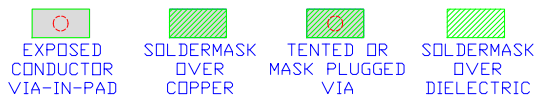
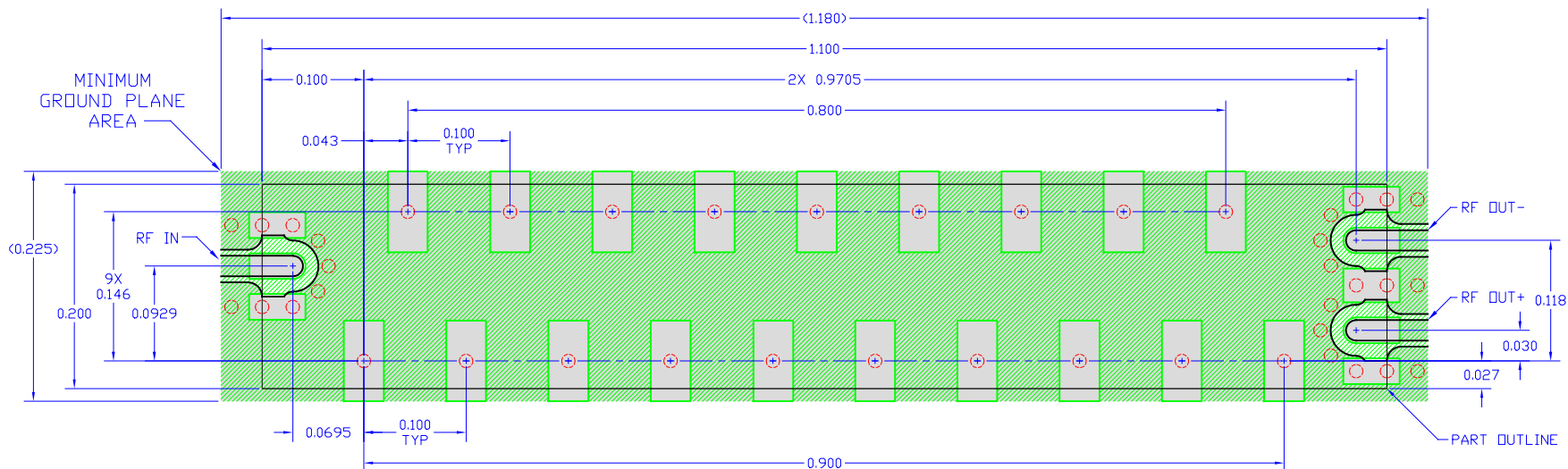


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**HATCH LEGEND**

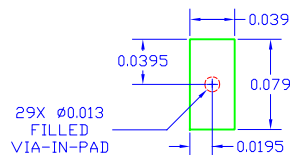


REVISIONS				
ECN #	REV	DESCRIPTION	DATE	RELEASED BY
	0	ORIGINAL	7/17/20	MC
	1	ADD PART OUTLINE	8/13/20	MC



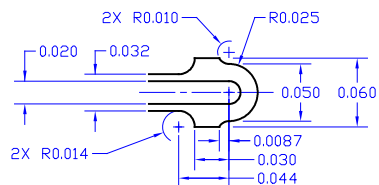
**DETAIL A**

Solder Mask Defined (SMD) Ground Pad



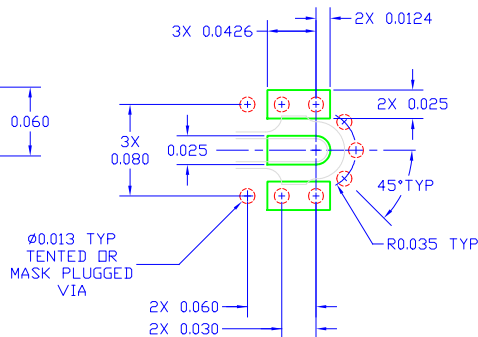
**DETAIL B**

RF Input/Output (GCPW) Conductor and Ground Spacing



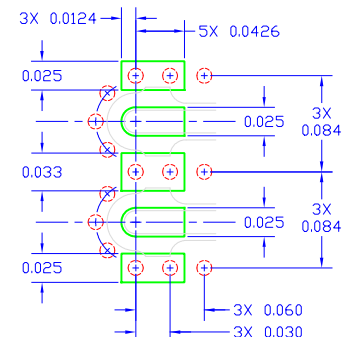
**DETAIL C**

RF Input Soldermask and Ground Vias




**DETAIL D**

RF Output Soldermask and Ground Vias

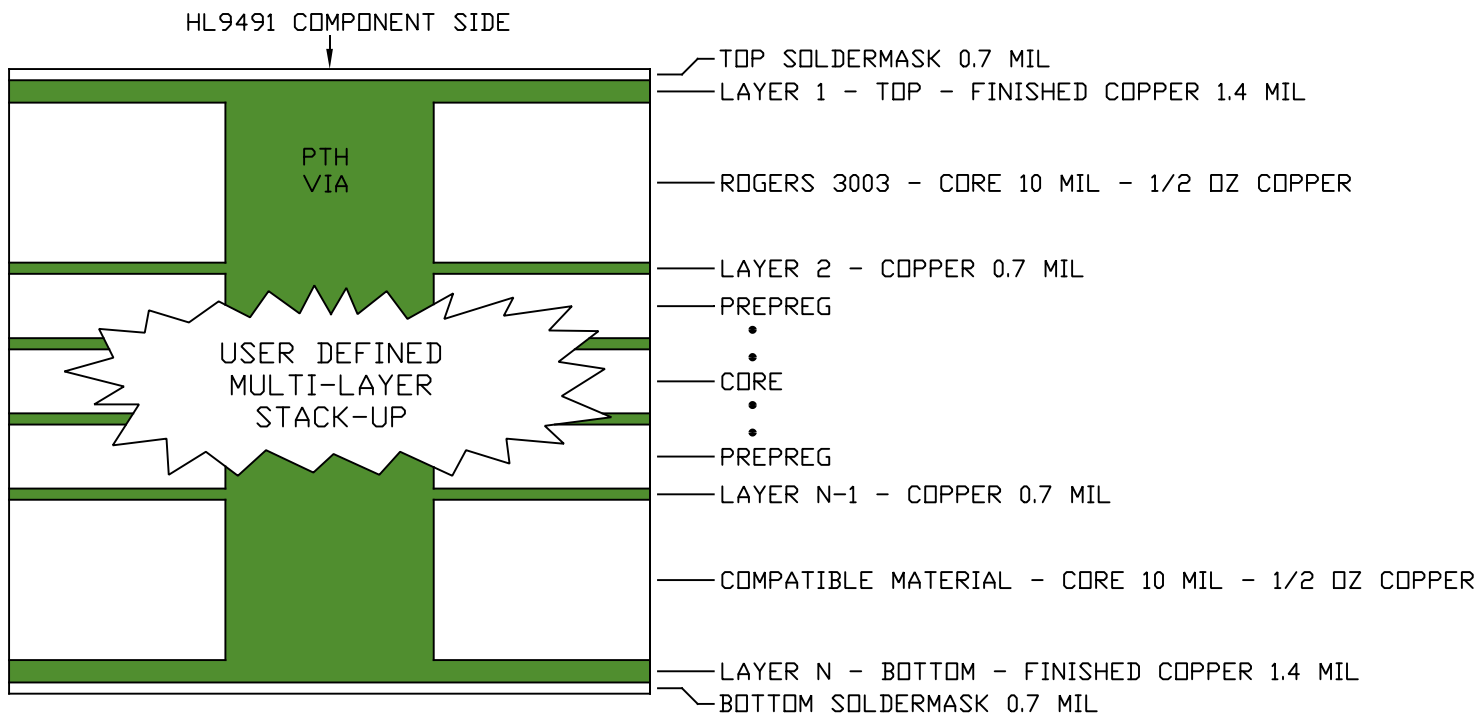


**NOTES:**

- NO THIEVING ALLOWED INSIDE MINIMUM GROUND PLANE AREA.
- ALL VIA-IN-PAD SHALL BE FILLED AND PLATED OVER TO PROVIDE A SMOOTH COPLANER PAD - 29 PLACES. REMAINING VIAS SHALL BE TENTED OR MASK PLUGGED.
- RECOMMENDED SURFACE FINISH: IMMERSION GOLD.
- RF IN/OUT TRANSMISSION LINES ARE GROUNDED COPLANER WAVEGUIDE. STITCH LAYER 1 GROUND TO LAYER 2 GROUND WITH VIA ARRAY. UNINTERRUPTED LAYER 2 GROUND PLANE MUST EXTEND TO A WIDTH OF 0.2" (MIN) UNDERNEATH RF IN/OUT CONDUCTORS.
- TRANSMISSION LINES ARE OPTIMIZED FOR 10 MIL ROGERS 3003 DIELECTRIC.
- SEE EXAMPLE STACK-UP ON PAGE 2.


SCALE:		MATERIAL: 0.5/0.5 0.010 CORE ROGERS 3003 (SEE NOTES)			
TOLERANCES UNLESS OTHERWISE NOTED: INCHES X.X ± 0.1 X.XX ± 0.01 X.XXX ± 0.0002 X.XXXX ± 0.0001 X* ± 1*	DRAWN BY	MC	DATE	7/17/20	 <b>HYPERLABS, Inc.</b> 13830 SW Rawhide Court, Beaverton OR 97008
	DESIGN ENG				
	MATERIALS				
	PROD ENG				
QUALITY					TITLE: FOOTPRINT, HL9491 SMD BALUN PART #: N/A REV: 1 DRAWING #: 700044-1
					SIZE: A PAGE 1 OF 2

## EXAMPLE STACK-UP



NOTES:

1. 6-LAYER EXAMPLE SHOWN. ANY NUMBER OF LAYERS IS POSSIBLE.
2. FOR OPTIMUM PERFORMANCE, USE 10MIL CORE ROGERS 3003 DIRECTLY UNDER HL9491. BALANCE STACK-UP WITH COMPATIBLE 10MIL CORE (E.G. RD3003, FR-4, ETC.) ON OPPOSITE SIDE OF BOARD.
3. CONTACT PCB VENDOR TO DEFINE STACK-UP FOR YOUR APPLICATION.

SCALE:	MATERIAL: 0.5/0.5 0.010 CORE ROGERS 3003 (SEE NOTES)		
TOLERANCES UNLESS OTHERWISE NOTED: INCHES X.X ± 0.1 X.XX ± 0.01 X.XXX ± 0.0002 X.XXXX ± 0.0001 X* ± 1*	INITIAL	DATE	 <b>HYPERLABS, Inc.</b> 13830 SW Rawhide Court, Beaverton OR 97008
	DRAWN BY	7/17/20	
	DESIGN ENG		
	MATERIALS		
	PROD ENG		
QUALITY			TITLE: FOOTPRINT, HL9491 SMD BALUN PART #: N/A DRAWING #: 700044-1
			REV: 1 SIZE: A PAGE 2 OF 2