ENVIRONMENTAL CHARACTERISTICS

TEST	CONDITIONS	REQUIREMENT
Life (Endurance) MIL-STD-202F Method 108A	125°C, $2U_R$, 1000 hours	No visible damage ΔC/C ≤2% for C≥5pF ΔC/C ≤0.25pF for C<5pF
Accelerated Damp Heat Steady State MIL-STD-202F Method 103B	85°C, 85% RH, U_R, 1000 hours	No visible damage ΔC/C ≤2% for C≥5pF ΔC/C ≤0.25pF for C<5pF
Temperature Cycling MIL-STD-202F Method 107E MIL-STD-883D Method 1010.7	–55°C to +125°C, 15 cycles – MLO™	No visible damage ΔC/C ≤2% for C≥5pF ΔC/C ≤0.25pF for C<5pF
Resistance to Solder Heat IEC-68-2-58	260°C ± 5°C for 10 secs.	C remains within initial limits

MECHANICAL SPECIFICATIONS

TEST	CONDITIONS	REQUIREMENT
Solderability IEC-68-2-58	Components completely immersed in a solder bath at 235°C for 2 secs.	Terminations to be well tinned, minimum 95% coverage
Leach Resistance IEC-68-2-58	Components completely immersed in a solder bath at 260±5°C for 60 secs.	Dissolution of termination faces ≤15% of area Dissolution of termination edges ≤25% of length
Adhesion MIL-STD-202F Method 211A	A force of 5N applied for 10 secs.	No visible damage
Termination Bond Strength IEC-68-2-21 Amend. 2	Tested as shown in diagram	No visible damage ΔC/C ≤2% for C≥5pF ΔC/C ≤0.25pF for C<5pF
Robustness of Termination IEC-68-2-21 Amend. 2	A force of 5N applied for 10 secs.	No visible damage
Storage	12 months minimum with components stored in “as received” packaging	Good solderability

QUALITY & RELIABILITY

MLO™ capacitors utilize high density interconnect wiring technology on well established low loss organic materials.

FINAL QUALITY INSPECTION

Finished parts are tested for standard electrical parameters and visual/mechanical characteristics. Each production lot is 100% evaluated for: capacitance and proof voltage at 2.5 U_R. In addition, production is periodically evaluated for:

- Average capacitance with histogram printout for capacitance distribution;
- IR and Breakdown Voltage distribution;
- Temperature Coefficient;
- Solderability;
- Dimensional, mechanical and temperature stability.

QUALITY ASSURANCE

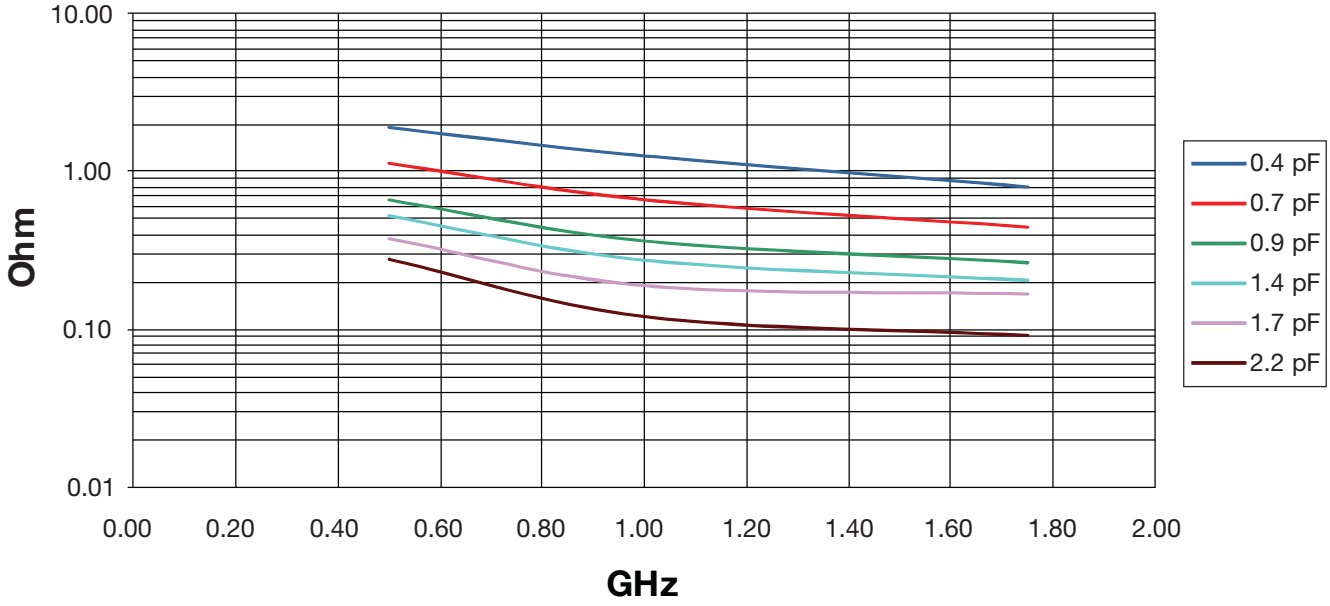
The reliability of these multilayer organic capacitors has been extensively studied. Various methods and standards have been used to ensure a high quality component including JEDEC, Mil Spec and IPC testing. AVX’s quality assurance policy is based on well established international industry standards. The reliability of the capacitors is determined by accelerated testing under the following conditions:

Life (Endurance)	125°C, $2U_R$, 1000 hours
Accelerated Damp Heat Steady State	85°C, 85% RH, U_R, 1000 hours.

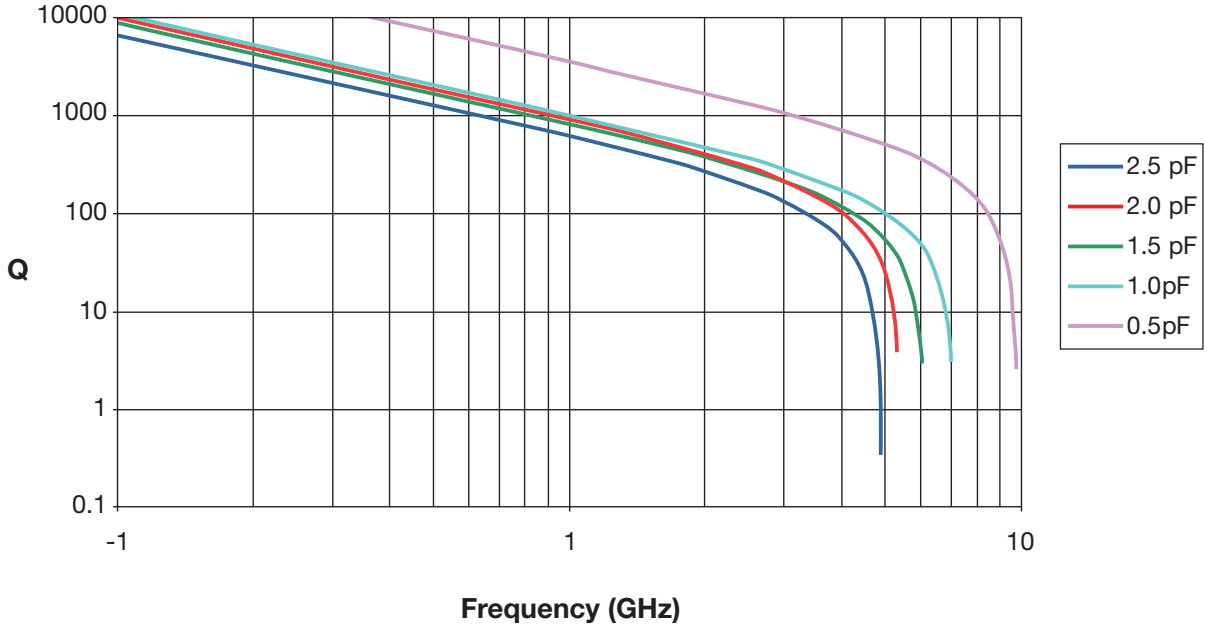
TABLE I: CASE SIZE ML03

Cap. pF	Cap. Tol.	WVDC
0.1	P, A, B	50, 250, 500
0.2	P, A, B	50, 250, 500
0.3	P, A, B	50, 250, 500
0.4	P, A, B	50, 250, 500
0.5	P, A, B, C	50, 250, 500
0.6	P, A, B, C	50, 250, 500
0.7	P, A, B, C	50, 250, 500
0.8	P, A, B, C	50, 250, 500
0.9	P, A, B, C	50, 250, 500
1.0	P, A, B, C	50, 250, 500
1.1	P, A, B, C	50, 250, 500
1.2	P, A, B, C	50, 250, 500
1.3	P, A, B, C	50, 250, 500
1.4	P, A, B, C	50, 250, 500
1.5	P, A, B, C	50, 250, 500
1.6	P, A, B, C	50, 250, 500
1.7	P, A, B, C	50, 250, 500
1.8	P, A, B, C	50, 250, 500
1.9	P, A, B, C	50, 250, 500
2.0	P, A, B, C	50, 250, 500
2.2	P, A, B, C	50, 250, 500
2.4	P, A, B, C	50, 250, 500
2.5	P, A, B, C	50, 250, 500
2.7	P, A, B, C	50, 250
3.0	P, A, B, C	50, 250
3.3	P, A, B, C	50, 250
3.6	P, A, B, C	50, 250
3.9	P, A, B, C	50, 250

Typical ESR vs. Frequency
MLO™ 0603



Typical Q vs. Frequency
MLO™ 0603



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Typical Self Resonant Frequency vs. Capacitance
MLO™ 0603