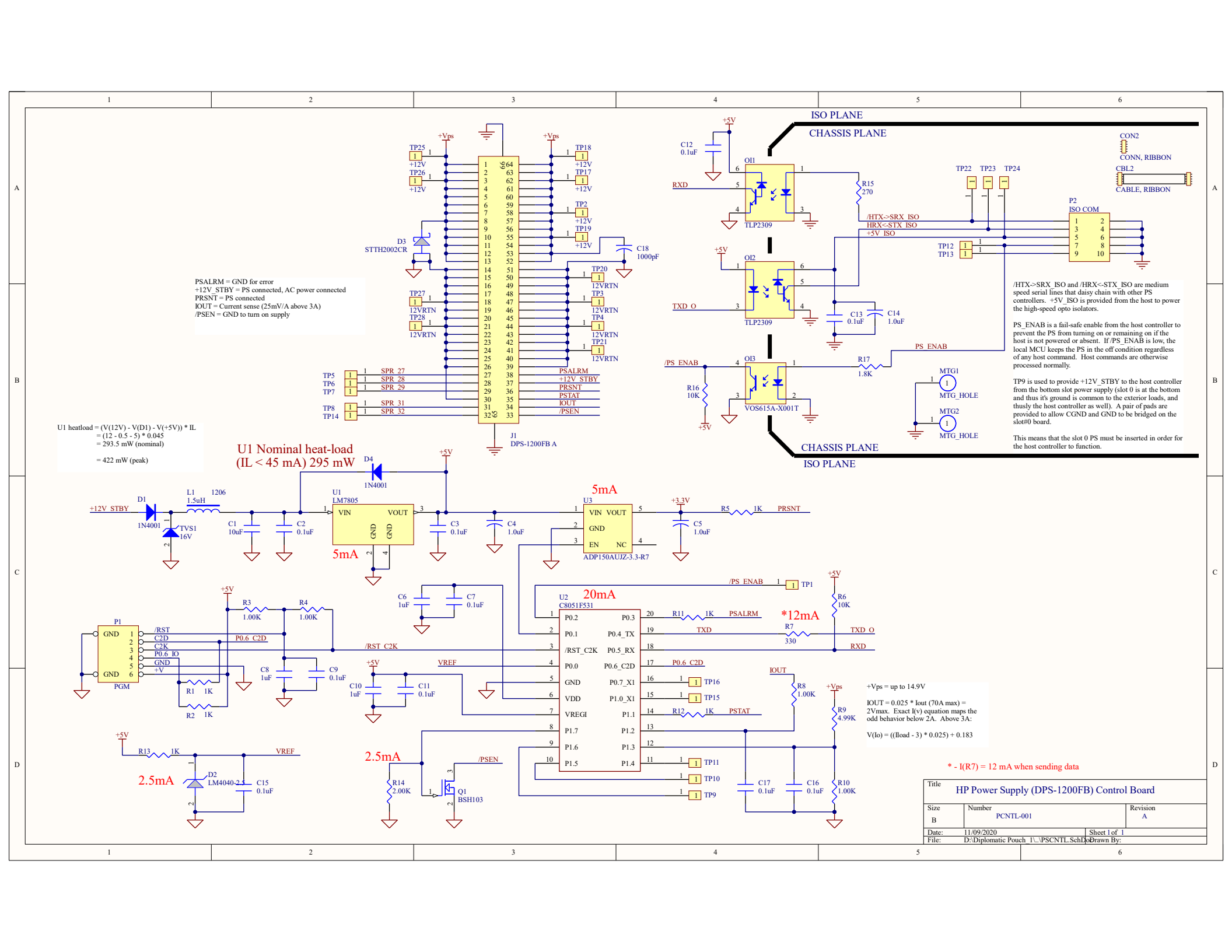
PSALRM = GND for error
+12V_STBY = PS connected, AC power connected
PRSNT = PS connected
IOUT = Current sense (25mV/A above 3A)
/PSEN = GND to turn on supply
U1 heatload = (V(12V) - V(D1) - V(+5V)) * IL
= (12 - 0.5 - 5) * 0.045
= 293.5 mW (nominal)
= 422 mW (peak)
U1 Nominal heat-load
(IL < 45 mA) 295 mW
ISO PLANE
CHASSIS PLANE
/HTX->SRX_ISO and /HRX<-STX_ISO are medium speed serial lines that daisy chain with other PS controllers. +5V_ISO is provided from the host to power the high-speed opto isolators.
PS_ENAB is a fail-safe enable from the host controller to prevent the PS from turning on or remaining on if the host is not powered or absent. If /PS_ENAB is low, the local MCU keeps the PS in the off condition regardless of any host command. Host commands are otherwise processed normally.
TP9 is used to provide +12V_STBY to the host controller from the bottom slot power supply (slot 0 is at the bottom and thus it's ground is common to the exterior loads, and thusly the host controller as well). A pair of pads are provided to allow CGND and GND to be bridged on the slot#0 board.
This means that the slot 0 PS must be inserted in order for the host controller to function.
+Vps = up to 14.9V
IOUT = 0.025 * Iout (70A max) = 2Vmax. Exact I(v) equation maps the odd behavior below 2A. Above 3A:
V(Io) = ((Iload - 3) * 0.025) + 0.183
* - I(R7) = 12 mA when sending data
HP Power Supply (DPS-1200FB) Control Board
PCNTL-001
A
B
11/09/2020
Sheet 1 of 1
D:\Diplomatic Pouch_1\..\PSCNTL.SchDoc
Drawn By:

QTY	REFDES	Comment	Description	Footprint	MPN	MFR	MPN_ALT	MFR_ALT
1	C1	10uF	CAP, MLCC, 25V, 0805, 10uF	0805	TMK212BBJ106MGHT	Taiyo Yuden		
10	C2, C3, C7, C9, C11, C12, C13, C15, C16, C17	0.1uF	CAP, MLCC, 25V, 0402, 0.1uF	0402	UMK105B7104KV-FR	Tiayo Yuden		
3	C4, C5, C14	1.0uF	CAP, MLCC, 25V, 0805, 1.0uF	0805	C0805C105K3RACTU	Kemet		
3	C6, C8, C10	1uF	CAP, MLCC, 25V, 0603, 1.0uF	0603	C0603C105K3RACTU	Kemet		
1	C18	1000pF	CAP, MLCC, 100V, 1206, 1000pF	1206	VJ1206A102JXBAT	Vishay		
REF	CBL2	CABLE, RIBBON	CBL, RBN, 0.05in PTCH	n/a	63911015521CAB (length as req'd)	Wurth Elektronik		
REF	CON2	CONN, RIBBON	CON, WIRE	n/a	164-9006-E	Kobiconn		
2	D1, D4	1N4001	DIO, 1A, SMD	SMB_POL	STPS5L60U	STM		
1	D2	LM4040-2.5	DIO, REF, PREC, SMD, 2.500V	SOT23-A	LM4040B25FTA	Diodes Inc.		
1	D3	STTH2002CR	DIO, SMD, SHKY, 1A	D2PAK	STTH2002CR	STM		
1	J1	DPS-1200FB A	CON, EDG, 64 PIN	CONN_EDGE_10046971-001LF	10046971-001LF	Amphenol		
1	L1	1.5uH	IND, SMD, 1.5uH, 2A, 1206	1206	CKP32161R5M-T	Taiyo Yuden		
2	OI1, OI2	TLP2309	ISO, OPTO, HS	SOP6_TLP2309	TLP2309(TPL,E)	Toshiba		
1	OI3	VOS615A-X001T	ISO, OPTO	TSSOP-4	VOS615A-X001T	Vishay		
1	P1	PGM	HDR, 6POS, 1.25mm	CON_1.25MM_6P	53398-0671 {Vert}	Molex	53261-0671 {RA}	Molex
1	P2	ISO COM	CON, 10 POS, 2ROW, 0.1in PTCH	IDC10	5103309-1	TE Connectivity		
1	Q1	BSH103	TR, FET, N, 1A, 30V, SOT-23	SOT23	NDS355AN	On Semi		
10	R1, R2, R3, R4, R5, R8, R10, R11, R12, R13	1K, 1.00K	RES, CHP, 0402, 1%, 1.00K	0402	RC0402FR-071KL	Yageo		
2	R6, R16	10K	RES, CHP, 0402, 1%, 10.0K	0402	RC0402FR-0710KL	Yageo		
1	R7	330	RES, CHP, 0603, 1%, 330	0603	RC0603FR-07330RL	Yageo		
1	R9	4.99K	RES, CHP, 0402, 1%, 4.99K	0402	RC0402FR-074K99L	Yageo		
1	R14	2.00K	RES, CHP, 0402, 1%, 2.00K	0402	RC0402FR-072KL	Yageo		
1	R15	270	RES, CHP, 0603, 1%, 270	0603	RC0603FR-07270RL	Yageo		
1	R17	1.8K	RES, CHP, 0402, 1%, 1.80K	0603	RC0402FR-071K8L	Yageo		
1	TVS1	16V	DIO, TVS, 13.8V, 600W	SMB	SMBJ16A-E3/5B	Vishay		
1	U1	LM7805	IC, VREG, FXD, 5.0V	TO-220	LM7805CT/NOPB	TI		
1	U2	C8051F531	IC, MCU, 8051, F531	TSSOP-20	C8051F531-C-IT	SiLabs		
1	U3	ADP150AUJZ-3.3-R7	IC, VREG, ULN, 3.3V	SOT-23-5	ADP150AUJZ-3.3-R7	Analog Devices		