

F98 Series



Resin-Molded Chip, High CV Undertab



FEATURES

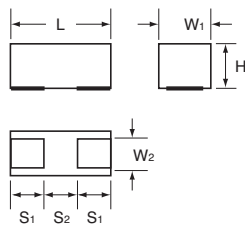
- Compliant to the RoHS directive (2002/95/EC)
- SMD face down design
- Small and low profile

APPLICATIONS

- Smartphone
- Mobile phone
- Wireless module
- Hearing aid

CASE DIMENSIONS: millimeters (inches)

Code	L	W ₁	W ₂	H	S ₁	S ₂
M	1.60 ^{+0.20} _{-0.10} (0.063 ^{+0.008} _{-0.004})	0.85 ^{+0.20} _{-0.10} (0.033 ^{+0.008} _{-0.004})	0.65±0.10 (0.026±0.004)	0.80±0.10 (0.031±0.004)	0.50±0.10 (0.020±0.004)	0.60±0.10 (0.024±0.004)
S	2.00 ^{+0.20} _{-0.10} (0.079 ^{+0.008} _{-0.004})	1.25 ^{+0.20} _{-0.10} (0.049 ^{+0.008} _{-0.004})	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)
U	1.10±0.05 (0.043±0.002)	0.60±0.05 (0.024±0.002)	0.35±0.05 (0.014±0.002)	0.55±0.05 (0.022±0.002)	0.30±0.05 (0.012±0.002)	0.50±0.05 (0.020±0.002)



TECHNICAL SPECIFICATIONS

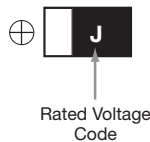
Item	Performance Characteristics
Category Temperature Range	-55 to +125°C (Rated temperature: +85°C)
Capacitance Tolerance	±20% (at 120Hz)
Dissipation Factor	Refer to next page
ESR (100kHz)	Refer to next page
Leakage Current	Refer to next page Provided that • After 5 minute's application of rated voltage, 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.
Damp Heat (Steady State)	At 40°C, 90 to 95% R.H., For 500 hours (No voltage applied) Capacitance Change Refer to next page (*1) Dissipation Factor 150% or less of initial specified value Leakage Current 200% or less of initial specified value
Temperature Cycles	-55°C / +125°C, For 30 minutes each, 5 cycles Capacitance Change Refer to next page (*1) Dissipation Factor 150% or less than the initial specified value 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 next page (*1) Dissipation Factor Initial specified value or less 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 listed below. Capacitance Change Refer to next page (*1) Dissipation Factor 150% or less than the initial specified value Leakage Current 200% or less than the 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 table below. Capacitance Change Refer to next page (*1) Dissipation Factor 150% or less than the initial specified value Leakage Current 200% or less than the initial specified value
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. 5N (0.51 kg · f) For 10 ± 1 seconds
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 the substrate so that substrate may bend by 1mm as illustrated. Then, there shall be found no remarkable abnormality on the capacitor terminals. R230 20 45 45

MARKING

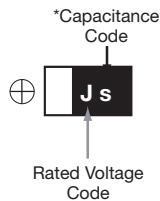
U CASE



M CASE



S CASE



HOW TO ORDER

F98

Type

0J

Rated Voltage

106

Capacitance Code

pF code: 1st two digits represent significant figures, 3rd digit represents multiplier (number of zeros to follow)

M

Tolerance
M = ±20%

M

Case Size
See table above

□

Packaging
See page 163 for details



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CAPACITANCE AND RATED VOLTAGE, V_R (VOLTAGE CODE) RANGE (LETTER DENOTES CASE SIZE)

Capacitance		Rated Voltage						*Cap Code
μF	Code	4V (0G)	6.3V (0J)	10V (1A)	16V (1C)	20V (1D)	25V (1E)	
1	105				M	M	M	-
2.2	225			M/U	M			-
4.7	475	U	M/U	M/U*	M			-
10	106	U	M/U*	M	S			a
22	226	M	M	M*/S				J
33	336	M	M	M*/S				n
47	476	M	M/S	S				s
68	686	M/S						w
100	107	M/S	S					A
220	227	S						J

Available Ratings

*Codes under development – subject to change

We can consider the type of compliance to AEC-Q200.

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

RATINGS & PART NUMBER REFERENCE

AVX Part Number	Case Size	Cap (μF)	Rated Voltage (V)	*2 Leakage Current (μA)	Dissipation Factor (%@120Hz)	ESR (Ω @100kHz)	*1 $\Delta\text{C}/\text{C}$ (%)
4 Volt							
F980G475MUA	U	4.7	4	0.5	20	20	± 30
F980G106MUA	U	10	4	0.8	25	20	± 30
F980G226MMA	M	22	4	0.9	15	7.5	± 30
F980G336MMA	M	33	4	1.3	30	4	± 30
F980G476MMA	M	47	4	1.9	40	8	± 30
F980G686MMA	M	68	4	27.2	50	10	± 30
F980G686MSA	S	68	4	2.7	30	4	± 30
F980G107MMA	M	100	4	80.0	60	10	± 30
F980G107MSA	S	100	4	4.0	35	4	± 30
F980G227MSA	S	220	4	132	80	5	± 30
6.3 Volt							
F980J475MUA	U	4.7	6.3	0.6	20	20	± 30
F980J475MMA	M	4.7	6.3	0.5	20	7.5	± 30
F980J106MMA	M	10	6.3	0.6	8	6	± 30
F980J226MMA	M	22	6.3	1.4	20	6	± 30
F980J336MMA	M	33	6.3	4.2	35	8	± 30
F980J476MMA	M	47	6.3	29.6	45	10	± 30
F980J476MSA	S	47	6.3	3.0	25	6	± 30
F980J107MSA	S	100	6.3	63.0	50	8	± 30
10 Volt							
F981A225MUA	U	2.2	10	0.5	15	15	± 30
F981A225MMA	M	2.2	10	0.5	6	7.5	± 30
F981A475MMA	M	4.7	10	0.5	6	6	± 30
F981A106MMA	M	10	10	1.0	20	7.5	± 30
F981A226MSA	S	22	10	2.2	20	4	± 30
F981A336MSA	S	33	10	3.3	30	6	± 30
F981A476MSA	S	47	10	9.4	35	5	± 30
16 Volt							
F981C105MMA	M	1	16	0.5	6	10	± 30
F981C225MMA	M	2.2	16	0.5	6	10	± 30
F981C475MMA	M	4.7	16	0.8	12	12	± 30
F981C106MSA	S	10	16	1.6	18	4	± 30
20 Volt							
F981D105MMA	M	1	20	0.5	6	10	± 30
25 Volt							
F981E105MMA	M	1	25	0.5	8	10	± 30

1: $\Delta\text{C}/\text{C}$ Marked “”

*2: Leakage Current

After 5 minute's application of rated voltage, leakage current at 20°C.

