

# 90° HYBRID

## SURFACE MOUNT MODEL: SMQ-CB1

**2:1 BANDWIDTH**

**7 - 14 MHz**

**FEATURES:**

- ▶ Excellent Performance
- ▶ Small Size, Surface Mount
- ▶ Building Block For:
  - Power Amplifiers
  - Image Rejection Mixers
  - I & Q / SSB Modulators
  - Phase Shifters & More...



**SPECIFICATIONS (Rev. C 06/20/22)**

Frequency	7 - 14 MHz	
Insertion Loss (dB) *	Typ.	Max.
	0.3	0.6
Amplitude Unbalance	Typ.	Max.
	0.4	0.75
Phase Unbalance (Deg.)	Typ.	Max.
	1	3
Isolation (dB)	Typ.	Min.
	26	20
Power Rating	1 Watt (Max.)	
Impedance	50 Ohms (Nom.)	
VSWR	1.1:1 (Typ.)	
Operating Temperature Range	-40 to +85 °C	
Storage Temperature Range	-55 to +100 °C	

\* Insertion loss in excess of the theoretical 3 dB coupling.

<b>Package #</b>	<b>129LF-2</b>
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TOP VIEW

DETAIL - A

RECOMMENDED PCB LAYOUT

BOTTOM VIEW

PACKAGE MOUNTING: SEE APPLICATION NOTE AN7301.  
TOLERANCES ON THREE DIMENSIONS ARE IN INCHES.  
DECIMAL PLACES = ± 0.015

Port Configuration					
Input	Isolated*	+90° Output	0° Output	GND.**	No Conn.
5	6	1	2	7,8,9,10	3,4

\* Terminate ISOLATED port in 50 Ohms EXTERNALLY.  
\*\* Ground Externally

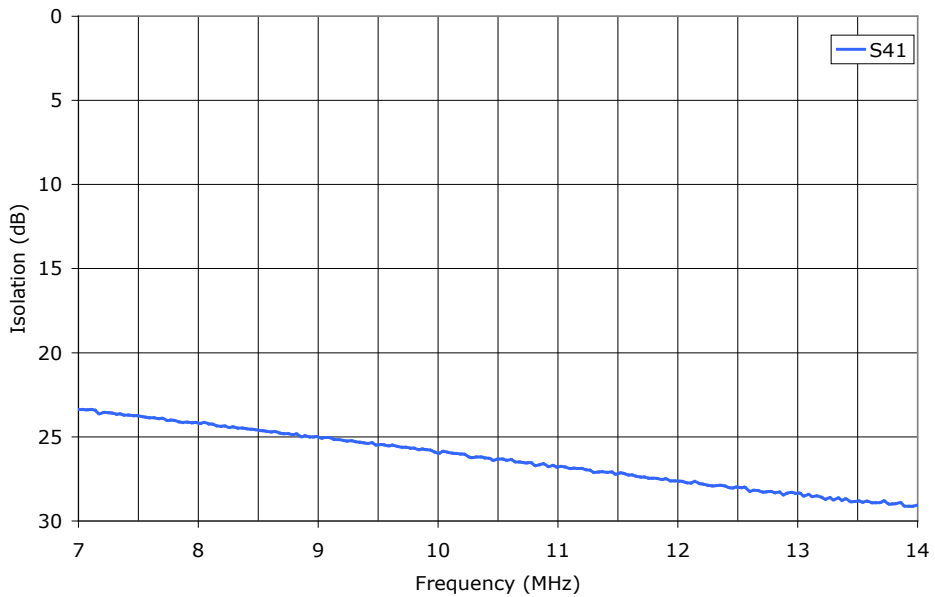
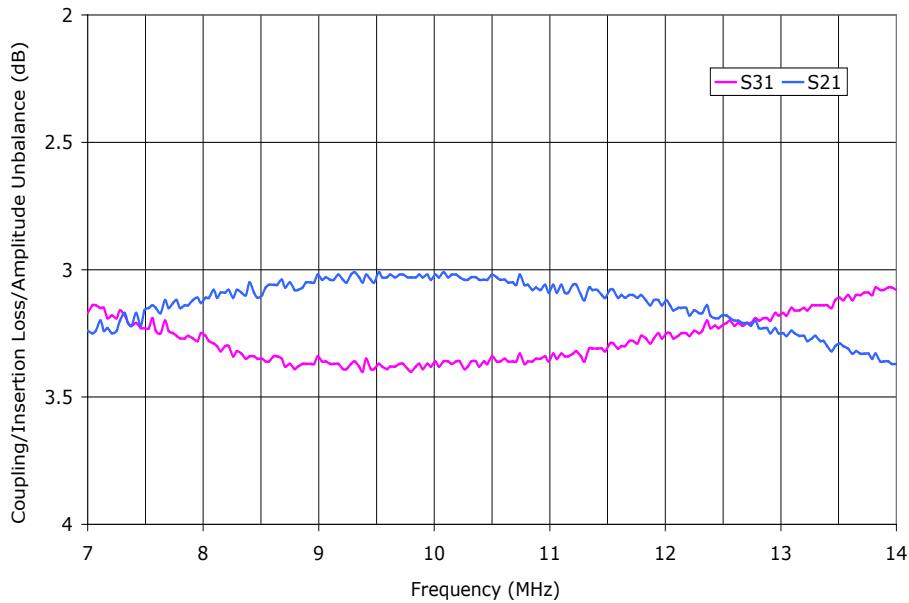
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Data @ 25°C



PERFORMANCE PLOTS

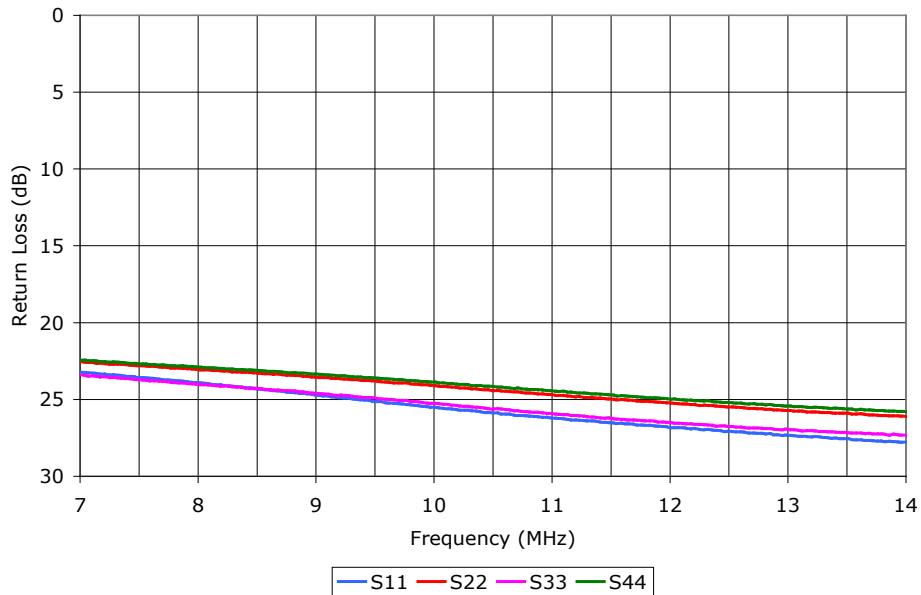
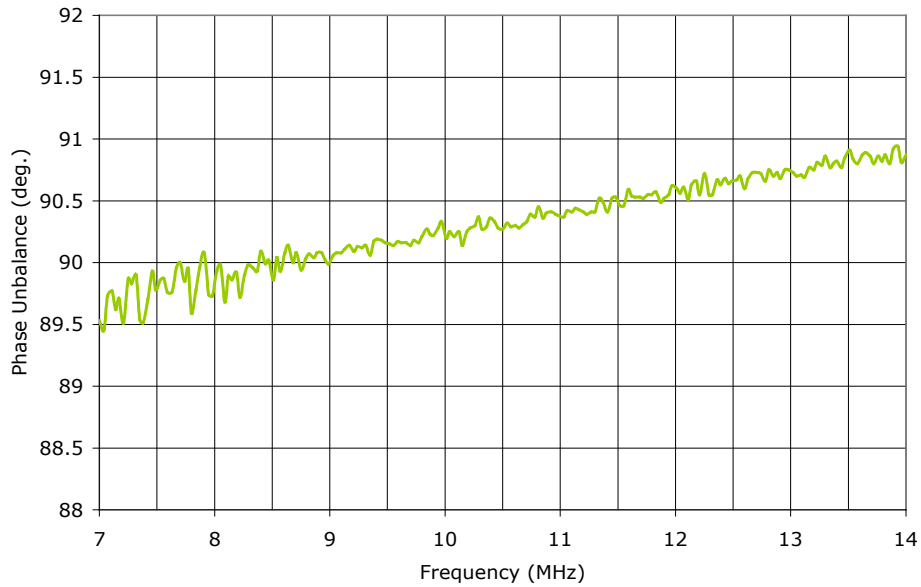
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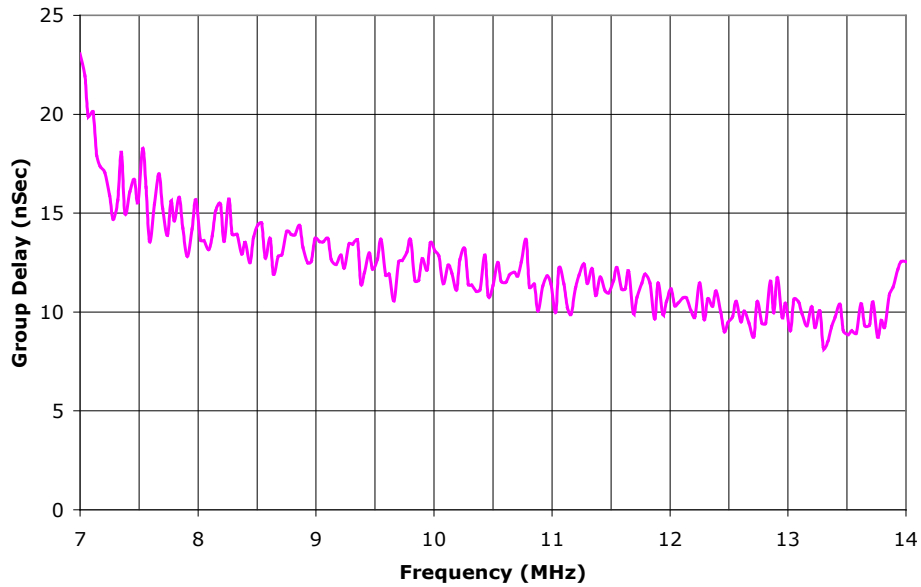
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