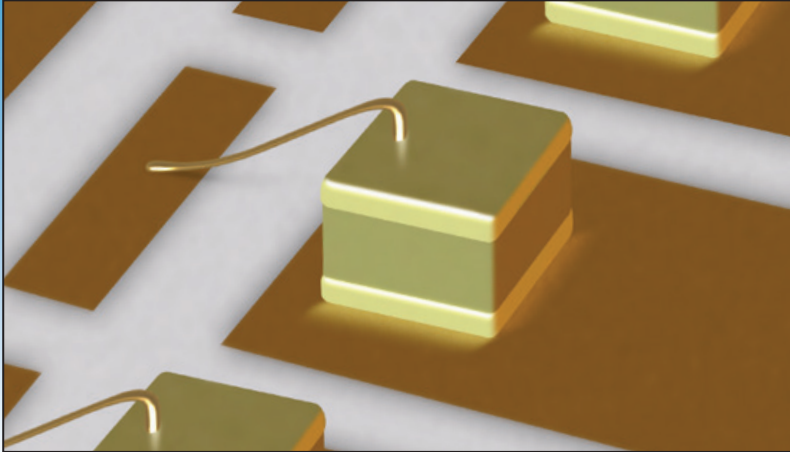


# V Series Single Layer Capacitors



## Description

Class II dielectric material with X7R characteristics for DC Blocking or RF Bypass applications in a broad frequency range.

These high frequency, wire bondable single layer capacitors are perfect for GaN and GaAs amplifier applications where small size and microwave performance is key to a well performing circuit.

## Features

- X7R Temperature Stability
- Excellent high frequency response
- Wire Bondable
- RoHS compliant
- High capacitance in a small footprint
- MSL-1
- Rated Operating/Storage Temp. -55 to +125°C

## Applications

- DC Blocking
- RF Bypassing
- Filtering
- Tuning
- Coupling

## Benefits

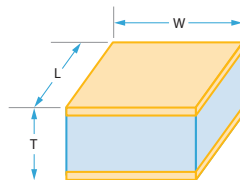
- High Capacitance Density
- Up to 10nF in 30 mil square size
- Up to 200WVDC for high powered system needs
- Can be epoxy or AuSn solder mounted

## Specification - V Series Capacitors

Part Number	Capacitance	Voltage	Dissipation Factor @ 1MHz	Insulation Resistance	
				@ +25C	@ +125C
V30BZ102M6SX	1nF ±20%	200WVDC	2.5%	10 <sup>3</sup> MΩ	10 <sup>2</sup> MΩ
V30BZ222M8SX	2.2nF ±20%	150WVDC	2.5%	10 <sup>3</sup> MΩ	10 <sup>2</sup> MΩ
V30BZ472M1SX	4.7nF ±20%	100WVDC	2.5%	10 <sup>3</sup> MΩ	10 <sup>2</sup> MΩ
V30BZ682M1SX	6.8nF ±20%	100WVDC	2.5%	10 <sup>3</sup> MΩ	10 <sup>2</sup> MΩ
V30BZ103M1SX	10nF ±20%	100WVDC	2.5%	10 <sup>3</sup> MΩ	10 <sup>2</sup> MΩ

Metal thickness is min. 100μ" of Au over min. 50μ" of Ni

Part Number	Length	Dimensions	
		Width	Thickness
V30BZ102M6SX	0.030" ±0.003" (0.762mm ±0.076mm)	0.030" ±0.003" (0.762mm ±0.076mm)	0.022" ±0.003" (0.559mm ±0.0762mm)
V30BZ222M8SX			
V30BZ472M1SX			
V30BZ682M1SX			
V30BZ103M1SX			



## Part Number Identification

V	30	BZ	102	M	5	S	X	
Product V = V-Series	Case Size 30	Material BZ (X7R)	Capacitance (pF) 102 = 1nF 222 = 2.2nF 472 = 4.7nF 682 = 6.8nF 103 = 10nF	Tolerance M ± 20%	Voltage 5 = 50V 1 = 100V 6 = 200V 8 = 150V	Termination S (Au/Ni)	Test Level X = Commercial A = Group A B = Group B  See test level definitions.	Packaging Available in Waffle Packs.



DLI•JohansonMFG•Novacap•Syfer•Voltronics

www.dilabs.com

### North America

Knowles (Cazenovia)  
Phone: +1 315 655 8710  
KCCSales@knowles.com

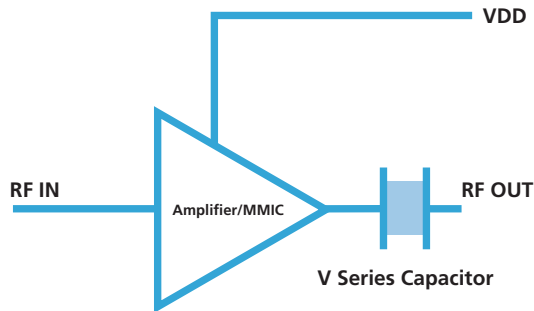
### Europe

Knowles (UK) Ltd  
Phone: +44 1603 723300  
SyferSales@knowles.com

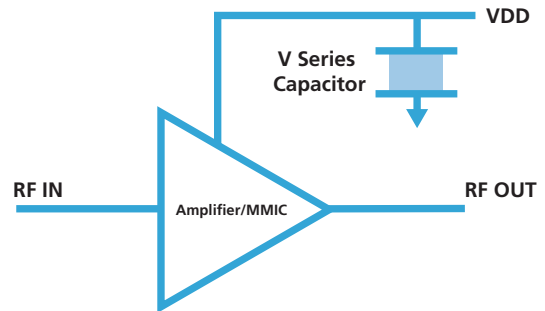
### Far East

Knowles Capacitors  
Phone: +86 512 62588258-6243  
KCAsiaSales@knowles.com

### DC Blocking

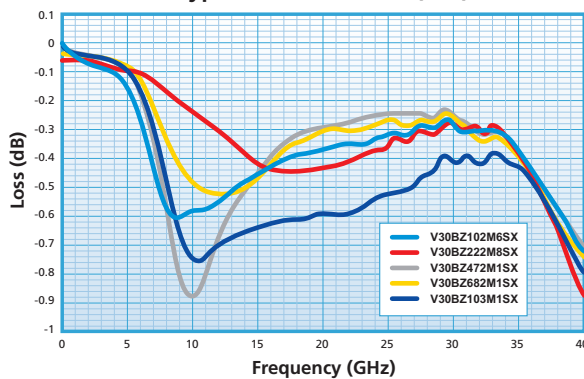


### RF Bypassing



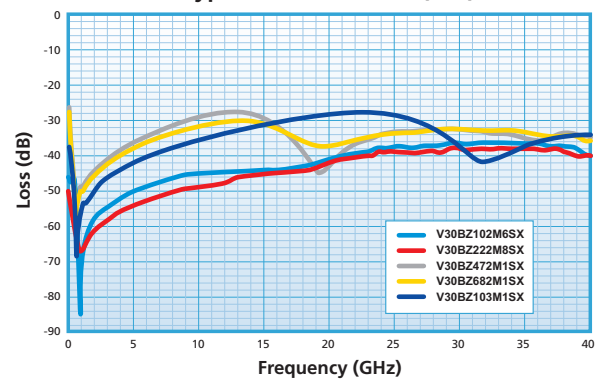
### Series data

Typical Insertion Loss (S21)



### Shunt data

Typical Insertion Loss (S21)



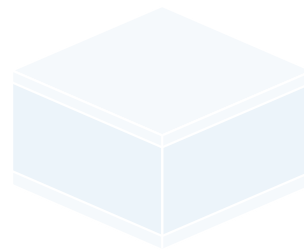
## Attachment Method - V Series Capacitors

### Recommended Attachment Method (Conductive Epoxy) Alternative Attachment Method (Gold Eutectic)

Bonding can be done with either needle or automatic dispensers.

Epoxy curing defer to the epoxy manufacturer's preferred schedule but typically in the 125°C to 150°C range.

Benefits of epoxy is easier repairs, cure need not be started immediately so multiple substrates may be processed at one time and epoxy is effective in higher frequencies.



# Mouser Electronics

Authorized Distributor

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## Dielectric Laboratories:

[V30BZ103M1SX](#) [V30BZ102M6SX](#) [V30BZ472M1SX](#) [V30BZ682M1SX](#) [V30BZ222M8SX](#)