

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.

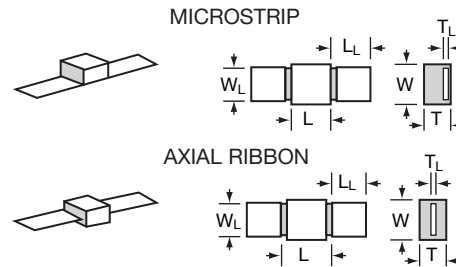
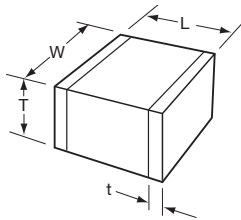


HOW TO ORDER

HQCC	A	A	271	J	A	T	1A
AVX Style	Voltage	Temperature Coefficient	Capacitance Code	Capacitance Tolerance	Test Level	Termination*	Packaging
HQCC	300V = 9 500V = 7	COG = A	(2 significant digits + no. of zeros) Examples: 4.7 pF = 4R7 10 pF = 100 100 pF = 101 1,000 pF = 102	B = 0.1pF (<8.2pF) C = ±0.25pF (<8.2pF) D = ±0.50pF (<8.2pF) F = ±1% (≥10pF) G = ±2% J = ±5% K = ±10% M = ±20%	A = Standard	T = Plated Ni and Sn (RoHS Compliant) J = 5% Min Pb 7 = Plated Ni and Au A = Axial Ribbon M = Microstrip	1A = 7" Reel* 6 = Waffle Pack *HQCC & HQCE only

DIMENSIONS

millimeters (inches)



STYLE	HQCC	HQCE
(L) Length	5.84 +0.51 -0.25 (0.230 +0.020 -0.010)	9.65 +0.38 -0.25 (0.380 +0.015 -0.010)
(W) Width	6.35 ± 0.38 (0.250 ± 0.015)	9.65 ± 0.25 (0.380 ± 0.010)
(T) Thickness Max.	3.68 (0.145) max. for capacitance values ≤ 680pF 4.19 (0.165) max. for capacitance values > 680pF	4.32 (0.170) max.
(Y) Overlap	1.20 ± (0.040) max.	1.02 ± (0.040) max.

STYLE	HQLC	HQLE
(L) Length	6.22 ± 0.64 (0.245 ± 0.025)	9.65 +0.89 -0.25 (0.380 +0.035 -0.010)
(W) Width	6.35 ± 0.38 (0.250 ± 0.015)	9.65 ± 0.25 (0.380 ± 0.010)
(T) Thickness Max.	3.68 (0.145) max. for capacitance values ≤ 680pF 4.19 (0.165) max. for capacitance values > 680pF	4.32 (0.170) max.
(Y) Overlap	N/A	N/A
(L _L) Lead Length	12.7 min. (0.500)	19.05 (0.750)
(W _L) Lead Width	6.10 ± 0.127 (0.240 ± 0.005)	8.89 ± 0.25 (0.350 ± 0.010)
(T _L) Lead Thickness	0.102 ± 0.025 (0.004 ± 0.001)	0.25 ± 0.13 (0.010 ± 0.005)
Lead Material	High Purity Silver Leads Leads are attached with High Temperature Solder	High Purity Silver Leads Leads are attached with High Temperature Solder

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DIELECTRIC PERFORMANCE CHARACTERISTICS

Capacitance Range	1.0pF to 2,700pF (25°C, 1.0 ±0.2 Vrms at 1kHz, for ≤ 1000 pF use 1MHz)
Capacitance Tolerances	±0.10pF, ±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	COG: 0 ± 30 ppm/°C (-55°C to +125°C)
Insulation Resistance	100K MΩ min. @ +25°C and 500VDC 10K MΩ min. @ +125°C and 500VDC
Dielectric Strength	250% of WVDC for capacitors rated at 500 volts DC or less for 5 seconds. 150% of WVDC for capacitors rated at 1250 volts DC or less for 5 seconds. 120% of WVDC for capacitors rated above 1250 volts DC or less for 5 seconds.

HQCC CAPACITANCE VALUES

Cap Code	Cap (pF)	Tol.	Rated WVDC	Cap Code	Cap (pF)	Tol.	Rated WVDC	Cap Code	Cap (pF)	Tol.	Rated WVDC	Cap Code	Cap (pF)	Tol.	Rated WVDC
1R0	1.0	B, C, D	2500	8R2	8.2	B, C, D	2500	680	68	F, G, J K, M	2500	471	470	F, G, J K, M	1500
1R2	1.2			100	10	820		82	561			560			
1R5	1.5			120	12	101		100	681			680			
1R8	1.8			150	15	121		120	821			820			
2R2	2.2			180	18	151		150	102			1000			
2R7	2.7			220	22	181		180	122			1200			
3R3	3.3			270	27	221		220	152			1500			
3R9	3.9			330	33	271		270	182			1800			
4R7	4.7			390	39	331		330	222			2200			
5R6	5.6			470	47	391		390	272			2700			
6R8	6.8			560	56										

HQCC CAPACITANCE VALUES

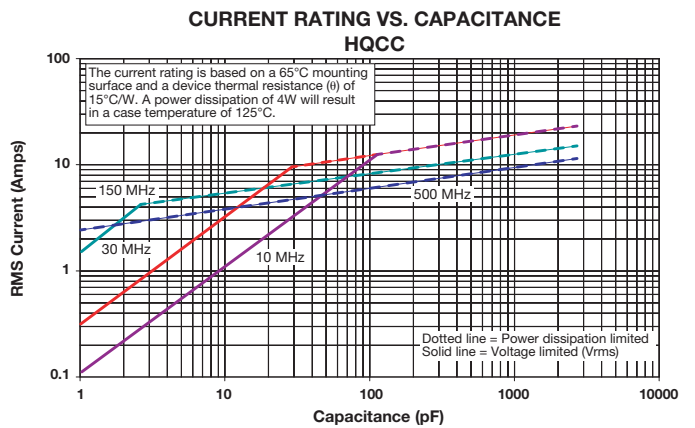
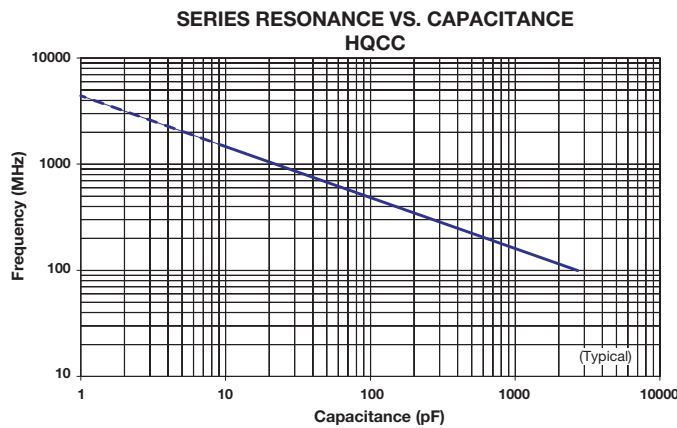
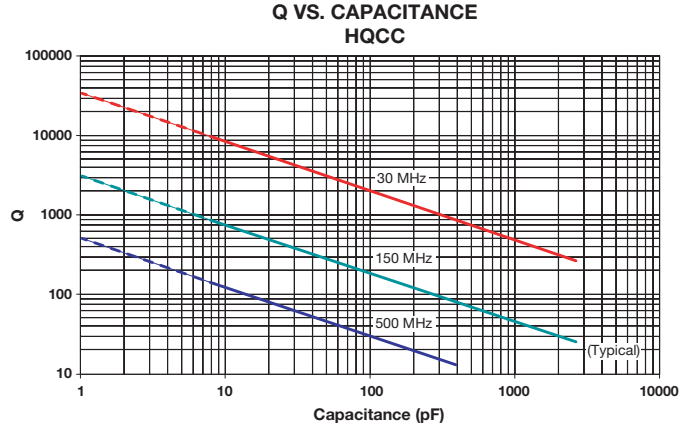
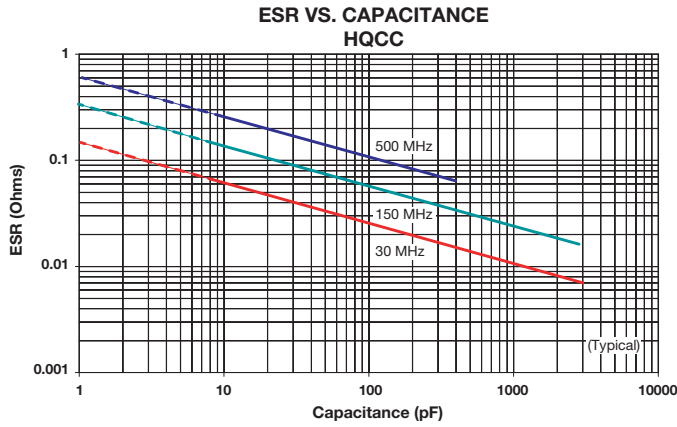
Cap Code	Cap (pF)	Tol.	Rated WVDC		Cap Code	Cap (pF)	Tol.	Rated WVDC		Cap Code	Cap (pF)	Tol.	Rated WVDC	
			Standard	Extended				Standard	Extended				Standard	Extended
1R0	1.0	C, D	3600	7200	150	15	G, J, K, M	3600	7200	221	220	G, J, K, M	2500	NA
1R2	1.2				180	18				271	270			
1R5	1.5				220	22				331	330			
1R8	1.8				270	27				391	390			
2R2	2.2				330	33				471	470			
2R7	2.7				390	39				561	560			
3R3	3.3				470	47				681	680			
3R9	3.9				560	56				821	820			
4R7	4.7				680	68				102	1000			
5R6	5.6				820	82				122	1200			
6R8	6.8				101	100				152	1500			
8R2	8.2				121	120				182	1800			
100	10				151	150				222	2200			
120	12				181	180								



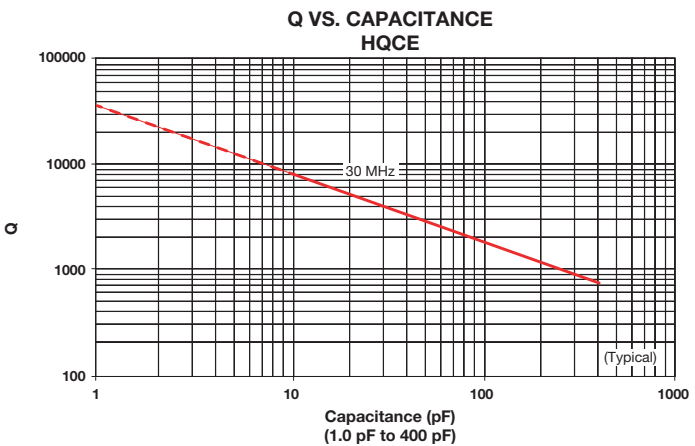
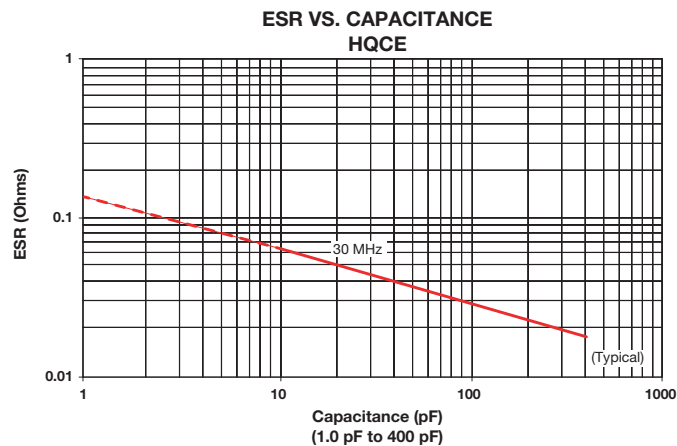
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