

# F98-AJ6 Series

## Resin-Molded Chip, High CV Facedown - Automotive Range



### FEATURES

- Compliant to the RoHS3 directive 2015/863/EU
- SMD Face Down Design
- Small and Low Profile
- Compliant to AEC-Q200
- 100% Surge Current Tested



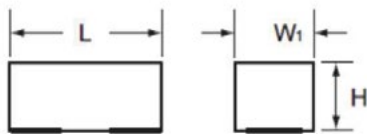
### APPLICATIONS

- Infotainment
- Cabin Electronics
- Cameras
- Digital Millers

### CASE DIMENSIONS:

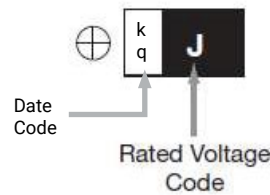
millimeters (inches)

Code	EIA Code	EIA Metric	L	W <sub>1</sub>	W <sub>2</sub>	H	S <sub>1</sub>	S <sub>2</sub>
M	0603	1608-09	1.60 <sup>+0.20</sup> <sub>-0.10</sub> (0.063 <sup>+0.008</sup> <sub>-0.004</sub> )	0.85 <sup>+0.20</sup> <sub>-0.10</sub> (0.033 <sup>+0.008</sup> <sub>-0.004</sub> )	0.65±0.10 (0.026±0.004)	1.0 Max (0.039 Max)	0.50±0.10 (0.020±0.004)	0.60±0.10 (0.024±0.004)
S	0805	2012-09	2.00 <sup>+0.20</sup> <sub>-0.10</sub> (0.079 <sup>+0.008</sup> <sub>-0.004</sub> )	1.25 <sup>+0.20</sup> <sub>-0.10</sub> (0.049 <sup>+0.008</sup> <sub>-0.004</sub> )	0.90±0.10 (0.035±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)

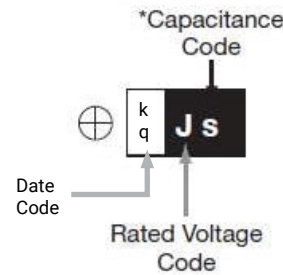


### MARKING

#### M CASE



#### S CASE



### HOW TO ORDER

<b>F98</b> T Type	<b>1C</b> T Rated Voltage	<b>106</b> T Capacitance Code pF code: 1st two digits represent significant figures, 3rd digit represents multiplier (number of zeros to follow)	<b>M</b> T Tolerance M = ± 20%	<b>S</b> T Case Size See table above	 T Packaging	<b>AJ6</b> T AEC-Q200 Compliant
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Code	Reel Dia (mm)	Tape Width (mm)	Qty (pcs)
A	φ180	8	4000
U	φ180	8	1000

### TECHNICAL SPECIFICATIONS

Category Temperature Range:	-55 to +125°C
Rated Temperature:	+85°C
Capacitance Tolerance:	±20% at 120Hz
Dissipation Factor:	Refer to Ratings & Part Number Reference
ESR 100kHz:	Refer to Ratings & Part Number Reference
Leakage Current:	Refer to Ratings & Part Number Reference at 20°C after application of rated voltage for 5 minutes Provided that: After 5 minute's application of rated voltage, leakage current at 85°C 10 times or less than 20°C specified value. 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)

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

Capacitance		Rated Voltage		Cap Code
μF	Code	10V (1A)	16V (1C)	
4.7	475	M	M	S
10	106	M	S	a

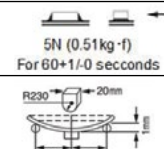
Released Ratings

### RATINGS & PART NUMBER REFERENCE

Part Number	Case Size	Cap (μF)	Rated Voltage (V)	DCL Max (μA)	DF Max (%@120Hz)	ESR Max (Ω@100kHz)	100kHz RMS Current (mA)			ΔC/C	MSL
							25°C	85°C	125°C		
<b>10 Volt</b>											
F981A475MMAAJ6	M	4.7	10	0.5	12	6	65	58	26	±30	3
F981A106MMAAJ6	M	10	10	1.0	20	7.5	58	52	23	±30	3
<b>16 Volt</b>											
F981C475MMAAJ6	M	4.7	16	0.8	12	12	46	41	18	±30	3
F981C106MSAAJ6	S	10	16	1.6	18	4	106	95	42	±30	3

### QUALIFICATION TABLE

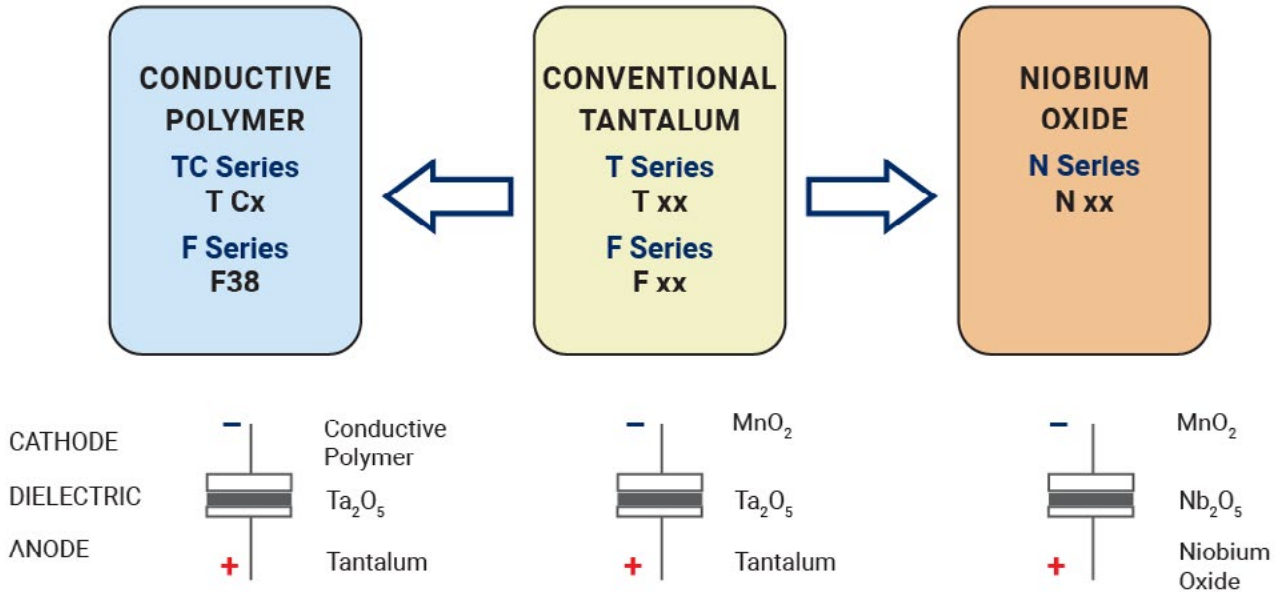
Test	F98-AJ6 series (Temperature range -55°C to +125°C)	
	Condition	
<b>Damp Heat (Steady State)</b>	At 40°C, 90% R.H., 500 hours (No voltage applied) Capacitance Change.....Refer to Ratings & Part Number Reference Dissipation Factor.....150% or less of initial specified value Leakage Current.....200% or less of initial specified value	
<b>Load Humidity</b>	After 1000 hour's application of rated voltage in series with a 33Ω resistor at 85°C, 85% R.H., capacitors meet the characteristics requirements table below. Capacitance Change.....Refer to Ratings & Part Number Reference Dissipation Factor.....150% or less of initial specified value Leakage Current.....10 times or less of initial specified value	
<b>Temperature Cycles</b>	At -55°C / +125°C, 30 minutes each, 1000 cycles Capacitance Change.....Refer to Ratings & Part Number Reference Dissipation Factor.....150% or less initial specified value Leakage Current.....5 times or less of initial specified value	
<b>Resistance to Soldering Heat</b>	10 seconds reflow at 260°C, 5 seconds immersion at 260°C Capacitance Change.....Refer to Ratings & Part Number Reference 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 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. Capacitance Change.....Refer to Ratings & Part Number Reference Dissipation Factor.....150% or less of initial specified value 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, or derated voltage in series with a 3Ω resistor at 125°C, capacitors shall meet the characteristic requirements in the table above. Capacitance Change.....Refer to Ratings & Part Number Reference Dissipation Factor.....150% or less of initial specified value Leakage Current.....200% or less of initial specified value	
<b>Shear Test</b>	After applying the pressure load of 5N for 60+1/-0 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	



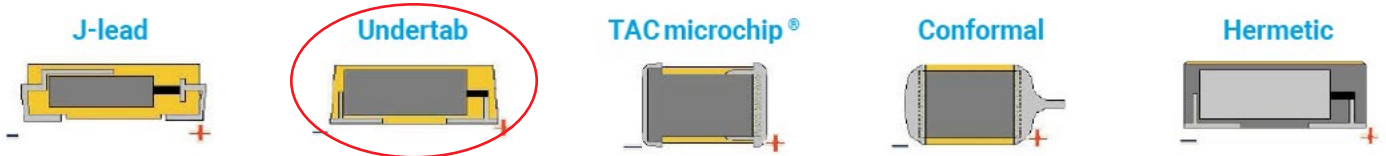
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### SOLID ELECTROLYTIC CAPACITOR ROADMAP



### FIVE CAPACITOR CONSTRUCTION STYLES



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

