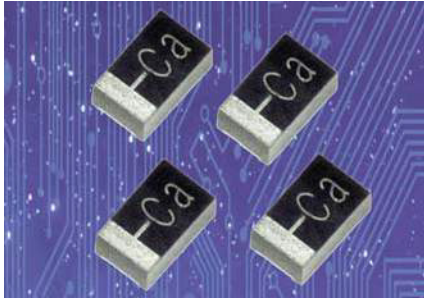


# F98-AS1 Series

## Fused Face-Down, High CV



### FEATURES

- Compliant to the RoHS3 directive 2015/863/EU
- SMD Face Down Design
- Small and Low Profile
- 100% Surge Current Tested

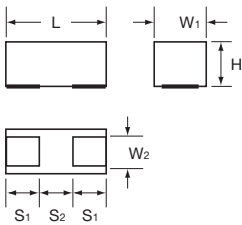
### APPLICATIONS

- Smartphone
- Mobile Phone
- Wireless Module
- Hearing Aid



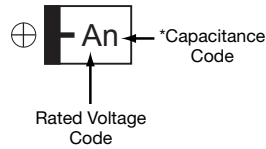
### CASE DIMENSIONS: millimeters (inches)

| Code | EIA Code | EIA Metric | L                                                                                      | W <sub>1</sub>                                                                         | W <sub>2</sub>             | H                          | S <sub>1</sub>             | S <sub>2</sub>             |
|------|----------|------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| S    | 0805     | 2012-09    | 2.00 <sup>+0.20</sup> <sub>-0.10</sub><br>(0.079 <sup>+0.008</sup> <sub>-0.004</sub> ) | 1.25 <sup>+0.20</sup> <sub>-0.10</sub><br>(0.049 <sup>+0.008</sup> <sub>-0.004</sub> ) | 0.90±0.10<br>(0.035±0.004) | 0.80±0.10<br>(0.031±0.004) | 0.50±0.10<br>(0.020±0.004) | 1.00±0.10<br>(0.039±0.004) |



### MARKING

#### S CASE



### HOW TO ORDER

|                 |                 |                                                                                                                    |                       |                              |                                                                                                       |                  |                 |   |   |  |
|-----------------|-----------------|--------------------------------------------------------------------------------------------------------------------|-----------------------|------------------------------|-------------------------------------------------------------------------------------------------------|------------------|-----------------|---|---|--|
| <b>F98</b>      | <b>1A</b>       | <b>336</b>                                                                                                         | <b>M</b>              | <b>S</b>                     | <div>□</div>                                                                                          | <b>AS1</b>       |                 |   |   |  |
| Type            | Rated Voltage   | Capacitance Code                                                                                                   | Tolerance<br>M = ±20% | Case Size<br>See table above | Packaging                                                                                             | Fuse Series Code |                 |   |   |  |
|                 |                 | pF code: 1st two digits represent significant figures, 3rd digit represents multiplier (number of zeros to follow) |                       |                              | <table><tr><td>Reel Dia (φ180)</td><td>Tape Width (mm)</td></tr><tr><td>A</td><td>8</td></tr></table> | Reel Dia (φ180)  | Tape Width (mm) | A | 8 |  |
| 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 10 times or less than 20°C specified value.<br>After 5 minute's application of rated voltage, leakage current at 125°C 12.5 times or less than 20°C specified value. |
| Termination Finish:         | Gold Plating (standard)                                                                                                                                                                                                                                                             |

# F98-AS1 Series

## Fused Face-Down, High CV

### 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 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 |             |     |
| 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   |

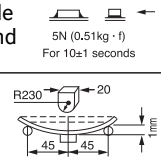
\*2: Leakage Current

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

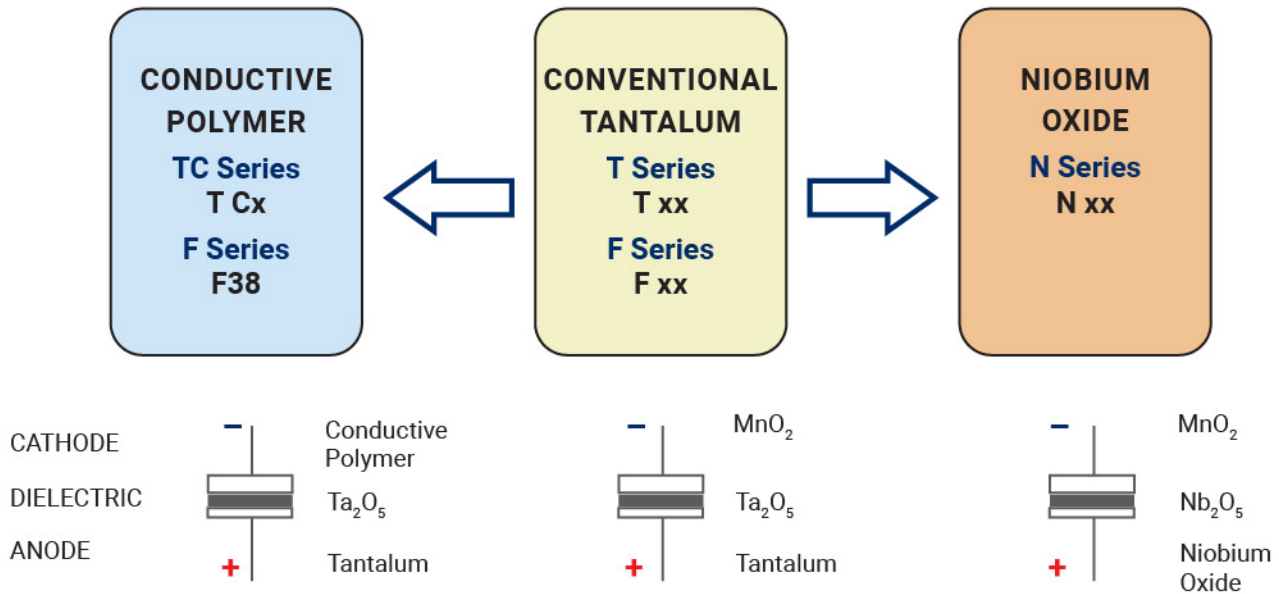
| TEST                                | F98-AS1 series (Temperature range -55°C to +125°C)                                                                                                                                                                                                                                                                                                                                                                    |  |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|                                     | Condition                                                                                                                                                                                                                                                                                                                                                                                                             |  |
| <b>Damp Heat (Steady State)</b>     | 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                                                                                                                                                                |  |
| <b>Temperature Cycles</b>           | -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                                                                                                                                                                              |  |
| <b>Resistance to Soldering Heat</b> | 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                                                                                                                                                                              |  |
| <b>Surge</b>                        | 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 |  |
| <b>Endurance</b>                    | 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                                                         |  |
| <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.                    |  |
| <b>Fuse Activation</b>              | 5 seconds max. with 2A min. applied current                                                                                                                                                                                                                                                                                                                                                                           |  |



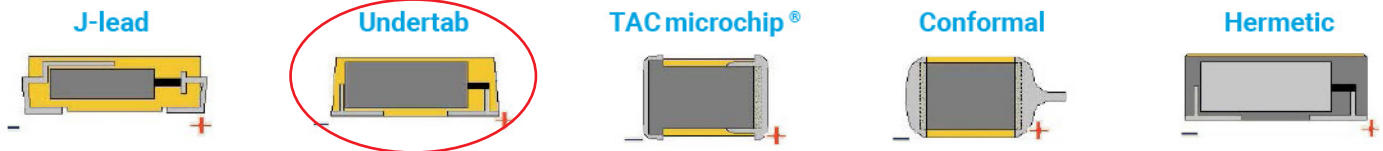
# F98-AS1 Series

## Fused Face-Down, High CV

### SOLID ELECTROLYTIC CAPACITOR ROADMAP



### FIVE CAPACITOR CONSTRUCTION STYLES



### SERIES LINE UP: CONVENTIONAL SMD $MnO_2$

