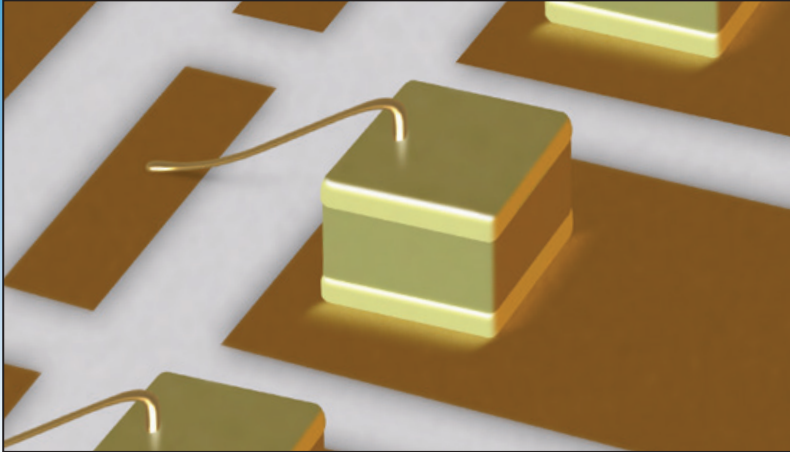


V Series Single Layer Capacitors



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

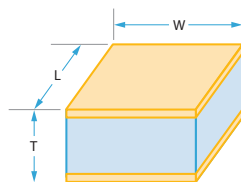
- High Capacitance Density
- Up to 10nF in 30 mil square size
- Up to 200WVDC for high powered system needs
- Can be epoxy or AuSn solder mounted

Specification - V Series Capacitors

| Part Number | Capacitance | Voltage | Dissipation Factor @ 1MHz | Insulation Resistance | |
|--------------|-------------|---------|---------------------------|-----------------------|--------------------|
| | | | | @ +25C | @ +125C |
| V30BZ102M6SX | 1nF ±20% | 200WVDC | 2.5% | 10 ³ MΩ | 10 ² MΩ |
| V30BZ222M8SX | 2.2nF ±20% | 150WVDC | 2.5% | 10 ³ MΩ | 10 ² MΩ |
| V30BZ472M1SX | 4.7nF ±20% | 100WVDC | 2.5% | 10 ³ MΩ | 10 ² MΩ |
| V30BZ682M1SX | 6.8nF ±20% | 100WVDC | 2.5% | 10 ³ MΩ | 10 ² MΩ |
| V30BZ103M1SX | 10nF ±20% | 100WVDC | 2.5% | 10 ³ MΩ | 10 ² 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" |
| V30BZ222M8SX | | | ±0.003" |
| V30BZ472M1SX | | | (0.559mm |
| V30BZ682M1SX | | | ±0.0762mm) |
| 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

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Knowles (Cazenovia)
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KCCSales@knowles.com

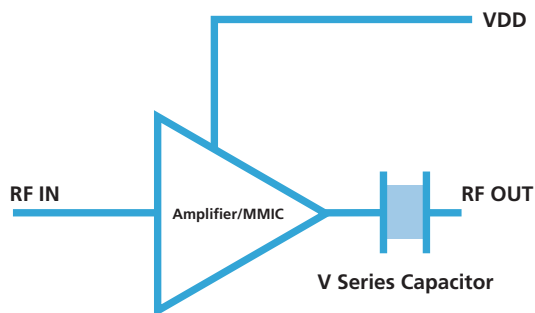
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SyferSales@knowles.com

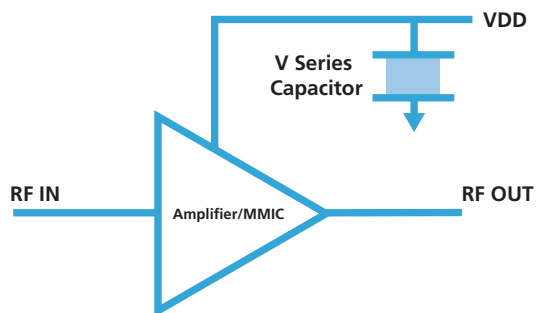
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Phone: +86 512 62588258-6243
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DC Blocking

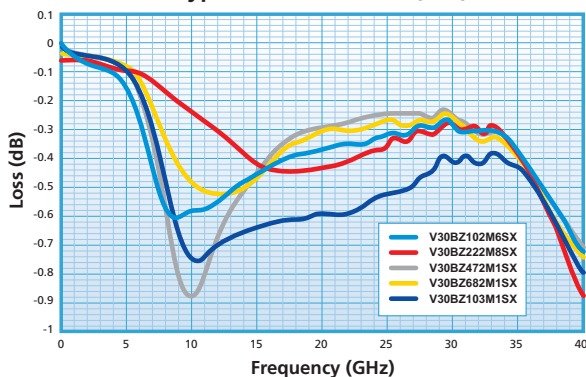


RF Bypassing



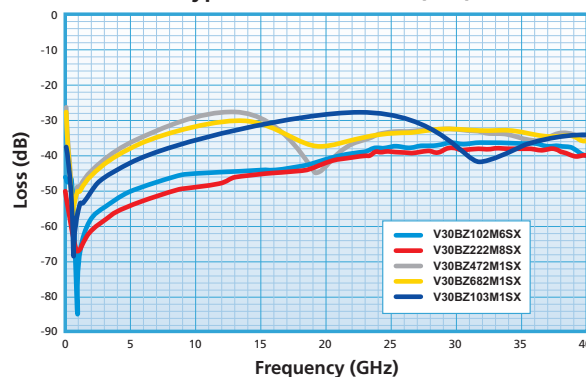
Series data

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.



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