

Minipac

(Lgit vs Access) laminates

(Forward vs Reverse) BW's

Build 2C

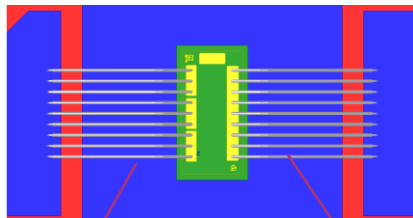
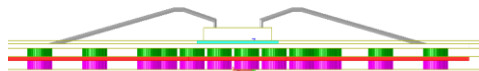
Bhagath Talluri
17 Nov 2023



Contents

- Motivation
- DOE definition
- EM simulation environment
 - Substrate
 - EM settings
- Spar (Sim vs meas)
 - Lgit
 - Access
 - Lgit vs Access
 - Fwd_BW vs Rev_BW (Access)
- Passive Modeling
- Conclusion
- Next steps

DoE plan overview WB



DoE	Run	U4						Bond type	Substrate supplier	Assy Drawing link
		WB Gate			WB drain					
		Length	Height	Peak dist	Length	Height	Peak dist			
2C	1	1303	215	132	1229	225	120	Foward	Access	LAC3839.lib_LAC3839_N9500Bv6_BW1c2c_DOEm_1_2022_12_02_14-46.dwg
2C	2	1303	215	132	1229	225	120	Foward	LGiT	
2C	3	1303	175	475	1229	175	475	Reverse	Access	LAC3839.lib_LGiT_N9500Bv6BW1c2c_DOEm_1_2022_12_02_14-51.dwg





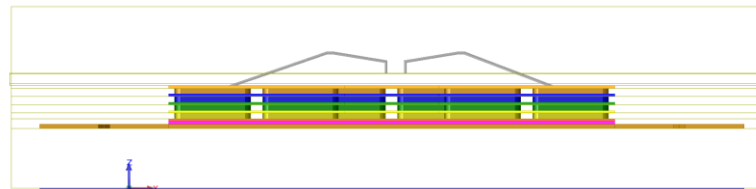
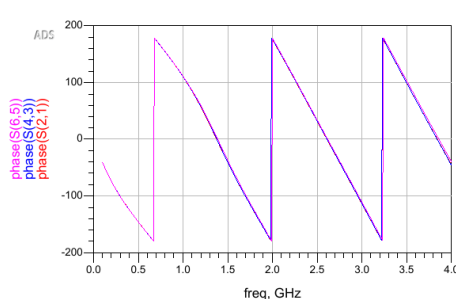
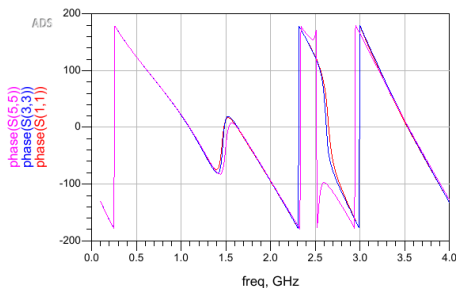
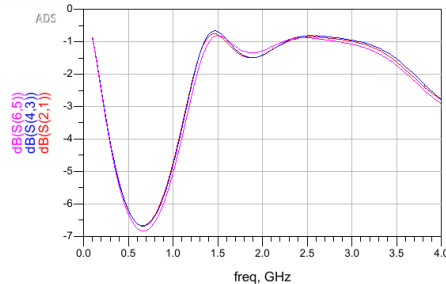
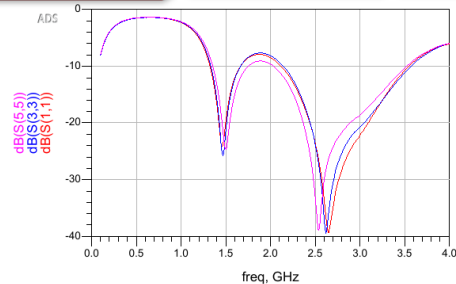
Part of your life. Part of tomorrow.

S-parameter measurements Build #2C

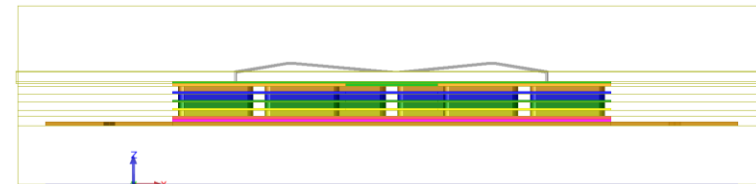
Access_Fwd_BW

LGIT_Fwd_BW

Access_rev_BW



Bond type	Substrate supplier
Foward	Access
Foward	LGIT
Reverse	Access



	Access			LGIT		
	Material	Nominal	Tol	Material	Nominal	Tol
SR	AUS308	15	+/-7	PSR-800 AUS SR1	18	+/-10
M1	Cu	20	+/-7	Cu	24	+/-7
D1	GEA-705G	40	+/-15	GEA-705G	47	+/-10
M2	Cu	20	+/-7	Cu	20	+/-7
D2	GEA-705G	50	+/-15	GEA-705G	51	+/-10
M3	Cu	20	+/-7	Cu	20	+/-7
D3	GEA-705G	50	+/-15	GEA-705G	51	+/-10
M4	Cu	20	+/-7	Cu	20	+/-7
D4	GEA-705G	40	+/-15	GEA-705G	47	+/-10
M5	Cu	20	+/-7	Cu	24	+/-7
SR	PSR-4000 AUS308	15	+/-7	PSR-800 AUS SR1	18	+/-10
TT		285	+/-30		0.322	+/-30

- › No significant difference between results from Access and Lgit substrates.
- › Reverse BW has some difference as expected
- › Next step is to compare with simulations and model the BW, Moscap..