

AUDIO F95 Series



Conformal Coated Chip Optimized for Audio Applications



FEATURES

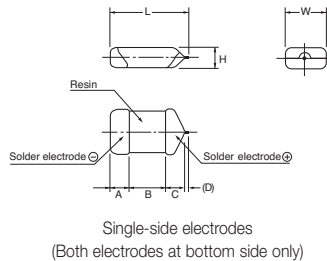
- Compliant to the RoHS2 directive 2011/65/EU
- Rich sound in the bass register and clear sound, Materials are strictly selected to achieve high level sound. F95 series has no lead-frame, and no vibration factor
- Low ESR, Low ESL
- Line up miniature size and high capacitance, necessary to mobile design
- SMD conformal
- Small and high CV



LEAD-FREE
LEAD-FREE COMPATIBLE
COMPONENT



RoHS
COMPLIANT



APPLICATIONS

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

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.

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

HOW TO ORDER

F95

Type

0G

Rated
Voltage

227

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%

S

Case
Size
See
table
above



Packaging
See Tape & Reel
Packaging Section

AM1

AUDIO
Series
Code

Q2

Single
Face
Electrode

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:	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)
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 No.	Case Size	Capacitance (μF)	Rated Voltage (V)	*2 DCL (μA)	DF (%) @ 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

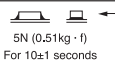
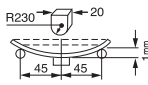
1: ΔC/C Marked ""

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

QUALIFICATION TABLE

TEST	AUDIO 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 170 (*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 170 (*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 page 170 (*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 170 (*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 in the table above. Capacitance Change Refer to page 170 (*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