

# F95 Audio Series

## Conformal Coated Chip Optimized for Audio Applications



### FEATURES

- Compliant to the RoHS3 directive 2015/863/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
- 100% Surge Current Tested
- Line Up Miniature Size and High Capacitance, Necessary to Mobile Design
- SMD Conformal
- Small and High CV



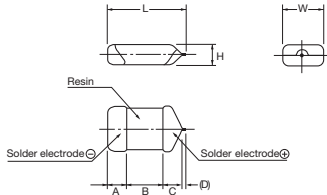
LEAD-FREE  
LEAD-FREE COMPATIBLE  
COMPONENT



RoHS  
COMPLIANT

### APPLICATIONS

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



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

### CASE DIMENSIONS:

millimeters (inches)

Code	EIA Code	EIA Metric	L	W	H	A	B	C	D*
B	1411	3528-20	3.50±0.20 (0.138±0.008)	2.80±0.20 (0.110±0.008)	1.80±0.20 (0.071±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)
S	1306	3216-12	3.20±0.30 (0.126±0.012)	1.60±0.30 (0.063±0.012)	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	1411	3527-12	3.50±0.20 (0.138±0.008)	2.70±0.20 (0.106±0.008)	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±0.012)	0.20 (0.008)

\*D dimension only for reference

### MARKING

#### S CASE

#### B, T CASE



Capacitance  
Code



Capacitance  
Code

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

### 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

# F95 Audio Series

## Conformal Coated Chip Optimized for Audio Applications

### 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		
220	227	S/T	B	
330	337	T	B	
470	477	B		
680	687			

Released ratings

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

### RATINGS & PART NUMBER REFERENCE

Part Number	Case Size	Capacitance (μF)	Rated Voltage (V)	DCL (μA)	DF @ 120Hz (%)	ESR @ 100kHz (Ω)	100kHz RMS Current (mA)			*1 ΔC/C (%)	MSL
							25°C	85°C	125°C		
<b>4 Volt</b>											
F950G686#SAAM1Q2	S	68	4	2.7	10	0.8	274	246	110	*	3
F950G107#SAAM1Q2	S	100	4	4.0	14	0.8	274	246	110	*	3
F950G157#SAAM1Q2	S	150	4	6.0	22	0.8	274	246	110	±15	3
F950G227#SAAM1Q2	S	220	4	8.8	30	0.8	274	246	110	±15	3
F950G227#TAAM1Q2	T	220	4	8.8	25	0.6	365	329	146	*	3
F950G337#TAAM1Q2	T	330	4	13.2	40	0.8	316	285	126	±20	3
F950G477#BAAM1Q2	B	470	4	18.8	40	0.4	461	415	184	±20	3
<b>6.3 Volt</b>											
F950J686#SAAM1Q2	S	68	6.3	4.3	14	0.9	258	232	103	*	3
F950J107#SAAM1Q2	S	100	6.3	6.3	20	0.9	258	232	103	±15	3
F950J107#TAAM1Q2	T	100	6.3	6.3	14	0.6	365	329	146	*	3
F950J227#BAAM1Q2	B	220	6.3	13.9	30	0.4	461	415	184	*	3
F950J337#BAAM1Q2	B	330	6.3	20.8	35	0.6	376	339	151	±20	3
<b>10 Volt</b>											
F951A686#BAAM1Q2	B	68	10	6.8	12	0.4	461	415	184	*	3
F951A107#BAAM1Q2	B	100	10	10.0	14	0.4	461	415	184	*	3

\*1: ΔC/C Marked “\*\*”

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

#: “M” for ±20% tolerance, “K” for ± 10% tolerance.  
Moisture Sensitivity Level (MSL) is defined according to J-STD-020.

# F95 Audio Series

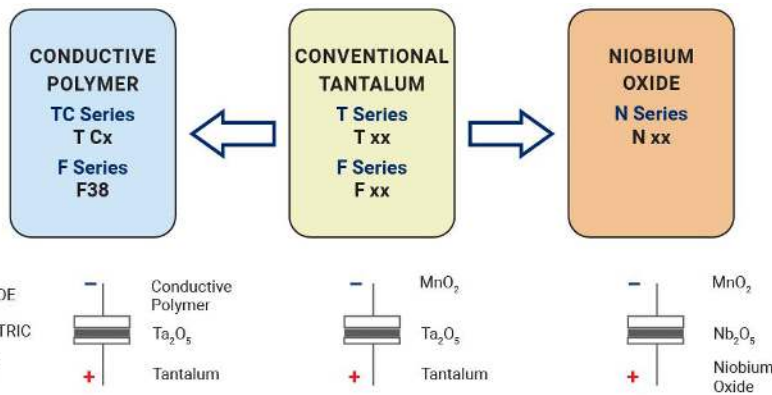
## Conformal Coated Chip Optimized for Audio Applications

### QUALIFICATION TABLE

TEST	Audio F95 series (Temperature range -55°C to +125°C)	
	Condition	
<b>Damp Heat (Steady State)</b>	At 40°C, 90 to 95% R.H., 500 hours (No voltage applied) Capacitance Change ..... Refer to the table above (*1) Dissipation Factor ..... Initial specified value or less Leakage Current ..... Initial specified value or less	
<b>Temperature Cycles</b>	At -55°C / +125°C, 30 minutes each, 5 cycles Capacitance Change ..... Refer to the table above (*1) Dissipation Factor ..... Initial specified value or less Leakage Current ..... Initial specified value or less	
<b>Resistance to Soldering Heat</b>	10 seconds reflow at 260°C, 5 seconds immersion at 260°C. Capacitance Change ..... Refer to the table above (*1) Dissipation Factor ..... Initial specified value or less Leakage Current ..... Initial specified value or less	
<b>Surge</b>	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 the table above (*1) Dissipation Factor ..... Initial specified value or less Leakage Current ..... Initial specified value or less	
<b>Endurance</b>	After 2000 hours' application of rated voltage 85°C, capacitors shall meet the characteristic requirements in the table above. Capacitance Change ..... Refer to the table above (*1) Dissipation Factor ..... Initial specified value or less Leakage Current ..... Initial specified value or less	
<b>Shear Test</b>	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.	
<b>Terminal Strength</b>	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.	

### SOLID ELECTROLYTIC CAPACITOR ROADMAP

### SERIES LINE UP : CONVENTIONAL SMD MnO<sub>2</sub>



### FIVE CAPACITOR CONSTRUCTION STYLES



Industrial & Automotive

**F95-AM1**  
Audio conformal

Standard

F95 conformal

Standard Low Profile

F72 conformal

High CV

F75 conformal