Hi-Q® High RF Power MLC Surface Mount Capacitors

For 600V to 7200V Applications

PRODUCT OFFERING

Hi-Q®, high RF power, surface mount MLC capacitors from AVX Corporation are characterized with ultra-low ESR and dissipation factor at high frequencies. They are designed to handle high power and high voltage levels for applications in RF power amplifiers, inductive heating, high magnetic field environments (MRI coils), medical and industrial electronics.

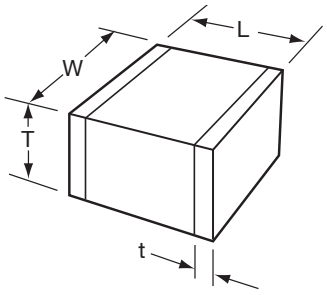
HOW TO ORDER

HQCC	A	A	271	J	A	T	1	A
AVX Style HQCC HQCE	**Voltage** 600V/630V = C 1000V = A 1500V = S 2000V = G 2500V = W 3000V = H 4000V = J 5000V = K 7200V = M	**Temperature Coefficient** C0G = A	**Capacitance Code** (2 significant digits + no. of zeros) Examples: 4.7 pF = 4R7 10 pF = 100 100 pF = 101 1,000 pF = 102	**Capacitance Tolerance** C = ±0.25pF (<13pF) D = ±0.50pF (<25pF) F = ±1% (≥25pF) G = ±2% (≥13pF) J = ±5% K = ±10% M = ±20%	**Test Level** A = Standard	**Termination*** 1 = Pd/Ag T = Plated Ni and Sn (RoHS Compliant) J = 5% Min Pb	**Packaging** 1 = 7" Reel 3 = 13" Reel 9 = Bulk	**Special Code** A = Standard

Contact factory for availability of Termination and Tolerance options for Specific Part Numbers.

DIMENSIONS millimeters (inches)

STYLE	HQCC	HQCE
(L) Length	5.84 ± 0.51 (0.230 ± 0.020)	9.4 ± 0.51 (0.370 ± 0.020)
(W) Width	6.35 ± 0.51 (0.250 ± 0.020)	9.9 ± 0.51 (0.390 ± 0.020)
(T) Thickness Max.	3.3 max. (0.130 max.)	3.3 max. (0.130 max.)
(t) terminal	0.64 ± 0.38 (0.025 ± 0.015)	0.64 ± 0.38 (0.025 ± 0.015)



RoHS COMPLIANT

DIELECTRIC PERFORMANCE CHARACTERISTICS

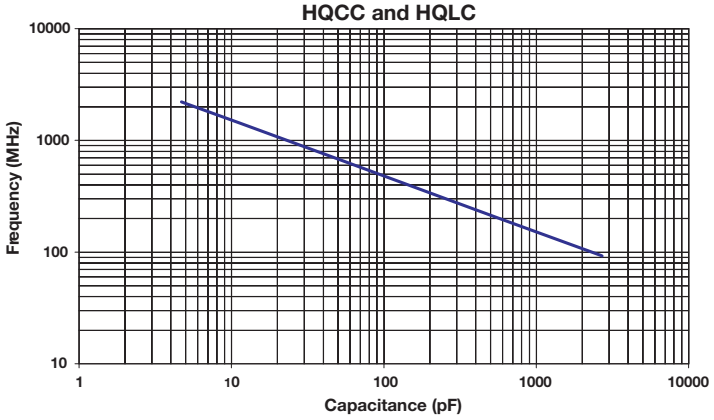
Capacitance Range	3.3pF to 6,800pF (25°C, 1.0 ±0.2 Vrms at 1kHz, for ≤ 1000 pF use 1MHz)
Capacitance Tolerances	±0.25pF, ±0.50pF, ±1%, ±2%, ±5%, ±10%, ±20%
Dissipation Factor 25°C	0.1% Max (+25°C, 1.0 ±0.2 Vrms at 1kHz, for ≤ 1000 pF use 1MHz)
Operating Temperature Range	-55°C to +125°C
Temperature Characteristic	C0G: 0 ± 30 ppm/°C (-55°C to +125°C)
Voltage Ratings	600, 630, 1000, 1500, 2000, 2500, 3000, 4000, 5000, 7200VDC
Insulation Resistance	100K MΩ min. @ +25°C and 500VDC 10K MΩ min. @ +125°C and 500VDC
Dielectric Strength	Minimum 120% of rated WVDC

HIGH VOLTAGE CAPACITANCE VALUES (pF)

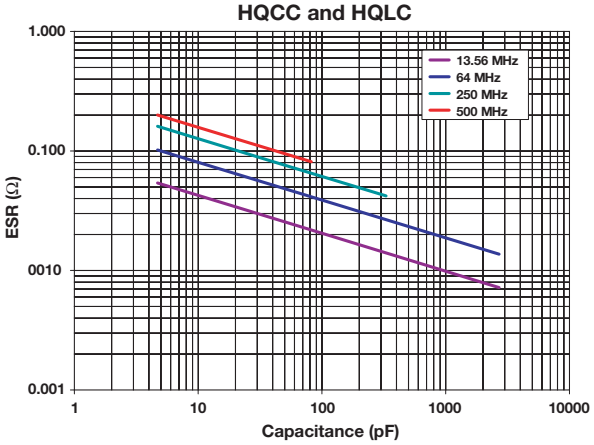
Style	600/630 WDC min./max.	1000 WVDC min./max.	1500 WVDC min./max.	2000 WVDC min./max.	2500 WVDC min./max.	3000 WVDC min./max.	4000 WVDC min./max.	5000 WVDC min./max.	7200 WVDC min./max.
HQCC	2,200 - 2,700	1,500 - 1,800	820 - 1,200	470 - 680	330 - 390	3.3 - 270			
HQCE	5,600 - 6,800	3,300 - 4,700	2,200 - 2,700	1,200 - 1,800	820 - 1,000	470-680	220-390	120 - 180	3.3 - 100

PERFORMANCE CHARACTERISTICS

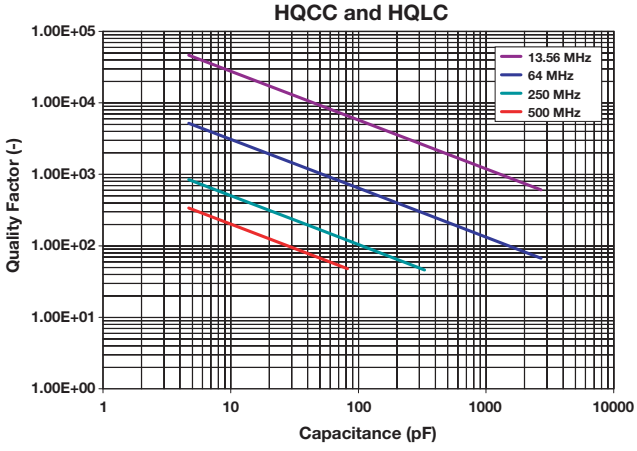
Typical Series Resonant Frequency vs. Capacitance
HQCC and HQLC



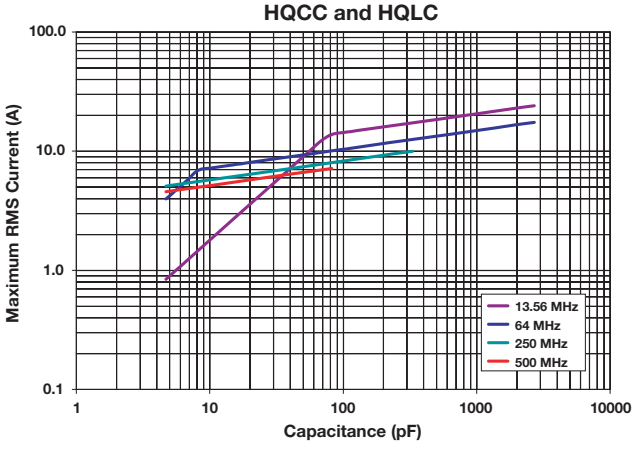
Typical ESR vs. Capacitance
HQCC and HQLC



Typical Quality Factor vs. Capacitance
HQCC and HQLC

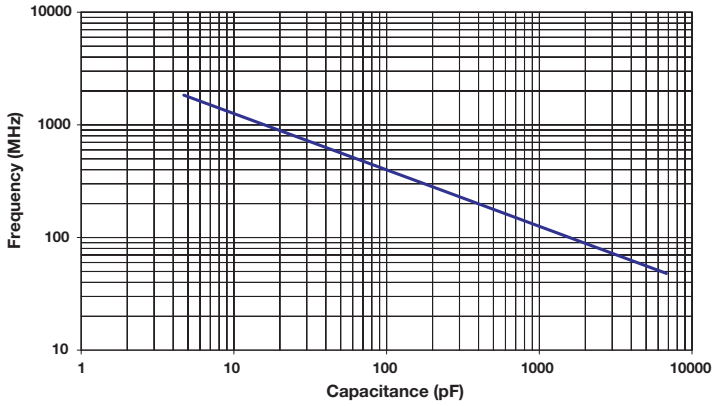


Maximum RMS Current vs. Capacitance
HQCC and HQLC

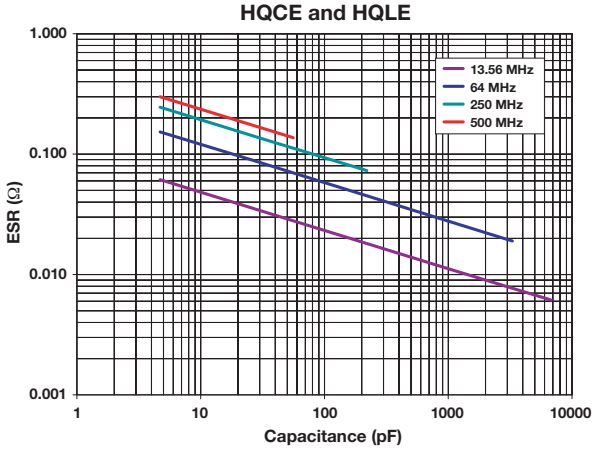


PERFORMANCE CHARACTERISTICS

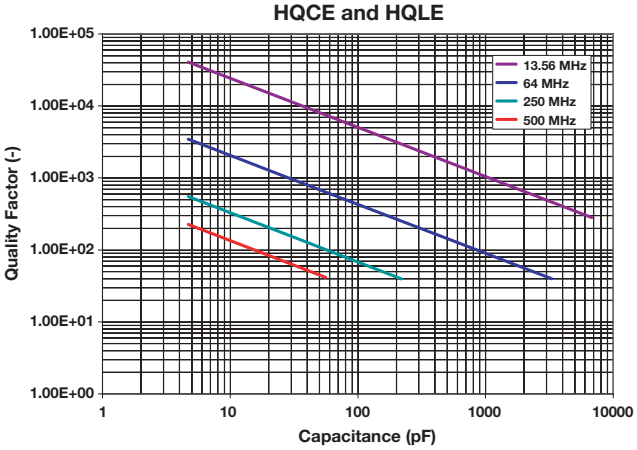
Typical Series Resonant Frequency vs. Capacitance
HQCE and HQLE



Typical ESR vs. Capacitance
HQCE and HQLE



Typical Quality Factor vs. Capacitance
HQCE and HQLE



Maximum RMS Current vs. Capacitance
HQCE and HQLE