# Insertion Loss Data

| | |
|---|---|
| Component: | BB0502X7R104M16VP820 |
| Global Part Number: | MBB0502X104MGP5N8- |
| Dielectric: | X7R |
| Capacitance: | 100nF, 82pF |
| Voltage: | 16VDC |
| Size: | 0502 |
| Temperature Coefficient: | ±15% (-55C, +125C) |

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

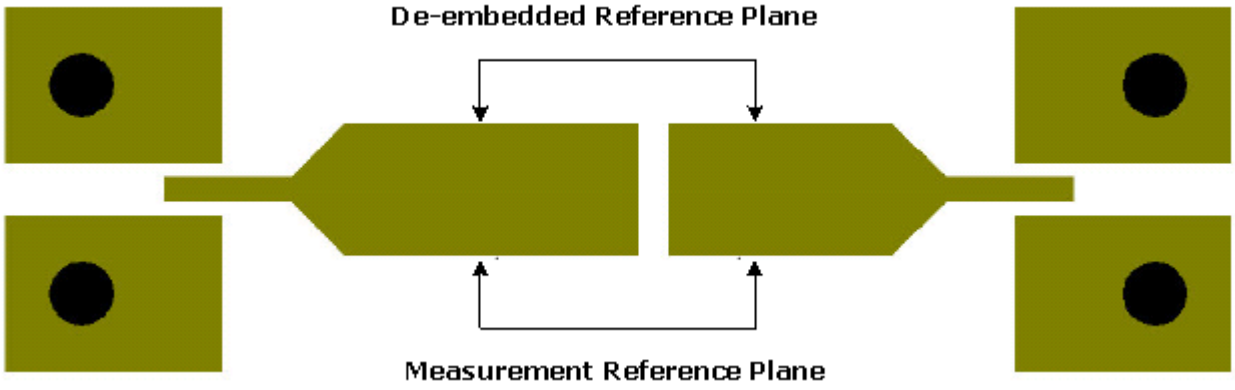


**Figure 1 –** 10 Mil. Quartz Test fixture
The capacitors were mounted to pad stacks on 10-mil fused silica. Series 2-port S-parameter measurements were made using a vector network analyzer that was calibrated to the outer edge of the pad stacks. Test fixture artifacts were removed from the initial S-parameter 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.

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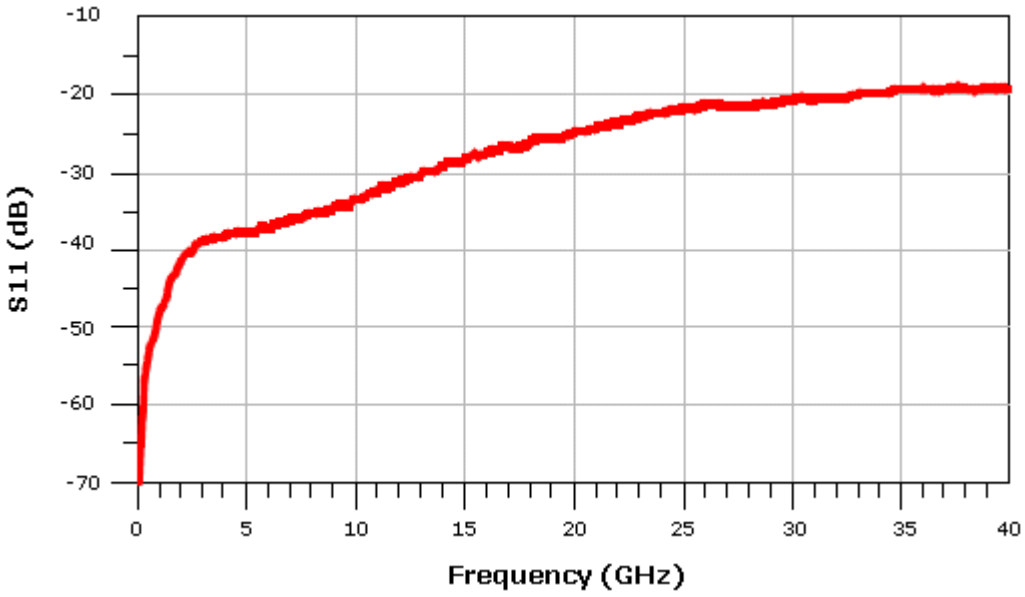


**Figure 2 -** Average magnitude extracted S11 (dB) of Capacitor: BB0502X7R104M16VP8205 Lot: 020805-93A measured on 10 Mil. Quartz.
{Transmission line effects and capacitance to ground removed.}

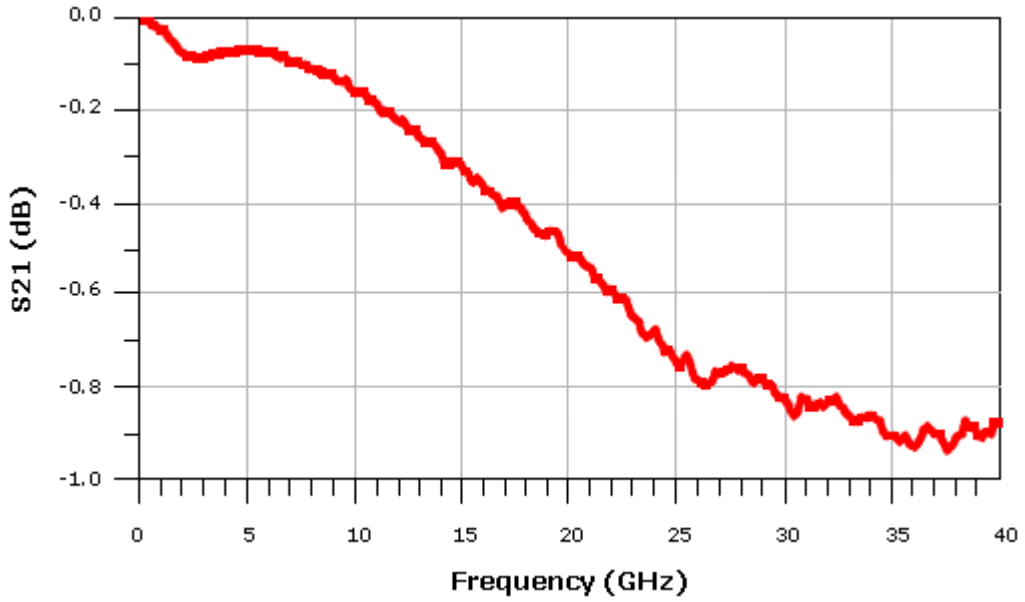


**Figure 3 –** Average magnitude extracted S21 (dB) of Capacitor: BB0502X7R104M16VP8205 Lot: 020805-93A measured on 10mil Quartz.
{Transmission line effects and capacitance to ground removed.}

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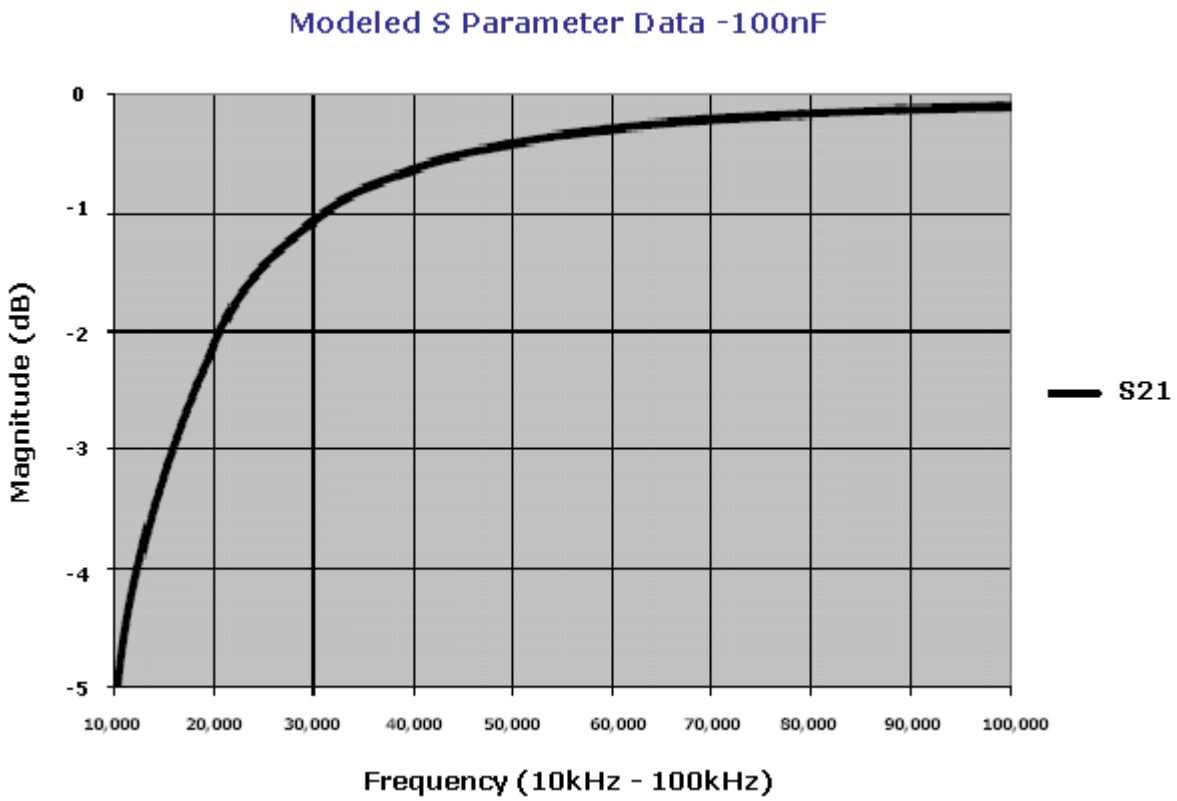


*Test Measurements and Modeling Services Provided by Modelithics.*

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