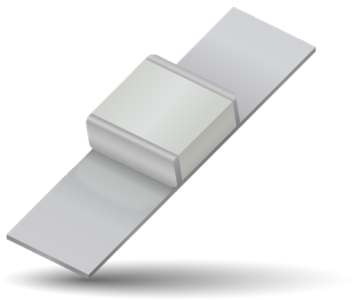
RF/Microwave Capacitors

RF/Microwave Multilayer Capacitors (MLC)

800H Series NPO Ceramic High RF Power Multilayer Capacitors



FEATURES

- Case H Size (.720" x .740")
- Capacitance Range 100 pF to 20,000 pF
- Ultra Low ESR
- High Q
- High RF Power
- Ultra-Stable Performance
- High RF Current/Voltage
- High Reliability

GENERAL DESCRIPTION

KYOCERA AVX's 800 H Series offers superb performance in demanding high RF power applications requiring consistent and reliable operation. The combination of highly conductive metal electrode systems, optimized case geometries, and proprietary dielectrics, yields the lowest ESR. KYOCERA AVX's new NPO low loss rugged dielectrics are designed to provide superior heat transfer in high RF power applications. Ultra-low ESR and superior thermal performance ensure that the 800 H Series products are your best choice for high RF power and High CV applications.

PACKAGING OPTIONS

Tray (4 pcs)

RoHS COMPLIANT

FUNCTIONAL APPLICATIONS

- Bypass
- Coupling
- Tuning
- Impedance Matching
- DC Blocking

CIRCUIT APPLICATIONS

- HF/RF Power Amplifiers
- Transmitters
- Antenna Tuning
- Inductive Heating
- Plasma Chambers
- Induction Charging Systems
- Medical (MRI coils)

ELECTRICAL SPECIFICATIONS

Temperature Coefficient (TCC)	0 ±30 PPM/°C (-55°C to +125°C)
Capacitance Drift	±(0.02% or 0.02 pF), whichever is greater
Operating Temperature	From -55°C to +125°C
Quality Factor	Greater than 5000 (100 pF to 1000 pF) @ 1 MHz. Greater than 5000 (1100 pF to 20,000 pF) @ 1 KHz.
Insulation Resistance (IR)	Max Test Voltage is 500 VDC 10^5 Megohms min. @ 25°C at 500 VDC 10^4 Megohms min. @ 125°C at 500 VDC
Working Voltage (WVDC)	See Capacitance Values table
Dielectric Withstanding Voltage (DWV)	120% of WVDC for 5 seconds
Aging Effects	None
Piezoelectric Effects	None
Capacitance Drift	± (0.02% or 0.02 pF), whichever is greater
Retrace	Less than ±(0.02% or 0.02 pF), whichever is greater.

ENVIRONMENTAL CHARACTERISTICS

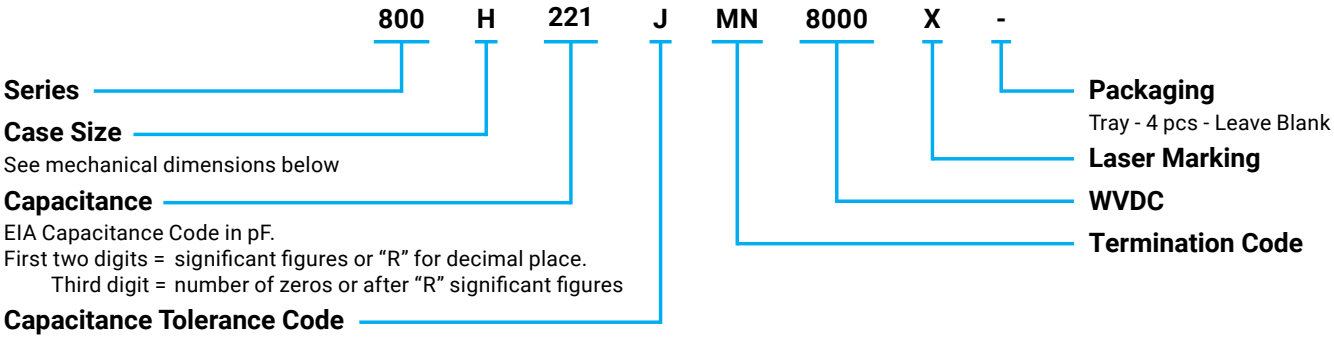
Thermal Shock	MIL-STD-202, Method 107, Condition A
Moisture Resistance	MIL-STD-202, Method 106
Low Voltage Humidity	MIL-STD-202, Method 103, Condition A, with 1.5 Volts DC applied while subjected to an environment of 85°C with 85% relative humidity for 240 hours min.
Life Test	MIL-STD-202, Method 108, for 2000 hours, at 125°C at rated voltage.
Termination Styles	See Mechanical Configurations
Terminal Strength	Terminations for chips withstand a pull of 12 lbs. min., 20 lbs. typical, for 5 seconds in direction perpendicular to the termination surface of the capacitor. Test per MIL-STD-202, method 211.

CAPACITANCE VALUES

CAP. CODE	CAP. (pF)	TOL.	RATED WVDC	CAP. CODE	CAP. (pF)	TOL.	RATED WVDC	CAP. CODE	CAP. (pF)	TOL.	RATED WVDC
101	100	G, J, K	8000	561	560	G, J, K	5000	332	3300	G, J, K	3000
111	110			621	620			392	3900		
121	120			681	680			472	4700		
131	130			751	750			512	5100		
151	150			821	820			562	5600		
161	160			911	910			622	6200		
181	180			102	1000			682	6800		
201	200			112	1100		3000	752	7500		
221	220			122	1200			822	8200		
241	240		5000	132	1300			912	9100		
271	270			152	1500			103	10000		
301	300			162	1600			113	11000		2000
331	330			182	1800			123	12000		
361	360			202	2000			133	13000		
391	390			222	2200			153	15000		
431	430			242	2400			163	16000		
471	470			272	2700			183	18000		
511	510			302	3000			203	20000		

SPECIAL VALUES, TOLERANCES AND MATCHING AVAILABLE. PLEASE CONSULT FACTORY.

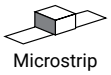
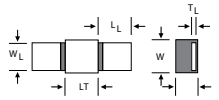
HOW TO ORDER



Code	G	J	K	M
Tol.	±2%	±5%	±10%	±20%

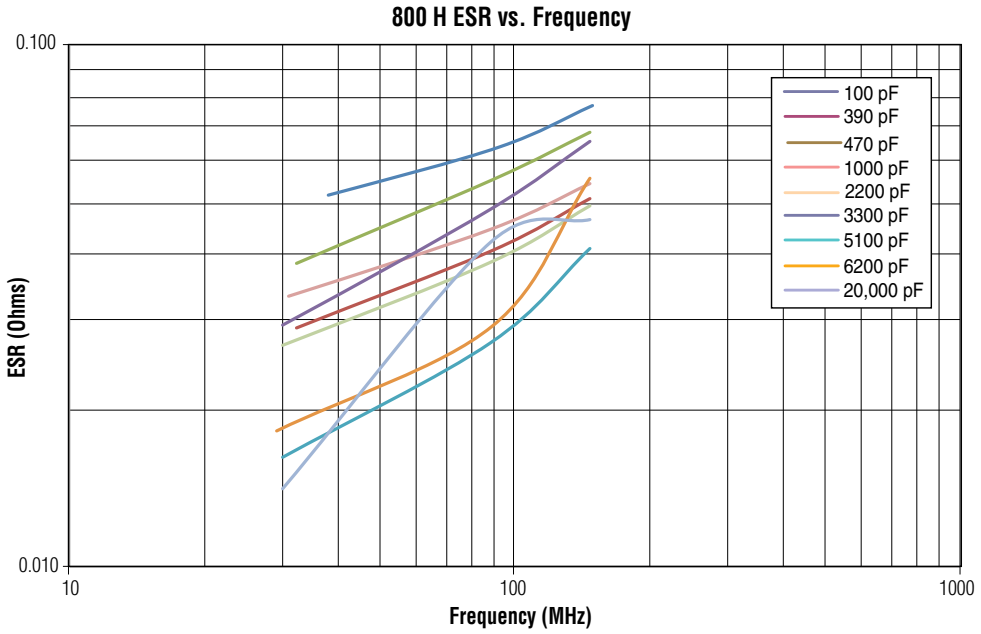
**Optional
The above part number refers to a 800 H Series (case size H) 220 pF capacitor, J tolerance (±5%), 8000 WVDC, with MN Non-Magnetic termination (Microstrip Termination), laser marking and Matrix Tray packaging.

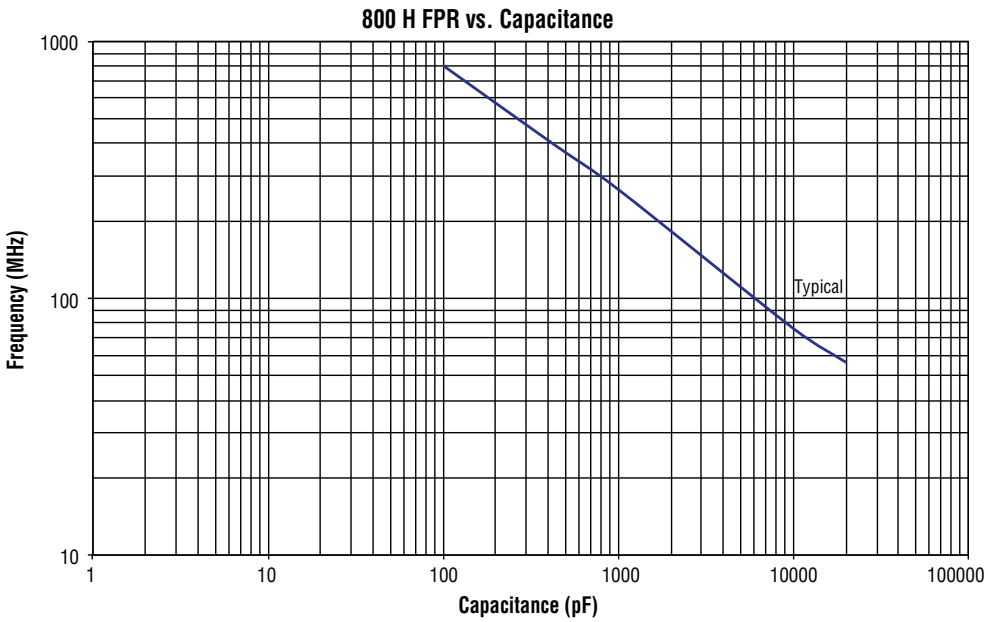
NON MECHANICAL CONFIGURATION

Series & Case Size	Term. Code	Case Size & Type	Outline W/T is a Termination Surface	Body Dimensions inches (mm)			Lead and Termination Dimensions and Material	
				Length (L)	Width (W)	Thickness (T)	Overlap (Y)	Materials
800H	MN	H  Microstrip		.735+.060 -.010 (18.67+1.524 -.254)	.750+.020 -.010 (19.05+.508 -.254)	.220 (5.59) max.	N/A	High Purity Silver Leads L_L = .750 (19.05) min. W_L = .660 ±.010 (16.764±.254) T_L = .010 ±.001 (.254 ±.025) Leads are Attached with High Temperature Solder

Custom lead styles and lengths are available; consult factory. All leads are high purity silver attached with high temperature solder and are **RoHS** compliant.

PERFORMANCE DATA





PERFORMANCE DATA