



ABSTRACT

This user's guide describes the characteristics, operation, and use of the TPS7H5005EVM, TPS7H5006EVM, TPS7H5007EVM, and TPS7H5008EVM evaluation modules (EVM). Setup to ensure proper operation of the device as well as a complete schematic diagram, printed-circuit board layouts, and bill of materials are included in this document. Basic waveforms of operation are also provided.

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Trademarks

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1 Introduction

This board enables the TPS7H5005/6/7/8EVM to be connected to other components needed to quickly prototype and evaluate a complete power converter design. The TPS7H5005EVM is placed on an open test board similar to the board used in the [TPS7H5005-SEP Total Ionizing Dose \(TID\) radiation report](#). Adding test points and voltage terminals is the only major change to the design that was needed to facilitate probing the TPS7H5005/6/7/8EVM without additional hardware. Minor changes were made to the BOM for manufacturability purposes.

1.1 Features

This EVM has the following features:

- Synchronous rectification outputs with adjustable dead time
- 0.613-V \pm 1% voltage reference overtemperature, radiation, and line and load
- Adjustable slope compensation and soft start
- Configurable duty cycle limit

1.2 Applications

- Space satellite isolated power supplies
- Radiation hardened applications
- Space satellite payloads

2 EVM Setup and Quick Start Guide

Table 2-1 lists the default configuration.

Table 2-1. Default EVM Configuration

PARAMETER	SPECIFICATION
Input power supply	4 V to 14 V
Operating temperature	25°C
Switching frequency	500 kHz

The TPS7H5005/6/7/8EVM can be quickly turned on and run using the connections shown in Table 2-2.

Table 2-2. TPS7H5005/6/7/8EVM Connections

TERMINAL OR TEST POINT	VOLTAGE SOURCE
J11 (VIN)	4-V to 14-V input at 10 mA. See Positive and Negative Terminal for J11 connections.
TP9 (COMP)	1 V at < 10 mA (input range can be -0.3 V to 3.3 V based on the TPS7H500x-SEP Radiation-Tolerant 2-MHz Current Mode PWM Controllers in Space Enhanced Plastic data sheet).

The device should then turn on and operate in open loop mode as shown in Figure 2-1. Figure 2-1 shows the output of TPS7H5005/6/7/8-SP measured on J1–J4 with the quick start method.

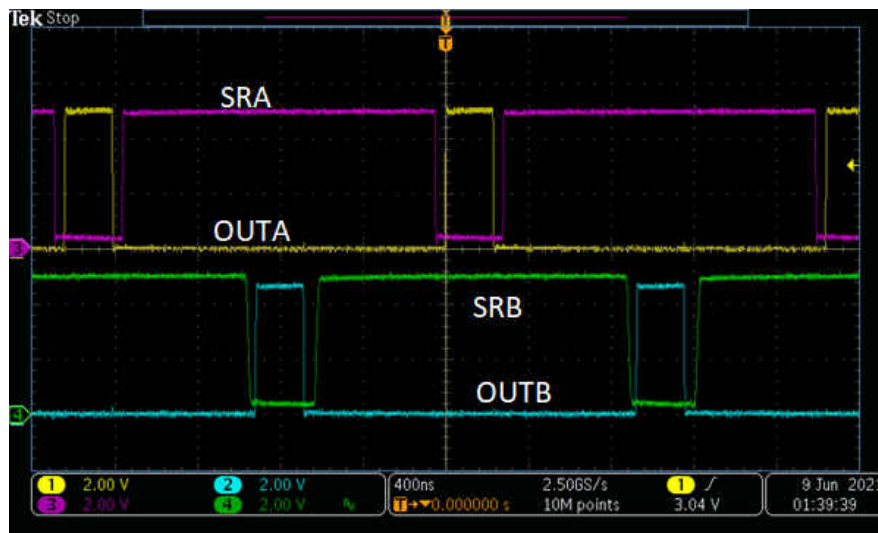


Figure 2-1. TPS7H5005/6/7/8-SEP Output

The operation of this mode is such that forcing the voltage on COMP will create an output on the TPS7H5005/6/7/8EVM. The duty cycle varies based on the input voltage on COMP as well as the triangle waveform created by the CS_LIM circuit, or any other waveform that the user decides to add to the CS_LIM pin. See Figure 2-2 for signal generation waveforms. Note that OUTB and SRB will not be present for TPS7H5006EVM, and TPS7H5007EVM. SRA and SRB will not be present for TPS7H5008EVM.

Figure 2-2 shows waveforms for input and output signal generations for the TPS7H5005/6/7/8EVM based on COMP voltage and CS_LIM pin voltage.

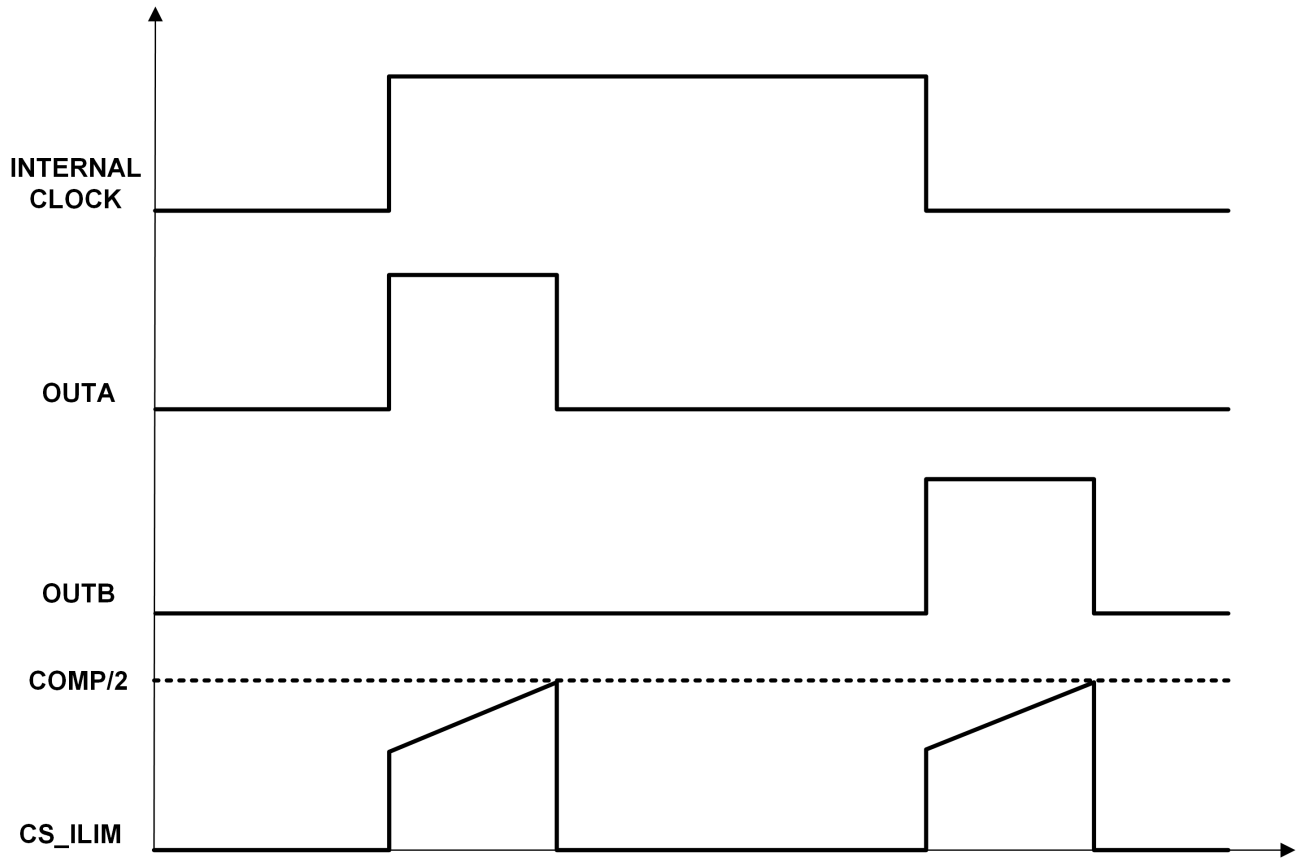


Figure 2-2. Duty Cycle Generation

3 EVM Connectors and Test Points

Table 3-1 is a list of major connections on the board. For further information, see the relevant section in the [TPS7H500x-SEP Radiation-Tolerant 2-MHz Current Mode PWM Controllers in Space Enhanced Plastic data sheet](#).

Table 3-1. EVM Board Connections

TEST POINT	5005	5006	5007	5008	CONNECTION	DESCRIPTION
TP1, J1	✓	✓	✓	✓	OUTA	Connected to the gate driver in the design. Components R5, C5 can be used to test different R/C loads.
TP2, J2	✓			✓	OUTB	Connected to the gate driver in the design. Components R6, C6 can be used to test different R/C loads.
TP3, J3	✓	✓	✓		SRA	Connected to the gate driver in the design. Components R7, C7 can be used to test different R/C loads.
TP4, J4	✓				SRB	Connected to the gate driver in the design. Components R8, C8 can be used to test different R/C loads.
TP5, TP6	✓	✓	✓	✓	CS_LIM	Input for current sense in the design. The CS_LIM circuit provides small triangle waveform from OUTA, OUTB. Note that this can load OUTA, OUTB causing a slow in the slew rate. If R9 and R10 are unpopulated, CS_LIM can be force from TP5.
TP7	✓	✓	✓	✓	VIN	Voltage input for the TPS7H5001EVM-CVAL device
TP8	✓	✓	✓	✓	EN	Enable pin for the TPS7H5001EVM-CVAL device, currently pulled high to VLDO
TP9	✓	✓	✓	✓	COMP	Error amplifier output for the TPS7H5001EVM-CVAL, forcing this voltage runs the TPS7H5001EVM-CVAL in open loop.
TP10	✓	✓	✓	✓	REFCAP	Internal reference for TPS7H5001EVM-CVAL
TP11, TP12	✓	✓	✓	✓	SS	In a closed loop design, this slowly increases converter output voltage during start-up
TP13, TP15	✓	✓	✓	✓	SYNC	Inputting a clock on this pin synchronizes the TPS7H5001EVM-CVAL to a frequency half of the input frequency
TP14	✓	✓	✓	✓	VLDO	Internal voltage rail for device logic
TP20	✓	✓	✓	✓	VSENSE	Voltage sense for the TPS7H5001EVM-CVAL. Connected to converter output voltage in the full design.
TP21	✓	✓	✓	✓	RSC	Slope compensation selection resistor. Sets slope compensation slew rate internal to the device.
TP22	✓	✓	✓	✓	HICC	Configurability for the hiccup time of the converter. While grounded through a resistor on the EVM, in a full design it is generally a capacitor.
TP23	✓	✓	✓	✓	FAULT	A signal high on this node turns the TPS7H5001EVM-CVAL off for any fault condition needed
TP24	✓	✓			SP	Configurability for the delay between the synchronous rectifiers and main output
TP25	✓	✓	✓	✓	RT	Frequency select for the TPS7H5001EVM-CVAL. Change this to vary the frequency of the converter.
TP26	✓	✓			PS	Configurability for the delay between the main output and synchronous rectifiers
TP27	✓	✓		✓	LEB	Configurability for the leading edge blanking time of the converter

[Table 3-2](#) describes and lists the connections and configuration for J6. Use J6 to switch between different DCL connections to test different duty cycle limits. Pin 1 is noted by the dot next to the pin.

Table 3-2. J6 Connections and Configuration

PIN CONNECTION	DUTY CYCLE LIMIT CONFIGURATION	DESCRIPTION
Pin 1 and Pin 2	100%	DCL is connected high to VLDO
Pin 2 and Pin 3	50%	DCL is connected low to AVSS
Floating	75%	DCL is left floating

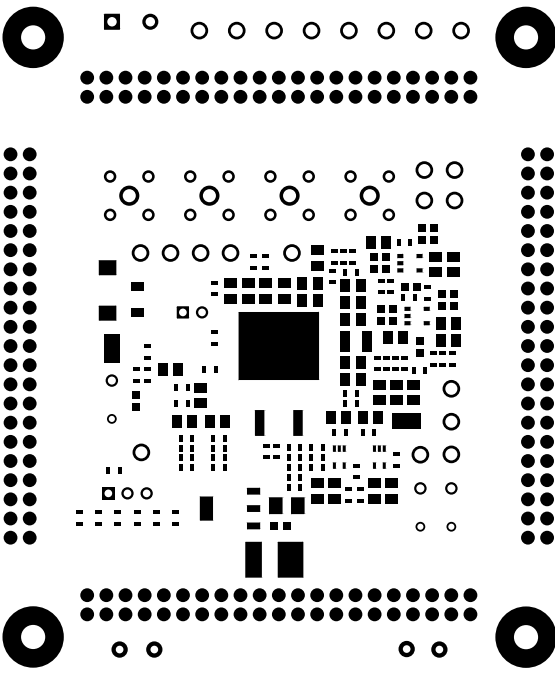


Figure 4-5. Bottom Solder

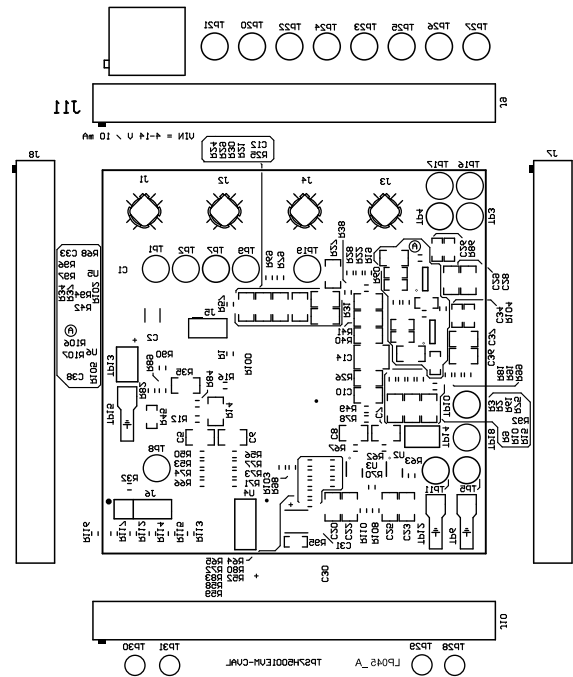
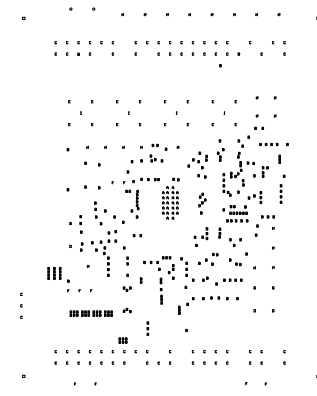


Figure 4-6. Bottom Overlay



DRILL CHART:

Symbol	Quantity	Finished Hole Size	Plating	Mat. Type	Tolerance(mils)
A	24	1.27mm (0.2500mm)	PTH	Round	+0.02
B	20	1.016mm (0.2000mm)	PTH	Round	+0.01
C	22	1.270mm (0.2500mm)	PTH	Round	+0.01
D	3	2.286mm (0.4500mm)	PTH	Round	+0.01
E	16	3.048mm (0.6000mm)	PTH	Round	+0.01
F	10	4.064mm (0.8000mm)	PTH	Round	+0.01
G	3	4.425mm (0.8850mm)	PTH	Round	+0.01
H	2	4.254mm (0.8500mm)	PTH	Round	+0.01
I	10	4.064mm (0.8000mm)	PTH	Round	+0.01
J	4	4.064mm (0.8000mm)	PTH	Round	+0.01
K	1	15.875mm (0.6250mm)	PTH	Round	+0.01
Q	1	15.875mm (0.6250mm)	PTH	Round	+0.01

Figure 4-7. Drill Drawing

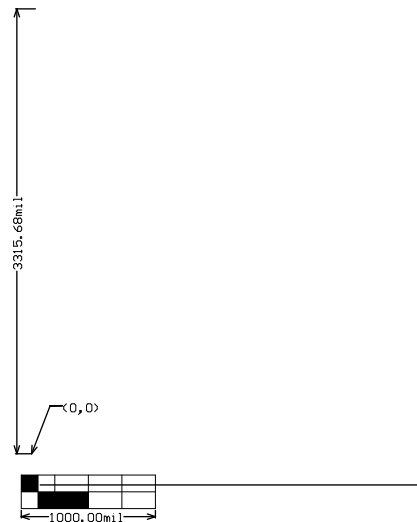


Figure 4-8. Board Dimensions

5 Schematics

For TPS7H5005EVM schematics, see [Figure 5-1](#) through [Figure 5-4](#).

For TPS7H5006EVM schematics, see [Figure 5-5](#) through [Figure 5-8](#).

For TPS7H5007EVM schematics, see [Figure 5-9](#) through [Figure 5-12](#).

For TPS7H5008EVM schematics, see [Figure 5-13](#) through [Figure 5-16](#).

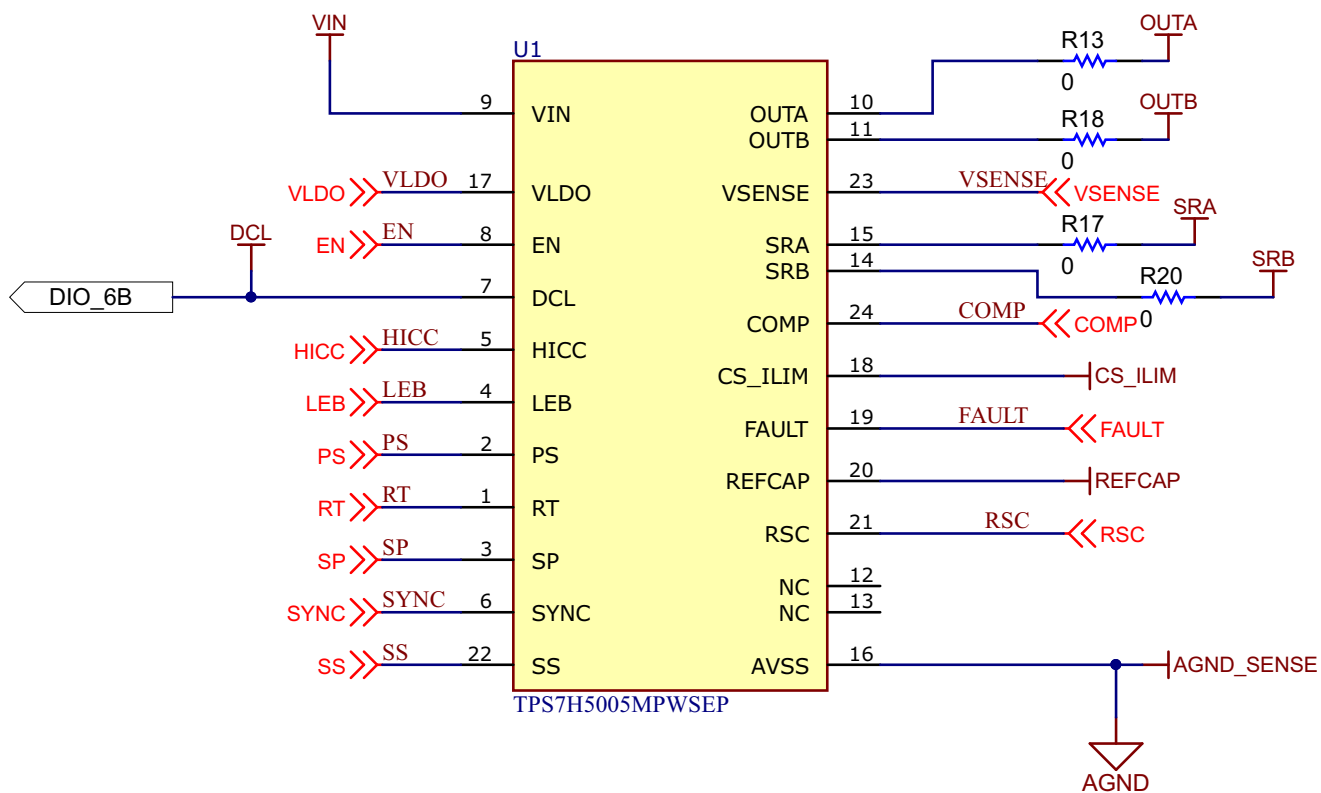


Figure 5-1. TPS7H5005EVM Schematic (Page 1)

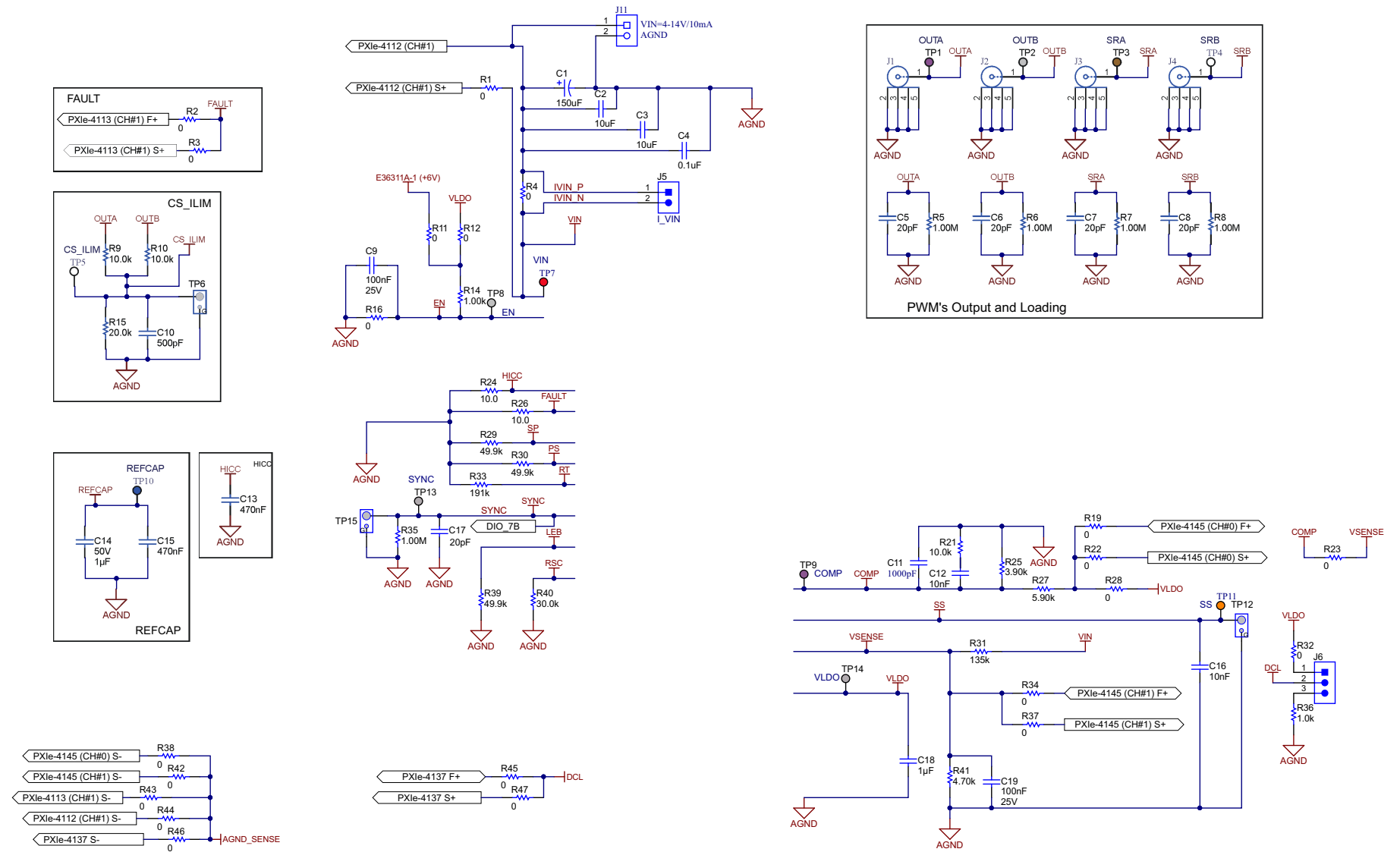


Figure 5-2. TPS7H5005EVM Schematic (Page 2)

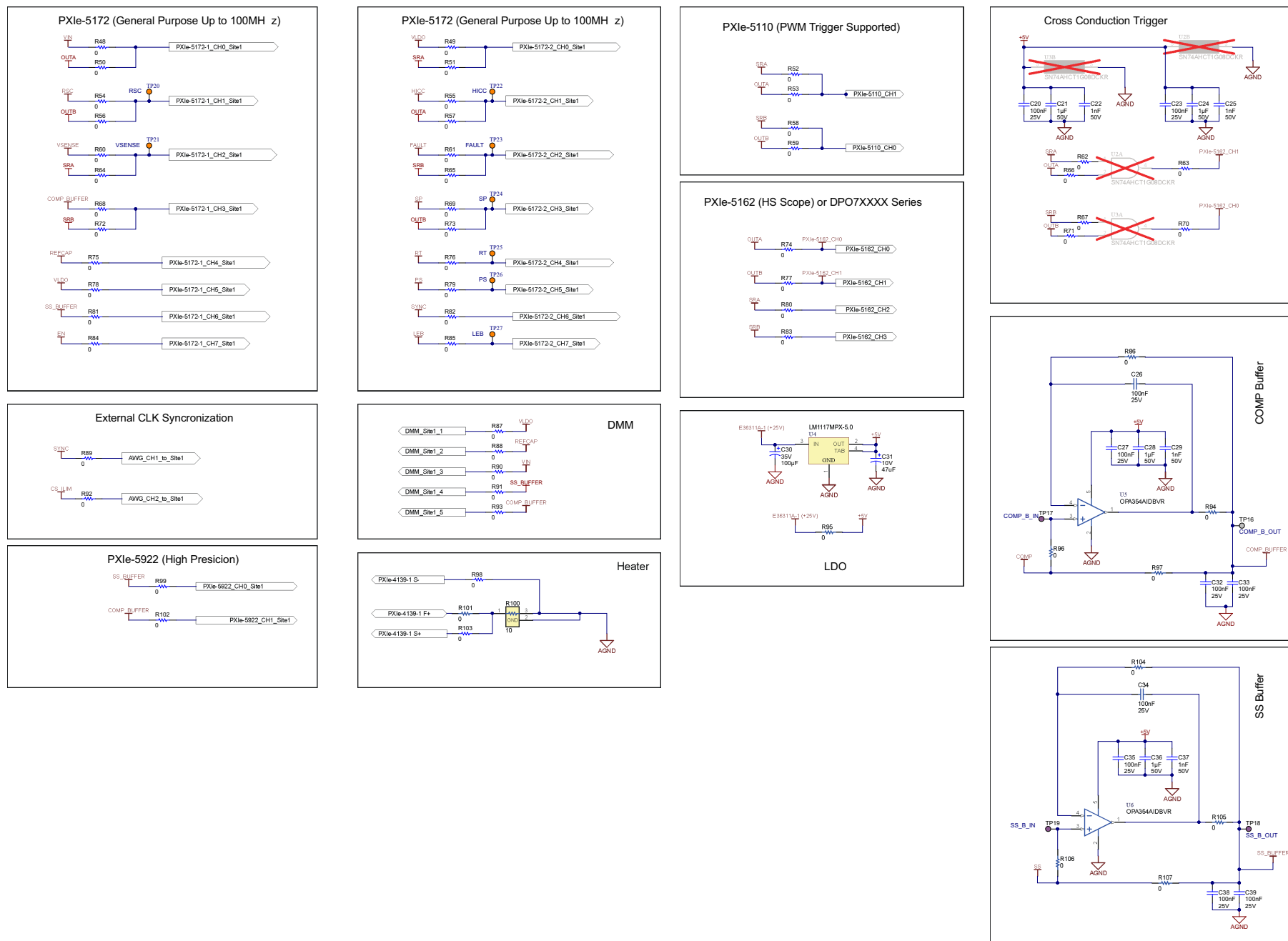
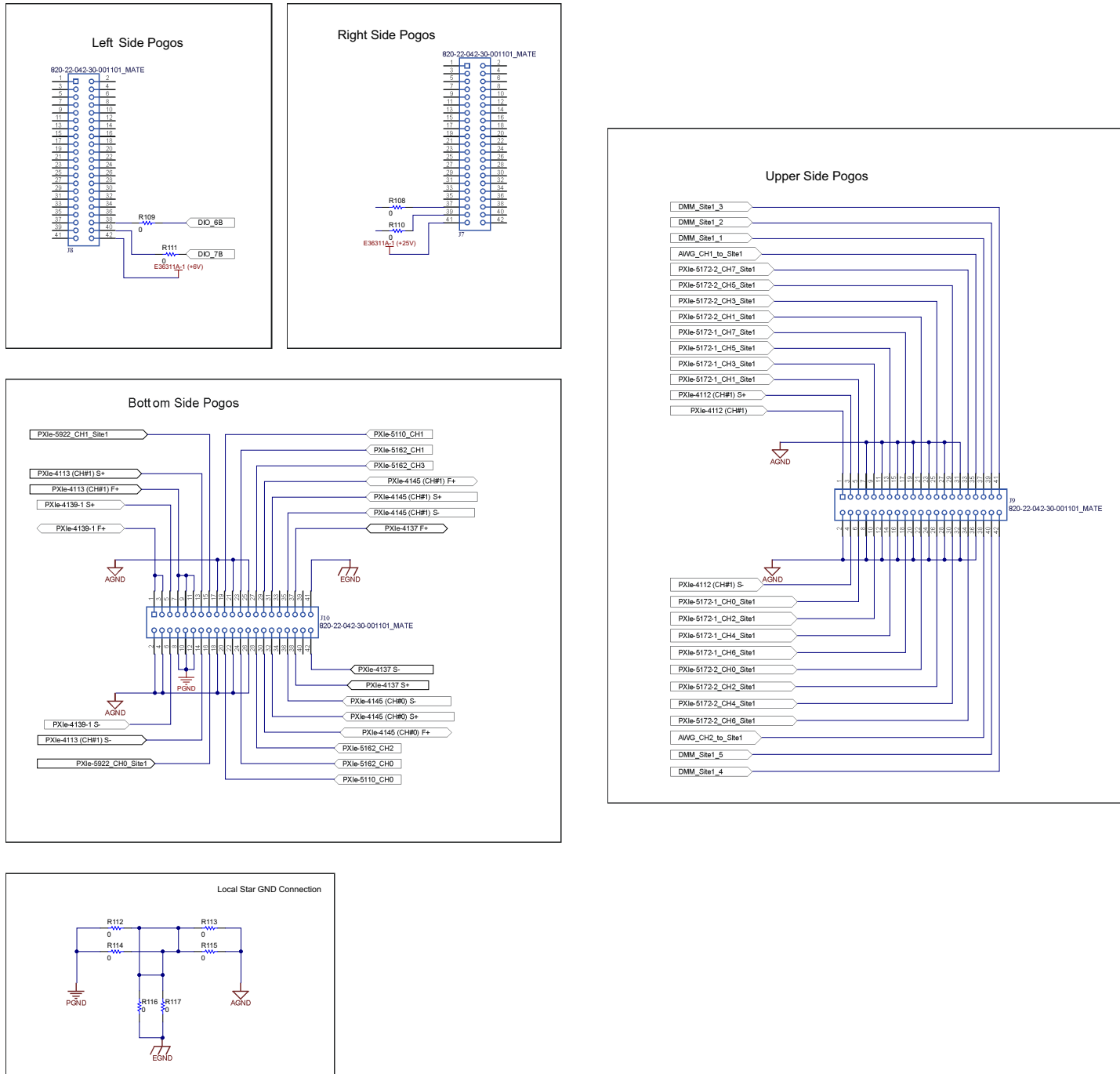


Figure 5-3. TPS7H5005EVM Schematic (Page 3)



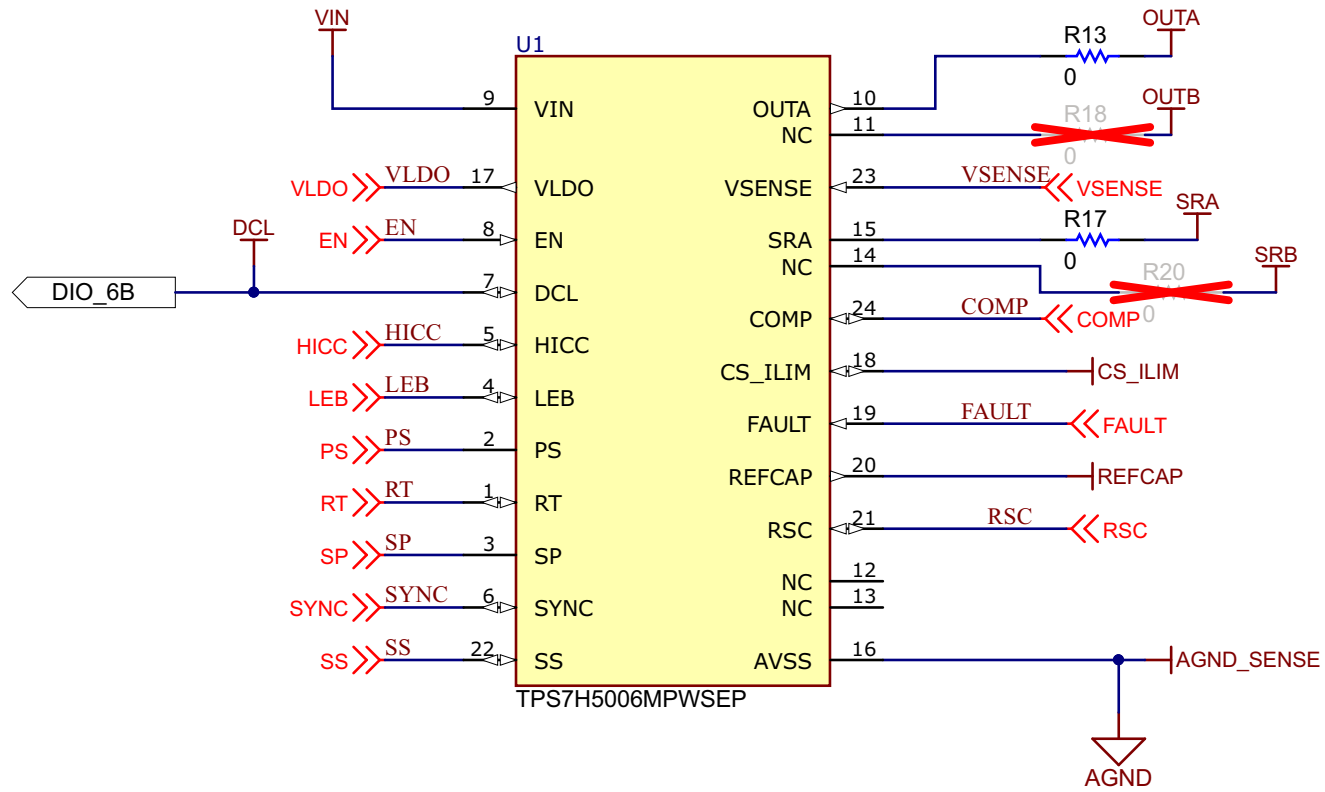


Figure 5-5. TPS7H5006EVM Schematic (Page 1)

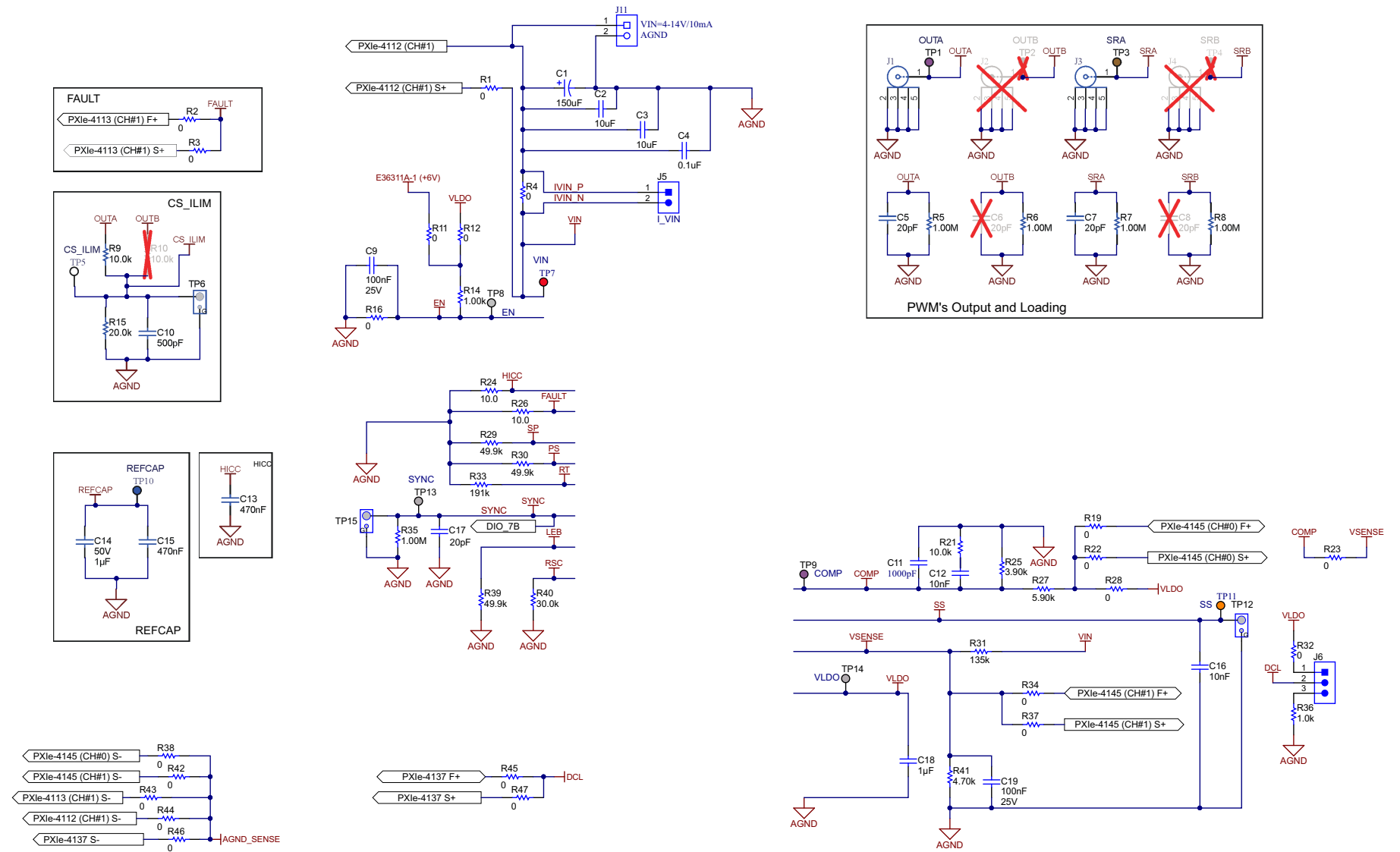


Figure 5-6. TPS7H5006EVM Schematic (Page 2)

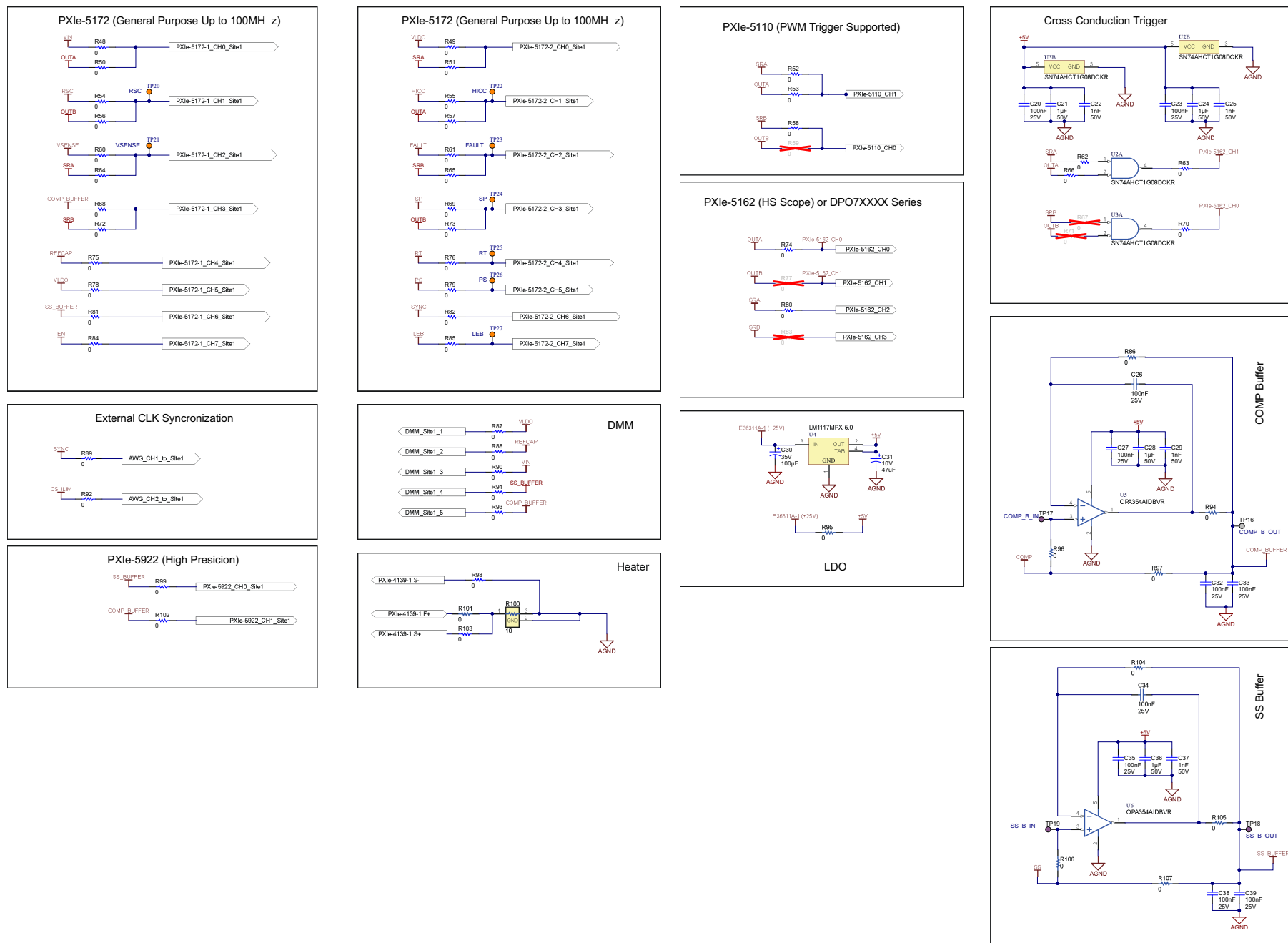
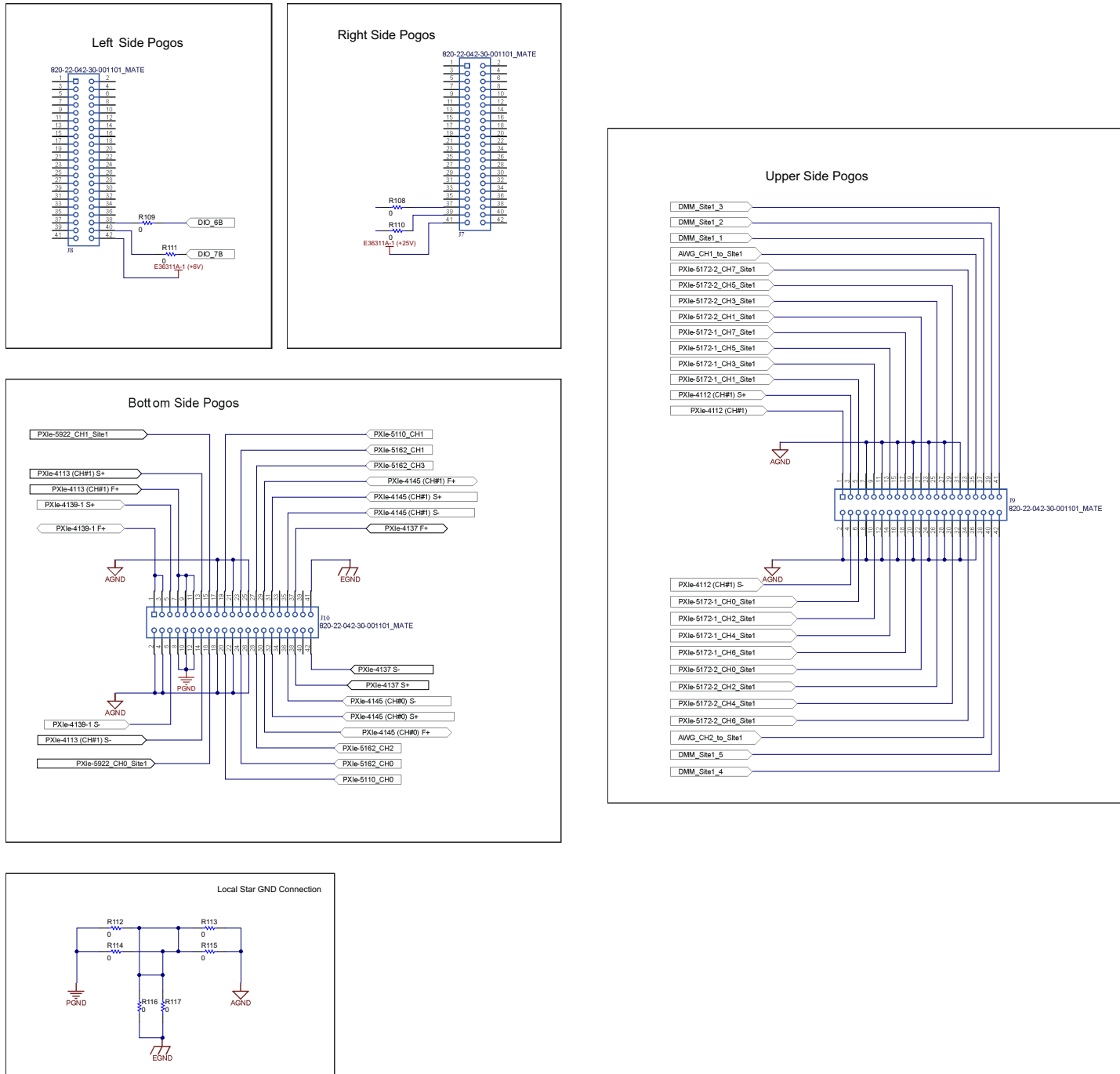


Figure 5-7. TPS7H5006EVM Schematic (Page 3)



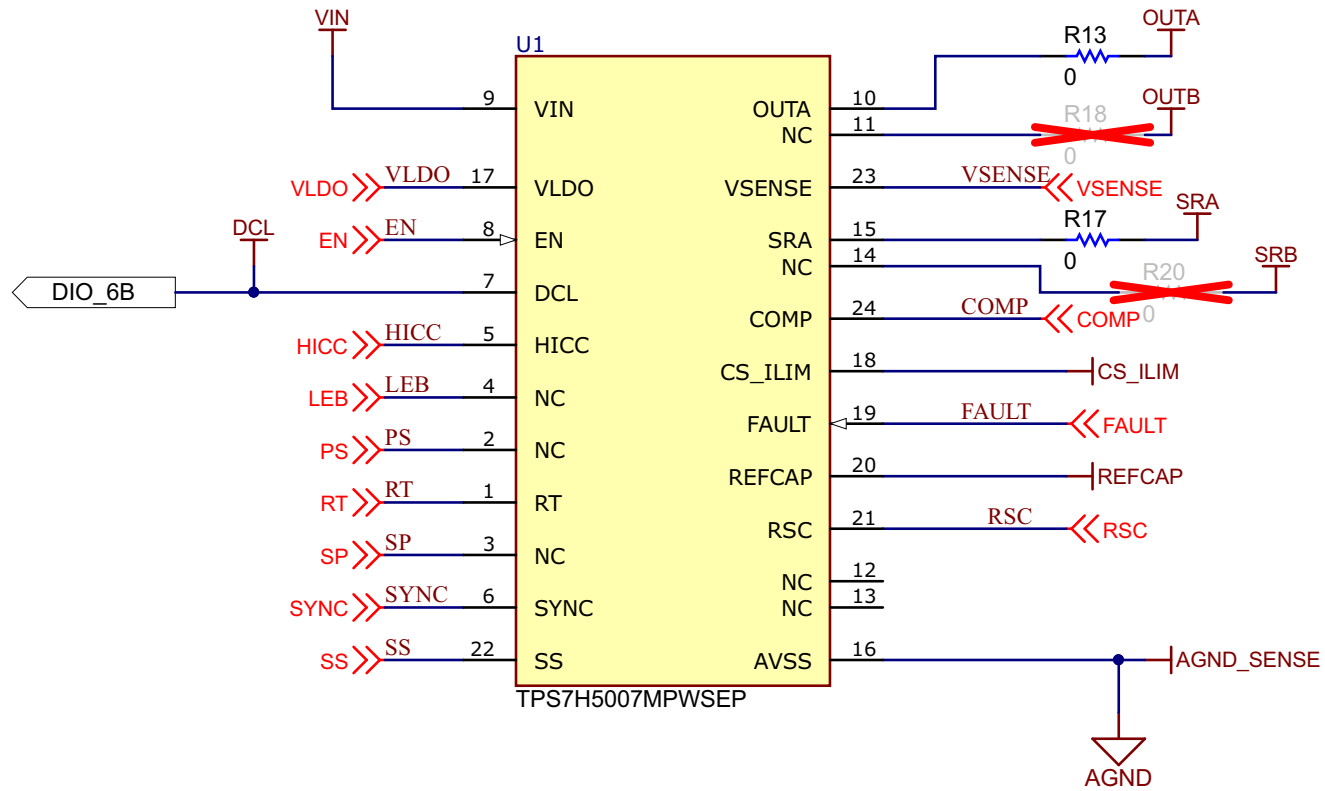


Figure 5-9. TPS7H5007EVM Schematic (Page 1)

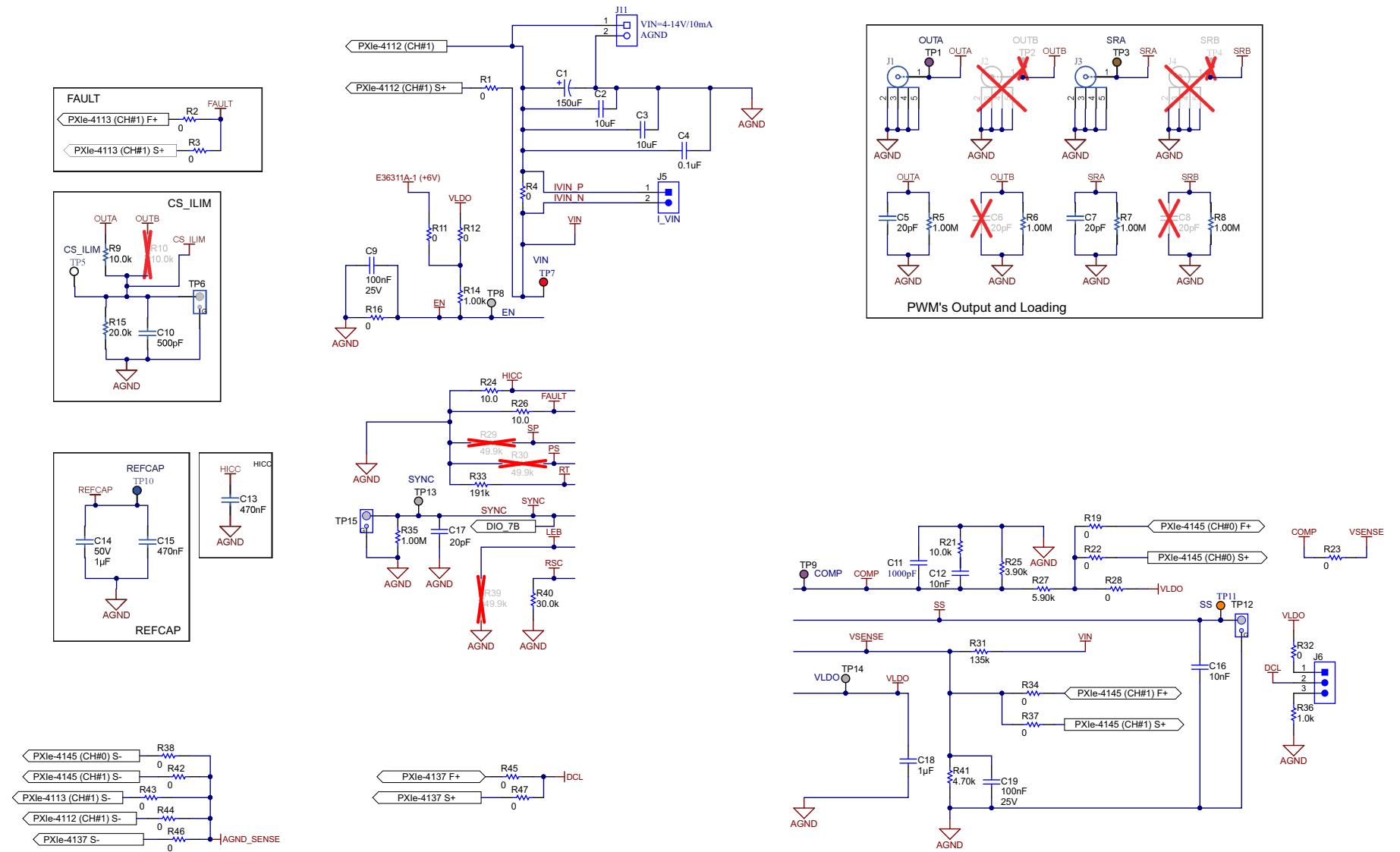


Figure 5-10. TPS7H5007EVM Schematic (Page 2)

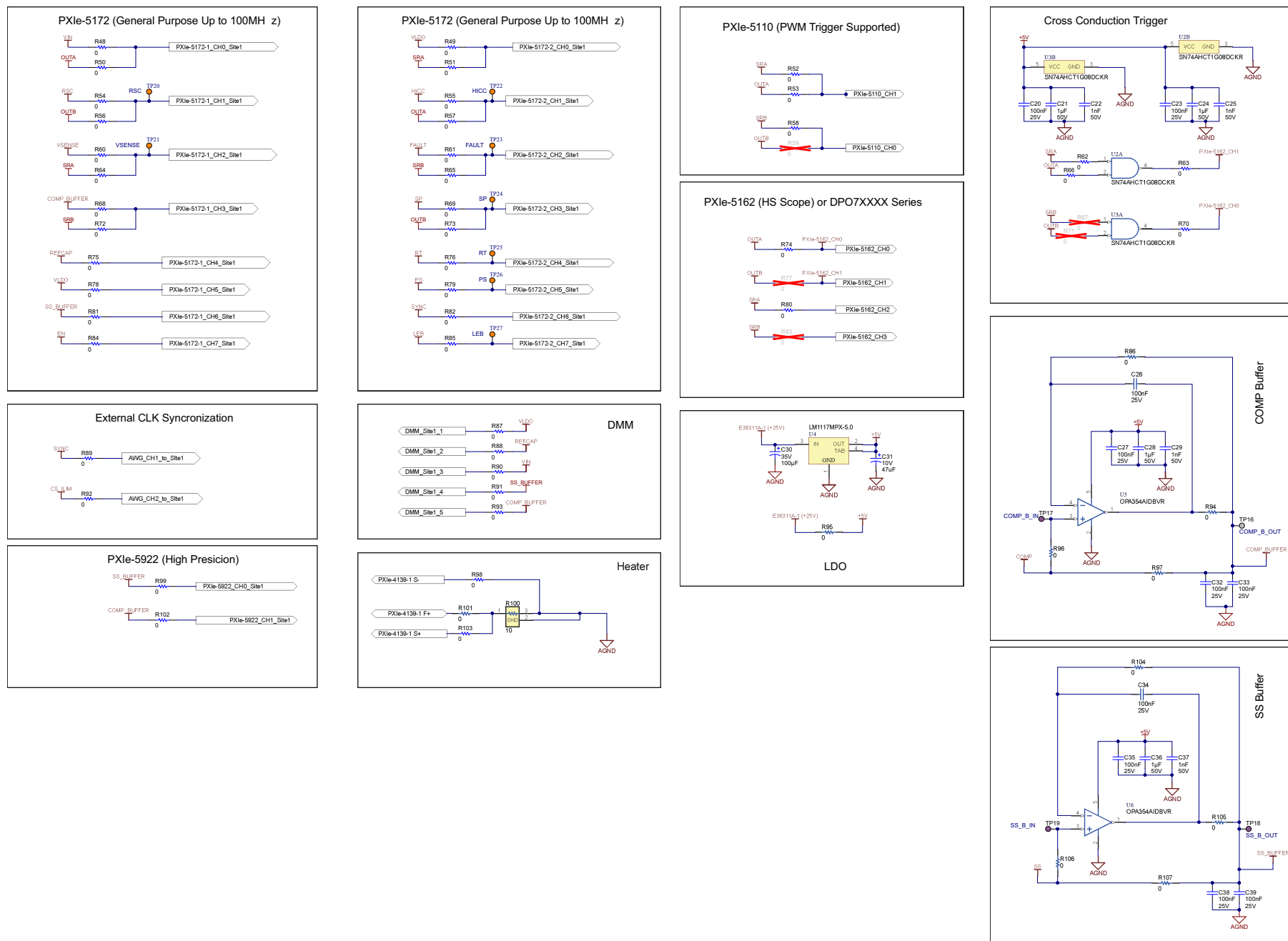
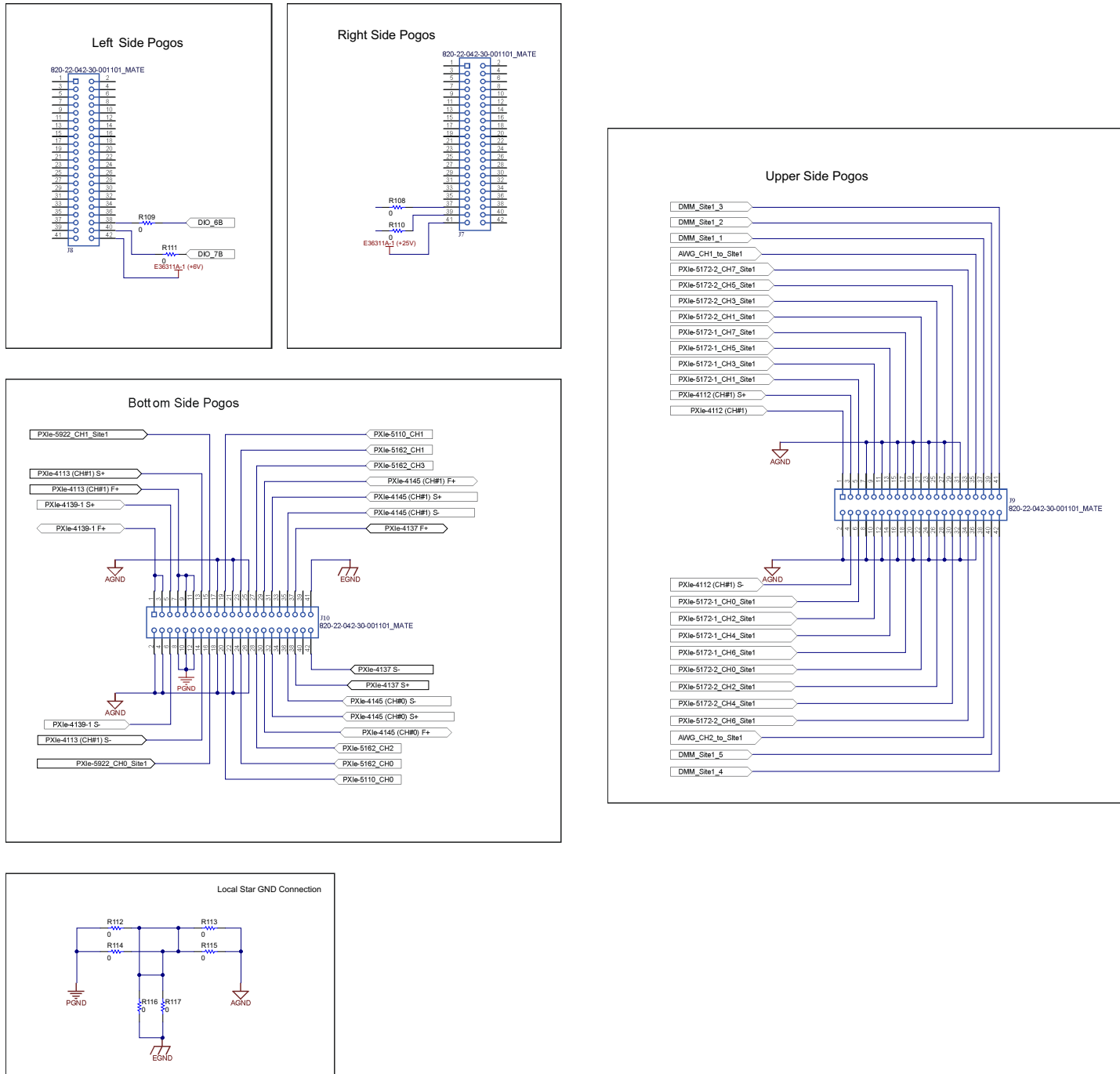


Figure 5-11. TPS7H5007EVM Schematic (Page 3)



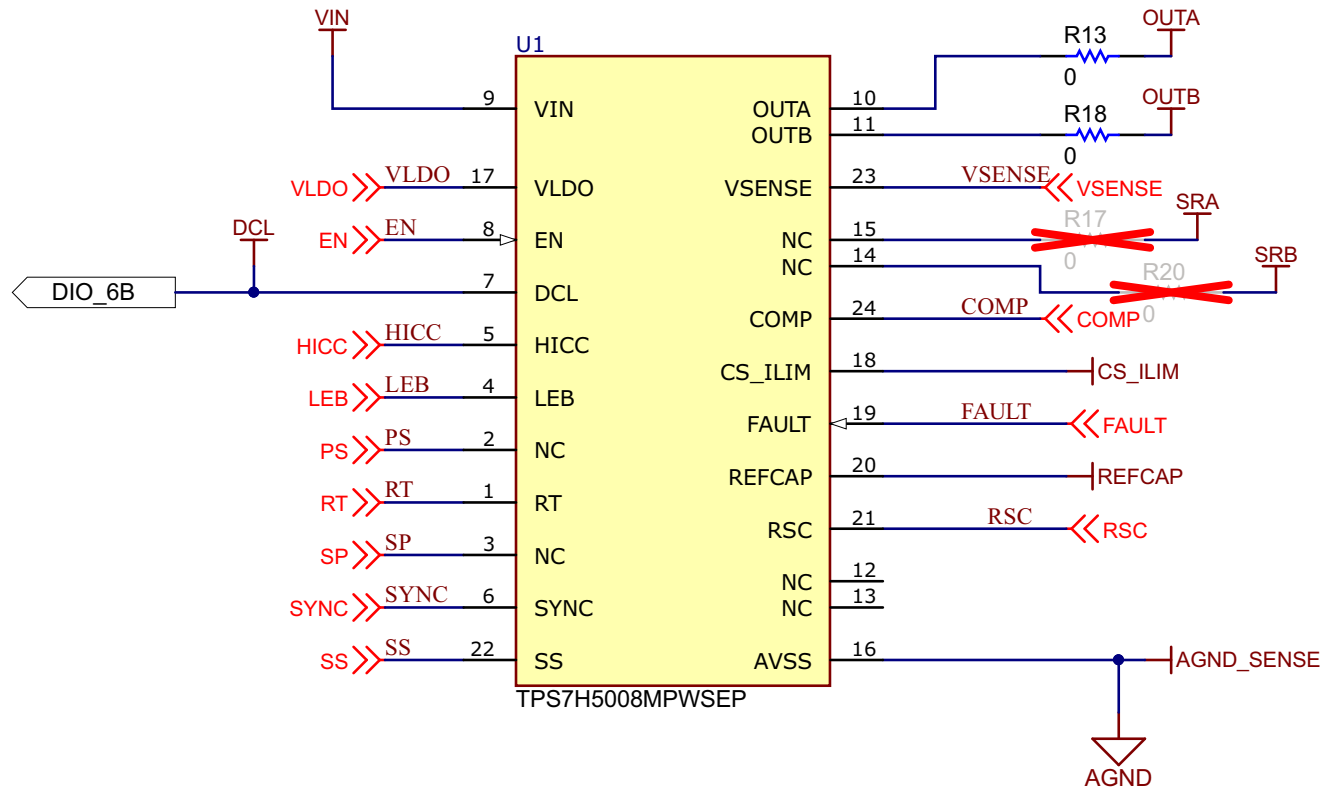


Figure 5-13. TPS7H5008EVM Schematic (Page 1)

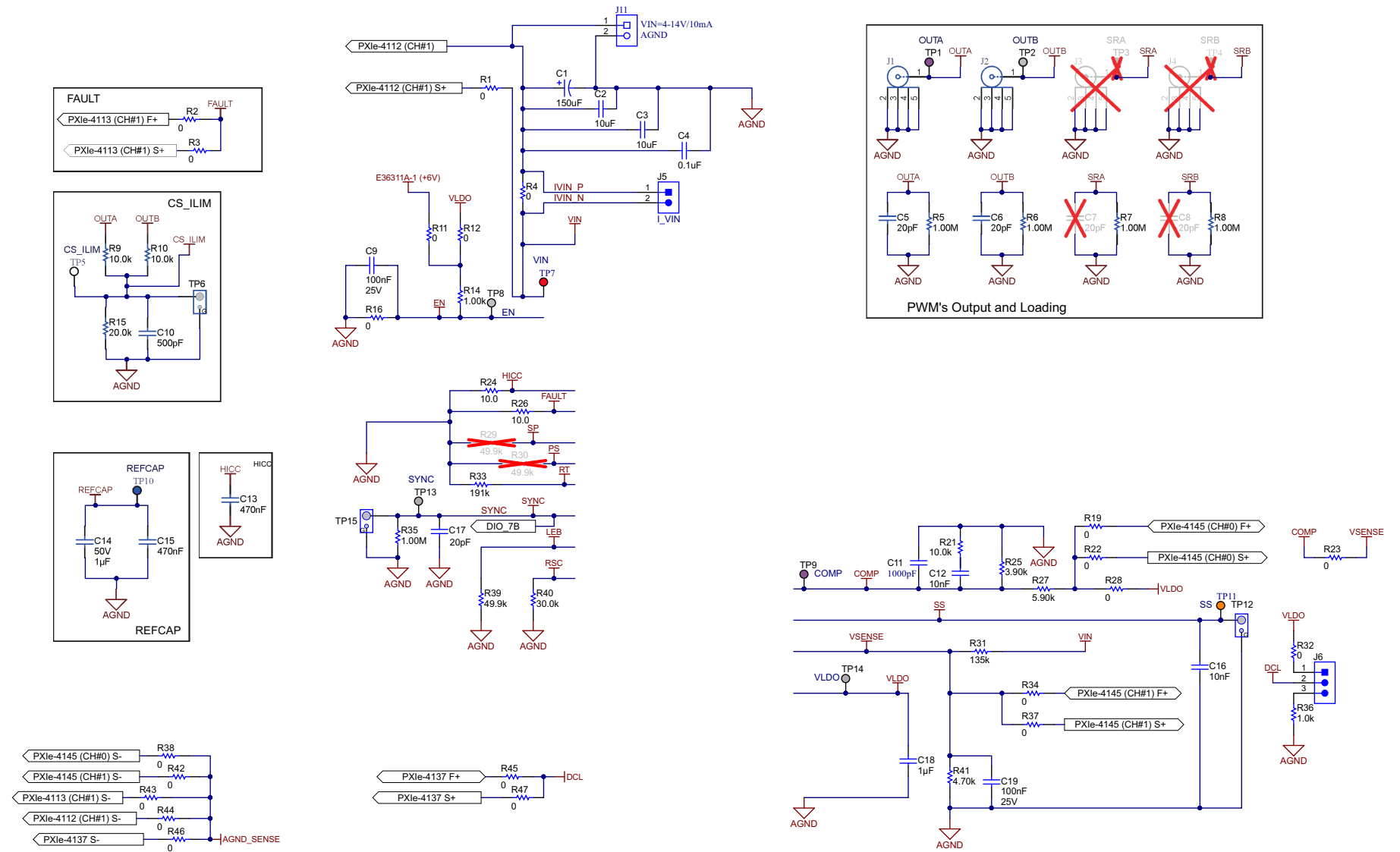


Figure 5-14. TPS7H5008EVM Schematic (Page 2)

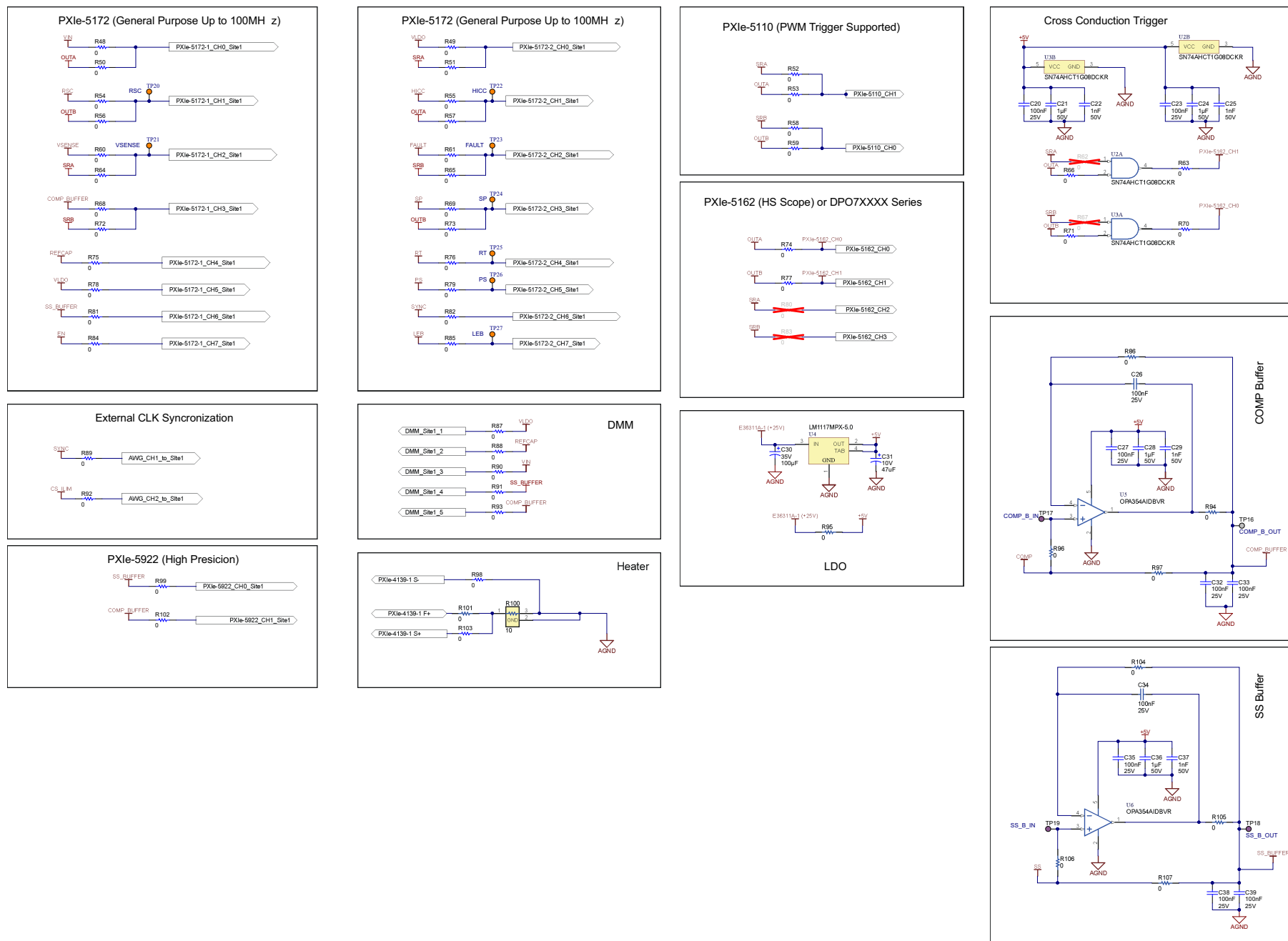
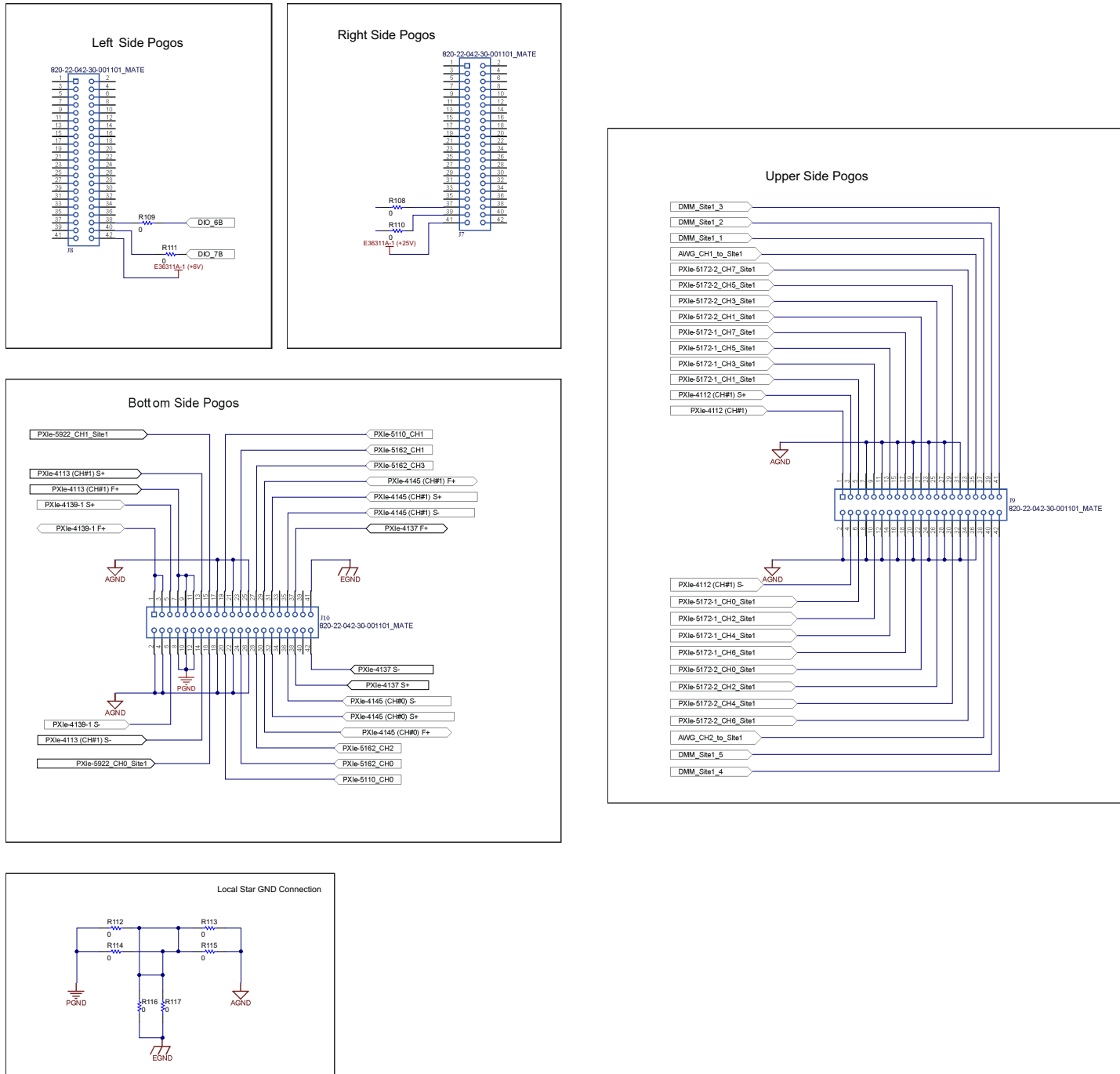


Figure 5-15. TPS7H5008EVM Schematic (Page 3)



6 Bill of Materials (BOM)

For a list of the TPS7H5005EVM bill of materials (BOM), see [Table 6-1](#).

For a list of the TPS7H5006EVM BOM, see [Table 6-2](#).

For a list of the TPS7H5007EVM BOM, see [Table 6-3](#).

For a list of the TPS7H5008EVM BOM, see [Table 6-4](#).

Table 6-1. TPS7H5005EVM BOM

DESIGNATOR	QUANTITY	VALUE	DESCRIPTION	PACKAGE REFERENCE	PART NUMBER	MANUFACTURER
IPCB1	1		Printed Circuit Board		LP069	Any
C1	1		150µF Molded Tantalum Polymer Capacitor 20V 2917 (7343 Metric) 50mOhm @ 100kHz	2917	T521D157M020ATE050	Kemet
C2, C3	2	10uF	CAP, CERM, 10 uF, 50 V, +/- 10%, X5R, 1206	1206	GRM31CR61H106KA12L	MuRata
C4	1	0.1uF	CAP, CERM, 0.1 uF, 50 V, +/- 5%, X7R, 1206	1206	12065C104JAT2A	AVX
C5, C6, C7, C8, C17	5	20pF	CAP, CERM, 20 pF, 100 V, +/- 5%, C0G/NP0, 0805	0805	08051A200JAT2A	AVX
C9, C19, C20, C23, C27, C32, C33, C35, C38, C39	10	0.1uF	CAP, CERM, 0.1 uF, 25 V, +/- 10%, X7R, 0805	0805	C0805C104K3RACTU	Kemet
C10	1	500pF	CAP, CERM, 500 pF, 50 V, +/- 2%, C0G/NP0, 0805	0805	08055A501GAT2A	AVX
C11	1	1000pF	CAP, CERM, 1000 pF, 50 V, +/- 10%, C0G/NP0, 0805	0805	08055A102KAT2A	AVX
C12	1	0.01uF	CAP, CERM, 0.01 uF, 50 V, +/- 20%, X7R, 0805	0805	C0805C103M5RACTU	Kemet
C13, C15	2	0.47uF	CAP, CERM, 0.47 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805	0805	GCM21BR71H474KA55L	MuRata
C14	1	1uF	CAP, CERM, 1 uF, 50 V, +/- 5%, X7R, AEC-Q200 Grade 1, 1210	1210	C1210C105J5RACTU	Kemet
C16	1	0.01uF	CAP, CERM, 0.01 uF, 50 V, +/- 5%, X7R, 0805	0805	08055C103JAT2A	AVX
C18	1	1uF	CAP, CERM, 1 uF, 50 V, +/- 10%, X7R, 0805	0805	08055C105KAT2A	AVX

Table 6-1. TPS7H5005EVM BOM (continued)

DESIGNATOR	QUANTITY	VALUE	DESCRIPTION	PACKAGE REFERENCE	PART NUMBER	MANUFACTURER
C21, C24, C28, C36	4	1uF	CAP, CERM, 1 uF, 50 V, +/- 10%, X7R, 0805	0805	885012207103	Würth Elektronik
C22, C25, C29, C37	4	1000pF	CAP, CERM, 1000 pF, 50 V, +/- 10%, X7R, 0805	0805	C0805C102K5RACTU	Kemet
C26, C34	2	0.1uF	CAP, CERM, 0.1 uF, 25 V, +/- 10%, X7R, 0603	0603	C0603X104K3RACTU	Kemet
C30	1	100uF	CAP, Tantalum Polymer, 100 µF, 35 V,+/- 20%, 0.1 ohm, 7.3x6.1mm SMD	7.3x6.1mm	TCN4107M035R0100	AVX
C31	1	47uF	CAP, TA, 47 uF, 10 V, +/- 10%, 0.65 ohm, SMD	3528-21	TPSB476K010R0650	AVX
H1, H2, H3, H4	4		Machine Screw, Round, #4-40 x 1/4, Nylon, Phillips panhead	Screw	NY PMS 440 0025 PH	B&F Fastener Supply
H5, H6, H7, H8	4		Standoff, Hex, 0.5"L #4-40 Nylon	Standoff	1902C	Keystone
J1, J2, J3, J4	4		Compact Probe Tip Circuit Board Test Points, TH, 25 per	TH Scope Probe	131-5031-00	Tektronix
J5	1		Header, 100mil, 2x1, Tin, TH	Header, 2 PIN, 100mil, Tin	PEC02SAAN	Sullins Connector Solutions
J6	1		Header, 100mil, 3x1, Tin, TH	Header, 3 PIN, 100mil, Tin	PEC03SAAN	Sullins Connector Solutions
J7, J8, J9, J10	4		Header Mate, 2.54mm, 21x2	Pads to Mate with Mill-Max_820-22-042-30-001101	820-22-042-30-001101_MATE	Mill-Max
J11	1		Terminal Block, 3.5mm Pitch, 2x1, TH	7.0x8.2x6.5mm	ED555/2DS	On-Shore Technology

Table 6-1. TPS7H5005EVM BOM (continued)

DESIGNATOR	QUANTITY	VALUE	DESCRIPTION	PACKAGE REFERENCE	PART NUMBER	MANUFACTURER
R1, R2, R3, R11, R12, R13, R16, R17, R18, R19, R20, R22, R28, R32, R34, R37, R38, R42, R43, R44, R48, R49, R50, R51, R52, R53, R54, R55, R56, R57, R58, R59, R60, R61, R62, R63, R64, R65, R66, R67, R68, R69, R70, R71, R72, R73, R74, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R87, R88, R89, R90, R91, R92, R93, R98, R99, R102, R103, R108, R109, R110, R111, R112, R113, R114, R115, R116, R117	79	0	RES, 0, 5%, 0.125 W, 0603	0603	MCT06030Z0000ZP500	Vishay/Beyschlag
R4, R101	2	0	RES, 0, 5%, 1 W, AEC-Q200 Grade 0, 2512	2512	CRCW25120000Z0EG	Vishay-Dale
R5, R6, R7, R8, R35	5	1.00Meg	RES, 1.00 M, 0.5%, 0.1 W, 0805	0805	RR1220P-105-D	Susumu Co Ltd
R9, R10	2	10.0k	RES, 10.0 k, 1%, 0.125 W, AEC- Q200 Grade 0, 0805	0805	CRCW080510K0FKEA	Vishay-Dale
R14	1	1.00k	RES, 1.00 k, 0.1%, 0.125 W, 0805	0805	RG2012P-102-B-T5	Susumu Co Ltd
R15	1	20.0k	RES, 20.0 k, 0.1%, 0.125 W, 0805	0805	RG2012P-203-B-T5	Susumu Co Ltd
R21	1	10.0k	RES, 10.0 k, 1%, 0.2 W, 0805	0805	MCU08050C1002FP500	Vishay/Beyschlag
R23, R45, R46, R47, R86, R94, R95, R96, R97, R104, R105, R106, R107	13	0	RES, 0, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603	RMCF0603ZT0R00	Stackpole Electronics Inc
R24, R26	2	10.0	RES, 10.0, 0.1%, 0.1 W, 0805	0805	CRT0805-BY-10R0ELF	Bourns
R25	1	3.90k	RES, 3.90 k, 0.5%, 0.1 W, 0805	0805	RR1220P-392-D	Susumu Co Ltd
R27	1	5.90k	RES, 5.90 k, 1%, 0.125 W, AEC- Q200 Grade 0, 0805	0805	CRCW08055K90FKEA	Vishay-Dale
R29, R30, R39	3	49.9k	RES, 49.9 k, 0.1%, 0.125 W, 0805	0805	RG2012P-4992-B-T5	Susumu Co Ltd
R31	1	135k	RES, 135 k, 0.1%, 0.125 W, 0805	0805	RT0805BRD07135KL	Yageo America
R33	1	191k	RES, 191 k, 1%, 0.125 W, AEC- Q200 Grade 0, 0805	0805	CRCW0805191KFKEA	Vishay-Dale

Table 6-1. TPS7H5005EVM BOM (continued)

DESIGNATOR	QUANTITY	VALUE	DESCRIPTION	PACKAGE REFERENCE	PART NUMBER	MANUFACTURER
R36	1	1.0k	RES, 1.0 k, 5%, 0.125 W, AEC-Q200 Grade 0, 0805	0805	CRCW08051K00JNEA	Vishay-Dale
R40	1	30.0k	RES, 30.0 k, 0.5%, 0.1 W, 0805	0805	RR1220P-303-D	Susumu Co Ltd
R41	1	4.70k	RES, 4.70 k, 1%, 0.5 W, AEC-Q200 Grade 0, 0805	0805	ERJ-P06F4701V	Panasonic
R100	1	10	RES, 10, 5%, 35 W, DDPAK	DDPAK	TDH35P10R0JE	Ohmite
TP1, TP9, TP17, TP18, TP19	5		Test Point, Multipurpose, Purple, TH	Purple Multipurpose Testpoint	5129	Keystone
TP2, TP8, TP16	3		Test Point, Multipurpose, Grey, TH	Grey Multipurpose Testpoint	5128	Keystone
TP3	1		Test Point, Multipurpose, Brown, TH	Brown Multipurpose Testpoint	5125	Keystone
TP4, TP5	2		Test Point, Multipurpose, White, TH	White Multipurpose Testpoint	5012	Keystone
TP7	1		Test Point, Multipurpose, Red, TH	Red Multipurpose Testpoint	5010	Keystone
TP10	1		Test Point, Multipurpose, Blue, TH	Blue Multipurpose Testpoint	5127	Keystone
TP11, TP20, TP21, TP22, TP23, TP24, TP25, TP26, TP27	9		Test Point, Multipurpose, Orange, TH	Orange Multipurpose Testpoint	5013	Keystone
TP13, TP14	2		Test Point, Miniature, SMT	Test Point, Miniature, SMT	5019	Keystone
U1	1		TPS7H5005MPWSEP	TSSOP24	TPS7H5005MPWSEP	Texas Instruments
U4	1		800mA Low-Dropout Linear Regulator, 4-pin SOT-223	DCY0004A	LM1117MPX-5.0	Texas Instruments
U5, U6	2		250 MHz, Rail-to-Rail I/O, CMOS Single Operational Amplifier, 2.5 to 5.5 V, -40 to 125 degC, 5-pin SOT23 (DBV5), Green (RoHS & no Sb/Br)	DBV0005A	OPA354AIDBVR	Texas Instruments

Table 6-2. TPS7H5006EVM BOM

DESIGNATOR	QUANTITY	VALUE	DESCRIPTION	PACKAGEREFERENCE	PARTNUMBER	MANUFACTURER
PCB1	1		Printed Circuit Board		LP070	Any
C1	1		150µF Molded Tantalum Polymer Capacitor 20V 2917 (7343 Metric) 50mOhm @ 100kHz	2917	T521D157M020ATE050	Kemet
C2, C3	2	10µF	CAP, CERM, 10 µF, 50 V, +/- 10%, X5R, 1206	1206	GRM31CR61H106KA12L	MuRata
C4	1	0.1µF	CAP, CERM, 0.1 µF, 50 V, +/- 5%, X7R, 1206	1206	12065C104JAT2A	AVX
C5, C7, C17	3	20pF	CAP, CERM, 20 pF, 100 V, +/- 5%, C0G/NP0, 0805	0805	08051A200JAT2A	AVX
C9, C19, C20, C23, C27, C32, C33, C35, C38, C39	10	0.1µF	CAP, CERM, 0.1 µF, 25 V, +/- 10%, X7R, 0805	0805	C0805C104K3RACTU	Kemet
C10	1	500pF	CAP, CERM, 500 pF, 50 V, +/- 2%, C0G/NP0, 0805	0805	08055A501GAT2A	AVX
C11	1	1000pF	CAP, CERM, 1000 pF, 50 V, +/- 10%, C0G/NP0, 0805	0805	08055A102KAT2A	AVX
C12	1	0.01µF	CAP, CERM, 0.01 µF, 50 V, +/- 20%, X7R, 0805	0805	C0805C103M5RACTU	Kemet
C13, C15	2	0.47µF	CAP, CERM, 0.47 µF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805	0805	GCM21BR71H474KA55L	MuRata
C14	1	1µF	CAP, CERM, 1 µF, 50 V, +/- 5%, X7R, AEC-Q200 Grade 1, 1210	1210	C1210C105J5RACTU	Kemet
C16	1	0.01µF	CAP, CERM, 0.01 µF, 50 V, +/- 5%, X7R, 0805	0805	08055C103JAT2A	AVX
C18	1	1µF	CAP, CERM, 1 µF, 50 V, +/- 10%, X7R, 0805	0805	08055C105KAT2A	AVX
C21, C24, C28, C36	4	1µF	CAP, CERM, 1 µF, 50 V, +/- 10%, X7R, 0805	0805	885012207103	Würth Elektronik
C22, C25, C29, C37	4	1000pF	CAP, CERM, 1000 pF, 50 V, +/- 10%, X7R, 0805	0805	C0805C102K5RACTU	Kemet
C26, C34	2	0.1µF	CAP, CERM, 0.1 µF, 25 V, +/- 10%, X7R, 0603	0603	C0603X104K3RACTU	Kemet

Table 6-2. TPS7H5006EVM BOM (continued)

DESIGNATOR	QUANTITY	VALUE	DESCRIPTION	PACKAGEREFERENCE	PARTNUMBER	MANUFACTURER
C30	1	100uF	CAP, Tantalum Polymer, 100 µF, 35 V,+/- 20%, 0.1 ohm, 7.3x6.1mm SMD	7.3x6.1mm	TCN4107M035R0100	AVX
C31	1	47uF	CAP, TA, 47 uF, 10 V, +/- 10%, 0.65 ohm, SMD	3528-21	TPSB476K010R0650	AVX
H1, H2, H3, H4	4		Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	Screw	NY PMS 440 0025 PH	B&F Fastener Supply
H5, H6, H7, H8	4		Standoff, Hex, 0.5	Standoff	1902C	Keystone
J1, J3	2		Compact Probe Tip Circuit Board Test Points, TH, 25 per	TH Scope Probe	131-5031-00	Tektronix
J5	1		Header, 100mil, 2x1, Tin, TH	Header, 2 PIN, 100mil, Tin	PEC02SAAN	Sullins Connector Solutions
J6	1		Header, 100mil, 3x1, Tin, TH	Header, 3 PIN, 100mil, Tin	PEC03SAAN	Sullins Connector Solutions
J7, J8, J9, J10	4		Header Mate, 2.54mm, 21x2	Pads to Mate with Mill- Max_820-22-042-30-001101	820-22-042-30-001101_MATE	Mill-Max
J11	1		Terminal Block, 3.5mm Pitch, 2x1, TH	7.0x8.2x6.5mm	ED555/2DS	On-Shore Technology
R1, R2, R3, R11, R12, R13, R16, R17, R19, R22, R28, R32, R34, R37, R38, R42, R43, R44, R48, R49, R50, R51, R52, R53, R54, R55, R56, R57, R58, R60, R61, R62, R63, R64, R65, R66, R68, R69, R70, R72, R73, R74, R75, R76, R78, R79, R80, R81, R82, R84, R85, R87, R88, R89, R90, R91, R92, R93, R98, R99, R102, R103, R108, R109, R110, R111, R112, R113, R114, R115, R116, R117	72	0	RES, 0, 5%, 0.125 W, 0603	0603	MCT06030Z0000ZP500	Vishay/Beyschlag
R4, R101	2	0	RES, 0, 5%, 1 W, AEC-Q200 Grade 0, 2512	2512	CRCW25120000Z0EG	Vishay-Dale
R5, R6, R7, R8, R35	5	1.00Meg	RES, 1.00 M, 0.5%, 0.1 W, 0805	0805	RR1220P-105-D	Susumu Co Ltd
R9	1	10.0k	RES, 10.0 k, 1%, 0.125 W, AEC- Q200 Grade 0, 0805	0805	CRCW080510K0FKEA	Vishay-Dale

Table 6-2. TPS7H5006EVM BOM (continued)

DESIGNATOR	QUANTITY	VALUE	DESCRIPTION	PACKAGEREFERENCE	PARTNUMBER	MANUFACTURER
R14	1	1.00k	RES, 1.00 k, 0.1%, 0.125 W, 0805	0805	RG2012P-102-B-T5	Susumu Co Ltd
R15	1	20.0k	RES, 20.0 k, 0.1%, 0.125 W, 0805	0805	RG2012P-203-B-T5	Susumu Co Ltd
R21	1	10.0k	RES, 10.0 k, 1%, 0.2 W, 0805	0805	MCU08050C1002FP500	Vishay/Beyschlag
R23, R45, R46, R47, R86, R94, R95, R96, R97, R104, R105, R106, R107	13	0	RES, 0, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603	RMCF0603ZT0R00	Stackpole Electronics Inc
R24, R26	2	10.0	RES, 10.0, 0.1%, 0.1 W, 0805	0805	CRT0805-BY-10R0ELF	Bourns
R25	1	3.90k	RES, 3.90 k, 0.5%, 0.1 W, 0805	0805	RR1220P-392-D	Susumu Co Ltd
R27	1	5.90k	RES, 5.90 k, 1%, 0.125 W, AEC- Q200 Grade 0, 0805	0805	CRCW08055K90FKEA	Vishay-Dale
R29, R30, R39	3	49.9k	RES, 49.9 k, 0.1%, 0.125 W, 0805	0805	RG2012P-4992-B-T5	Susumu Co Ltd
R31	1	135k	RES, 135 k, 0.1%, 0.125 W, 0805	0805	RT0805BRD07135KL	Yageo America
R33	1	191k	RES, 191 k, 1%, 0.125 W, AEC- Q200 Grade 0, 0805	0805	CRCW0805191KFKEA	Vishay-Dale
R36	1	1.0k	RES, 1.0 k, 5%, 0.125 W, AEC- Q200 Grade 0, 0805	0805	CRCW08051K00JNEA	Vishay-Dale
R40	1	30.0k	RES, 30.0 k, 0.5%, 0.1 W, 0805	0805	RR1220P-303-D	Susumu Co Ltd
R41	1	4.70k	RES, 4.70 k, 1%, 0.5 W, AEC- Q200 Grade 0, 0805	0805	ERJ-P06F4701V	Panasonic
R100	1	10	RES, 10, 5%, 35 W, DDPAK	DDPAK	TDH35P10R0JE	Ohmite
TP1, TP9, TP17, TP18, TP19	5		Test Point, Multipurpose, Purple, TH	Purple Multipurpose Testpoint	5129	Keystone
TP3	1		Test Point, Multipurpose, Brown, TH	Brown Multipurpose Testpoint	5125	Keystone
TP5	1		Test Point, Multipurpose, White, TH	White Multipurpose Testpoint	5012	Keystone
TP7	1		Test Point, Multipurpose, Red, TH	Red Multipurpose Testpoint	5010	Keystone
TP8, TP16	2		Test Point, Multipurpose, Grey, TH	Grey Multipurpose Testpoint	5128	Keystone
TP10	1		Test Point, Multipurpose, Blue, TH	Blue Multipurpose Testpoint	5127	Keystone
TP11, TP20, TP21, TP22, TP23, TP24, TP25, TP26, TP27	9		Test Point, Multipurpose, Orange, TH	Orange Multipurpose Testpoint	5013	Keystone

Table 6-2. TPS7H5006EVM BOM (continued)

DESIGNATOR	QUANTITY	VALUE	DESCRIPTION	PACKAGEREFERENCE	PARTNUMBER	MANUFACTURER
TP13, TP14	2		Test Point, Miniature, SMT	Test Point, Miniature, SMT	5019	Keystone
U1	1		Radiation-Hardened 2 MHz Current Mode PWM Controllers in Space Enhanced Plastic	TSSOP24	TPS7H5006MPWSEP	Texas Instruments
U2, U3	2		Single 2-Input Positive-AND Gate, DCK0005A, LARGE T&R	DCK0005A	SN74AHCT1G08DCKR	Texas Instruments
U4	1		800mA Low-Dropout Linear Regulator, 4-pin SOT-223	DCY0004A	LM1117MPX-5.0	Texas Instruments
U5, U6	2		250 MHz, Rail-to-Rail I/O, CMOS Single Operational Amplifier, 2.5 to 5.5 V, -40 to 125 degC, 5-pin SOT23 (DBV5), Green (RoHS & no Sb/Br)	DBV0005A	OPA354AIDBVR	Texas Instruments

Table 6-3. TPS7H5007EVM BOM

DESIGNATOR	QUANTITY	VALUE	DESCRIPTION	PACKAGEREFERENCE	PARTNUMBER	MANUFACTURER
PCB1	1		Printed Circuit Board		LP071	Any
C1	1		150µF Molded Tantalum Polymer Capacitor 20V 2917 (7343 Metric) 50mOhm @ 100kHz	2917	T521D157M020ATE050	Kemet
C2, C3	2	10µF	CAP, CERM, 10 µF, 50 V, +/- 10%, X5R, 1206	1206	GRM31CR61H106KA12L	MuRata
C4	1	0.1µF	CAP, CERM, 0.1 µF, 50 V, +/- 5%, X7R, 1206	1206	12065C104JAT2A	AVX
C5, C7, C17	3	20pF	CAP, CERM, 20 pF, 100 V, +/- 5%, C0G/NP0, 0805	0805	08051A200JAT2A	AVX
C9, C19, C20, C23, C27, C32, C33, C35, C38, C39	10	0.1µF	CAP, CERM, 0.1 µF, 25 V, +/- 10%, X7R, 0805	0805	C0805C104K3RACTU	Kemet
C10	1	500pF	CAP, CERM, 500 pF, 50 V, +/- 2%, C0G/NP0, 0805	0805	08055A501GAT2A	AVX
C11	1	1000pF	CAP, CERM, 1000 pF, 50 V, +/- 10%, C0G/NP0, 0805	0805	08055A102KAT2A	AVX
C12	1	0.01µF	CAP, CERM, 0.01 µF, 50 V, +/- 20%, X7R, 0805	0805	C0805C103M5RACTU	Kemet
C13, C15	2	0.47µF	CAP, CERM, 0.47 µF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805	0805	GCM21BR71H474KA55L	MuRata
C14	1	1µF	CAP, CERM, 1 µF, 50 V, +/- 5%, X7R, AEC-Q200 Grade 1, 1210	1210	C1210C105J5RACTU	Kemet
C16	1	0.01µF	CAP, CERM, 0.01 µF, 50 V, +/- 5%, X7R, 0805	0805	08055C103JAT2A	AVX
C18	1	1µF	CAP, CERM, 1 µF, 50 V, +/- 10%, X7R, 0805	0805	08055C105KAT2A	AVX
C21, C24, C28, C36	4	1µF	CAP, CERM, 1 µF, 50 V, +/- 10%, X7R, 0805	0805	885012207103	Würth Elektronik
C22, C25, C29, C37	4	1000pF	CAP, CERM, 1000 pF, 50 V, +/- 10%, X7R, 0805	0805	C0805C102K5RACTU	Kemet
C26, C34	2	0.1µF	CAP, CERM, 0.1 µF, 25 V, +/- 10%, X7R, 0603	0603	C0603X104K3RACTU	Kemet

Table 6-3. TPS7H5007EVM BOM (continued)

DESIGNATOR	QUANTITY	VALUE	DESCRIPTION	PACKAGEREFERENCE	PARTNUMBER	MANUFACTURER
C30	1	100uF	CAP, Tantalum Polymer, 100 µF, 35 V,+/- 20%, 0.1 ohm, 7.3x6.1mm SMD	7.3x6.1mm	TCN4107M035R0100	AVX
C31	1	47uF	CAP, TA, 47 uF, 10 V, +/- 10%, 0.65 ohm, SMD	3528-21	TPSB476K010R0650	AVX
H1, H2, H3, H4	4		Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	Screw	NY PMS 440 0025 PH	B&F Fastener Supply
H5, H6, H7, H8	4		Standoff, Hex, 0.5"L #4-40 Nylon	Standoff	1902C	Keystone
J1, J3	2		Compact Probe Tip Circuit Board Test Points, TH, 25 per	TH Scope Probe	131-5031-00	Tektronix
J5	1		Header, 100mil, 2x1, Tin, TH	Header, 2 PIN, 100mil, Tin	PEC02SAAN	Sullins Connector Solutions
J6	1		Header, 100mil, 3x1, Tin, TH	Header, 3 PIN, 100mil, Tin	PEC03SAAN	Sullins Connector Solutions
J7, J8, J9, J10	4		Header Mate, 2.54mm, 21x2	Pads to Mate with Mill-Max_820-22-042-30-001101	820-22-042-30-001101_MATE	Mill-Max
J11	1		Terminal Block, 3.5mm Pitch, 2x1, TH	7.0x8.2x6.5mm	ED555/2DS	On-Shore Technology
R1, R2, R3, R11, R12, R13, R16, R17, R19, R22, R28, R32, R34, R37, R38, R42, R43, R44, R48, R49, R50, R51, R52, R53, R54, R55, R56, R57, R58, R60, R61, R62, R63, R64, R65, R66, R68, R69, R70, R72, R73, R74, R75, R76, R78, R79, R80, R81, R82, R84, R85, R87, R88, R89, R90, R91, R92, R93, R98, R99, R102, R103, R108, R109, R110, R111, R112, R113, R114, R115, R116, R117	72	0	RES, 0, 5%, 0.125 W, 0603	0603	MCT06030Z0000ZP500	Vishay/Beyschlag
R4, R101	2	0	RES, 0, 5%, 1 W, AEC-Q200 Grade 0, 2512	2512	CRCW25120000Z0EG	Vishay-Dale
R5, R6, R7, R8, R35	5	1.00Meg	RES, 1.00 M, 0.5%, 0.1 W, 0805	0805	RR1220P-105-D	Susumu Co Ltd
R9	1	10.0k	RES, 10.0 k, 1%, 0.125 W, AEC-Q200 Grade 0, 0805	0805	CRCW080510K0FKEA	Vishay-Dale

Table 6-3. TPS7H5007EVM BOM (continued)

DESIGNATOR	QUANTITY	VALUE	DESCRIPTION	PACKAGEREFERENCE	PARTNUMBER	MANUFACTURER
R14	1	1.00k	RES, 1.00 k, 0.1%, 0.125 W, 0805	0805	RG2012P-102-B-T5	Susumu Co Ltd
R15	1	20.0k	RES, 20.0 k, 0.1%, 0.125 W, 0805	0805	RG2012P-203-B-T5	Susumu Co Ltd
R21	1	10.0k	RES, 10.0 k, 1%, 0.2 W, 0805	0805	MCU08050C1002FP500	Vishay/Beyschlag
R23, R45, R46, R47, R86, R94, R95, R96, R97, R104, R105, R106, R107	13	0	RES, 0, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603	RMCF0603ZT0R00	Stackpole Electronics Inc
R24, R26	2	10.0	RES, 10.0, 0.1%, 0.1 W, 0805	0805	CRT0805-BY-10R0ELF	Bourns
R25	1	3.90k	RES, 3.90 k, 0.5%, 0.1 W, 0805	0805	RR1220P-392-D	Susumu Co Ltd
R27	1	5.90k	RES, 5.90 k, 1%, 0.125 W, AEC- Q200 Grade 0, 0805	0805	CRCW08055K90FKEA	Vishay-Dale
R31	1	135k	RES, 135 k, 0.1%, 0.125 W, 0805	0805	RT0805BRD07135KL	Yageo America
R33	1	191k	RES, 191 k, 1%, 0.125 W, AEC- Q200 Grade 0, 0805	0805	CRCW0805191KFKEA	Vishay-Dale
R36	1	1.0k	RES, 1.0 k, 5%, 0.125 W, AEC- Q200 Grade 0, 0805	0805	CRCW08051K00JNEA	Vishay-Dale
R40	1	30.0k	RES, 30.0 k, 0.5%, 0.1 W, 0805	0805	RR1220P-303-D	Susumu Co Ltd
R41	1	4.70k	RES, 4.70 k, 1%, 0.5 W, AEC- Q200 Grade 0, 0805	0805	ERJ-P06F4701V	Panasonic
R100	1	10	RES, 10, 5%, 35 W, DDPAK	DDPAK	TDH35P10R0JE	Ohmite
TP1, TP9, TP17, TP18, TP19	5		Test Point, Multipurpose, Purple, TH	Purple Multipurpose Testpoint	5129	Keystone
TP3	1		Test Point, Multipurpose, Brown, TH	Brown Multipurpose Testpoint	5125	Keystone
TP5	1		Test Point, Multipurpose, White, TH	White Multipurpose Testpoint	5012	Keystone
TP7	1		Test Point, Multipurpose, Red, TH	Red Multipurpose Testpoint	5010	Keystone
TP8, TP16	2		Test Point, Multipurpose, Grey, TH	Grey Multipurpose Testpoint	5128	Keystone
TP10	1		Test Point, Multipurpose, Blue, TH	Blue Multipurpose Testpoint	5127	Keystone
TP11, TP20, TP21, TP22, TP23, TP24, TP25, TP26, TP27	9		Test Point, Multipurpose, Orange, TH	Orange Multipurpose Testpoint	5013	Keystone
TP13, TP14	2		Test Point, Miniature, SMT	Test Point, Miniature, SMT	5019	Keystone

Table 6-3. TPS7H5007EVM BOM (continued)

DESIGNATOR	QUANTITY	VALUE	DESCRIPTION	PACKAGEREFERENCE	PARTNUMBER	MANUFACTURER
U1	1		Radiation-Hardened 2 MHz Current Mode PWM Controllers in Space Enhanced Plastic	TSSOP24	TPS7H5007MPWSEP	Texas Instruments
U2, U3	2		Single 2-Input Positive-AND Gate, DCK0005A, LARGE T&R	DCK0005A	SN74AHCT1G08DCKR	Texas Instruments
U4	1		800mA Low-Dropout Linear Regulator, 4-pin SOT-223	DCY0004A	LM1117MPX-5.0	Texas Instruments
U5, U6	2		250 MHz, Rail-to-Rail I/O, CMOS Single Operational Amplifier, 2.5 to 5.5 V, -40 to 125 degC, 5-pin SOT23 (DBV5), Green (RoHS & no Sb/Br)	DBV0005A	OPA354AIDBVR	Texas Instruments

Table 6-4. TPS7H5008EVM BOM

DESCRIPTION	DESIGNATOR	PARTNUMBER	QUANTITY	MANUFACTURER	PACKAGE REFERENCE	VALUE
Printed Circuit Board	IPCB1	LP072	1	Any		
150µF Molded Tantalum Polymer Capacitor 20V 2917 (7343 Metric) 50mOhm @ 100kHz	C1	T521D157M020ATE050	1	Kemet	2917	
CAP, CERM, 10 uF, 50 V, +/- 10%, X5R, 1206	C2, C3	GRM31CR61H106KA12L	2	MuRata	1206	10uF
CAP, CERM, 0.1 uF, 50 V, +/- 5%, X7R, 1206	C4	12065C104JAT2A	1	AVX	1206	0.1uF
CAP, CERM, 20 pF, 100 V, +/- 5%, C0G/NP0, 0805	C5, C6, C17	08051A200JAT2A	3	AVX	0805	20pF
CAP, CERM, 0.1 uF, 25 V, +/- 10%, X7R, 0805	C9, C20, C23, C27, C35	C0805C104K3RACTU	5	Kemet	0805	0.1uF
CAP, CERM, 500 pF, 50 V, +/- 2%, C0G/NP0, 0805	C10	08055A501GAT2A	1	AVX	0805	500pF
CAP, CERM, 0.47 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805	C15	GCM21BR71H474KA55L	1	MuRata	0805	0.47uF
CAP, CERM, 0.01 uF, 50 V, +/- 5%, X7R, 0805	C16	08055C103JAT2A	1	AVX	0805	0.01uF
CAP, CERM, 1 uF, 50 V, +/- 10%, X7R, 0805	C18	08055C105KAT2A	1	AVX	0805	1uF
CAP, CERM, 1 uF, 50 V, +/- 10%, X7R, 0805	C21, C24, C28, C36	885012207103	4	Wurth Elektronik	0805	1uF
CAP, CERM, 1000 pF, 50 V, +/- 10%, X7R, 0805	C22, C25, C29, C37	C0805C102K5RACTU	4	Kemet	0805	1000pF
CAP, Tantalum Polymer, 100 µF, 35 V, +/- 20%, 0.1 ohm, 7.3x6.1mm SMD	C30	TCN4107M035R0100	1	AVX	7.3x6.1mm	100uF
CAP, TA, 47 uF, 10 V, +/- 10%, 0.65 ohm, SMD	C31	TPSB476K010R0650	1	AVX	3528-21	47uF
Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	H1, H2, H3, H4	NY PMS 440 0025 PH	4	B&F Fastener Supply	Screw	
Standoff, Hex, 0.5"L #4-40 Nylon	H5, H6, H7, H8	1902C	4	Keystone	Standoff	

Table 6-4. TPS7H5008EVM BOM (continued)

DESCRIPTION	DESIGNATOR	PARTNUMBER	QUANTITY	MANUFACTURER	PACKAGEREFERENCE	VALUE
Compact Probe Tip Circuit Board Test Points, TH, 25 per	J1, J2	131-5031-00	2	Tektronix	TH Scope Probe	
Header, 100mil, 2x1, Tin, TH	J5	PEC02SAAN	1	Sullins Connector Solutions	Header, 2 PIN, 100mil, Tin	
Header, 100mil, 3x1, Tin, TH	J6	PEC03SAAN	1	Sullins Connector Solutions	Header, 3 PIN, 100mil, Tin	
Terminal Block, 3.5mm Pitch, 2x1, TH	J11	ED555/2DS	1	On-Shore Technology	7.0x8.2x6.5mm	
RES, 0, 5%, 0.125 W, 0603	R1, R2, R3, R12, R13, R18, R32, R34, R37, R38, R42, R43, R44, R48, R49, R53, R54, R55, R59, R60, R61, R63, R66, R68, R69, R70, R71, R74, R75, R76, R77, R78, R79, R81, R82, R84, R85, R87, R88, R89, R90, R91, R92, R93, R98, R99, R102, R103, R108, R109, R110, R111, R112, R113, R114, R115, R116, R117	MCT06030Z0000ZP500	58	Vishay/Beyschlag	0603	0
RES, 0, 5%, 1 W, AEC-Q200 Grade 0, 2512	R4, R101	CRCW25120000Z0EG	2	Vishay-Dale	2512	0
RES, 10.0 k, 1%, 0.125 W, AEC- Q200 Grade 0, 0805	R9, R10	CRCW080510K0FKEA	2	Vishay-Dale	0805	10.0k
RES, 1.00 k, 0.1%, 0.125 W, 0805	R14	RG2012P-102-B-T5	1	Susumu Co Ltd	0805	1.00k
RES, 20.0 k, 0.1%, 0.125 W, 0805	R15	RG2012P-203-B-T5	1	Susumu Co Ltd	0805	20.0k
RES, 10.0 k, 1%, 0.2 W, 0805	R21	MCU08050C1002FP500	1	Vishay/Beyschlag	0805	10.0k
RES, 10.0, 0.1%, 0.1 W, 0805	R24, R26	CRT0805-BY-10R0ELF	2	Bourns	0805	10.0
RES, 3.90 k, 0.5%, 0.1 W, 0805	R25	RR1220P-392-D	1	Susumu Co Ltd	0805	3.90k
RES, 5.90 k, 1%, 0.125 W, AEC- Q200 Grade 0, 0805	R27	CRCW08055K90FKEA	1	Vishay-Dale	0805	5.90k
RES, 135 k, 0.1%, 0.125 W, 0805	R31	RT0805BRD07135KL	1	Yageo America	0805	135k
RES, 191 k, 1%, 0.125 W, AEC- Q200 Grade 0, 0805	R33	CRCW0805191KFKEA	1	Vishay-Dale	0805	191k
RES, 1.00 M, 0.5%, 0.1 W, 0805	R35	RR1220P-105-D	1	Susumu Co Ltd	0805	1.00Meg
RES, 1.0 k, 5%, 0.125 W, AEC- Q200 Grade 0, 0805	R36	CRCW08051K00JNEA	1	Vishay-Dale	0805	1.0k

Table 6-4. TPS7H5008EVM BOM (continued)

DESCRIPTION	DESIGNATOR	PARTNUMBER	QUANTITY	MANUFACTURER	PACKAGEREFERENCE	VALUE
RES, 49.9 k, 0.1%, 0.125 W, 0805	R39	RG2012P-4992-B-T5	1	Susumu Co Ltd	0805	49.9k
RES, 30.0 k, 0.5%, 0.1 W, 0805	R40	RR1220P-303-D	1	Susumu Co Ltd	0805	30.0k
RES, 4.70 k, 1%, 0.5 W, AEC-Q200 Grade 0, 0805	R41	ERJ-P06F4701V	1	Panasonic	0805	4.70k
RES, 0, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	R45, R46, R47, R86, R94, R95, R96, R104, R105, R106	RMCF0603ZT0R00	10	Stackpole Electronics Inc	0603	0
RES, 10, 5%, 35 W, DDPAK	R100	TDH35P10R0JE	1	Ohmite	DDPAK	10
Test Point, Multipurpose, Purple, TH	TP1, TP9, TP17, TP18, TP19	5129	5	Keystone	Purple Multipurpose Testpoint	
Test Point, Multipurpose, Grey, TH	TP2, TP8, TP16	5128	3	Keystone	Grey Multipurpose Testpoint	
Test Point, Multipurpose, White, TH	TP5	5012	1	Keystone	White Multipurpose Testpoint	
Test Point, Multipurpose, Red, TH	TP7	5010	1	Keystone	Red Multipurpose Testpoint	
Test Point, Multipurpose, Blue, TH	TP10	5127	1	Keystone	Blue Multipurpose Testpoint	
Test Point, Multipurpose, Orange, TH	TP11, TP20, TP21, TP22, TP23, TP24, TP25, TP26, TP27	5013	9	Keystone	Orange Multipurpose Testpoint	
Test Point, Miniature, SMT	TP13, TP14	5019	2	Keystone	Test Point, Miniature, SMT	
Radiation-Hardened 2 MHz Current Mode PWM Controllers in Space Enhanced Plastic	U1	TPS7H5008MPWSEP	1	Texas Instruments	TSSOP24	
800mA Low-Dropout Linear Regulator, 4-pin SOT-223	U4	LM1117MPX-5.0	1	Texas Instruments	DCY0004A	
250 MHz, Rail-to-Rail I/O, CMOS Single Operational Amplifier, 2.5 to 5.5 V, -40 to 125 degC, 5-pin SOT23 (DBV5), Green (RoHS & no Sb/Br)	U5, U6	OPA354AIDBVR	2	Texas Instruments	DBV0005A	
CAP, CERM, 20 pF, 100 V, +/- 5%, C0G/NP0, 0805	C7, C8	08051A200JAT2A	0	AVX	0805	20pF
CAP, CERM, 1000 pF, 50 V, +/- 10%, C0G/NP0, 0805	C11	08055A102KAT2A	0	AVX	0805	1000pF
CAP, CERM, 0.01 uF, 50 V, +/- 20%, X7R, 0805	C12	C0805C103M5RACTU	0	Kemet	0805	0.01uF

Table 6-4. TPS7H5008EVM BOM (continued)

DESCRIPTION	DESIGNATOR	PARTNUMBER	QUANTITY	MANUFACTURER	PACKAGE REFERENCE	VALUE
CAP, CERM, 0.47 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805	C13	GCM21BR71H474KA55L	0	MuRata	0805	0.47uF
CAP, CERM, 1 uF, 50 V, +/- 5%, X7R, AEC-Q200 Grade 1, 1210	C14	C1210C105J5RACTU	0	Kemet	1210	1uF
CAP, CERM, 0.1 uF, 25 V, +/- 10%, X7R, 0805	C19, C32, C33, C38, C39	C0805C104K3RACTU	0	Kemet	0805	0.1uF
CAP, CERM, 0.1 uF, 25 V, +/- 10%, X7R, 0603	C26, C34	C0603X104K3RACTU	0	Kemet	0603	0.1uF
Fiducial mark. There is nothing to buy or mount.	FID1, FID2, FID3, FID4, FID5, FID6	N/A	0	N/A	N/A	
Compact Probe Tip Circuit Board Test Points, TH, 25 per	J3, J4	131-5031-00	0	Tektronix	TH Scope Probe	
Header Mate, 2.54mm, 21x2	J7, J8, J9, J10	820-22-042-30-001101_MATE	0	Mill-Max	Pads to Mate with Mill-Max_820-22-042-30-001101	
RES, 1.00 M, 0.5%, 0.1 W, 0805	R5, R6, R7, R8	RR1220P-105-D	0	Susumu Co Ltd	0805	1.00Meg
RES, 0, 5%, 0.125 W, 0603	R11, R16, R17, R19, R20, R22, R28, R50, R51, R52, R56, R57, R58, R62, R64, R65, R67, R72, R73, R80, R83	MCT06030Z0000ZP500	0	Vishay/Beyschlag	0603	0
RES, 0, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	R23, R97, R107	RMCF0603ZT0R00	0	Stackpole Electronics Inc	0603	0
RES, 49.9 k, 0.1%, 0.125 W, 0805	R29, R30	RG2012P-4992-B-T5	0	Susumu Co Ltd	0805	49.9k
Test Point, Multipurpose, Brown, TH	TP3	5125	0	Keystone	Brown Multipurpose Testpoint	
Test Point, Multipurpose, White, TH	TP4	5012	0	Keystone	White Multipurpose Testpoint	
Single 2-Input Positive-AND Gate, DCK0005A, LARGE T&R	U2, U3	SN74AHCT1G08DCKR	0	Texas Instruments	DCK0005A	

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