

F95 Series

Standard Conformal Coated Chip



CAPACITANCE AND RATED VOLTAGE RANGE (LETTER DENOTES CASE SIZE)

| Capacitance | | Rated Voltage | | | | | | | |
|-------------|------|--------------------|-----------------------------|---------------------------|-----------|----------|----------|----------|-------------------|
| µF | Code | 4V (0G) | 6.3V (0J) | 10V (1A) | 16V (1C) | 20V (1D) | 25V (1E) | 35V (1V) | 50V (1H) |
| 1.0 | 105 | | | | | | R | P/S | P ^{(M)*} |
| 1.5 | 155 | | | | | | | | |
| 2.2 | 225 | | | | | P | P/R | A | |
| 3.3 | 335 | | | | | | | | |
| 4.7 | 475 | | | | P/R | A/S | A/P/Q/S | B | |
| 6.8 | 685 | | | | | | | | |
| 10 | 106 | | | P/R ^(M) | A/P/Q/S | A/B/S | A/B | | |
| 15 | 156 | | | P | A/S | | | | |
| 22 | 226 | | R ^(M) | A/P ^(M) /Q/S | A/B/Q/S/T | B | | | |
| 33 | 336 | | P ^(M) | A/P ^(M) /Q/S | B/T | B | | | |
| 47 | 476 | | P ^(M) | A/B/P ^(M) /S/T | B | | | | |
| 68 | 686 | | P ^(M) | B | | | | | |
| 100 | 107 | A/P/S | A/B/P ^(M) /Q/S/T | A/B/T | | | | | |
| 150 | 157 | B/P ^(M) | B | | | | | | |
| 220 | 227 | A/B/Q/S/T | B | | | | | | |
| 330 | 337 | A/B/T | B | | | | | | |
| 470 | 477 | B | B | | | | | | |
| 680 | 687 | | | | | | | | |

Released ratings ^(M tolerance only)

*Rated temperature 60°C only. Please contact AVX when you need detail spec.

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) | DCL (µA) | DF @ 120Hz (%) | ESR @ 100kHz (Ω) | 100kHz RMS Current (mA) | | | | *1 ΔC/C (%) | MSL |
|-----------------|-----------|------------------|-------------------|----------|----------------|------------------|-------------------------|------|------|-------|-------------|-----|
| | | | | | | | 25°C | 60°C | 85°C | 125°C | | |
| 4 Volt | | | | | | | | | | | | |
| F950G107#AAAQ2 | A | 100 | 4 | 4.0 | 12 | 0.5 | 387 | - | 349 | 155 | * | 3 |
| F950G107#PAAQ2 | P | 100 | 4 | 4.0 | 30 | 1.2 | 158 | - | 142 | 63 | ±15 | 3 |
| F950G107#SAAQ2 | S | 100 | 4 | 4.0 | 14 | 0.8 | 274 | - | 246 | 110 | * | 3 |
| F950G157#BAAQ2 | B | 150 | 4 | 6.0 | 14 | 0.4 | 461 | - | 415 | 184 | * | 3 |
| F950G157MPAAQ2 | P | 150 | 4 | 12.0 | 31 | 1.1 | 165 | - | 149 | 66 | ±20 | 3 |
| F950G227#AAAQ2 | A | 220 | 4 | 8.8 | 25 | 0.8 | 306 | - | 276 | 122 | ±15 | 3 |
| F950G227#BAAQ2 | B | 220 | 4 | 8.8 | 16 | 0.4 | 461 | - | 415 | 184 | * | 3 |
| F950G227#QAAQ2 | Q | 220 | 4 | 8.8 | 30 | 1.5 | 173 | - | 156 | 69 | ±20 | 3 |
| F950G227#SAAQ2 | S | 220 | 4 | 8.8 | 30 | 0.8 | 274 | - | 246 | 110 | ±15 | 3 |
| F950G227#TAAQ2 | T | 220 | 4 | 8.8 | 25 | 0.6 | 365 | - | 329 | 146 | * | 3 |
| F950G337#AAAQ2 | A | 330 | 4 | 13.2 | 40 | 0.8 | 306 | - | 276 | 122 | ±20 | 3 |
| F950G337#BAAQ2 | B | 330 | 4 | 13.2 | 30 | 0.6 | 376 | - | 339 | 151 | ±15 | 3 |
| F950G337#TAAQ2 | T | 330 | 4 | 13.2 | 40 | 0.8 | 316 | - | 285 | 126 | ±20 | 3 |
| F950G477#BAAQ2 | B | 470 | 4 | 18.8 | 40 | 0.4 | 461 | - | 415 | 184 | ±20 | 3 |
| 6.3 Volt | | | | | | | | | | | | |
| F950J336MPAAQ2 | P | 33 | 6.3 | 2.1 | 14 | 1.1 | 165 | - | 149 | 66 | * | 3 |
| F950J226MRAAQ2 | R | 22 | 6.3 | 1.4 | 20 | 2.0 | 112 | - | 101 | 45 | ±20 | 3 |
| F950J476MPAAQ2 | P | 47 | 6.3 | 3.0 | 20 | 1.1 | 165 | - | 149 | 66 | ±15 | 3 |
| F950J686MPAAQ2 | P | 68 | 6.3 | 4.3 | 25 | 1.2 | 158 | - | 142 | 63 | ±15 | 3 |
| F950J107#AAAQ2 | A | 100 | 6.3 | 6.3 | 14 | 0.5 | 387 | - | 349 | 155 | * | 3 |
| F950J107#BAAQ2 | B | 100 | 6.3 | 6.3 | 14 | 0.4 | 461 | - | 415 | 184 | * | 3 |
| F950J107MPAAQ2 | P | 100 | 6.3 | 12.6 | 35 | 1.2 | 158 | - | 142 | 63 | ±20 | 3 |
| F950J107#QAAQ2 | Q | 100 | 6.3 | 6.3 | 30 | 1.1 | 202 | - | 182 | 81 | ±20 | 3 |
| F950J107#SAAQ2 | S | 100 | 6.3 | 6.3 | 20 | 0.9 | 258 | - | 232 | 103 | ±15 | 3 |
| F950J107#TAAQ2 | T | 100 | 6.3 | 6.3 | 14 | 0.6 | 365 | - | 329 | 146 | * | 3 |
| F950J157#BAAQ2 | B | 150 | 6.3 | 9.5 | 18 | 0.4 | 461 | - | 415 | 184 | * | 3 |
| F950J227#BAAQ2 | B | 220 | 6.3 | 13.9 | 30 | 0.4 | 461 | - | 415 | 184 | * | 3 |
| F950J337#BAAQ2 | B | 330 | 6.3 | 20.8 | 35 | 0.6 | 376 | - | 339 | 151 | ±20 | 3 |
| F950J477#BAAQ2 | B | 470 | 6.3 | 59.2 | 40 | 0.5 | 412 | - | 371 | 165 | ±20 | 3 |
| 10 Volt | | | | | | | | | | | | |
| F951A106#PAAQ2 | P | 10 | 10 | 1.0 | 8 | 3.0 | 100 | - | 90 | 40 | * | 3 |
| F951A106MRAAQ2 | R | 10 | 10 | 1.0 | 18 | 3.0 | 91 | - | 82 | 37 | ±20 | 3 |
| F951A156#PAAQ2 | P | 15 | 10 | 1.5 | 10 | 3.0 | 100 | - | 90 | 40 | * | 3 |
| F951A226#AAAQ2 | A | 22 | 10 | 2.2 | 6 | 0.9 | 289 | - | 260 | 115 | * | 3 |
| F951A226MPAAQ2 | P | 22 | 10 | 2.2 | 14 | 3.0 | 100 | - | 90 | 40 | * | 3 |
| F951A226#QAAQ2 | Q | 22 | 10 | 2.2 | 10 | 2.0 | 150 | - | 135 | 60 | * | 3 |
| F951A226#SAAQ2 | S | 22 | 10 | 2.2 | 10 | 1.1 | 234 | - | 210 | 93 | * | 3 |
| F951A336#AAAQ2 | A | 33 | 10 | 3.3 | 10 | 0.8 | 306 | - | 276 | 122 | * | 3 |
| F951A336MPAAQ2 | P | 33 | 10 | 3.3 | 20 | 3.0 | 100 | - | 90 | 40 | ±15 | 3 |
| F951A336#QAAQ2 | Q | 33 | 10 | 3.3 | 18 | 3.0 | 122 | - | 110 | 49 | ±15 | 3 |
| F951A336#SAAQ2 | S | 33 | 10 | 3.3 | 10 | 1.1 | 234 | - | 210 | 93 | * | 3 |
| F951A476#AAAQ2 | A | 47 | 10 | 4.7 | 10 | 0.8 | 306 | - | 276 | 122 | * | 3 |



F95 Series

Standard Conformal Coated Chip



RATINGS & PART NUMBER REFERENCE

| AVX Part No. | Case Size | Capacitance (µF) | Rated Voltage (V) | DCL (µA) | DF @ 120Hz (%) | ESR @ 100kHz (Ω) | 100kHz RMS Current (mA) | | | | *1 ΔC/C (%) | MSL |
|------------------|-----------|------------------|-------------------|----------|----------------|------------------|-------------------------|------|------|-------|-------------|-----|
| | | | | | | | 25°C | 60°C | 85°C | 125°C | | |
| F951A476#BAAQ2 | B | 47 | 10 | 4.7 | 8 | 0.4 | 461 | - | 415 | 184 | * | 3 |
| F951A476#PAAQ2 | P | 47 | 10 | 4.7 | 30 | 3.0 | 100 | - | 90 | 40 | ±20 | 3 |
| F951A476#SAAQ2 | S | 47 | 10 | 4.7 | 14 | 1.1 | 234 | - | 210 | 93 | ±15 | 3 |
| F951A476#TAAQ2 | T | 47 | 10 | 4.7 | 12 | 0.8 | 316 | - | 285 | 126 | * | 3 |
| F951A686#BAAQ2 | B | 68 | 10 | 6.8 | 12 | 0.4 | 461 | - | 415 | 184 | * | 3 |
| F951A107#AAAQ2 | A | 100 | 10 | 10.0 | 35 | 1.0 | 274 | - | 246 | 110 | ±15 | 3 |
| F951A107#BAAQ2 | B | 100 | 10 | 10.0 | 14 | 0.4 | 461 | - | 415 | 184 | * | 3 |
| F951A107#TAAQ2 | T | 100 | 10 | 10.0 | 20 | 0.6 | 365 | - | 329 | 146 | ±15 | 3 |
| 16 Volt | | | | | | | | | | | | |
| F951C475#PAAQ2 | P | 4.7 | 16 | 0.8 | 10 | 4.0 | 87 | - | 78 | 35 | * | 3 |
| F951C475#RAAQ2 | R | 4.7 | 16 | 0.8 | 12 | 6.0 | 65 | - | 58 | 26 | ±20 | 3 |
| F951C106#AAAQ2 | A | 10 | 16 | 1.6 | 6 | 1.4 | 231 | - | 208 | 93 | * | 3 |
| F951C106#PAAQ2 | P | 10 | 16 | 1.6 | 10 | 4.0 | 87 | - | 78 | 35 | * | 3 |
| F951C106#QAAQ2 | Q | 10 | 16 | 1.6 | 8 | 3.0 | 122 | - | 110 | 49 | * | 3 |
| F951C106#SAAQ2 | S | 10 | 16 | 1.6 | 8 | 2.0 | 173 | - | 156 | 69 | * | 3 |
| F951C156#AAAQ2 | A | 15 | 16 | 2.4 | 8 | 1.4 | 231 | - | 208 | 93 | * | 3 |
| F951C156#SAAQ2 | S | 15 | 16 | 2.4 | 8 | 2.0 | 173 | - | 156 | 69 | * | 3 |
| F951C226#AAAQ2 | A | 22 | 16 | 3.5 | 8 | 1.4 | 231 | - | 208 | 93 | * | 3 |
| F951C226#BAAQ2 | B | 22 | 16 | 3.5 | 6 | 0.5 | 412 | - | 371 | 165 | * | 3 |
| F951C226#QAAQ2 | Q | 22 | 16 | 3.5 | 12 | 3.0 | 122 | - | 110 | 49 | * | 3 |
| F951C226#SAAQ2 | S | 22 | 16 | 3.5 | 10 | 2.0 | 173 | - | 156 | 69 | ±15 | 3 |
| F951C226#TAAQ2 | T | 22 | 16 | 3.5 | 8 | 1.4 | 239 | - | 215 | 96 | * | 3 |
| F951C336#BAAQ2 | B | 33 | 16 | 5.3 | 8 | 0.5 | 412 | - | 371 | 165 | * | 3 |
| F951C336#TAAQ2 | T | 33 | 16 | 5.3 | 11 | 1.5 | 231 | - | 208 | 92 | ±10 | 3 |
| F951C476#BAAQ2 | B | 47 | 16 | 7.5 | 10 | 0.6 | 376 | - | 339 | 151 | * | 3 |
| 20 Volt | | | | | | | | | | | | |
| F951D225#PAAQ2 | P | 2.2 | 20 | 0.5 | 6 | 6.0 | 71 | - | 64 | 28 | * | 3 |
| F951D475#AAAQ2 | A | 4.7 | 20 | 0.9 | 6 | 1.5 | 224 | - | 201 | 89 | * | 3 |
| F951D475#SAAQ2 | S | 4.7 | 20 | 0.9 | 8 | 4.0 | 122 | - | 110 | 49 | * | 3 |
| F951D106#AAAQ2 | A | 10 | 20 | 2.0 | 8 | 1.5 | 224 | - | 201 | 89 | * | 3 |
| F951D106#BAAQ2 | B | 10 | 20 | 2.0 | 6 | 0.8 | 326 | - | 293 | 130 | * | 3 |
| F951D106#SAAQ2 | S | 10 | 20 | 2.0 | 10 | 4.0 | 122 | - | 110 | 49 | ±10 | 3 |
| F951D226#BAAQ2 | B | 22 | 20 | 4.4 | 8 | 0.8 | 326 | - | 293 | 130 | * | 3 |
| F951D336#BAAQ2 | B | 33 | 20 | 6.6 | 15 | 1.0 | 292 | - | 262 | 117 | * | 3 |
| 25 Volt | | | | | | | | | | | | |
| F951E105#RAAQ2 | R | 1 | 25 | 0.5 | 10 | 10.0 | 50 | - | 45 | 20 | ±10 | 3 |
| F951E225#PAAQ2 | P | 2.2 | 25 | 0.6 | 8 | 6.0 | 71 | - | 64 | 28 | ±15 | 3 |
| F951E225#RAAQ2 | R | 2.2 | 25 | 0.6 | 15 | 15.0 | 41 | - | 37 | 16 | ±20 | 3 |
| F951E475#AAAQ2 | A | 4.7 | 25 | 1.2 | 8 | 2.0 | 194 | - | 174 | 77 | * | 3 |
| F951E475#PAAQ2 | P | 4.7 | 25 | 1.2 | 10 | 8.0 | 61 | - | 55 | 24 | ±15 | 3 |
| F951E475#QAAQ2 | Q | 4.7 | 25 | 1.2 | 10 | 4.0 | 106 | - | 95 | 42 | ±15 | 3 |
| F951E475#SAAQ2 | S | 4.7 | 25 | 1.2 | 8 | 4.0 | 122 | - | 110 | 49 | * | 3 |
| F951E106#AAAQ2 | A | 10 | 25 | 2.5 | 12 | 2.0 | 194 | - | 174 | 77 | ±15 | 3 |
| F951E106#BAAQ2 | B | 10 | 25 | 2.5 | 6 | 0.9 | 307 | - | 227 | 123 | * | 3 |
| 35 Volt | | | | | | | | | | | | |
| F951V105#PAAQ2 | P | 1 | 35 | 0.5 | 8 | 10.0 | 55 | - | 49 | 22 | ±10 | 3 |
| F951V105#SAAQ2 | S | 1 | 35 | 0.5 | 6 | 8.0 | 87 | - | 78 | 35 | * | 3 |
| F951V225#AAAQ2 | A | 2.2 | 35 | 0.8 | 6 | 4.4 | 131 | - | 118 | 52 | * | 3 |
| F951V475#BAAQ2 | B | 4.7 | 35 | 1.7 | 6 | 1.6 | 230 | - | 207 | 92 | * | 3 |
| 50 Volt | | | | | | | | | | | | |
| F951H105MPALZTQ2 | P | 1 | 50 | 1.0 | 8 | 7.0 | 65 | 59 | - | 26 | ±20 | 3 |

1: ΔC/C Marked ""

#: "M" for ±20% tolerance, "K" for ±10% tolerance. When you need K tolerance for the part numbers which have M tolerance only, please contact to your local AVX sales office.

Moisture Sensitivity Level (MSL) is defined according to J-STD-020.

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



The Important Information/Disclaimer is incorporated in the catalog where these specifications came from or available online at www.avx.com/disclaimer/ by reference and should be reviewed in full before placing any order.

F95 Series

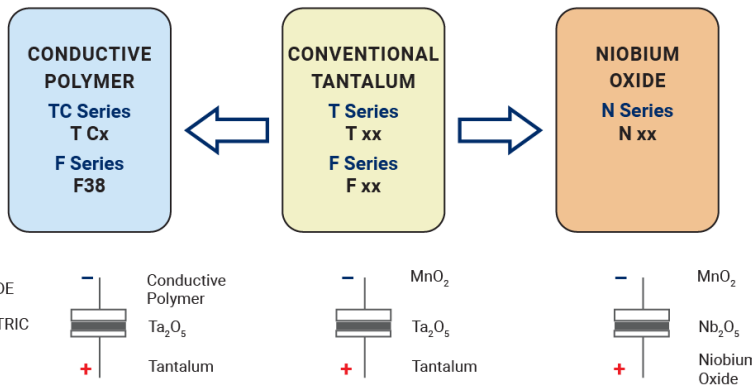
Standard Conformal Coated Chip

QUALIFICATION TABLE

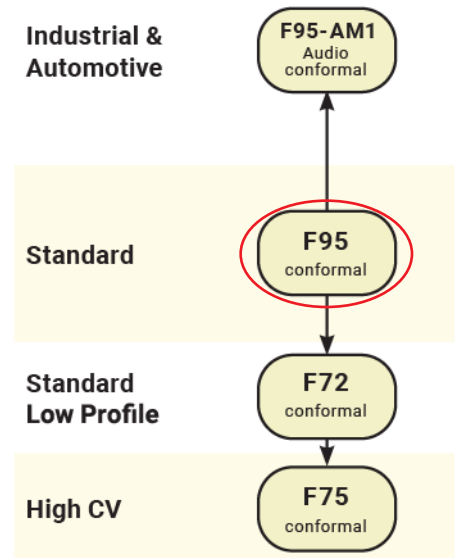
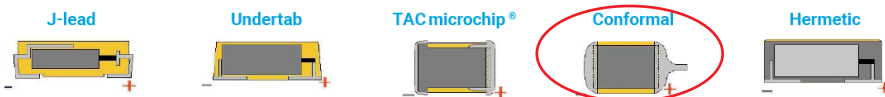
| TEST | F95 series (Temperature range -55°C to +125°C) | |
|-------------------------------------|---|--|
| | Condition | |
| Damp Heat (Steady State) | At 40°C, 90 to 95% R.H., 500 hours (No voltage applied) Capacitance Change Refer to page 166 (*1) Dissipation Factor Initial specified value or less Leakage Current Initial specified value or less | |
| Temperature Cycles | At -55°C / +125°C, 30 minutes each, 5 cycles Capacitance Change Refer to page 166 (*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 page 166 (*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 166 (*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 in the table above. Capacitance Change Refer to page 166 (*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. | |

AVX SOLID ELECTROLYTIC CAPACITOR ROADMAP

SERIES LINE UP : CONVENTIONAL SMD MnO₂



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