

AUDIO F95 Series



Conformal Coated Chip Optimized for Audio Applications



FEATURES

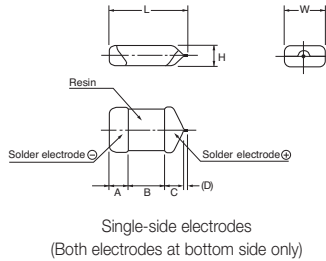
- Compliant to the RoHS2 directive 2011/65/EU
- Rich sound in the bass register and clear sound, Materials are strictly selected to achieve high level sound. F95 series has no lead-frame, and no vibration factor
- Low ESR, Low ESL
- Line up miniature size and high capacitance, necessary to mobile design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

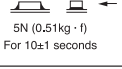
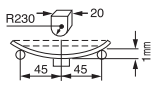
After 1 minute's application of rated voltage, leakage current at 20°C.

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QUALIFICATION TABLE

| | |
|-------------------------------------|--|
| Damp Heat (Steady State) | At 40°C, 90 to 95% R.H., 500 hours (No voltage applied) Capacitance Change Refer to page 152 (*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 152 (*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 152 (*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 152 (*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 152 (*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.  |