

## Functional Applications

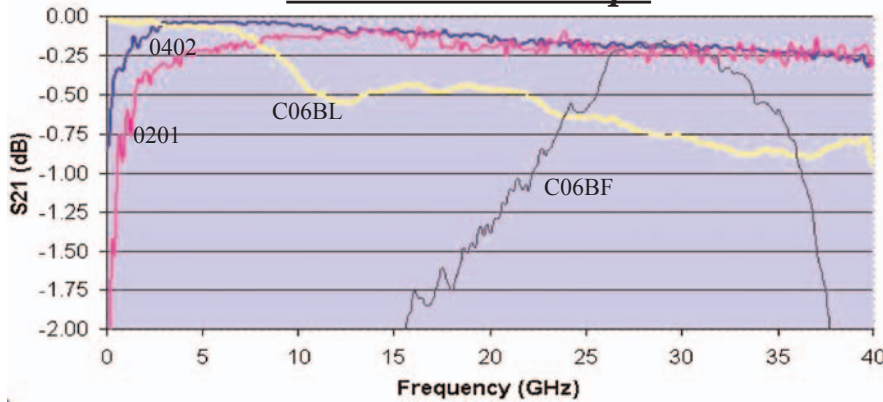
- 0201,0402,0502, 0602 Footprints
- Very Low Series Inductance
- Ultra High Series Resonance
- Low Loss, High Q

## Benefits

- Matches typical 50 ohm Line Widths
- Preserves Board Space
- Behaves Like An Ideal Capacitor
- More Usable Bandwidth

## Insertion Loss Comparison of DLI Broadband

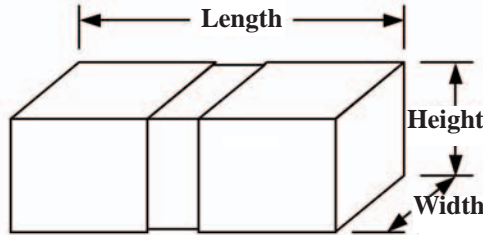
### Blocks vs Milli-Caps®



0402 MilliCap® wide-band very low loss no resonances  
 0201 MilliCap® wide-band very low loss no resonances  
 C06BL\_850pF standard capacitor  
 C06CF\_0.2pF -Hi K material

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- Terminations : Gold
- Assembly temperatures not to exceed 260°C.
- Ideal for Test Equipment, Photonics, SONET, Digital radios, and Matching Filter applications

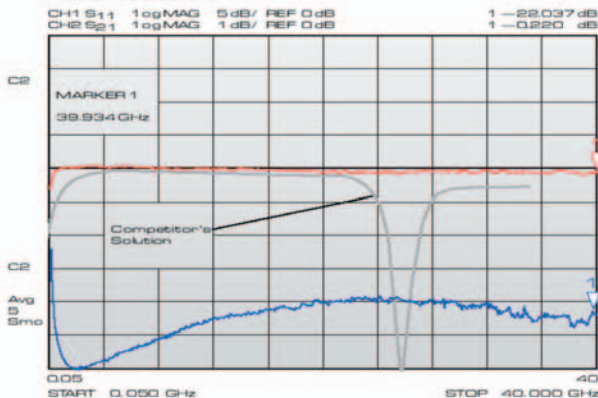
### Dimension Key

- P21=0201
- P42=0402
- P02=0502
- P62=0602

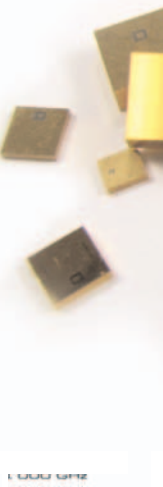
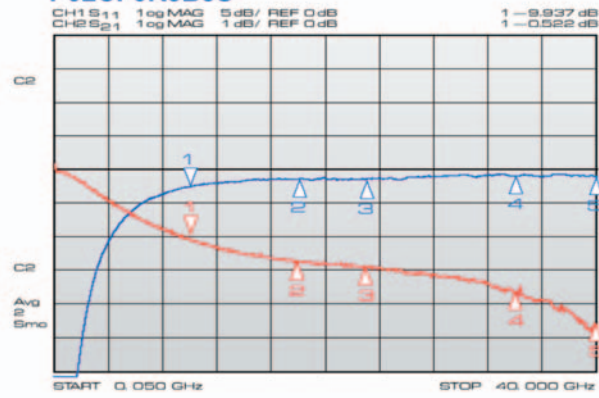
Part Characteristics								
Part Number	Cap.	Voltage Rating	Temperature Coefficient -55°C to 125°C	Maximum Dissipation Factor	Insulation Resistance (MΩ Minimum)	Aging Rate	Frequency Range	
P_BN820Z5ST	82 pF	50 V dc	± 10%	3.0% @ 1MHz, 25°C	10 <sup>5</sup> MΩ @ 25°C at rated voltage	≤1.5%/decade hours	20MHz-40GHz	
P_NR3R0K5ST	3.0 pF		N1500 ±500PPM / °C	0.25% @ 1MHz, 25°C	10 <sup>5</sup> MΩ @ 25°C at rated voltage		N / A*	4-20GHz
P_CG1R5C5ST	1.5 pF		0 ± 30PPM	0.7% @ 1KHz, 25°C				8-32GHz
P_CG1R0C5ST	1.0 pF							18-40GHz
P_CD0R7B5ST	0.7 pF		N20 ±15PPM / °C	0.15% @ 1MHz, 25°C				20-46GHz
P_CF0R5B5ST	0.5 pF		0 ±15PPM / °C	0.6% @ 1MHz, 25°C				28-40GHz
P_CF0R3B5ST	0.3 pF							35-50GHz

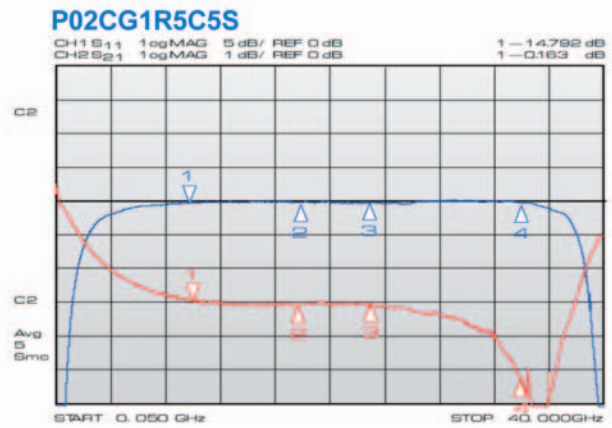
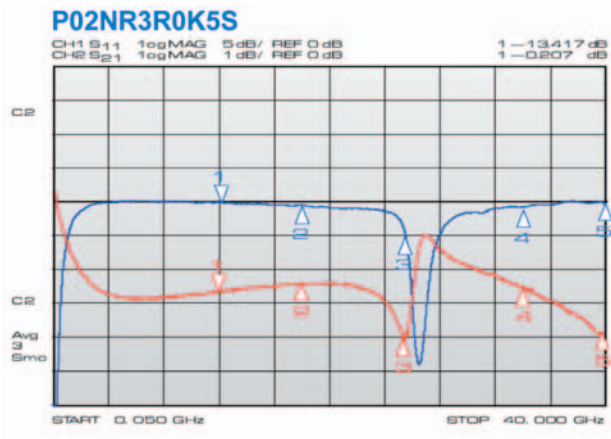
Consult Factory for custom values

### P02BN820Z5S

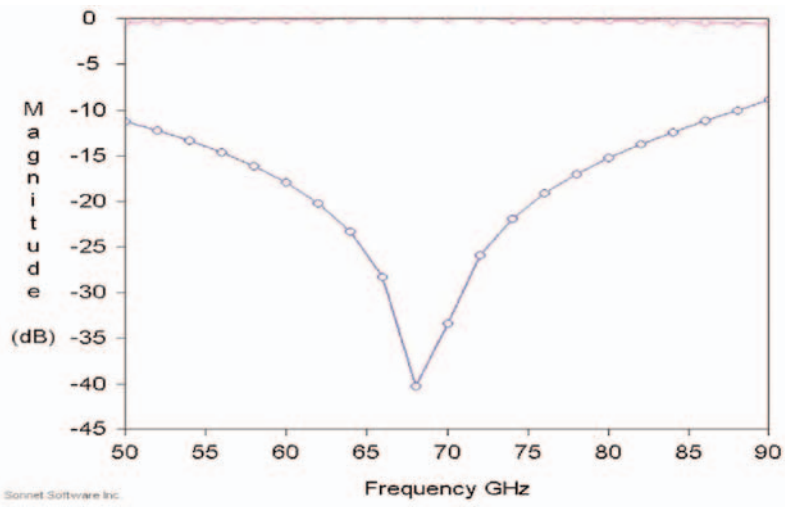
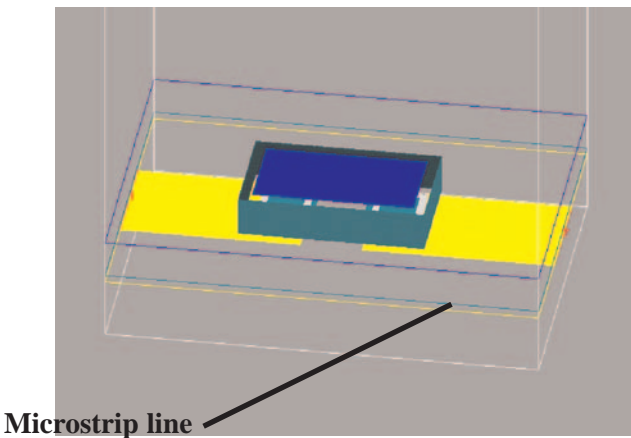


### P02CF0R5B5S





## Thin Film DC Block



### Benefits

- Hi-K ceramics & precision thin film geometry provide repeatable Millimeter-wave performance
- Design can be optimized for:
  - Frequency & BW
  - Microstrip line width
  - Mounting pad design rules