AUDIO F95 Series

Conformal Coated Chip Optimized for Audio Applications

LEAD-FREE

LEAD-FREE COMPATIBLE COMPONENT

RoHS COMPLIANT

FEATURES

- Compliant to the RoHS directive (2002/95/EC)
- 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.
- SMD conformal
- Small and high CV

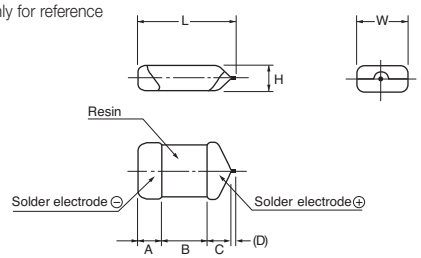
APPLICATIONS

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

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)
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±0.20 (0.043±0.008)	0.20 (0.008)

*D dimension only for reference



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

TECHNICAL SPECIFICATIONS

Item	Performance Characteristics
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	Refer to next page Provided that • After 1 minute's application of rated voltage, leakage current at 85°C, 10 times or less than 20ºC specified value. • After 1 minute's application of derated voltage, leakage current at 125°C, 12.5 times or less than 20ºC 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., 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, 5 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 85ºC, 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 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 1mm 45 45

MARKING

A, S CASE

Capacitance Code

B, T CASE

Capacitance Code

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

P case - No marking on part.

HOW TO ORDER

F95	0G	227	M	S	□	AM1	Q2
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 page 163 for details	**AUDIO Series Code**	**Single Face Electrode**

AUDIO F95 Series

Conformal Coated Chip Optimized for Audio Applications

CAPACITANCE AND RATED VOLTAGE, V_R (VOLTAGE CODE) RANGE (LETTER DENOTES CASE SIZE)

Capacitance		Rated Voltage		
µF	Code	4V (0G)	6.3V (0J)	10V (1A)
68	686	S	S	B
100	107	S	S/T	B
150	157	S	A*	
220	227	P*/S/T	A*/B/T*	
330	337	T	B	
470	477	B/T*	B*	
680	687	B*/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.

RATINGS & PART NUMBER REFERENCE

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