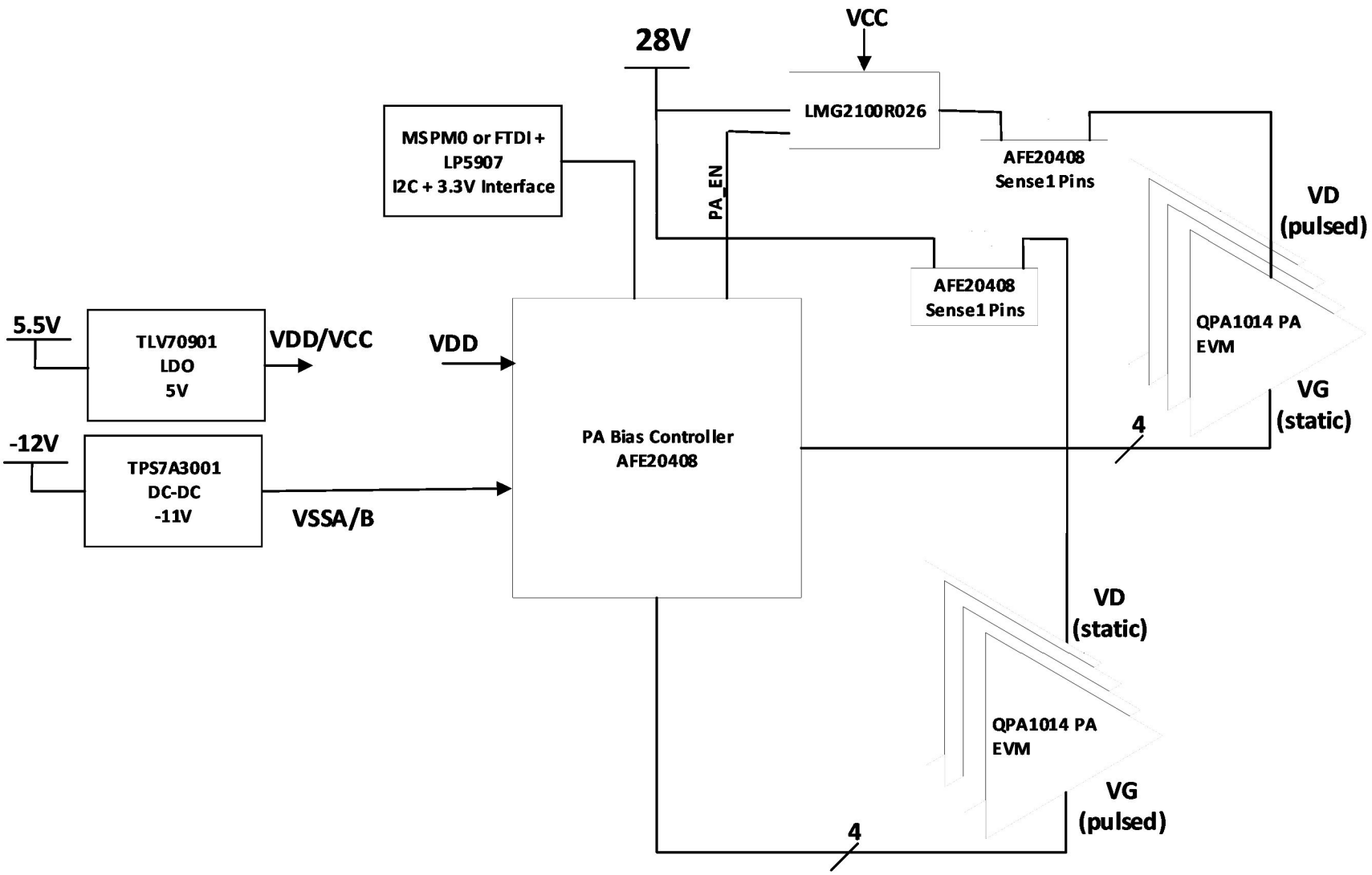
Revision History				
Rev	ECN #	Approved Date	Approved by	Notes
N/A	N/A	N/A	N/A	N/A



Orderable: N/A	Designed for: Public Release	Mod. Date: 4/22/2025
TID #: TIDA-010289	Project Title: High power amplifier bias control	
Number: TIDA-010289 Rev: E1	Sheet Title: Block Diagram	
SVN Rev: Not in version control	Assembly Variant: [No Variations]	Sheet: 1 of 5
Drawn By: Zach D.	File: TIDA010289 Overview.SchDoc	Size: B
Engineer: Zach D.	Contact: http://www.ti.com/support	

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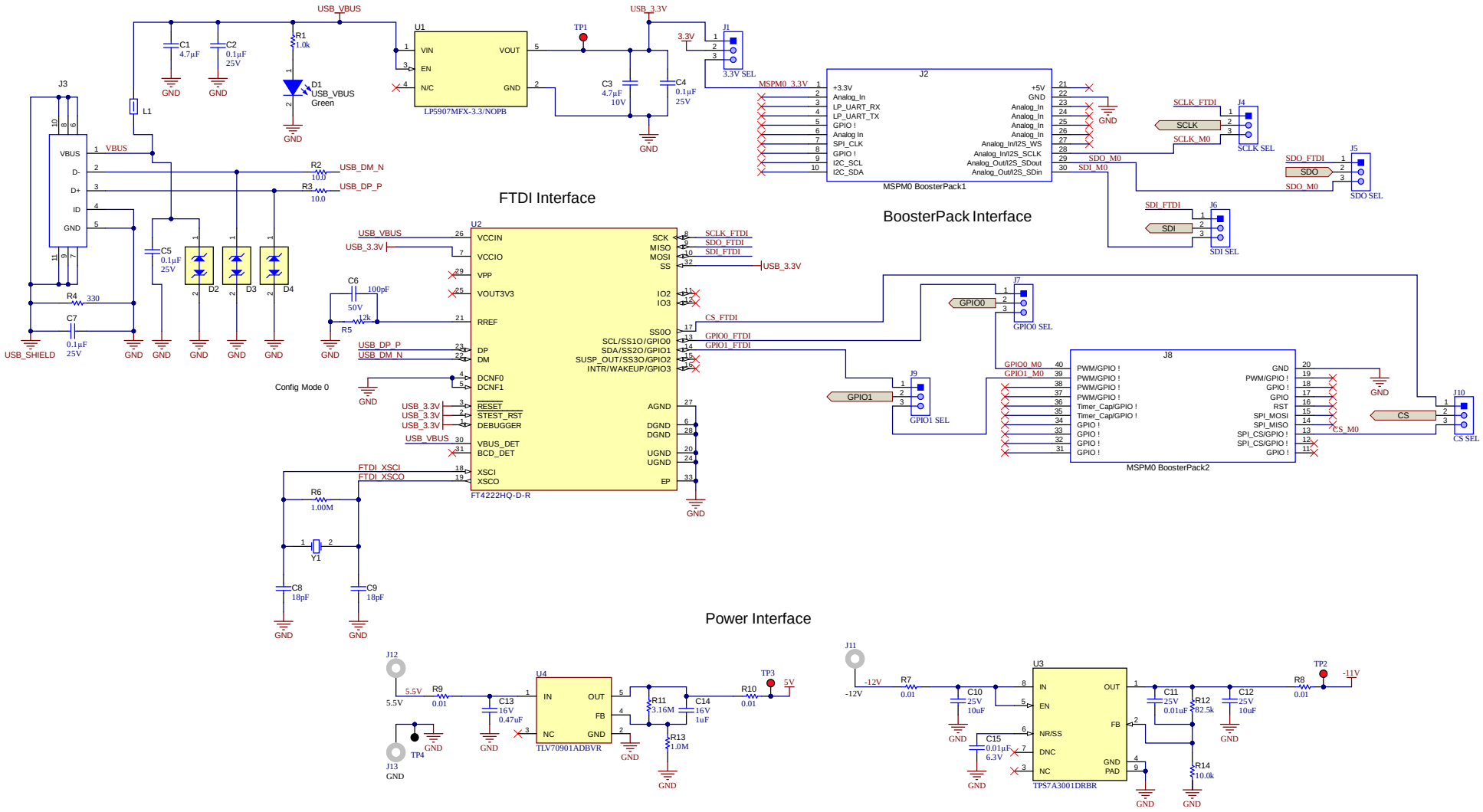

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Orderable: N/A	Designed for: Public Release	Mod. Date: 3/24/2025
TID #: TIDA-010289	Project Title: High power amplifier bias control	
Number: TIDA-010289 Rev: E1	Sheet Title: Control and Power Interface	
SVN Rev: Not in version control	Assembly Variant: [No Variations]	Sheet: 2 of 5
Drawn By: Zach D	File: Power.SchDoc	Size: B
Engineer: Zach D.	Contact: http://www.ti.com/support	

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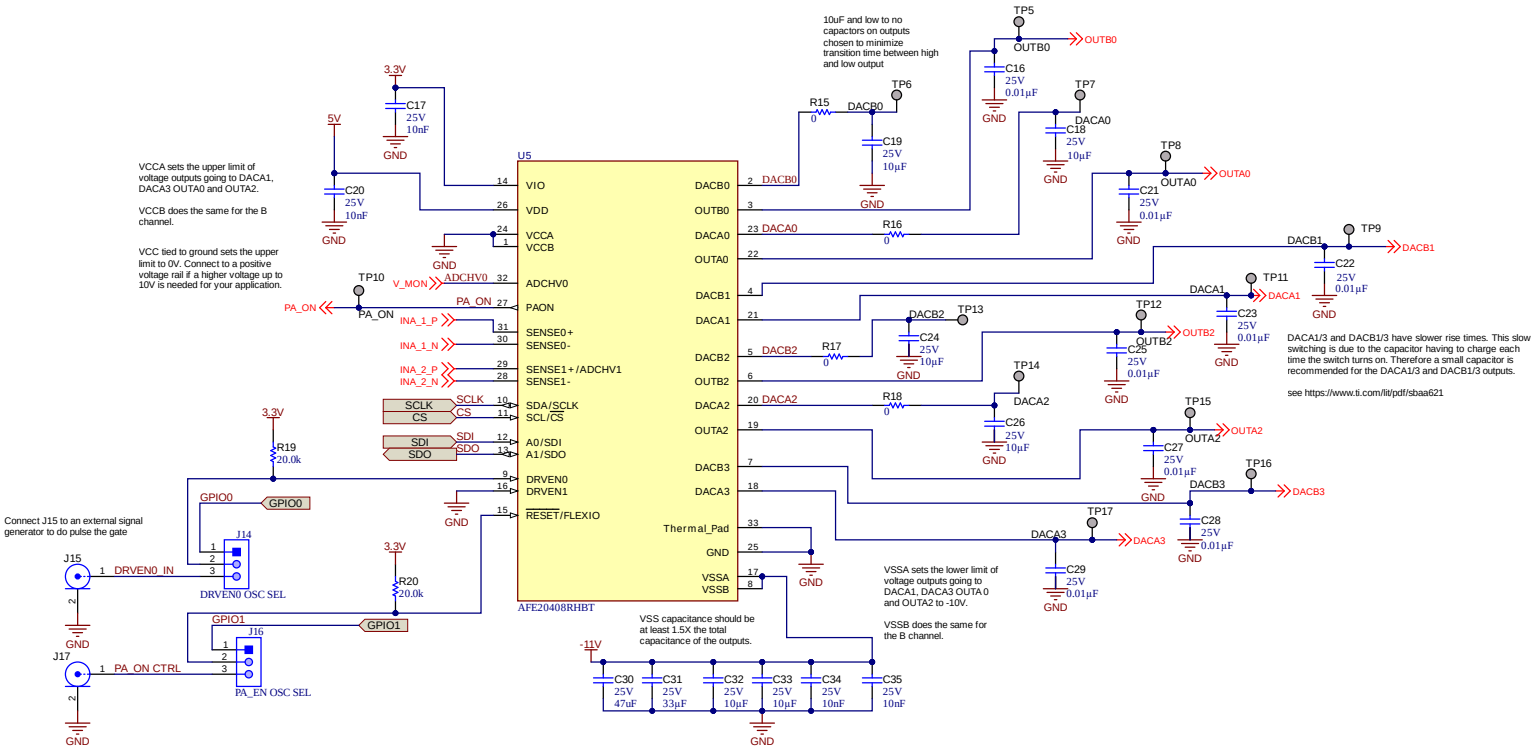
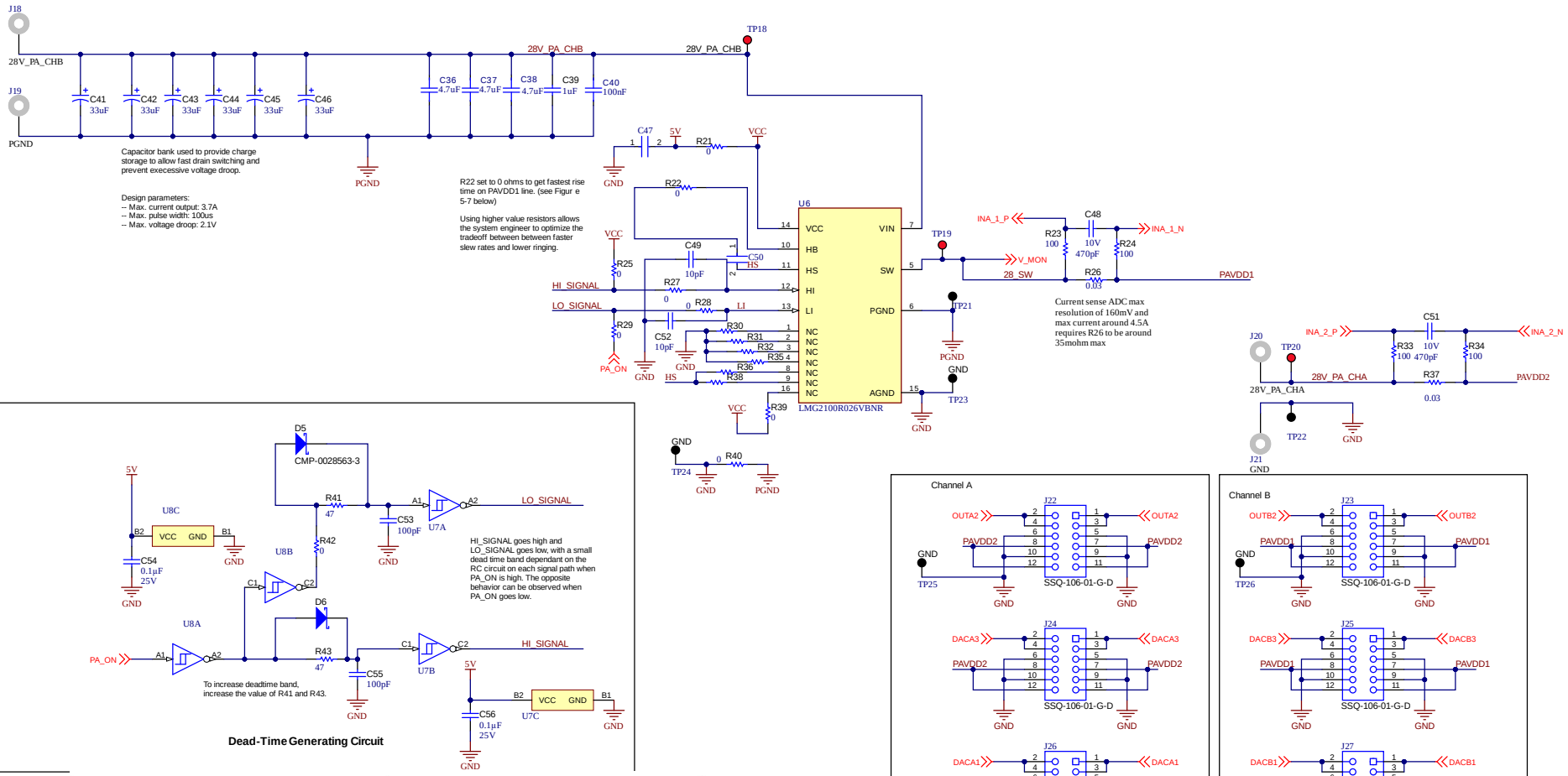


Orderable: N/A	Designed for: Public Release	Mod. Date: 7/15/2025
TID #: TIDA-010289	Project Title: High power amplifier bias control	
Number: TIDA-010289 Rev: E1	Sheet Title: PA Gate bias controller	
SVN Rev: Not in version control	Assembly Variant: [No Variations]	Sheet: 3 of 5
Drawn By: Zach D	File: AFE20408.SchDoc	Size: B
Engineer: Zach D.	Contact: http://www.ti.com/support	



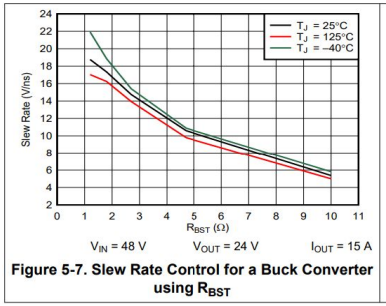


Figure 5-7. Slew Rate Control for a Buck Converter using R_{BST}

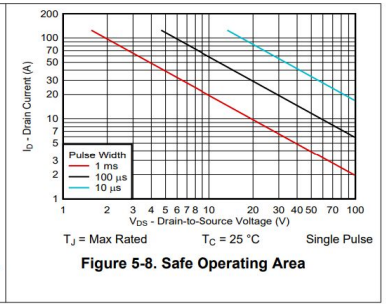


Figure 5-8. Safe Operating Area

Orderable: N/A	Designed for: Public Release	Mod. Date: 7/15/2025
TID #: TIDA-010289	Project Title: High power amplifier bias control	
Number: TIDA-010289 Rev: E1	Sheet Title: HPA Drain Control	
SVN Rev: Not in version control	Assembly Variant: [No Variations]	Sheet: 4 of 5
Drawn By: Zach D.	File: LMG2100.SchDoc	Size: B
Engineer: Zach D.	Contact: http://www.ti.com/support	

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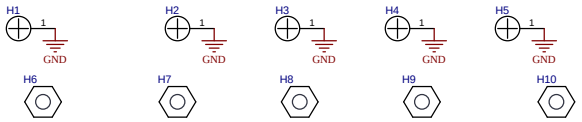
PCB
LOGO
FCC disclaimer

PCB
LOGO
WEEE logo

PCB Number: TIDA-010289
PCB Rev: E1

PCB Label
THT-14-423-10
Size: 0.65" x 0.20 "

PCB
LOGO
CAUTION. READ USER GUIDE BEFORE USE



Orderable: N/A	Designed for: Public Release	Mod. Date: 3/25/2025
TID #: TIDA-010289	Project Title: High power amplifier bias control	
Number: TIDA-010289 Rev: E1	Sheet Title: Hardware	
SVN Rev: Not in version control	Assembly Variant: [No Variations]	Sheet: 5 of 5
Drawn By: Zach D	File: Hardware.SchDoc	Size: B
Engineer: Zach D.	Contact: http://www.ti.com/support	

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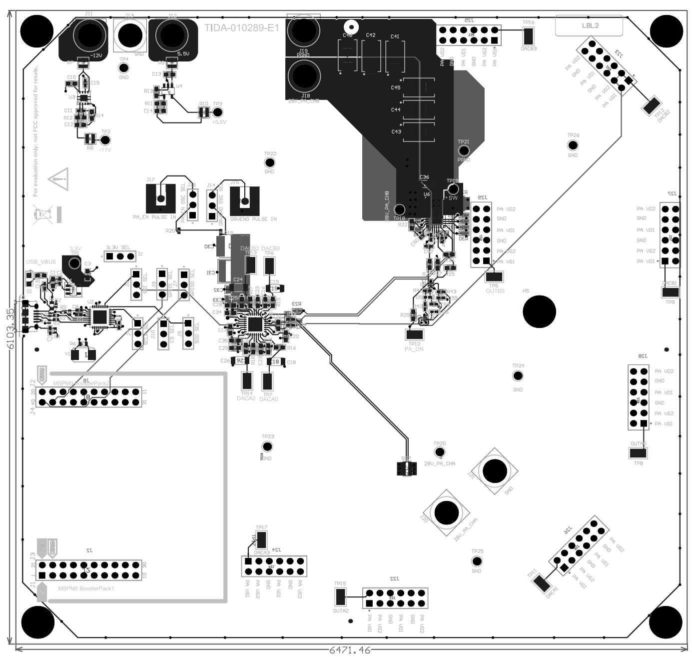
Layer	Name	Material	Thickness	Constant	Board Layer Stack
	Top Overlay				
	Top Solder	SM-001	1.00mil	4	
	Top Surface Finish	PbSn	0.79mil		
1	Top Layer	CF-004	1.38mil		
	Dielectric 1	PP-006	2.80mil	4.1	
2	GND1	CF-004	1.38mil		
	Dielectric 3	Core-027	9.00mil	4.5	
3	Signal Layer 3	CF-004	1.38mil		
	Dielectric 4	PP-006	2.80mil	4.1	
4	Signal Layer 4	CF-004	1.38mil		
	Dielectric 6	Core-027	9.00mil	4.5	
5	POWER	CF-004	1.38mil		
	Dielectric 8	PP-006	2.80mil	4.1	
6	PA Drain Power Layer	CF-004	1.38mil		
	Dielectric 9	Core-027	9.00mil	4.5	
7	GND2	CF-004	1.38mil		
	Dielectric 11	PP-006	2.80mil	4.1	
8	Bottom Layer	CF-004	1.38mil		
	Bottom Surface Finish	PbSn	0.79mil		
	Bottom Solder	SM-001	1.00mil	4	
	Bottom Overlay				



1000.00mil

COMPONENTS MARKED 'DNP' SHOULD NOT BE POPULATED.
ASSEMBLY VARIANT: [No Variations]

	E1	BOARD #: TIDA-010289	REV: E1	
LAYER NAME = Top Overlay / Bottom				
PLOT NAME = Multi Layer	Composite Print	GENERATED: 7/15/2025	10:58:29 AM	TEXAS INSTRUMENTS

DESIGN INFORMATION

MIN. TRACK WIDTH: 8 MIL
MIN. CLEARANCE: 7.874 MIL
MIN. VIA PAD SIZE: 24 MIL
MINIMUM ANNULAR RING 0.05mm (2MIL) EXTERNAL
PER IPC-D-275 CLASS 2 LEVEL C
REGISTRATION TOLERANCES: METAL +/- 5 MIL, HOLES +/- 3 MIL
HOLE SIZE TOLERANCE (UNLESS OTHERWISE SPECIFIED): +/- 3 MIL

MATERIAL:
[ ] FR-4 [X] FR-4 High Tg [ ] OTHER ______
THICKNESS: [X] 62 MIL (1.6mm) +/-10% [ ] OTHER ______
TOLERANCE: [X] ANSI IPC-6012 TYPE 3 CLASS 2
[ ] OTHER +/- ______
BOW & TWIST: [X] ANSI IPC-6012 TYPE 3 CLASS 2
[ ] OTHER +/- ______

DRILLING:
REFERENCE: [X] AS SHOWN [X] NC_DRILL FILES
PTH COPPER THICKNESS: [X] 20-30 um [ ] OTHER ______

BOARD FINISH:
SILKSCREEN: [X] TOP [X] BOTTOM
SILKSCREEN COLOR: [X] WHITE [ ] OTHER ______
SOLDER RESIST COLOR: [X] GREEN [ ] OTHER ______
[X] MATTE [ ] SEMI-GLOSS

SURFACE FINISH: [X] IMMERSION GOLD (ENIG) [ ] ENEPIG
[ ] IMM. TIN/SILVER OR EQUIV [ ] OTHER ______

ARRAY/PANEL: [ ] CUT AND TRIM PER M1 BOARD OUTLINE
[ ] N.C. ROUTE [X] V. SCORE

CERTIFICATION: MATERIALS AND WORKMANSHIP FOR ALL PCBS TO MEET OR EXCEED THE REQUIREMENTS OF:
[X] ANSI IPC-A-600F CLASS -> [ ] 1 [X] 2 [ ] 3
[X] RoHS [ ] OTHER PER ORDER

ALL BOARDS MUST MEET OR EXCEED UL94-V0 REQUIREMENTS.
PCB MUST BEAR THE UL94V-0 UL REGISTERED MATERIAL ID NUMBER

ADDITIONAL REQUIREMENTS:
MICROSECTION: [ ] YES
BARE BOARD ELEC. TEST: [ ] NONE [X] REQUIRED [ ] PER ORDER
[ ] XX MIL VIAS REQUIRE NON-CONDUCTIVE FILL AND PLANARIZE
[ ] XX MIL VIAS REQUIRE CONDUCTIVE FILL AND PLANARIZE
[ ] OUTER XX MIL TRACES REQUIRE 50 OHM SINGLE-ENDED IMPEDANCE
[ ] LAYER 2 & 3 (INNER LAYERS) XX MIL WIDE, XX MIL SPACE TRACES REQUIRE 100 OHM DIFFERENTIAL IMPEDANCE

TEXAS INSTRUMENTS

PROJECT TITLE:
High power amplifier bias control

DESIGNED FOR:
Public Release

FILE NAME:
PCB_Project.PcbDoc

ENGINEER:	LAYOUT BY:
Zach D.	Zach D.
SCALE: 1.00	ALTIUM DESIGNER VERSION: 23.1.1.15

Board Stack Report

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