

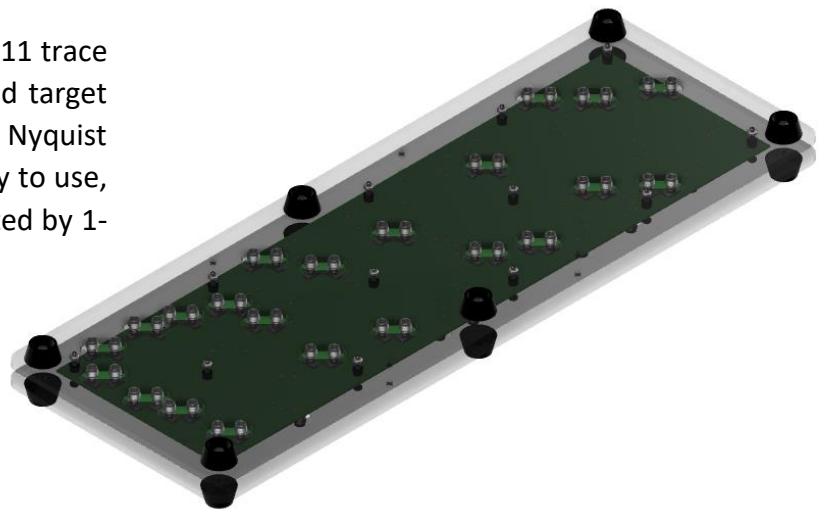
# 224G Channel Emulation Board

## Technical Product Sheet

The ML4067-224 Channel Emulation board contains 11 trace paths with lengths ranging from 1.2 to 9 inches, and target losses which range from 4 to 30 dB at the target Nyquist frequency of 53.125 GHz. The ML4067-224 is an easy to use, compact and portable design. All traces are terminated by 1-mm or 1.85-mm connectors.

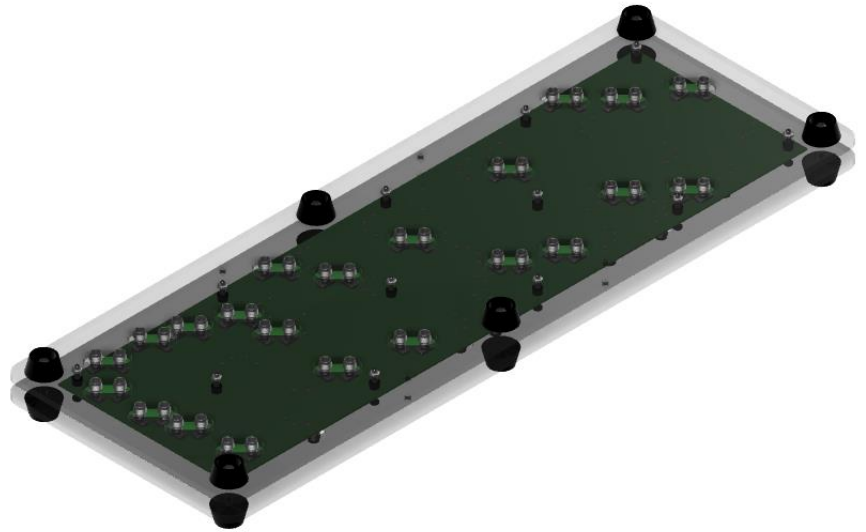
### Typical Applications:

- IC validation
- Receiver stress testing
- Rx equalization verification
- Channel emulation of OIF-CEI-112/224G and relevant IEEE 802.3 standards such as dj, bs, ck, etc.



## ML4067-224 Key Features

- The ML4067-224 features 11 trace paths on the top side, with 92 Ohms trace impedance
- It features 11 additional trace paths on the bottom side, with 100 Ohms trace impedance
- Loss applicable to all trace paths is from 4 dB to 30 dB
- Target Nyquist frequency of 53.125 GHz
- The whole board is available in 1-mm or 1.85-mm connectors



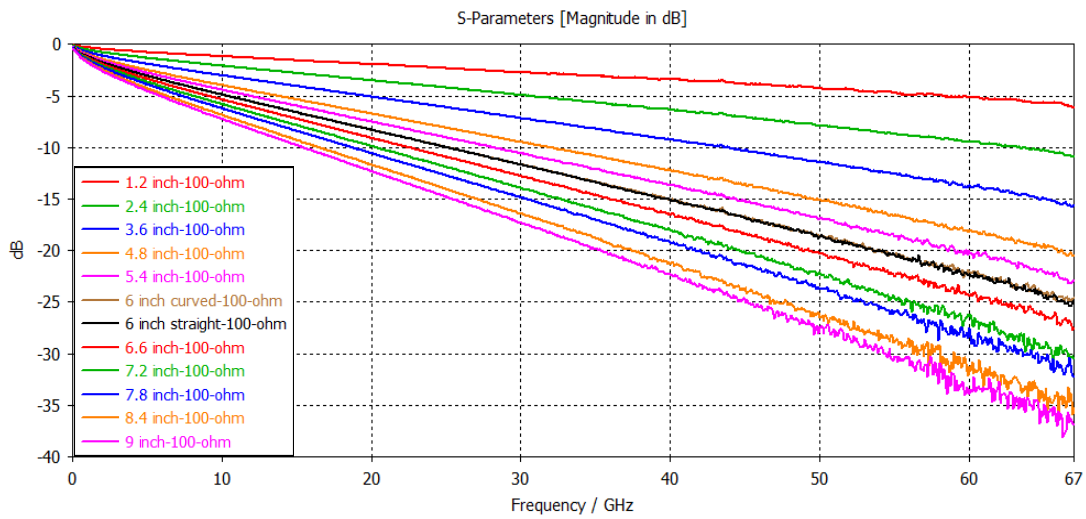
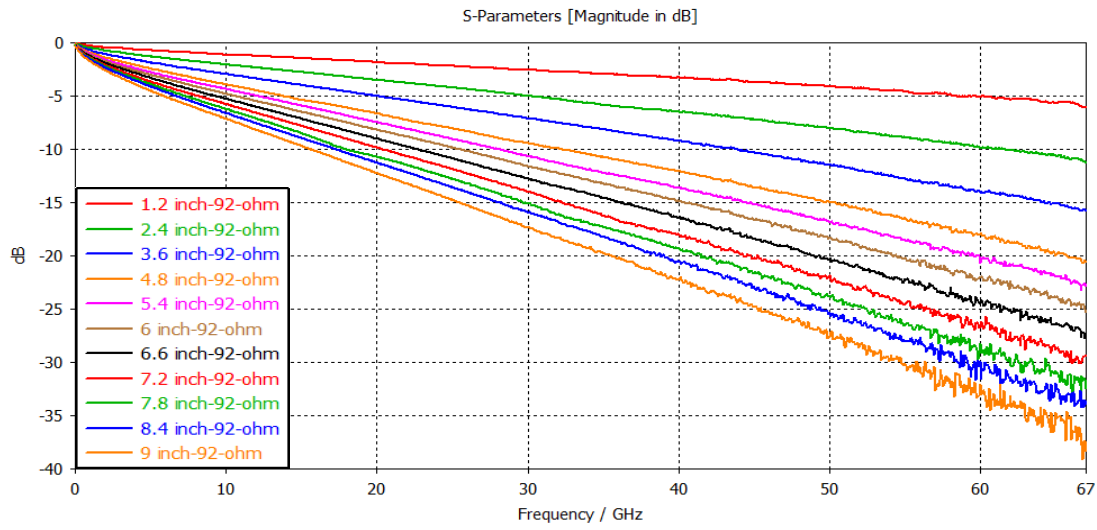
## Specifications of 1.85-mm Board

Channel Length (inch)	Measured Insertion Loss Data (dB) at 53.125GHz	Channel Length (inch)	Measured Insertion Loss Data (dB) at 53.125GHz
<b>92 Ohms</b>		<b>100 Ohms</b>	
1.2	4.43	1.2	4.59
2.4	8.54	2.4	8.34
3.6	12.28	3.6	12.16
4.8	15.92	4.8	15.93
5.4	17.79	5.4	17.86
6	19.44	6 (Straight)	19.69
		6 (curved)	19.59
6.6	21.42	6.6	21.44
7.2	23.40	7.2	23.66
7.8	25.47	7.8	25.19
8.4	26.99	8.4	27.45
9	28.85	9	28.644

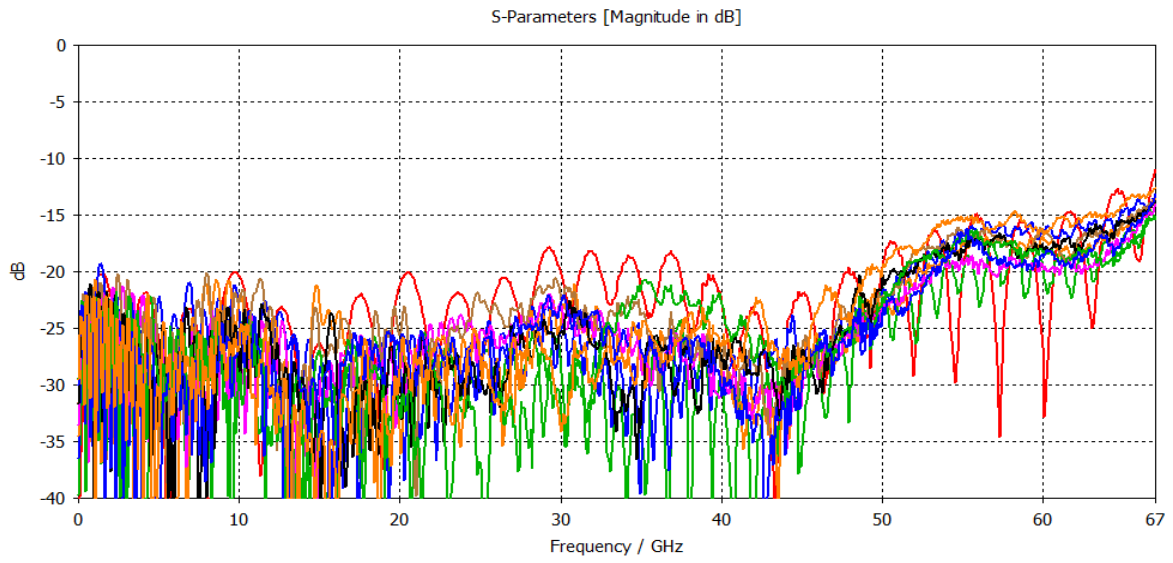
*Each individual channel board comes with a unique set of actual measured S-parameters which can be shared in advance upon request.*

Parameter	Specifications
<b>Return Loss at 53.125GHz</b>	< -12 dB, up to 67 GHz
<b>Impedance, differential</b>	92 Ohms +/- 5% (typical)
<b>Impedance, differential</b>	100 Ohms +/- 5% (typical)

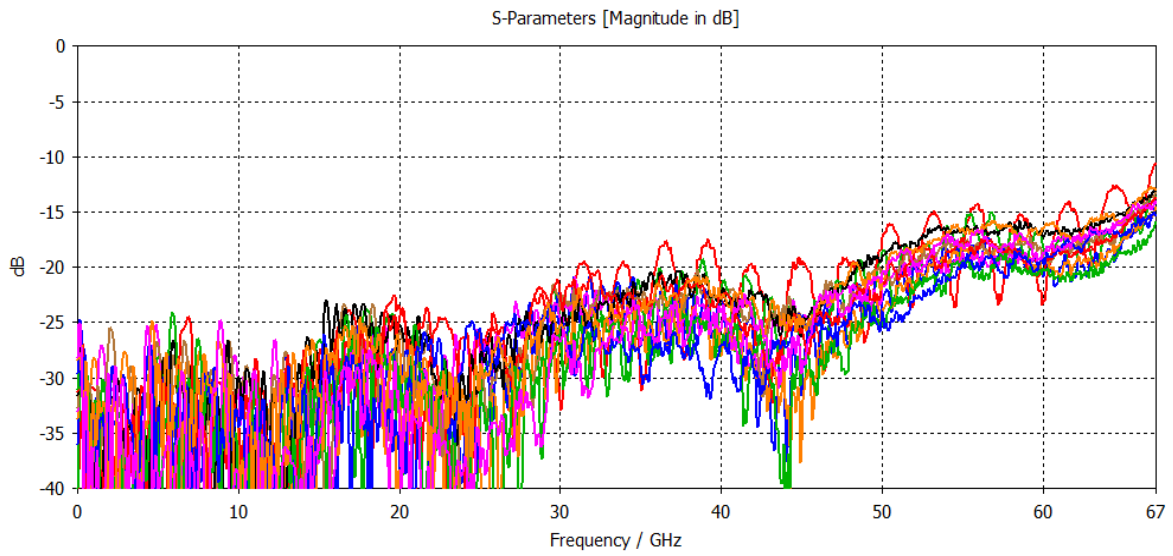
# Measured Insertion Loss at 67GHz of 1.85-mm Board



Measured Return Loss at 67GHz



92 Ohms Return Loss



100 Ohms Return Loss

## Ordering Options

Part Number	Description
<b>1-mm Connectors</b>	
ML4067-224-92-10	224G board with 92 Ohms trace impedance and 1-mm connectors
ML4067-224-100-10	224G board with 100 Ohms trace impedance and 1-mm connectors
ML4067-224-10	224G board with 92 Ohms trace impedance on the top side, and 100 Ohms trace impedance on the bottom side. 1-mm connectors
<b>1.85-mm Connectors</b>	
ML4067-224-100-18	224G board with 100 Ohms trace impedance and 1.85-mm connectors
ML4067-224-92-18	224G board with 92 Ohms trace impedance and 1.85-mm connectors
ML4067-224-18	224G board with 92 Ohms trace impedance on the top side, and 100 Ohms trace impedance on the bottom side. 1.85-mm connectors