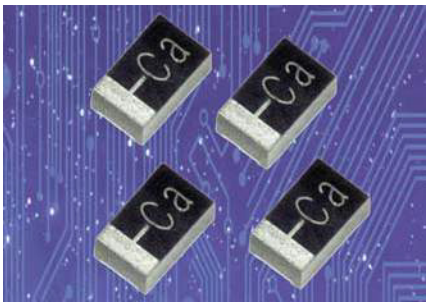
# F98-AS1 Series

## Fused Face-Down, High CV



## FEATURES

- Compliant to the RoHS2 directive 2011/65/EU
- SMD face down design
- Small and low profile

LEAD-FREE
LEAD-FREE COMPATIBLE COMPONENT

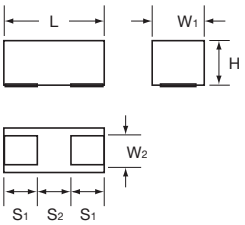
RoHS COMPLIANT

## APPLICATIONS

- Smartphone
- Mobile phone
- Wireless module
- Hearing aid

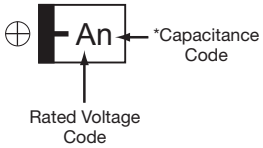
## CASE DIMENSIONS: millimeters (inches)

| Code | EIA Code | EIA Metric | L | $W_1$ | $W_2$ | H | $S_1$ | $S_2$ |
|---|---|---|---|---|---|---|---|---|
| S | 0805 | 2012-09 | $2.00^{+0.20}_{-0.10}$ ($0.079^{+0.008}_{-0.004}$) | $0.85^{+0.20}_{-0.10}$ ($0.033^{+0.008}_{-0.004}$) | 1.25±0.10 (0.049±0.004) | 0.80±0.10 (0.031±0.004) | 0.50±0.10 (0.020±0.004) | 1.00±0.10 (0.039±0.004) |




## MARKING

### S CASE




## HOW TO ORDER

| F98 | 1A | 336 | M | S | □ | AS1 |
|---|---|---|---|---|---|---|
| Type | Rated Voltage | Capacitance Code pF code: 1st two digits represent significant figures, 3rd digit represents multiplier (number of zeros to follow) | Tolerance M = ±20% | Case Size See table above | Packaging | Fuse Series Code |

**Packaging**

| Reel Dia (ϕ180) | Tape Width (mm) |
|---|---|
| A | 8 |

## TECHNICAL SPECIFICATIONS

| | |
|---|---|
| Category Temperature Range: | -55 to +125°C |
| Rated Temperature: | +85°C |
| Capacitance Tolerance: | ±20% at 120Hz |
| Dissipation Factor: | Refer to next page |
| ESR 100kHz: | Refer to next page |
| Leakage Current: | Refer to next page<br>Provided that:<br>After 5 minute's application of rated voltage, leakage current at 85°C<br>10 times or less than 20ºC specified value. |
| | After 5 minute's application of rated voltage, leakage current at 125°C<br>12.5 times or less than 20ºC specified value. |
| Termination Finish: | Gold Plating (standard) |

## CAPACITANCE AND RATED VOLTAGE RANGE (LETTER DENOTES CASE SIZE)

| Capacitance | | Rated Voltage | | | | | *Cap Code |
|---|---|---|---|---|---|---|---|
| µF | Code | 10V (1A) | 16V (1C) | 20V (1D) | 25V (1E) | 35 (1V) | |
| 1.0 | 105 | | | | | S | A |
| 2.2 | 225 | | | | | | J |
| 4.7 | 475 | | | | | | S |
| 10 | 106 | | S | | | | a |
| 22 | 226 | S | | | | | J |
| 33 | 336 | S | | | | | n |
| 47 | 476 | S | | | | | s |

Released ratings

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

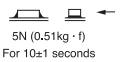
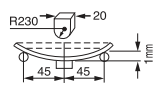
## RATINGS & PART NUMBER REFERENCE

| 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 | 85°C | 125°C | | |
| **10 Volt** | | | | | | | | | | | |
| F981A226MSAAS1 | S | 22 | 10 | 2.2 | 20 | 4.5 | 100 | 90 | 40 | ±20 | 3 |
| F981A336MSAAS1 | S | 33 | 10 | 3.3 | 30 | 6.5 | 83 | 75 | 33 | ±30 | 3 |
| F981A476MSAAS1 | S | 47 | 10 | 9.4 | 35 | 5.5 | 90 | 81 | 36 | ±30 | 3 |
| **16 Volt** | | | | | | | | | | | |
| F981C106MSAAS1 | S | 10 | 16 | 1.6 | 18 | 4.5 | 100 | 90 | 40 | ±20 | 3 |
| **35 Volt** | | | | | | | | | | | |
| F981V105MSAAS1 | S | 1 | 35 | 0.7 | 20 | 8.5 | 73 | 65 | 29 | ±30 | 3 |

*2: Leakage Current
After 5 minute's application of rated voltage, leakage current at 20°C.

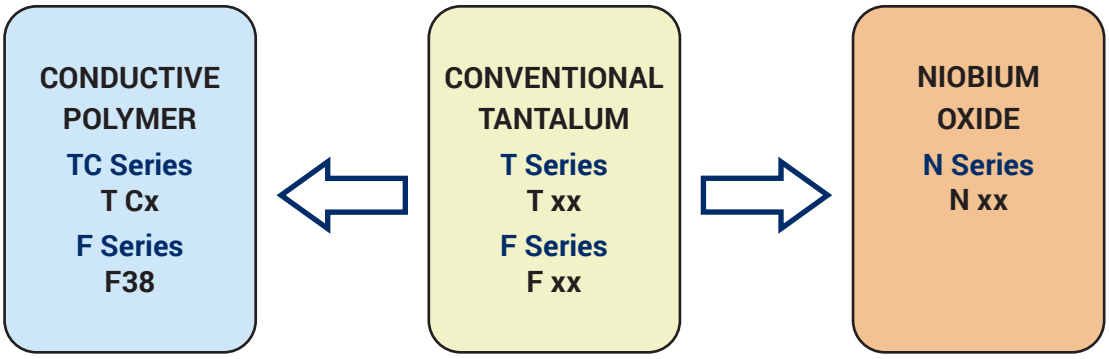
Moisture Sensitivity Level (MSL) is defined according to J-STD-020.

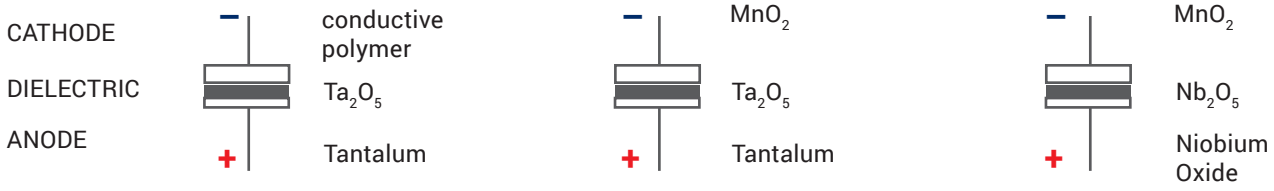
## QUALIFICATION TABLE

| TEST | F98-AS1 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)<br>Capacitance Change ..... Refer to the table above (*1)<br>Dissipation Factor ..... 150% or less of initial specified value<br>Leakage Current ..... 200% or less of initial specified value |
| **Temperature Cycles** | -55°C / +125°C, 30 minutes each, 5 cycles<br>Capacitance Change ..... Refer to the table above (*1)<br>Dissipation Factor ..... 150% or less of initial specified value<br>Leakage Current ..... 200% or less of initial specified value |
| **Resistance to Soldering Heat** | 10 seconds reflow at 260°C, 5 seconds immersion at 260°C.<br>Capacitance Change ..... Refer to the table above (*1)<br>Dissipation Factor ..... Initial specified value or less<br>Leakage Current ..... Initial specified value or less |
| **Surge** | After application of surge in series with a 1kΩ 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.<br>Capacitance Change ..... Refer the table above (*1)<br>Dissipation Factor ..... 150% or less of initial specified value<br>Leakage Current ..... 200% or less of initial specified value |
| **Endurance** | After 1000 hours' application of rated voltage in series with a 3Ω resistor at 85°C, capacitors shall meet the characteristic requirements in the table above.<br>Capacitance Change .....Refer to the table above (*1)<br>Dissipation Factor .....150% or less of initial specified value<br>Leakage Current .....200% or less of initial specified value |
| **Shear Test** | After applying the pressure load of 5N for 10±1 seconds horizontally to the center of capacitor side bodywhich has no electrode and has been soldered beforehand on a substrate, there shall be found neither exfoliation nor its sign at the terminal electrode.<br>  <br> |
| **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.<br>  <br> |
| **Fuse Activation** | 5 seconds max. with 2A min. applied current |

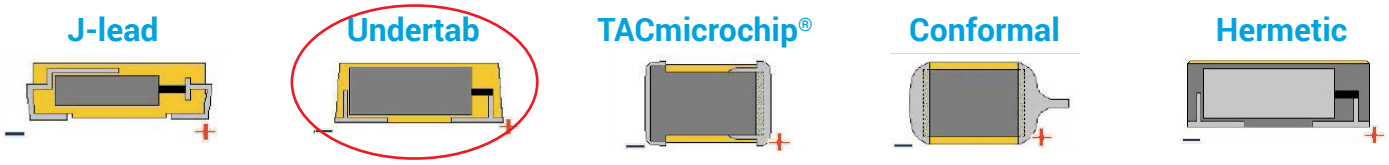
**NOTICE: DESIGN, SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.**

## AVX SOLID ELECTROLYTIC CAPACITOR ROADMAP




## FIVE CAPACITOR CONSTRUCTION STYLES




## SERIES LINE UP: CONVENTIONAL SMD $MnO_2$