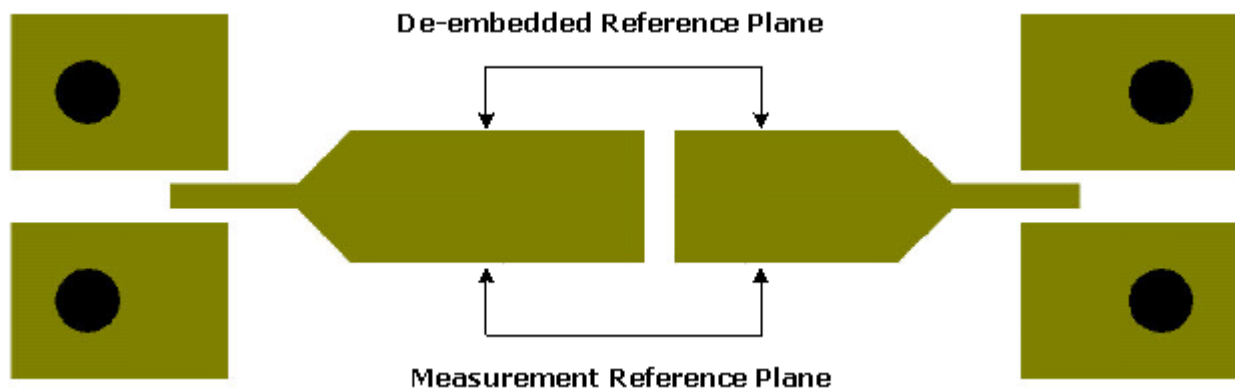


## Insertion Loss Data

Component:	BB0502X7R123M16VP820
Global Part Number:	MBB0502X123MGP5N8-
Dielectric:	X7R
Capacitance:	12nF, 82pF
Voltage:	16VDC
Size:	0502
Temperature Coefficient:	±15% (-55C, +125C)

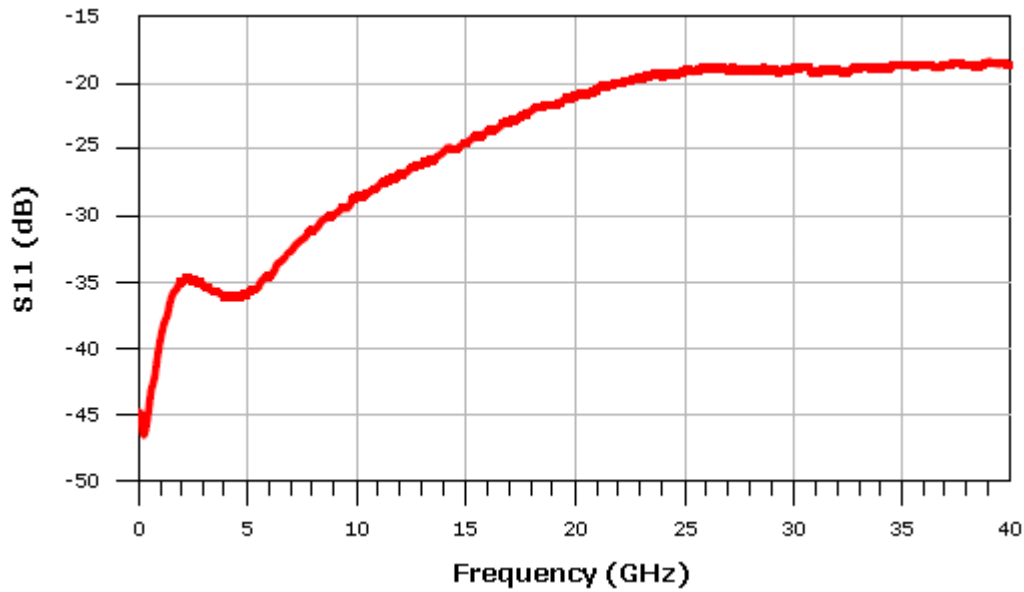
Measured on fused silica (500MHz-40GHz)  
Line Width 23 Mils  
Gap Width 5 Mils



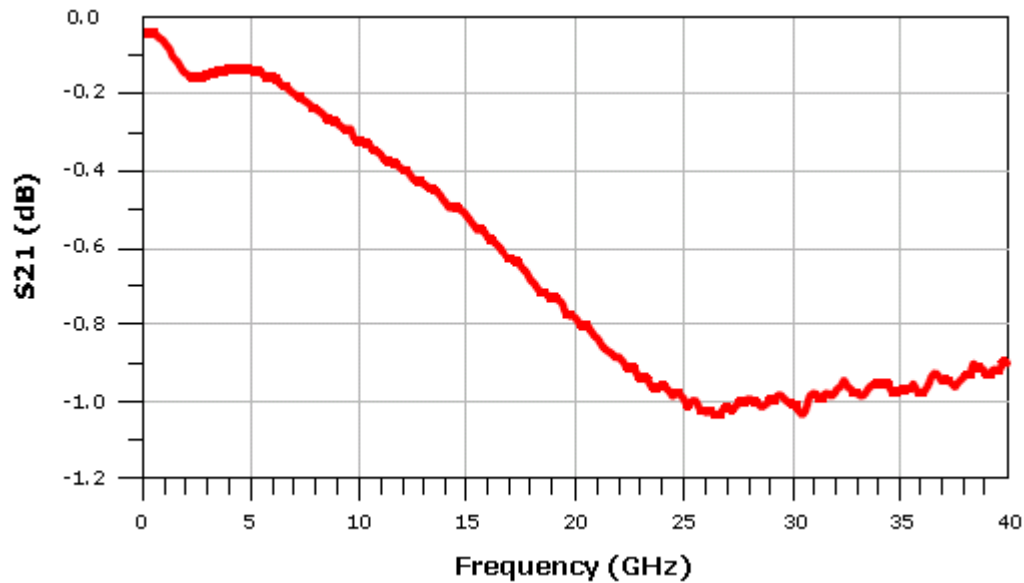
**Figure 1** - 10mil Quartz Test fixture.

The capacitors were mounted to pad stacks on 10-mil fused silica. Series 2-port S-parameter measurements were made using a vector network analyzer that was calibrated to the outer edge of the pad stacks. Test fixture artifacts were removed from the initial S-parameter data by de-embedding the pad stack effects, and subsequently extracting stray capacitance to ground using a pi-network equivalent circuit. The presented data is thus nominally test-fixture independent. Presented below is the de-embedded and extracted data.

## Insertion Loss Data



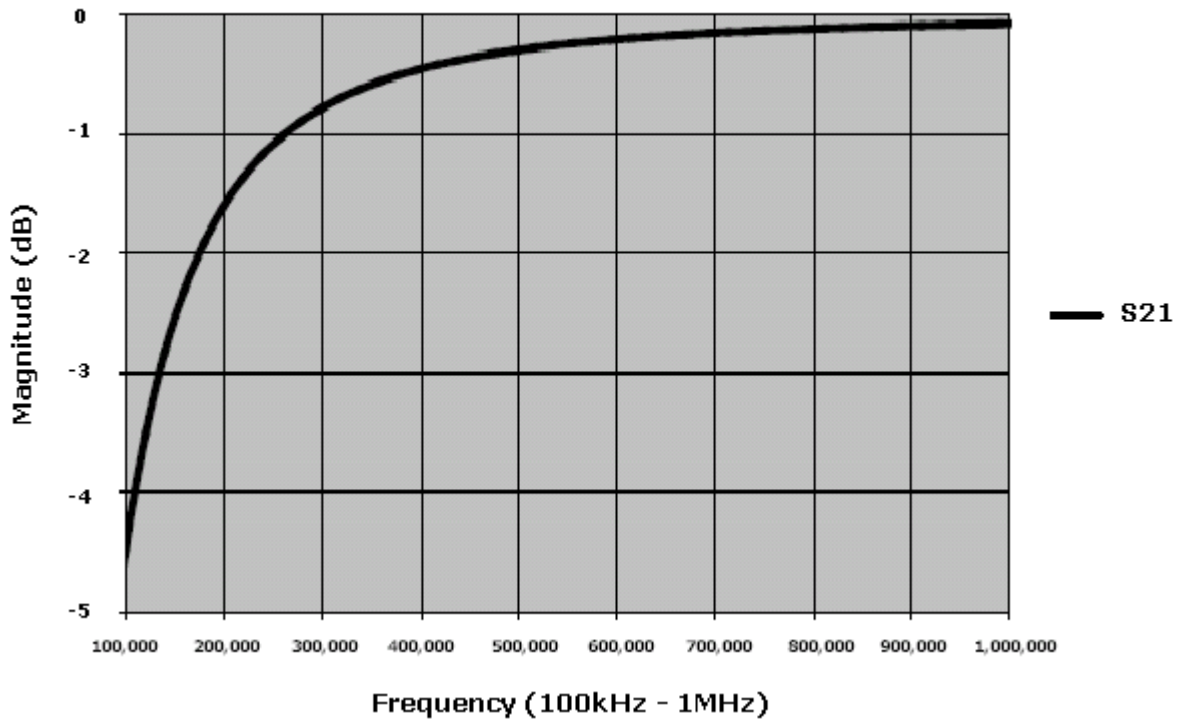
**Figure 2** - Average magnitude extracted S11 (dB) of Capacitor: BB0502X7R123M16VP8205 Lot: 020911-70 measured on 10mil Quartz.  
{Transmission line effects and capacitance to ground removed.}



**Figure 3** - Average magnitude extracted S21 (dB) of Capacitor: BB0502X7R123M16VP8205 Lot: 020911-70 measured on 10mil Quartz.  
{Transmission line effects and capacitance to ground removed.}

# Insertion Loss Data

## 12nF Capacitor S-21 Parameters



Test Measurements and Modeling Services Provided by [Modelithics](http://Modelithics.com).

