High Q Capacitors, High Temperature - H range

The Ultra-low ESR "H" range offers a very stable, X8G High Q material system that provides excellent low loss performance.

Optimised for lowest possible ESR, the electrode system provides low metal losses resulting in flatter performance curves and reduced losses at higher frequencies.

An extended operating temperature range of -55ºC to +150ºC accommodates modern high density micro electronics requirements.

This range of high frequency capacitors is suitable for many applications where economical, high performance is required.

Operating Temperature
-55°C to +150°C (EIA X8G)

Temperature Coefficient (Typical)
0 ± 30 ppm/°C (EIA X8G)

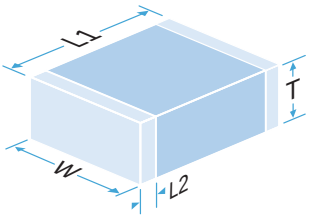
Insulation resistance
Time constant (Ri xCr) (whichever is the least)
100GΩ or 1000s

Q Factor
>2000 @ 1MHz

Minimum / maximum capacitance values - Ultra-low ESR capacitors - H range

Chip Size		0402	0603	0805
Min Cap		0.1pF	0.1pF	0.2pF
Max Cap	250V	22pF	100pF	240pF
Tape quantities		7" reel - 10,000	7" reel - 4,000	7" reel - 3,000
		13" reel - 15,000	13" reel - 16,000	13" reel - 12,000

Note: Below 1pF capacitance values are available in 0.1pF steps. Above 1pF capacitance values are available in E24 series values.



Dimensions

Size	Length (L1) mm ~ inches	Width (W) mm ~ inches	Max. Thickness (T) mm ~ inches	Termination Band (L2) mm ~ inches	
				min	max
0402	1.0 ± 0.10 ~ 0.04 ± 0.004	0.5 ± 0.1 ~ 0.02 ± 0.004	0.60 ~ 0.24	0.10 ~ 0.004	0.40 ~ 0.016
0603	1.6 ± 0.2 ~ 0.063 ± 0.008	0.8 ± 0.2 ~ 0.032 ± 0.008	0.80 ~ 0.032	0.10 ~ 0.004	0.40 ~ 0.016
0805	2.0 ± 0.3 ~ 0.079 ± 0.012	1.25 ± 0.20 ~ 0.049 ± 0.008	1.3 ~ 0.051	0.13 ~ 0.005	0.75 ~ 0.03

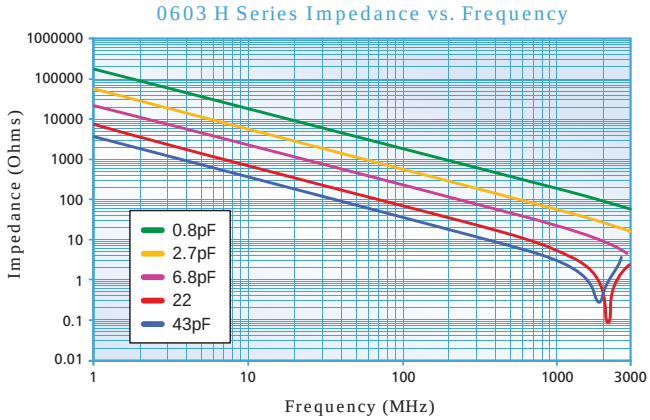
Ordering information - Ultra-low ESR capacitors - H range

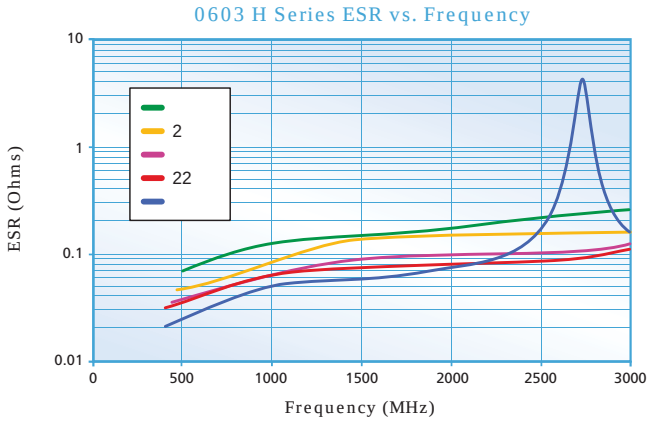
0805	J	250	0101	J	H	T
Chip size	Termination	Voltage	Capacitance in picofarads (pF)	Capacitance tolerance	Dielectric	Packaging
0402 **0603** **0805**	**J** = Nickel barrier (100% matte tin plating). RoHS compliant. Lead free.	**250** = 250V	<1.0pF: Insert a P for the decimal point as the first character. eg. **P300** = 0.3pF Values in 0.1pF steps ⩾1.0pF & <10pF: Insert a P for the decimal point as the second character. eg. **8P20** = 8.2pF Values are E24 series ⩾10pF: First digit is 0. Second and third digits are significant figures of capacitance code. Fourth digit is number of zeros. eg. **0101** = 100pF Values are E24 series	<4.7pF **H** = ±0.05pF **B** = ±0.1pF **C** = ±0.25pF **D** = ±0.5pF <10pF **B** = ±0.1pF **C** = ±0.25pF **D** = ±0.5pF ⩾10pF **F** = ±1% **G** = ±2% **J** = ±5% **K** = ±10%	**H** = Ultra-low ESR High Frequency "H" range	**T** = 178mm (7") reel **R** = 330mm (13") reel **B** = Bulk pack - tubs or trays

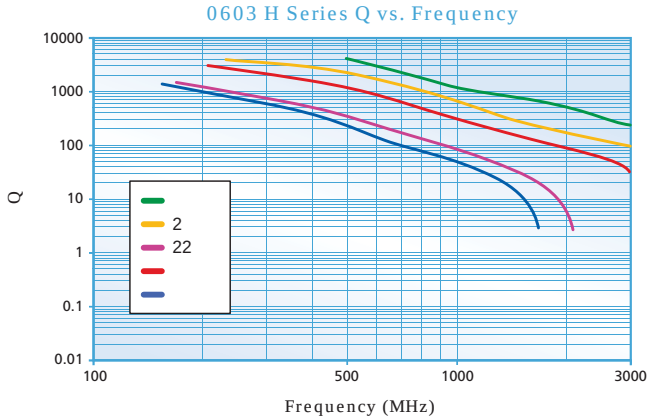
Should be ordered as Syfer parts

High Q Capacitors, High Temperature - H range

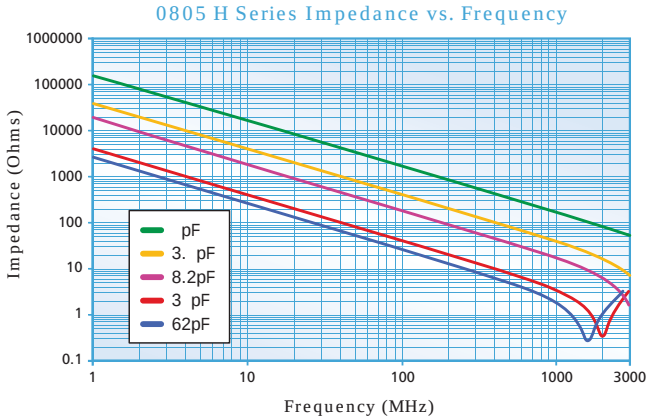
Typical performance - 0603 chip size

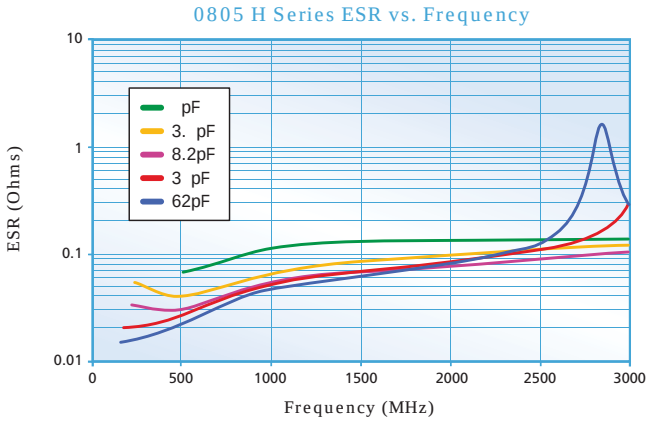


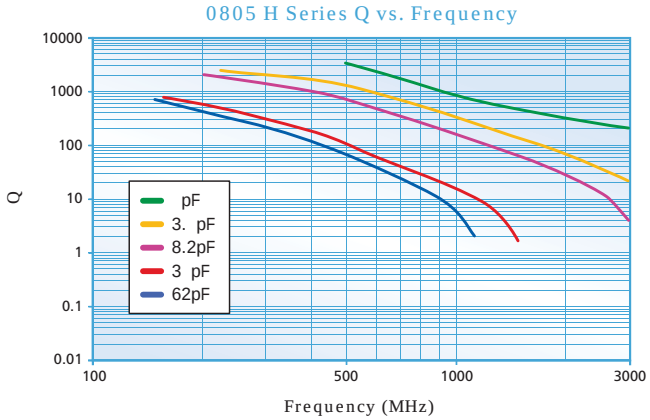




Typical performance - 0805 chip size







Should be ordered as Syfer parts.

knowles
DLI•JohansonMFG•Novacap•Syfer•Voltronics

www.knowlescapacitors.com