8	±15
	220	T	F950G227MTAAM1Q2	8.8	25	0.6	*
	330	T	F950G337MTAAM1Q2	13.2	40	0.8	±20
	470	B	F950G477MBAAM1Q2	18.8	40	0.4	±20
6.3V	68	S	F950J686MSAAM1Q2	4.3	14	0.9	*
	100	S	F950J107MSAAM1Q2	6.3	20	0.9	±15
	100	T	F950J107MTAAM1Q2	6.3	14	0.6	*
	220	B	F950J227MBAAM1Q2	13.9	30	0.4	*
	330	B	F950J337MBAAM1Q2	20.8	35	0.6	±20
10V	68	B	F951A686MBAAM1Q2	6.8	12	0.4	*
	100	B	F951A107MBAAM1Q2	10.0	14	0.4	*

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

1 : ΔC/C Marked ""

Item	S·A·T·B Case (%)
Damp Heat	±10
Tempereature 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.