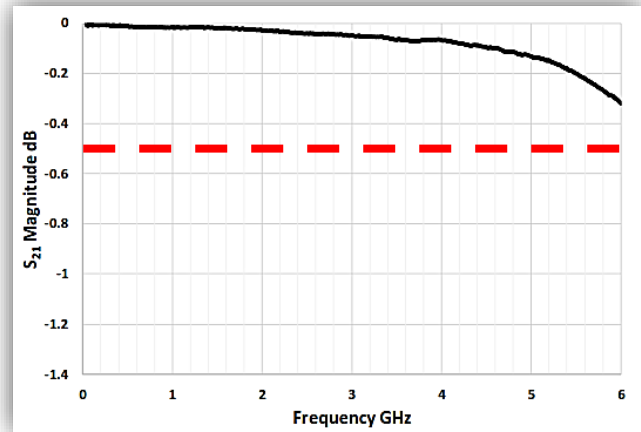


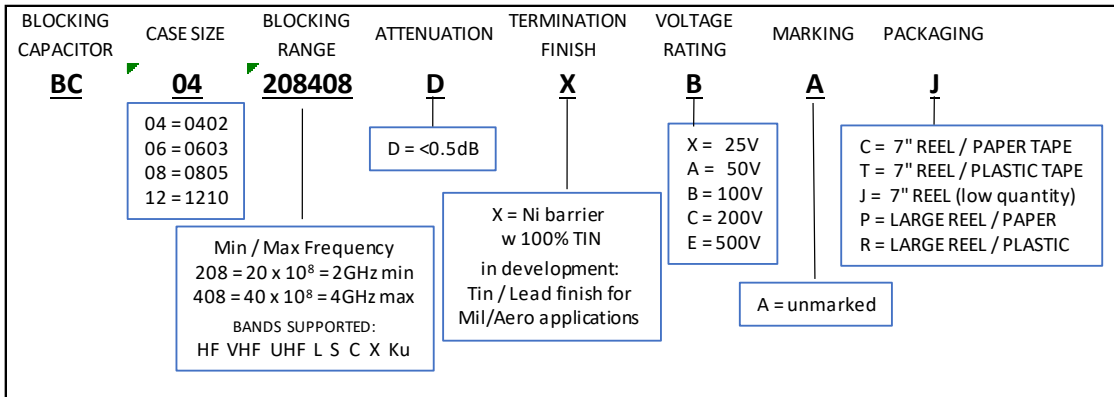
DC Blocking Capacitors – Filling a need

- Vitramon, working with military radio designers, revealed a need for a DC blocking capacitor
- Vishay MLCC team developed a solution that met their needs: BC04306608DXBAC
- Initial product:

- Size: 0402
- Coupling Range: 30 MHz to 6 GHz (306608)
- Typical Attenuation (dB) < -0.5
- V_{DC} : 100 V
- Operating Temperature: -55 °C to +150 °C
- Capacitance: 4.7nF



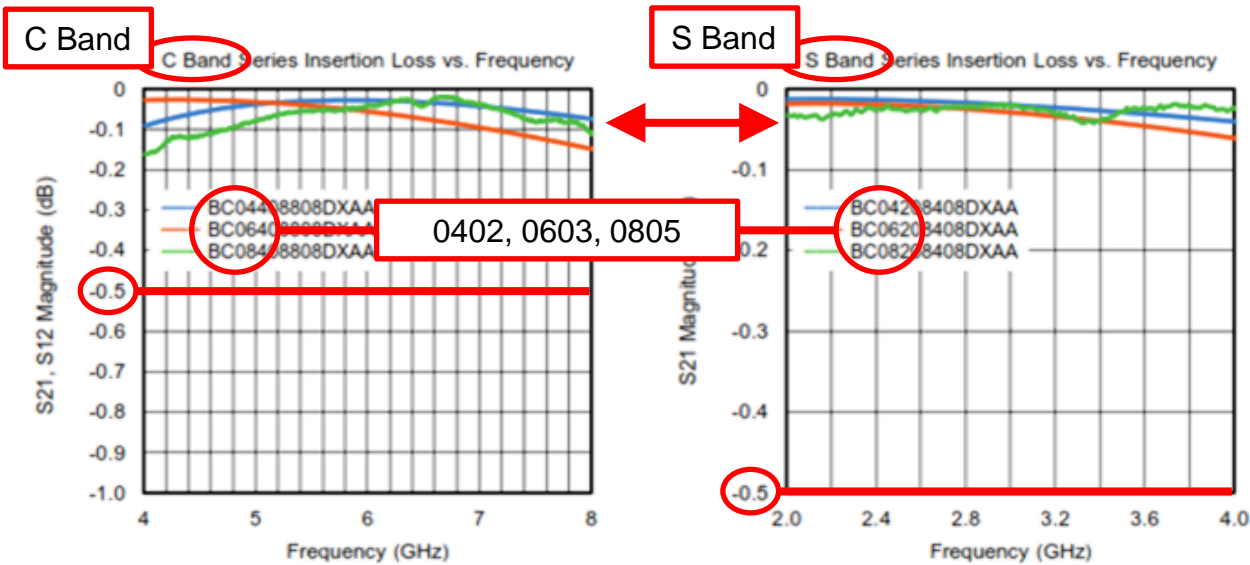
- Evolved into a full series of parts:



Contact ESC for data sheet and tech support
Sales@escomponents.com

DC Blocking Capacitors

- Series of MLCCs that provide DC blocking across defined frequency ranges
- Resonance free performance across working frequency range
- Multiple body sizes
- DC blocking, < 0.5 dB insertion loss across frequency band
- Custom frequency ranges available, ie: 306608 (30MHz – 6GHz)
- Surface-mount standard EIA body sizes
- Low loss reliable noble metal electrode system
- S-parameters available



FREQUENCY BAND	CASE SIZE	MAXIMUM VOLTAGE (V)
HF 3 MHz-30 MHz PN: 305306	0402	50
	0603	100
	0805	100
	1210	500
VHF 30 MHz-300 MHz PN: 306307	0402	50
	0603	100
	0805	100
	1210	500
UHF 300 MHz-3 GHz PN: 307308	0402	50
	0603	100
	0805	100
	1210	500
L 1 GHz-2 GHz PN: 108208	0402	50
	0603	100
	0805	100
	1210	500
S 2 GHz-4 GHz PN: 208408	0402	50
	0603	100
	0805	100
	1210	500
C 4 GHz-8 GHz PN: 408808	0402	50
	0603	100
	0805	100
X 8 GHz-12 GHz PN: 808129	0402	50
	0603	100
Ku 12 GHz-18 GHz PN: 129189	0402	50
	0603	100

Vishay MLCC RF Simulation

- Circuit simulation can shorten the design cycle time.
- RF Simulation Tool
 - *On Vishay website*
- View / download frequency characteristics:
- [RFMLCC Simulation Tool | Vishay](#)

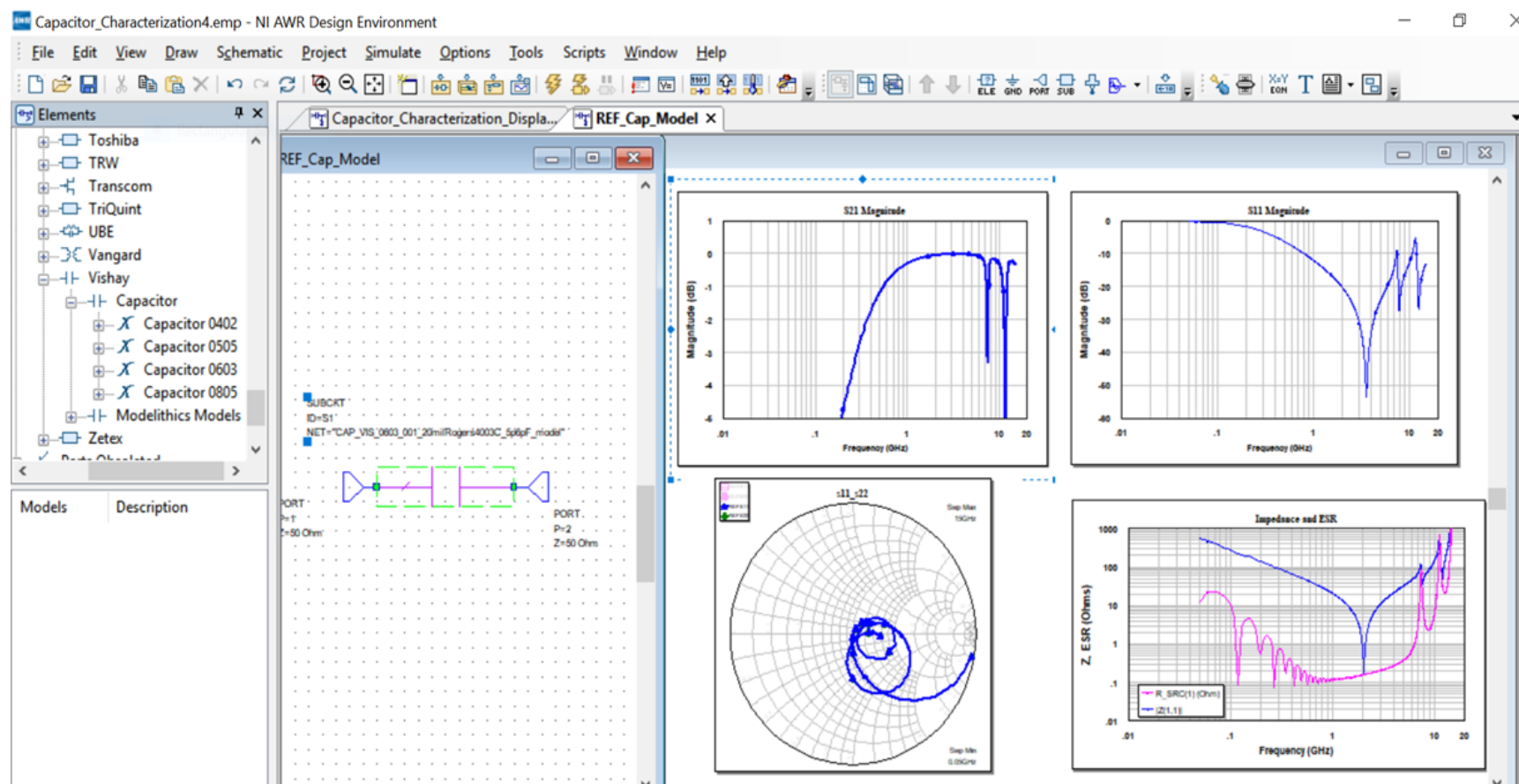
Modelithics (0402, 0603)

Download data for use →

Cadence AWR (0402, 0603, 0805, 0505)

Vishay MLCC RF Circuit Models

- S2p files can be downloaded from Vishay web site.
- This allows simulation using packages such as Keysight ADS, **Cadence AWR** and Keysight Genesys





DC BLOCKING CAPACITORS

EFFICIENT SIGNAL COUPLING

FEATURES

Resonance-free performance across the working frequency range

DC blocking, < 0.5 dB insertion loss across the frequency band

Custom frequency ranges available

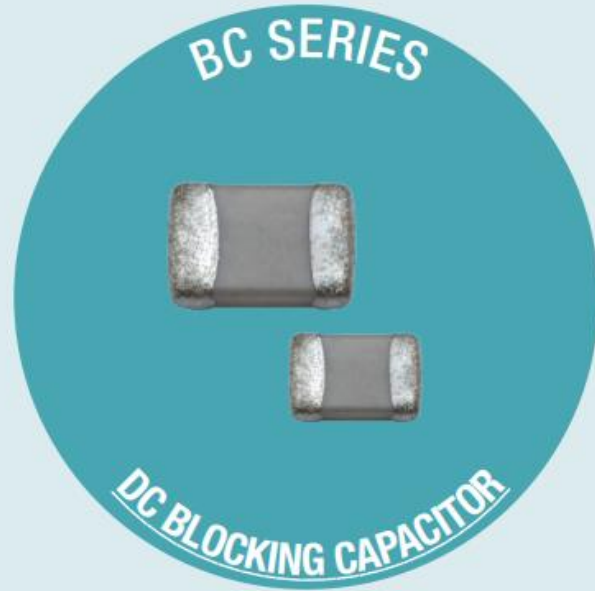
Surface-mount standard EIA body sizes

Low loss, reliable noble metal electrode system

S-parameters available

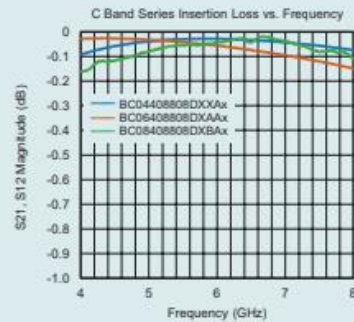
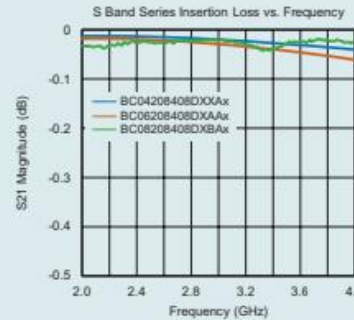
QUICK REFERENCE DATA

Frequency Band	Case Sizes	Max. Voltage (V)
HF (3 MHz to 30 MHz)	0402, 0603, 0805, 1210	500
VHF (30 MHz to 300 MHz)		
UHF (300 MHz to 3 GHz)		
L (1 GHz to 2 GHz)		
S (2 GHz to 4 GHz)	0402, 0603, 0805	100
C (4 GHz to 8 GHz)		
X (8 GHz to 12 GHz)	0402, 0603	
Ku (12 GHz to 18 GHz)		
Custom (30 MHz to 6 GHz)	0402	



DOWNLOAD S-PARAMETERS FOR THIS PRODUCT >>>

TYPICAL ATTENUATION CURVES



APPLICATIONS



For technical questions: mlccrf@vishay.com

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IG26760884-2203

Specific parts for key bands

- HF, VHF, UHF.... C, X, Ku
- Custom bands available

Across the specified band:

- Resonant-free blocking
- <0.5dB insertion loss

Rated voltages:

- From 25V to 500V

S-parameters:

- Available for download

Applications:

- Wireless Communication
- High speed communication
- High frequency data links
- High frequency test equipment
- Fiber optic lines
- RF / microwave modules
- Bluetooth communication
- 5G base stations

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