






Features

- AmP PMIC enables programmable custom PMIC
- Integrate application targeted Power Components
- Power Blocks for a variety of topologies
 - Scalable Integrated N-channel MOSFETs (SIM)
 - Voltage, current sense for protection, telemetry, regulation
 - Build Switching topologies - High/Low current buck, single/two phase DrMOS control
 - Build Linear topologies - LDO, Load Switch
- Analog fabric connectivity for sensor signals
- Digital μ Logic fabric connectivity: Analog/Digital Blocks
- Industry first: Analog Proficiency - Digital Flexibility

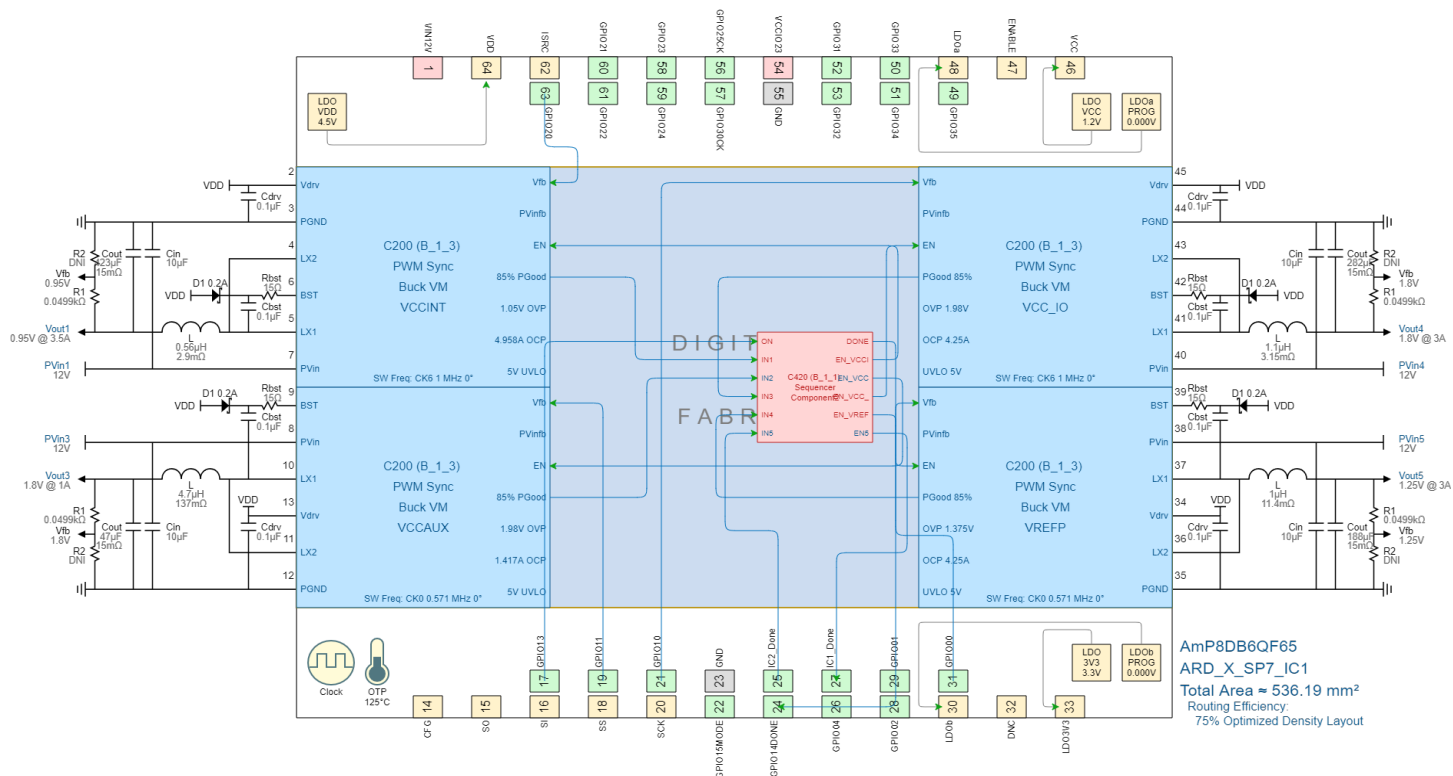
Order Information

Part Number	Package	Body Size
AmP8DB6QF65	QF65	5x5

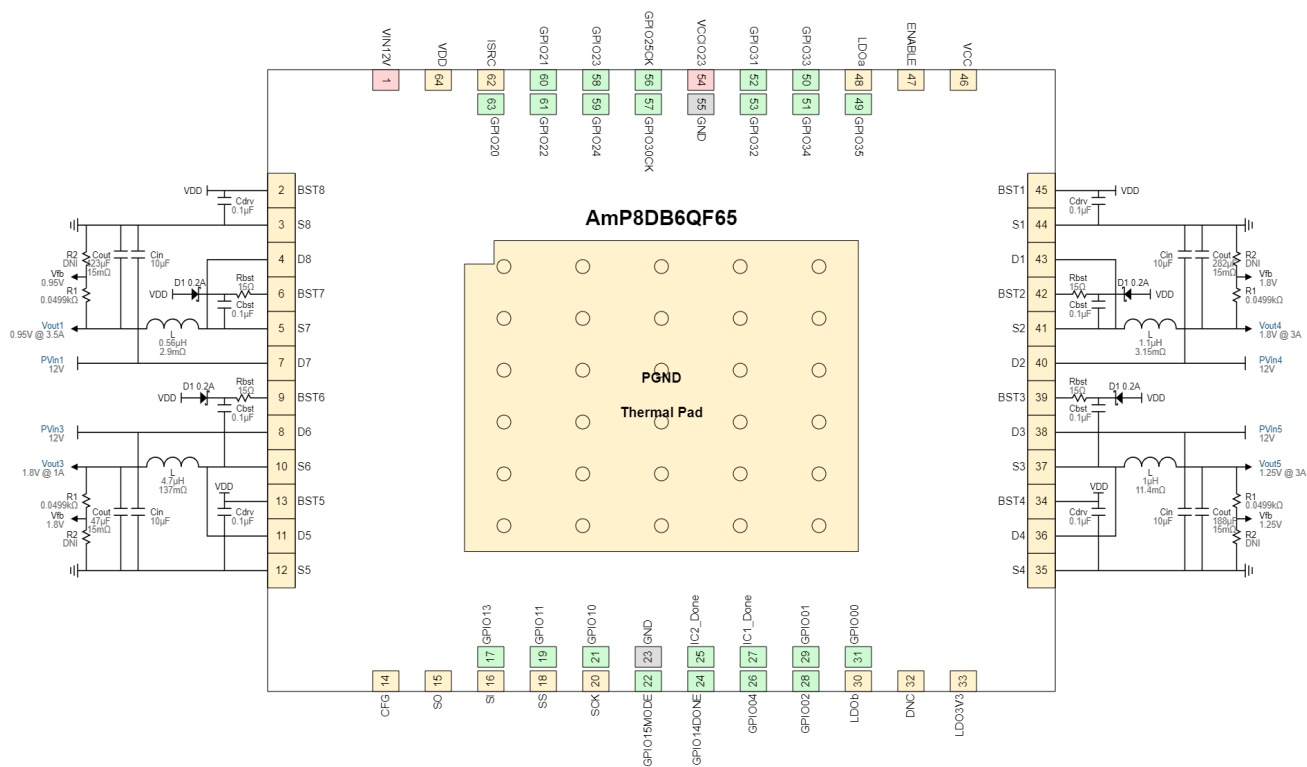
Power Component Summary

Spec	Category	Function	Part	Name	Key Parameter
	PWM Switching Regulator	PWM SyncBuck VM	C200	VCCINT	0.95V@3.5A
	PWM Switching Regulator	PWM SyncBuck VM	C200	VCCAUX	1.8V@1A
	PWM Switching Regulator	PWM SyncBuck VM	C200	VCC_IO	1.8V@3A
	PWM Switching Regulator	PWM SyncBuck VM	C200	VREFP	1.25V@3A
	Supervisor	Sequencer	C420	Component2	

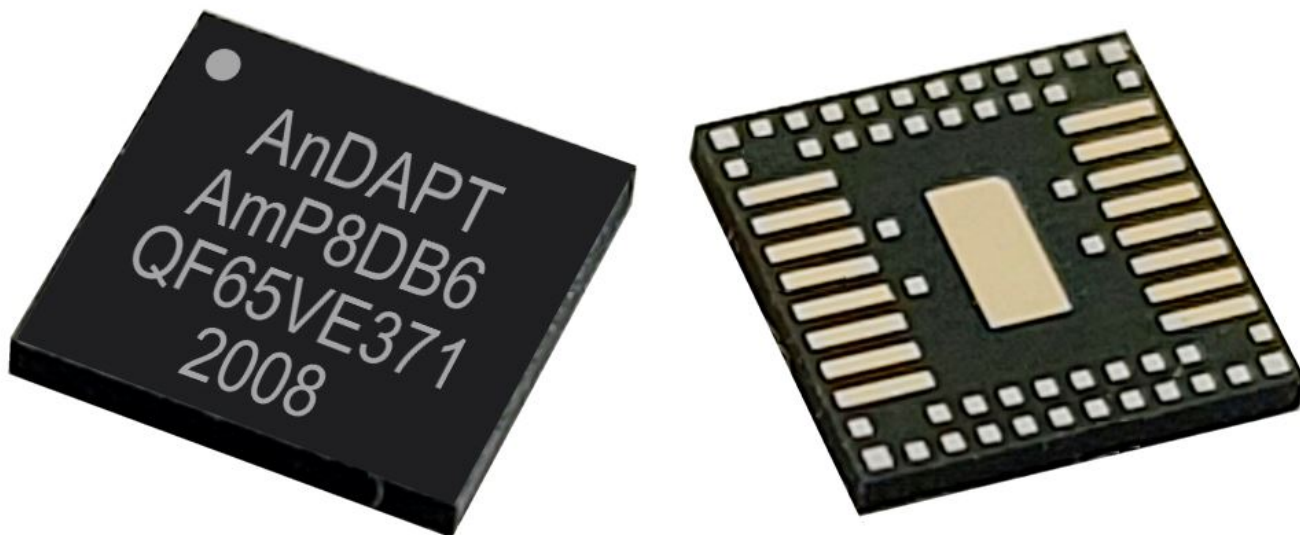
Power Component View



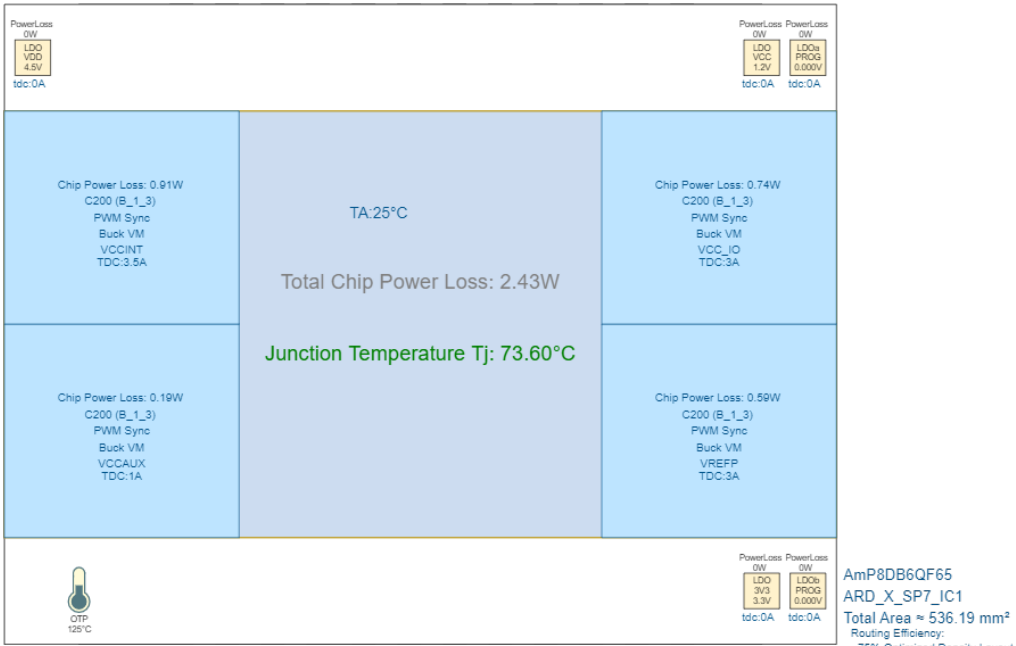
Package Top View (Pin and Thermal Pads are on bottom side)



Package Marking Example - QF65



Thermal View



Pin Configurations

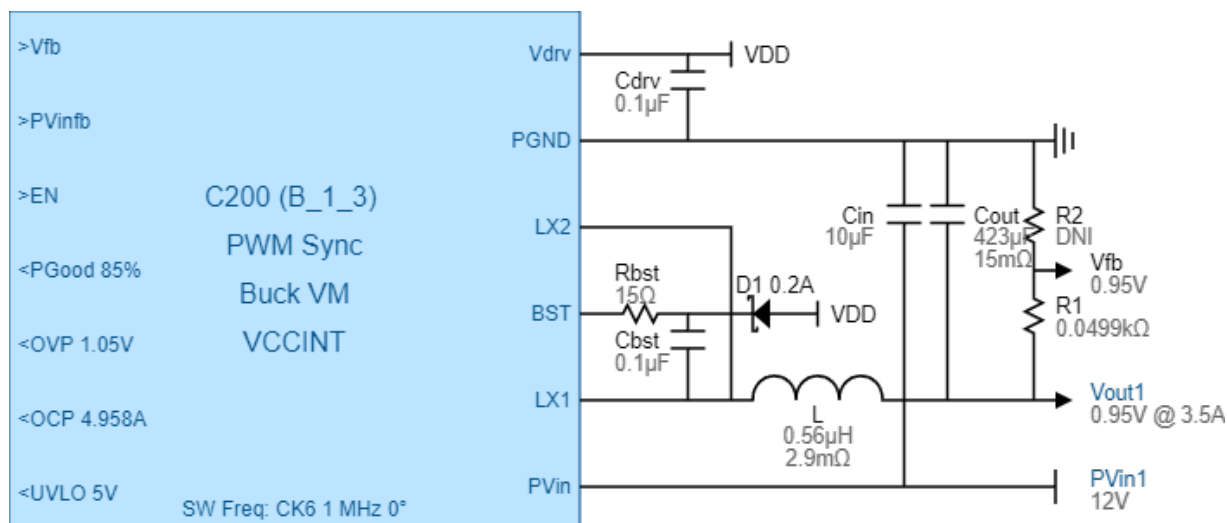
Pin Name	Design Name	Pin Number	Function
BST8		2	Boost
S8		3	Source
D8		4	Drain
BST7		6	Boost
S7		5	Source
D7		7	Drain
BST6		9	Boost
D6		8	Drain
S6		10	Source
BST5		13	Boost
D5		11	Drain
S5		12	Source
CFG		14	Configuration
SO		15	SPI serial out
SI		16	SPI serial in
GPIO13		17	GPIO
SS		18	SPI slave
GPIO11		19	GPIO
SCK		20	SPI clock
GPIO10		21	GPIO
GPIO15MODE		22	GPIO
GND		23	GND
GPIO14DONE		24	GPIO
GPIO05CK	IC2_Done	25	GPIO
GPIO04		26	GPIO
GPIO03	IC1_Done	27	GPIO
GPIO02		28	GPIO
GPIO01		29	GPIO
LDOb		30	LDO Prog.
GPIO00		31	GPIO
DNC		32	DNC
LDO3V3		33	LDO 3.3 V
S4		35	Source

Pin Name	Design Name	Pin Number	Function
D4		36	Drain
BST4		34	Boost
S3		37	Source
D3		38	Drain
BST3		39	Boost
D2		40	Drain
S2		41	Source
BST2		42	Boost
D1		43	Drain
S1		44	Source
BST1		45	Boost
VCC		46	LDO, 1.2 V
ENABLE		47	Enable AmP
LDOa		48	LDO, Prog.
GPIO35		49	GPIO
GPIO33		50	GPIO
GPIO34		51	GPIO
GPIO31		52	GPIO
GPIO32		53	GPIO
VCCIO23		54	IO bank supply
GND		55	GND
GPIO25CK		56	GPIO
GPIO30CK		57	GPIO
GPIO23		58	GPIO
GPIO24		59	GPIO
GPIO21		60	GPIO
GPIO22		61	GPIO
ISRC		62	LDO 3.3 V
GPIO20		63	GPIO
VDD		64	LDO 6 V
VIN		1	Supply
GND		65	GND Thermal Pad

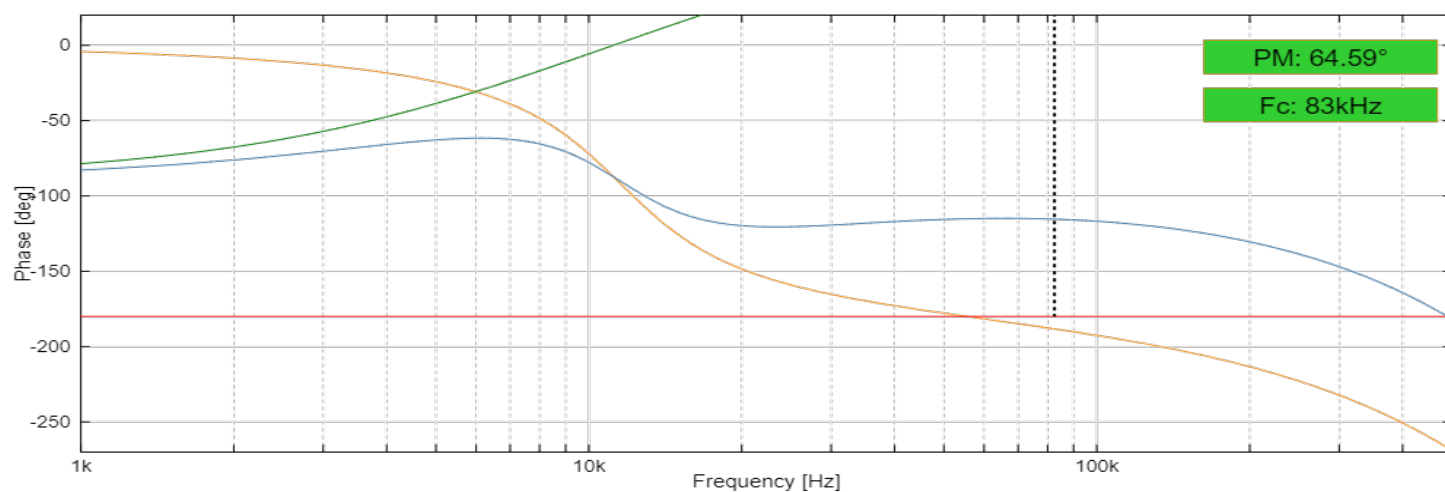
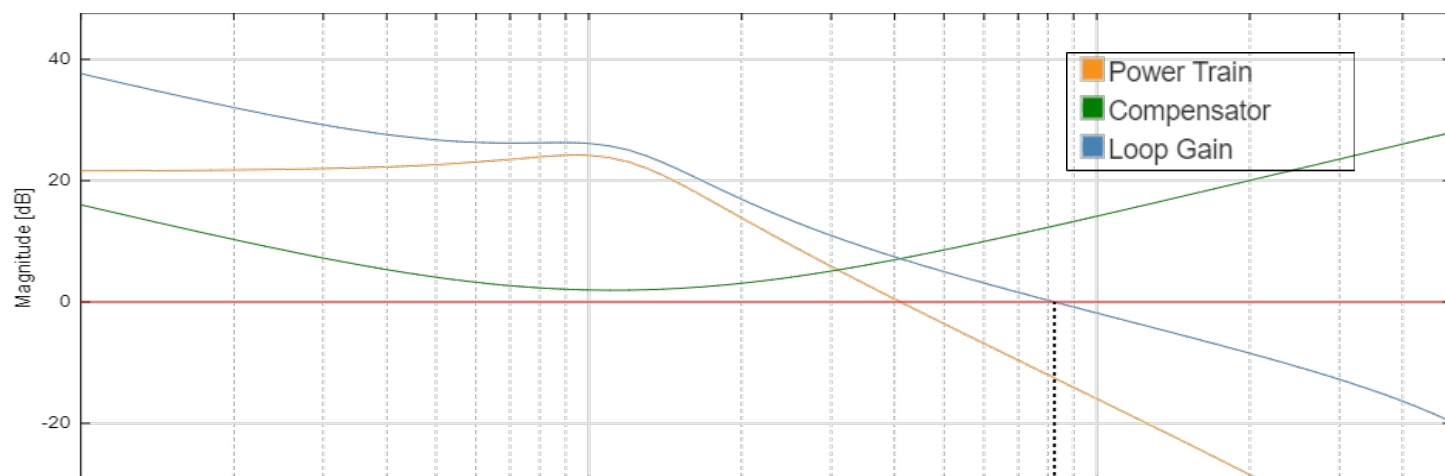
C200 PWM Sync Buck VM

AmP Power VCCINT

Schematic



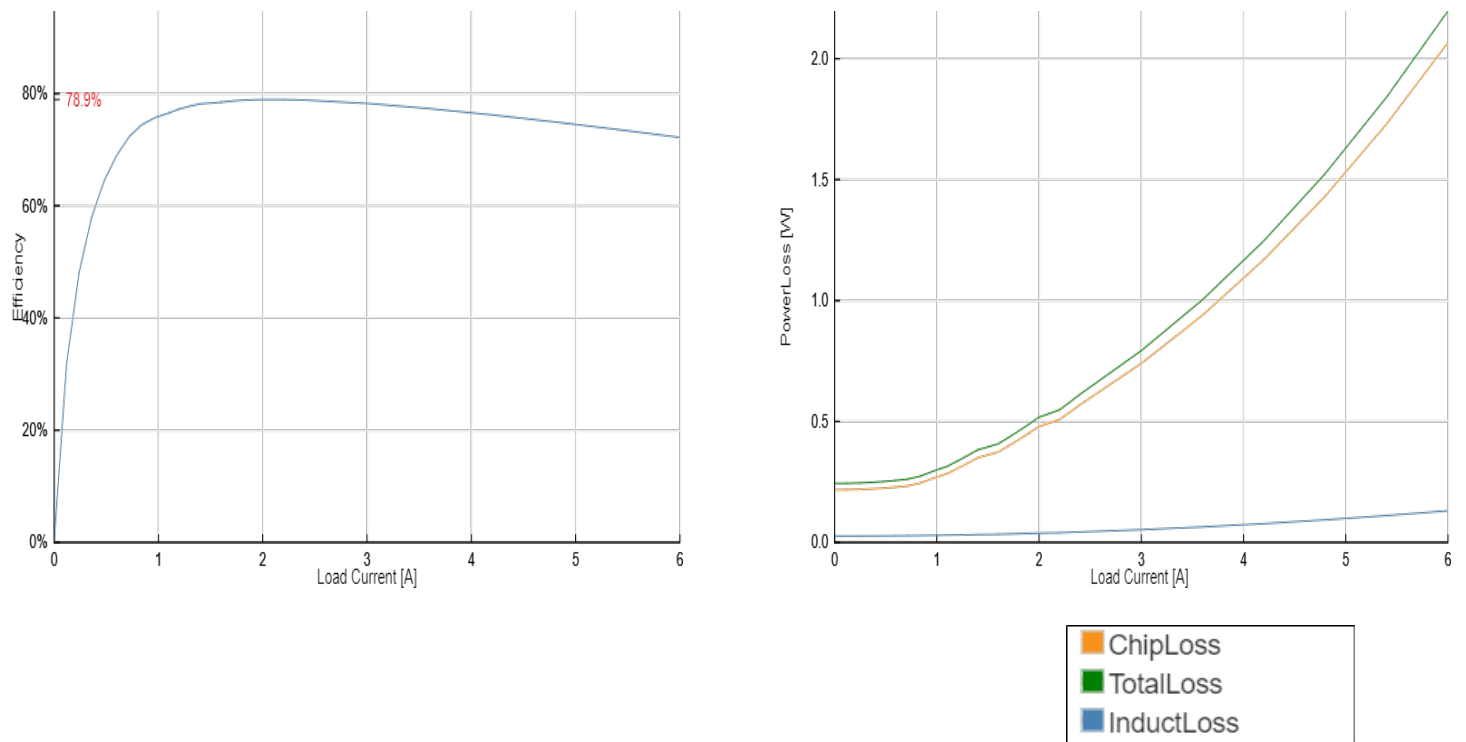
Bode Plot



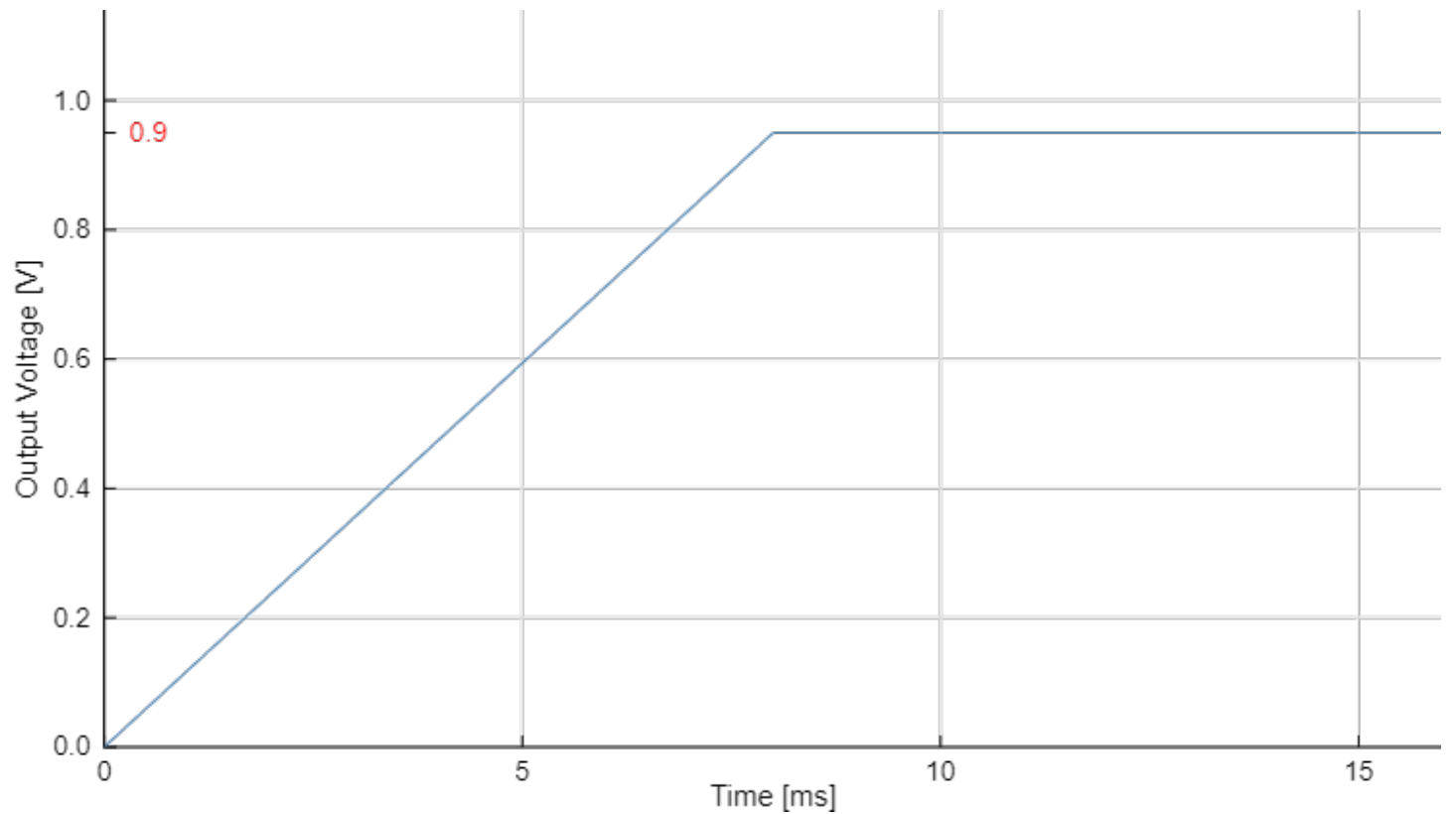
C200 PWM Sync Buck VM

AmP Power VCCINT

Efficiency



Soft Start



C200 PWM Sync Buck VM

AmP Power VCCINT

BoM

Part	Description	Recommended Attributes	Attributes	Quantity	Size (Imperial)	X(mm)	Y(mm)	Part Number	Spec	Manufacturer
C200	PWM Sync Buck VM		Vout1,0.95V @ 3.5A	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text"/>		<input type="text" value="AnDAPT, LLC"/>
L	Inductor	2.2µH, 10mΩ, >2.5A	0.56µH, 2.90mΩ, >2.5A, W	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="6.65"/>	<input type="text" value="6.45"/>	<input type="text" value="744393440056"/>		<input type="text" value="Würth Elektronik"/>
Cout (Ceramic)	Output Capacitor (Ceramic)	184µF, <15mΩ, >0.95V	47µF, 6.3V	<input type="text" value="9"/>	<input type="text" value="0805"/>	<input type="text" value="2"/>	<input type="text" value="1.25"/>	<input type="text" value="885012107006"/>		<input type="text" value="Würth Elektronik"/>
Cout (Bulk)	Output Capacitor (Bulk)		0µF, >0.95V	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text"/>		<input type="text"/>
Cin	Capacitor	10µF, <15mΩ, >12V	22µF, 3mΩ, 16V	<input type="text" value="1"/>	<input type="text" value="1206"/>	<input type="text" value="3.2"/>	<input type="text" value="1.6"/>	<input type="text" value="885012108018"/>		<input type="text" value="Würth Elektronik"/>
Cbst	Capacitor	0.1µF, >6V	0.1µF, 25V	<input type="text" value="1"/>	<input type="text" value="0402"/>	<input type="text" value="1"/>	<input type="text" value="0.5"/>	<input type="text" value="885012205085R"/>		<input type="text" value="Würth Elektronik"/>
Cdrv	Capacitor	0.1µF, >6V	0.1µF, 25V	<input type="text" value="1"/>	<input type="text" value="0402"/>	<input type="text" value="1"/>	<input type="text" value="0.5"/>	<input type="text" value="885012205085R"/>		<input type="text" value="Würth Elektronik"/>
D1	Schottky Diode	200mA, 0.5V	200mA, 0.5V	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="1.2"/>	<input type="text" value="0.8"/>	<input type="text" value="RB521S30T5G"/>		<input type="text" value="ON Semiconductor"/>
R1	Resistor	0.0499kΩ, 1%, 0.063W	0.0499kΩ, 1%, 0.063W	<input type="text" value="1"/>	<input type="text" value="0402"/>	<input type="text" value="1"/>	<input type="text" value="0.5"/>	<input type="text"/>		<input type="text"/>
R2	Resistor	DNI	DNI	<input type="text" value="0"/>	<input type="text" value="Optional"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text"/>		<input type="text"/>
Rbst	Resistor	15Ω	15Ω	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text"/>		<input type="text"/>

Total BoM Area ≈ 157.17 mm²

C200 PWM Sync Buck VM

AmP Power VCCINT

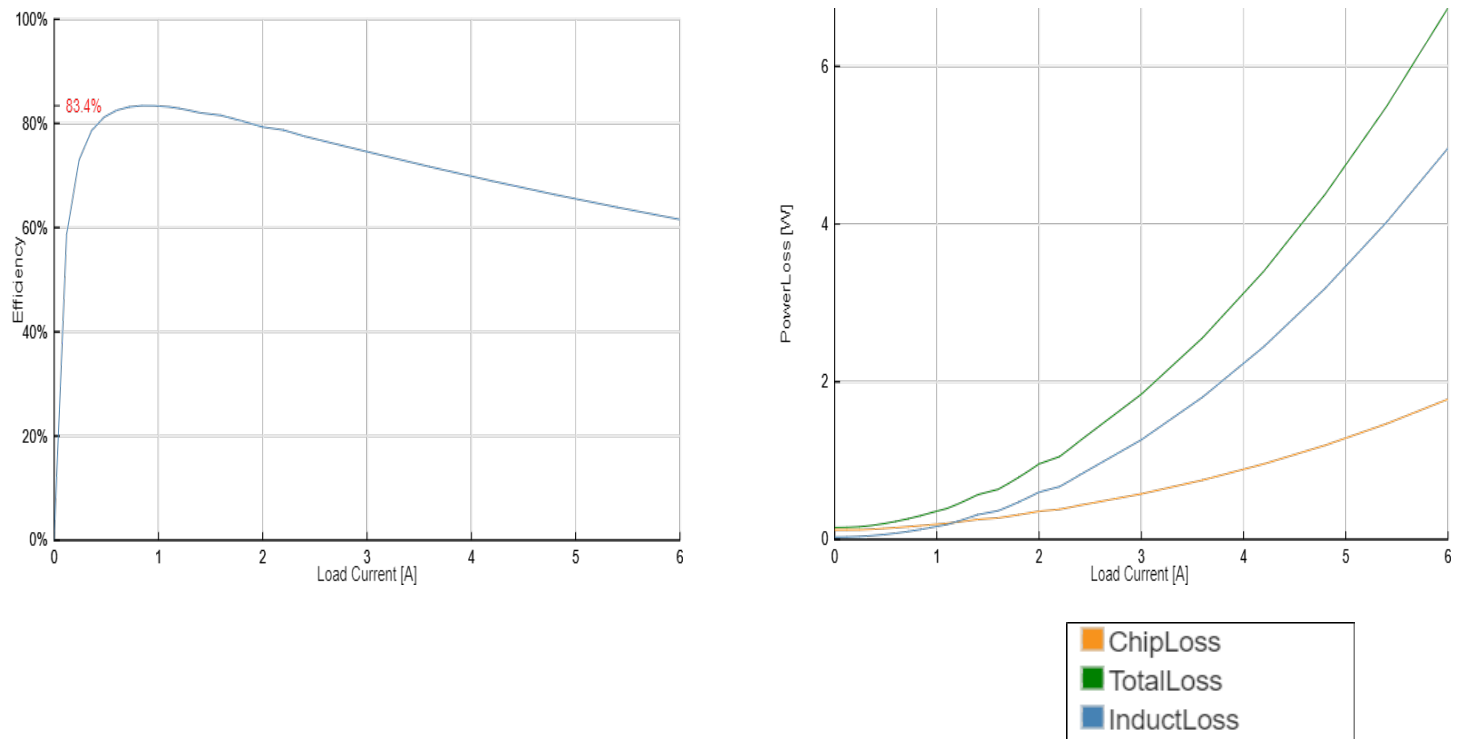
Parameters

Category	Parameter	Description	Value
Basic_Configuration	Fsw	Switching Frequency	1000kHz
Basic_Configuration	Vin	Nominal Input Voltage	12V
Basic_Configuration	Vin_Name	Used in The Schematics View	PVin1
Basic_Configuration	Vout	Nominal Output Voltage	0.95V
Basic_Configuration	Vout_Name	Used in The Schematics View	Vout1
Basic_Configuration	V_Ripple	Output Voltage Ripple	0.5mV
Basic_Configuration	V_Overshoot	Max Overshoot for a transient of Iout Delta	0V
Basic_Configuration	Iout	Maximum Converter Current	3.5A
Basic_Configuration	I_Ripple	Desired Ripple. Used for LC Recommendations	44.63%
Basic_Configuration	I_Delta	Used to Calculate Overshoot and Transient Response	2.5A
Manual_LC	Inductor	Nominal Inductor Value	0.56μH
Manual_LC	Inductor_DCR	Nominal Inductor DC Resistance	2.9mΩ
Manual_LC	Capacitor	Nominal Capacitor value	423μF
Manual_LC	Cap_ESR	Nominal Capacitor Equivalent Series Resistance	15mΩ
Manual_LC	CapacitorBlk	Nominal Capacitor value	0μF
Manual_LC	Cap_ESR_BlK	Nominal Capacitor Equivalent Series Resistance	0mΩ
Manual_LC	Inductor_R\$	Nominal Inductor Value	0.4μH
Manual_LC	Inductor_DCR_R\$	Nominal Inductor DC Resistance	10mΩ
Manual_LC	Capacitor_R\$	Nominal Capacitor value	184μF
Manual_LC	Cap_ESR_R\$	Nominal Capacitor Equivalent Series Resistance	15mΩ
Manual_LC	Capacitor_R_BlK\$	Nominal Capacitor value	0μF
Manual_LC	Cap_ESR_R_BlK\$	Nominal Capacitor Equivalent Series Resistance	15mΩ
Manual_LC	fLC	LC Resonant Frequency	10.3kHz
Manual_Resistor	R1		0.0499kΩ
Manual_Resistor	R2		DNI
Manual_Resistor	Vfb	$Vfb = Vout * R2 / (R1 + R2)$	0.95V
Manual_Resistor	R3		1370kΩ
Manual_Resistor	R4		107kΩ
Manual_Resistor	PVinfb		0.362V
Manual_Resistor	Rbst		15Ω
Manual_Resistor	Ext_Div_Ratio		1
Manual_Resistor	Ext_Div_Ratio2		13.804
Controller	Gain	Proportional Gain	500
Controller	Fz1	First Compensation Zero	5kHz
Controller	Fz2	Second Compensation Zero	25kHz
Controller	Ki	Integral Gain	1.570796e+7
Controller	Kd	Derivative gain	3.183099e-3
Controller	Jitter	jitter/transient performance optimization	Best jitter
Controller	Controller_Type		0
PID_Nonlinear	Kp_a		0
PID_Nonlinear	Ki_a		0
PID_Nonlinear	Kd_a		0
PID_Nonlinear	Kp_b		0
PID_Nonlinear	Ki_b		0
PID_Nonlinear	Kd_b		0
PID_Nonlinear	Kp_alpha		0
PID_Nonlinear	Ki_min		0
PID_Nonlinear	Kd_min		0
PID_Nonlinear	Kd_max		0
UVLO_EN	UVLO	Input Under Voltage Lockout	5V
UVLO_EN	UVLOSense	Internal: Sensed through High Side Drain pin. External: Sensed through a GPIO	Internal
VoUVLO_Group	VoUVLO	Output Under Voltage Lockout Threshold	0.75V
OCP_Group	OCP	Cycle by Cycle Current Protection Level	4.958A
OVP_EN	OVP	Output Over Voltage Protection Level	1.05V
Soft_Start_EN	UseCM	Use CM	enable
Soft_Start_EN	Rise_Time	Soft Start Length	8ms
PGood_EN	PGood	Power Good percentage of Nominal Vout	85%
WebAdapter Compatibility	webAdapterCompatible	Enable Resource Optimization	disable
hidden	Cin		10μF
hidden	Cbst		0.1μF
hidden	Cdrv		0.1μF
hidden	D1		0.2A

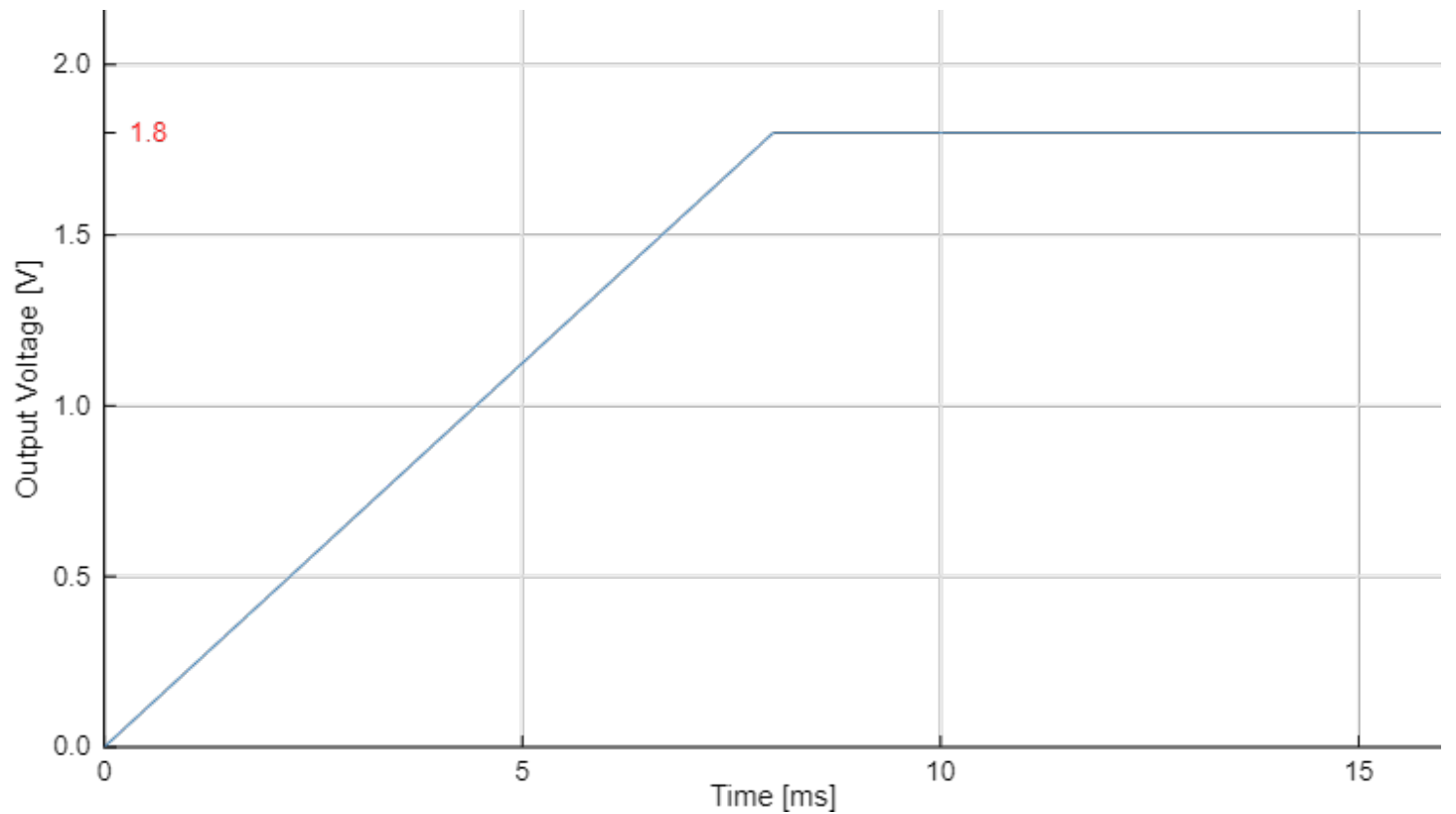
C200 PWM Sync Buck VM

AmP Power VCCAUX

Efficiency



Soft Start



C200 PWM Sync Buck VM

AmP Power VCCAUX

BoM

Part	Description	Recommended Attributes	Attributes	Quantity	Size (Imperial)	X(mm)	Y(mm)	Part Number	Spec	Manufacturer
C200	PWM Sync Buck VM		Vout3, 1.8V @ 1A	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text"/>		<input type="text" value="AnDAPT, LLC"/>
L	Inductor	10µH, 10mΩ, >0.35A	4.7µH, 137.00mΩ, >0.35A, W	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="3"/>	<input type="text" value="3"/>	<input type="text" value="74438336047"/>		<input type="text" value="Würth Elektronik"/>
Cout (Ceramic)	Output Capacitor (Ceramic)	1µF, <15mΩ, >1.8V	47µF, 6.3V	<input type="text" value="1"/>	<input type="text" value="0805"/>	<input type="text" value="2"/>	<input type="text" value="1.25"/>	<input type="text" value="885012107006"/>		<input type="text" value="Würth Elektronik"/>
Cout (Bulk)	Output Capacitor (Bulk)		0µF, >1.8V	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text"/>		<input type="text"/>
Cin	Capacitor	10µF, <15mΩ, >12V	22µF, 3mΩ, 16V	<input type="text" value="1"/>	<input type="text" value="1206"/>	<input type="text" value="3.2"/>	<input type="text" value="1.6"/>	<input type="text" value="885012108018"/>		<input type="text" value="Würth Elektronik"/>
Cbst	Capacitor	0.1µF, >6V	0.1µF, 25V	<input type="text" value="1"/>	<input type="text" value="0402"/>	<input type="text" value="1"/>	<input type="text" value="0.5"/>	<input type="text" value="885012205085R"/>		<input type="text" value="Würth Elektronik"/>
Cdrv	Capacitor	0.1µF, >6V	0.1µF, 25V	<input type="text" value="1"/>	<input type="text" value="0402"/>	<input type="text" value="1"/>	<input type="text" value="0.5"/>	<input type="text" value="885012205085R"/>		<input type="text" value="Würth Elektronik"/>
D1	Schottky Diode	200mA, 0.5V	200mA, 0.5V	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="1.2"/>	<input type="text" value="0.8"/>	<input type="text" value="RB521S30T5G"/>		<input type="text" value="ON Semiconductor"/>
R1	Resistor	0.0499kΩ, 1%, 0.063W	0.0499kΩ, 1%, 0.063W	<input type="text" value="1"/>	<input type="text" value="0402"/>	<input type="text" value="1"/>	<input type="text" value="0.5"/>	<input type="text"/>		<input type="text"/>
R2	Resistor	DNI	DNI	<input type="text" value="0"/>	<input type="text" value="Optional"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text"/>		<input type="text"/>
Rbst	Resistor	15Ω	15Ω	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text"/>		<input type="text"/>

Total BoM Area ≈ 49.19 mm²

C200 PWM Sync Buck VM

AmP Power VCCAUX

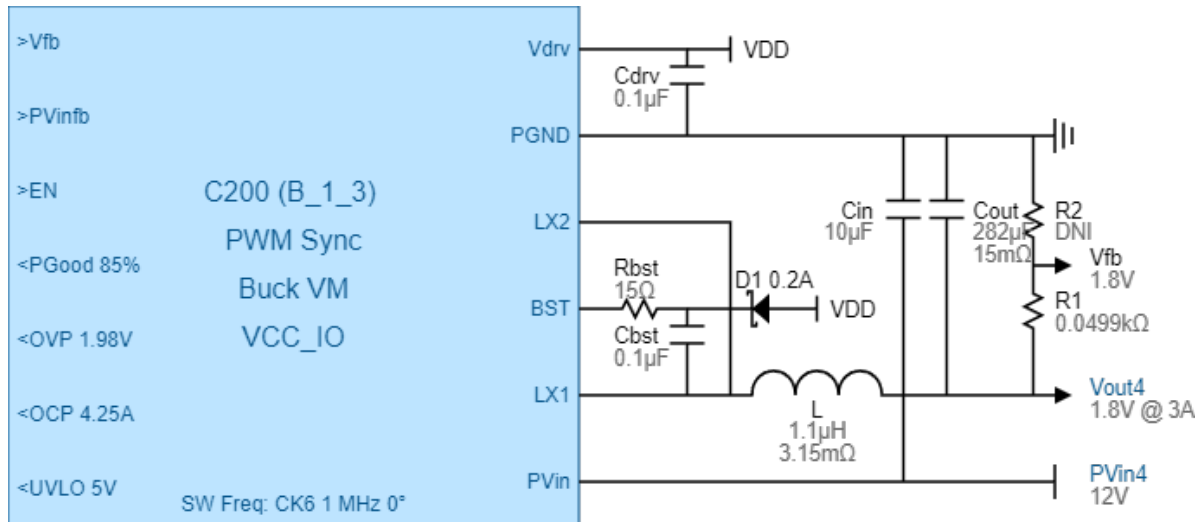
Parameters

Category	Parameter	Description	Value
Basic_Configuration	Fsw	Switching Frequency	571kHz
Basic_Configuration	Vin	Nominal Input Voltage	12V
Basic_Configuration	Vin_Name	Used in The Schematics View	PVin3
Basic_Configuration	Vout	Nominal Output Voltage	1.8V
Basic_Configuration	Vout_Name	Used in The Schematics View	Vout3
Basic_Configuration	V_Ripple	Output Voltage Ripple	2.7mV
Basic_Configuration	V_Overshoot	Max Overshoot for a transient of Iout Delta	0V
Basic_Configuration	Iout	Maximum Converter Current	1A
Basic_Configuration	I_Ripple	Desired Ripple. Used for LC Recommendations	57.01%
Basic_Configuration	I_Delta	Used to Calculate Overshoot and Transient Response	0.1A
Manual_LC	Inductor	Nominal Inductor Value	4.7μH
Manual_LC	Inductor_DCR	Nominal Inductor DC Resistance	137mΩ
Manual_LC	Capacitor	Nominal Capacitor value	47μF
Manual_LC	Cap_ESR	Nominal Capacitor Equivalent Series Resistance	15mΩ
Manual_LC	CapacitorBlk	Nominal Capacitor value	0μF
Manual_LC	Cap_ESR_BlK	Nominal Capacitor Equivalent Series Resistance	0mΩ
Manual_LC	Inductor_R\$	Nominal Inductor Value	1.645μH
Manual_LC	Inductor_DCR_R\$	Nominal Inductor DC Resistance	10mΩ
Manual_LC	Capacitor_R\$	Nominal Capacitor value	1μF
Manual_LC	Cap_ESR_R\$	Nominal Capacitor Equivalent Series Resistance	15mΩ
Manual_LC	Capacitor_R_BlK\$	Nominal Capacitor value	0μF
Manual_LC	Cap_ESR_R_BlK\$	Nominal Capacitor Equivalent Series Resistance	15mΩ
Manual_LC	fLC	LC Resonant Frequency	10.7kHz
Manual_Resistor	R1		0.0499kΩ
Manual_Resistor	R2		DNI
Manual_Resistor	Vfb	$Vfb = Vout * R2 / (R1 + R2)$	1.8V
Manual_Resistor	R3		1370kΩ
Manual_Resistor	R4		107kΩ
Manual_Resistor	PVinfb		0.362V
Manual_Resistor	Rbst		15Ω
Manual_Resistor	Ext_Div_Ratio		1
Manual_Resistor	Ext_Div_Ratio2		13.804
Controller	Gain	Proportional Gain	500
Controller	Fz1	First Compensation Zero	5kHz
Controller	Fz2	Second Compensation Zero	25kHz
Controller	Ki	Integral Gain	1.570796e+7
Controller	Kd	Derivative gain	3.183099e-3
Controller	Jitter	jitter/transient performance optimization	Best jitter
Controller	Controller_Type		0
PID_Nonlinear	Kp_a		0
PID_Nonlinear	Ki_a		0
PID_Nonlinear	Kd_a		0
PID_Nonlinear	Kp_b		0
PID_Nonlinear	Ki_b		0
PID_Nonlinear	Kd_b		0
PID_Nonlinear	Kp_alpha		0
PID_Nonlinear	Ki_min		0
PID_Nonlinear	Kd_min		0
PID_Nonlinear	Kd_max		0
UVLO_EN	UVLO	Input Under Voltage Lockout	5V
UVLO_EN	UVLOSense	Internal: Sensed through High Side Drain pin. External: Sensed through a GPIO	Internal
VoUVLO_Group	VoUVLO	Output Under Voltage Lockout Threshold	1.384V
OCP_Group	OCP	Cycle by Cycle Current Protection Level	1.417A
OVP_EN	OVP	Output Over Voltage Protection Level	1.98V
Soft_Start_EN	UseCM	Use CM	enable
Soft_Start_EN	Rise_Time	Soft Start Length	8ms
PGood_EN	PGood	Power Good percentage of Nominal Vout	85%
WebAdapter Compatibility	webAdapterCompatible	Enable Resource Optimization	disable
hidden	Cin		10μF
hidden	Cbst		0.1μF
hidden	Cdrv		0.1μF
hidden	D1		0.2A

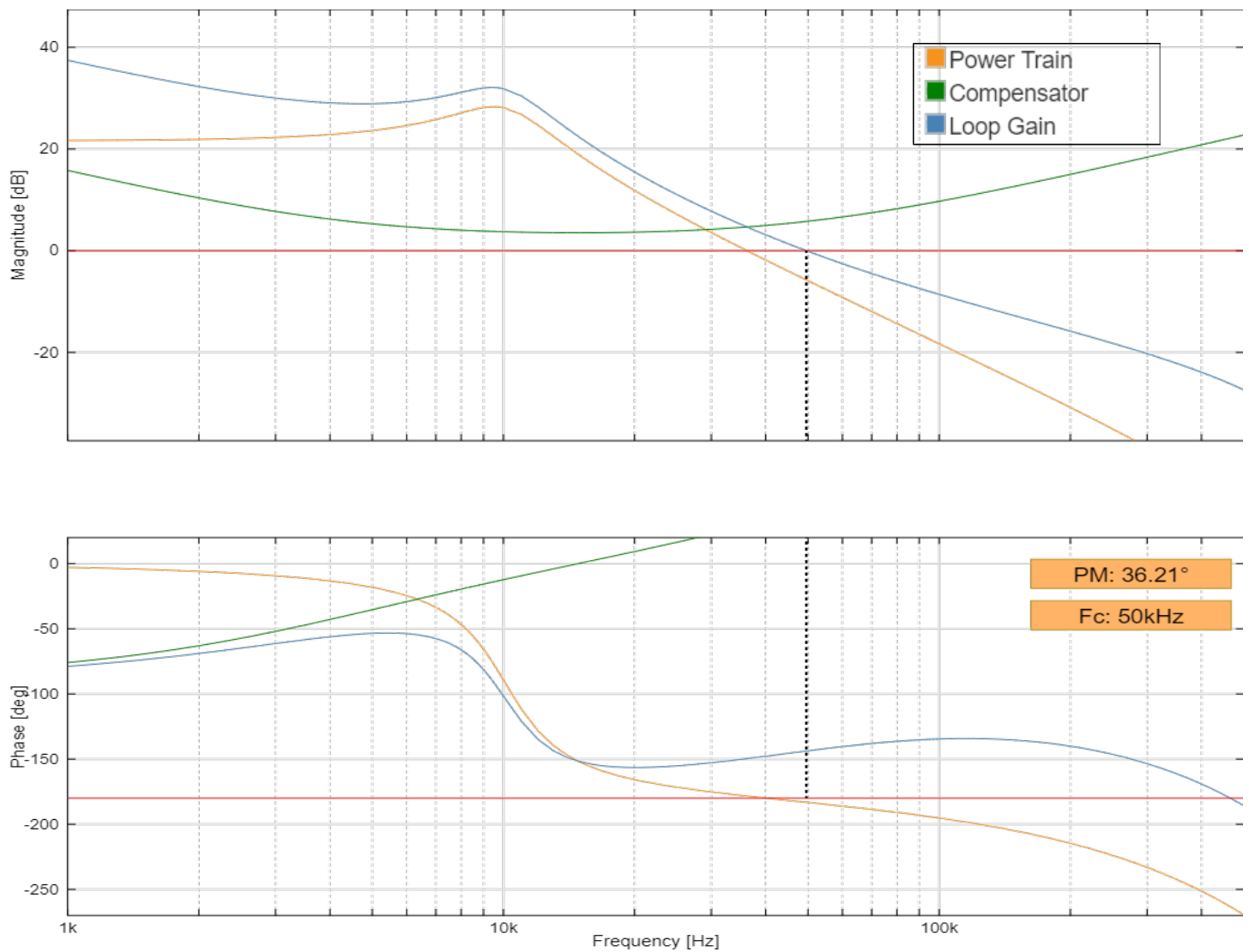
C200 PWM Sync Buck VM

AmP Power VCC_IO

Schematic



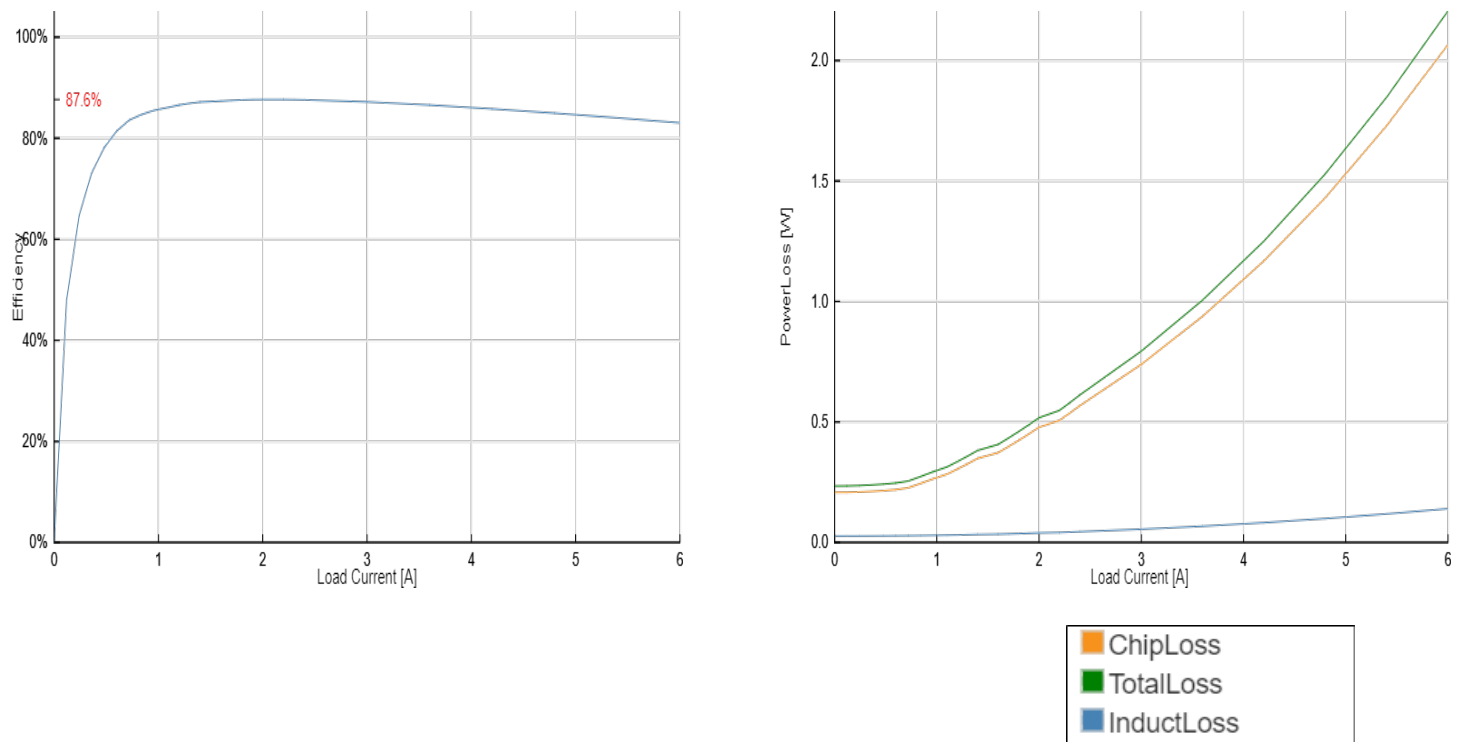
Bode Plot



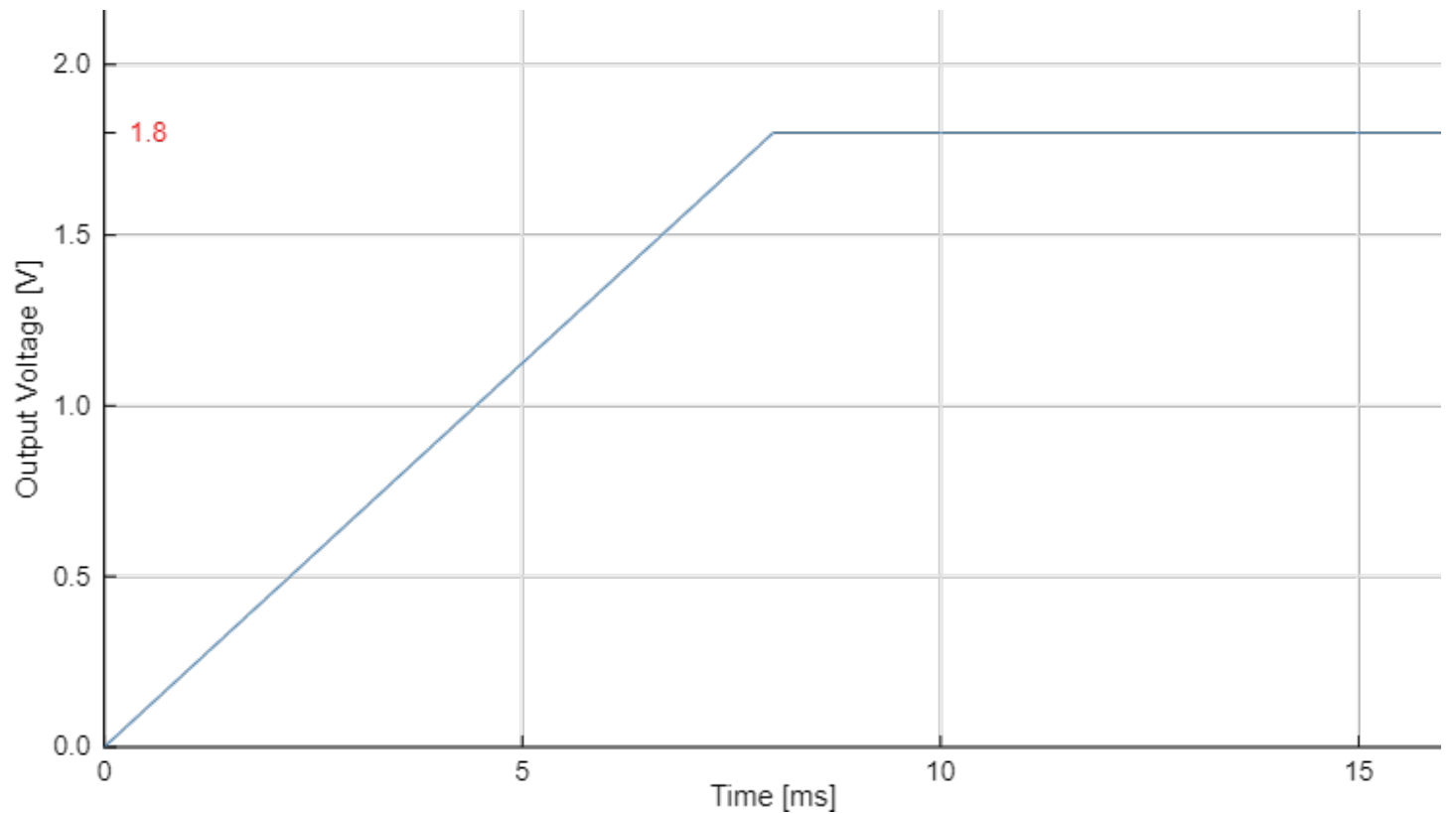
C200 PWM Sync Buck VM

AmP Power VCC_IO

Efficiency



Soft Start



C200 PWM Sync Buck VM

AmP Power VCC_IO

BoM

Part	Description	Recommended Attributes	Attributes	Quantity	Size (Imperial)	X(mm)	Y(mm)	Part Number	Spec	Manufacturer
C200	PWM Sync Buck VM		Vout4, 1.8V @ 3A	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text"/>		AnDAPT, LLC
L	Inductor	1.7μH, 10mΩ, >3A	1.1μH, 3.10mΩ, >3A, W	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="6.9"/>	<input type="text" value="6.9"/>	<input type="text" value="744314110"/>		Würth Elektronik
Cout (Ceramic)	Output Capacitor (Ceramic)	8μF, <15mΩ, >1.8V	47μF, 6.3V	<input type="text" value="6"/>	<input type="text" value="0805"/>	<input type="text" value="2"/>	<input type="text" value="1.25"/>	<input type="text" value="885012107006"/>		Würth Elektronik
Cout (Bulk)	Output Capacitor (Bulk)		0μF, >1.8V	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text"/>		<input type="text"/>
Cin	Capacitor	10μF, <15mΩ, >12V	22μF, 3mΩ, 16V	<input type="text" value="1"/>	<input type="text" value="1206"/>	<input type="text" value="3.2"/>	<input type="text" value="1.6"/>	<input type="text" value="885012108018"/>		Würth Elektronik
Cbst	Capacitor	0.1μF, >6V	0.1μF, 25V	<input type="text" value="1"/>	<input type="text" value="0402"/>	<input type="text" value="1"/>	<input type="text" value="0.5"/>	<input type="text" value="885012205085R"/>		Würth Elektronik
Cdrv	Capacitor	0.1μF, >6V	0.1μF, 25V	<input type="text" value="1"/>	<input type="text" value="0402"/>	<input type="text" value="1"/>	<input type="text" value="0.5"/>	<input type="text" value="885012205085R"/>		Würth Elektronik
D1	Schottky Diode	200mA, 0.5V	200mA, 0.5V	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="1.2"/>	<input type="text" value="0.8"/>	<input type="text" value="RB521S30T5G"/>		ON Semiconductor
R1	Resistor	0.0499kΩ, 1%, 0.063W	0.0499kΩ, 1%, 0.063W	<input type="text" value="1"/>	<input type="text" value="0402"/>	<input type="text" value="1"/>	<input type="text" value="0.5"/>	<input type="text"/>		<input type="text"/>
R2	Resistor	DNI	DNI	<input type="text" value="0"/>	<input type="text" value="Optional"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text"/>		<input type="text"/>
Rbst	Resistor	15Ω	15Ω	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text"/>		<input type="text"/>

Total BoM Area ≈ 143.05 mm²

C200 PWM Sync Buck VM

AmP Power VCC_IO

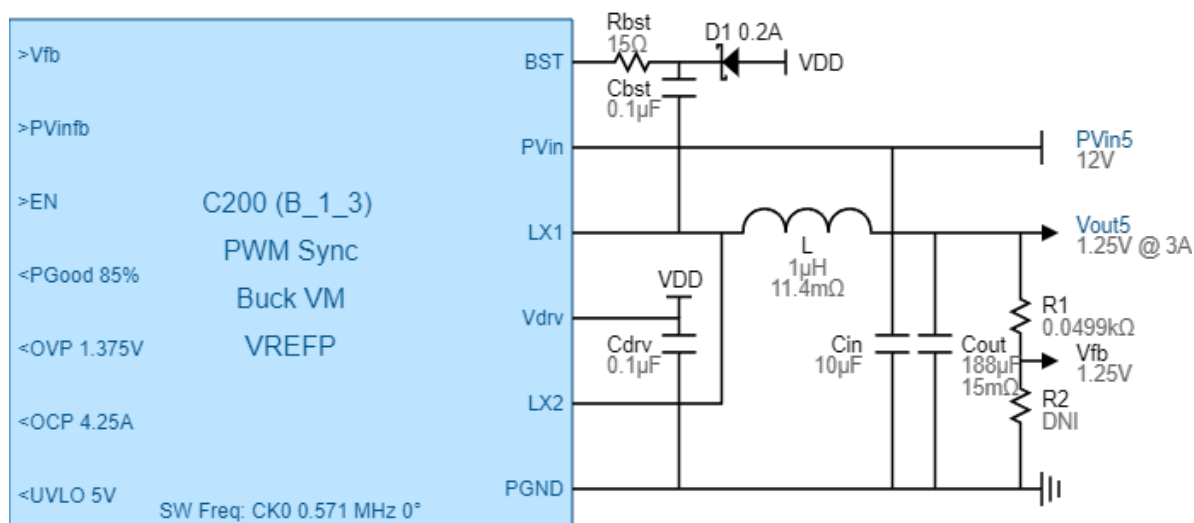
Parameters

Category	Parameter	Description	Value
Basic_Configuration	Fsw	Switching Frequency	1000kHz
Basic_Configuration	Vin	Nominal Input Voltage	12V
Basic_Configuration	Vin_Name	Used in The Schematics View	PVin4
Basic_Configuration	Vout	Nominal Output Voltage	1.8V
Basic_Configuration	Vout_Name	Used in The Schematics View	Vout4
Basic_Configuration	V_Ripple	Output Voltage Ripple	0.6mV
Basic_Configuration	V_Overshoot	Max Overshoot for a transient of Iout Delta	0V
Basic_Configuration	Iout	Maximum Converter Current	3A
Basic_Configuration	I_Ripple	Desired Ripple. Used for LC Recommendations	46.36%
Basic_Configuration	I_Delta	Used to Calculate Overshoot and Transient Response	0.5A
Manual_LC	Inductor	Nominal Inductor Value	1.1μH
Manual_LC	Inductor_DCR	Nominal Inductor DC Resistance	3.15mΩ
Manual_LC	Capacitor	Nominal Capacitor value	282μF
Manual_LC	Cap_ESR	Nominal Capacitor Equivalent Series Resistance	15mΩ
Manual_LC	CapacitorBlk	Nominal Capacitor value	0μF
Manual_LC	Cap_ESR_BlK	Nominal Capacitor Equivalent Series Resistance	0mΩ
Manual_LC	Inductor_R\$	Nominal Inductor Value	0.917μH
Manual_LC	Inductor_DCR_R\$	Nominal Inductor DC Resistance	10mΩ
Manual_LC	Capacitor_R\$	Nominal Capacitor value	8μF
Manual_LC	Cap_ESR_R\$	Nominal Capacitor Equivalent Series Resistance	15mΩ
Manual_LC	Capacitor_R_BlK\$	Nominal Capacitor value	0μF
Manual_LC	Cap_ESR_R_BlK\$	Nominal Capacitor Equivalent Series Resistance	15mΩ
Manual_LC	fLC	LC Resonant Frequency	9kHz
Manual_Resistor	R1		0.0499kΩ
Manual_Resistor	R2		DNI
Manual_Resistor	Vfb	$Vfb = Vout * R2 / (R1 + R2)$	1.8V
Manual_Resistor	R3		1370kΩ
Manual_Resistor	R4		107kΩ
Manual_Resistor	PVinfb		0.362V
Manual_Resistor	Rbst		15Ω
Manual_Resistor	Ext_Div_Ratio		1
Manual_Resistor	Ext_Div_Ratio2		13.804
Controller	Gain	Proportional Gain	600
Controller	Fz1	First Compensation Zero	4kHz
Controller	Fz2	Second Compensation Zero	55kHz
Controller	Ki	Integral Gain	1.507964e+7
Controller	Kd	Derivative gain	1.736236e-3
Controller	Jitter	jitter/transient performance optimization	Best jitter
Controller	Controller_Type		0
PID_Nonlinear	Kp_a		0
PID_Nonlinear	Ki_a		0
PID_Nonlinear	Kd_a		0
PID_Nonlinear	Kp_b		0
PID_Nonlinear	Ki_b		0
PID_Nonlinear	Kd_b		0
PID_Nonlinear	Kp_alpha		0
PID_Nonlinear	Ki_min		0
PID_Nonlinear	Kd_min		0
PID_Nonlinear	Kd_max		0
UVLO_EN	UVLO	Input Under Voltage Lockout	5V
UVLO_EN	UVLOSense	Internal: Sensed through High Side Drain pin. External: Sensed through a GPIO	Internal
VoUVLO_Group	VoUVLO	Output Under Voltage Lockout Threshold	1.384V
OCP_Group	OCP	Cycle by Cycle Current Protection Level	4.25A
OVP_EN	OVP	Output Over Voltage Protection Level	1.98V
Soft_Start_EN	UseCM	Use CM	enable
Soft_Start_EN	Rise_Time	Soft Start Length	8ms
PGood_EN	PGood	Power Good percentage of Nominal Vout	85%
WebAdapter Compatibility	webAdapterCompatible	Enable Resource Optimization	disable
hidden	Cin		10μF
hidden	Cbst		0.1μF
hidden	Cdrv		0.1μF
hidden	D1		0.2A

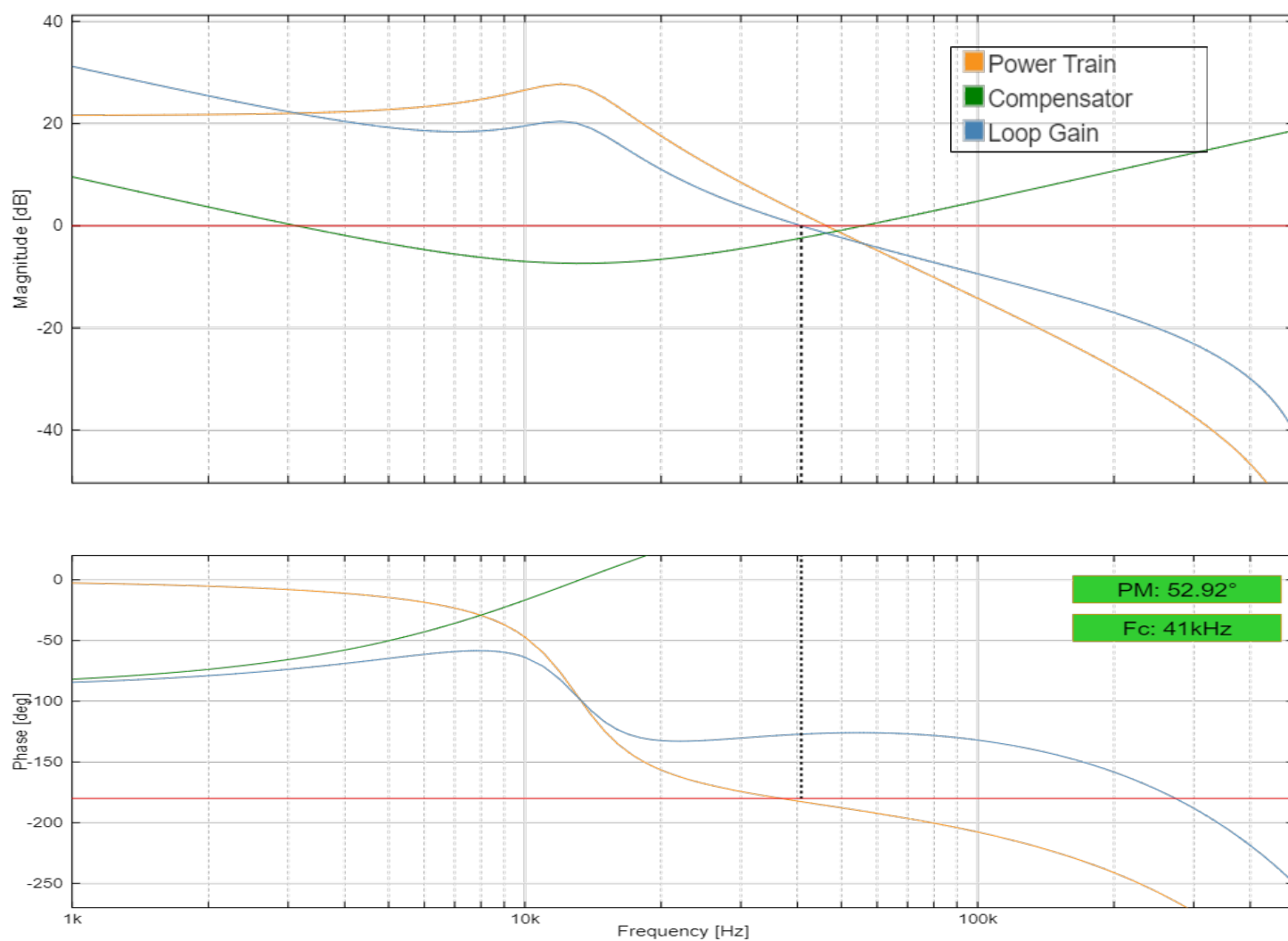
C200 PWM Sync Buck VM

AmP Power VREFP

Schematic



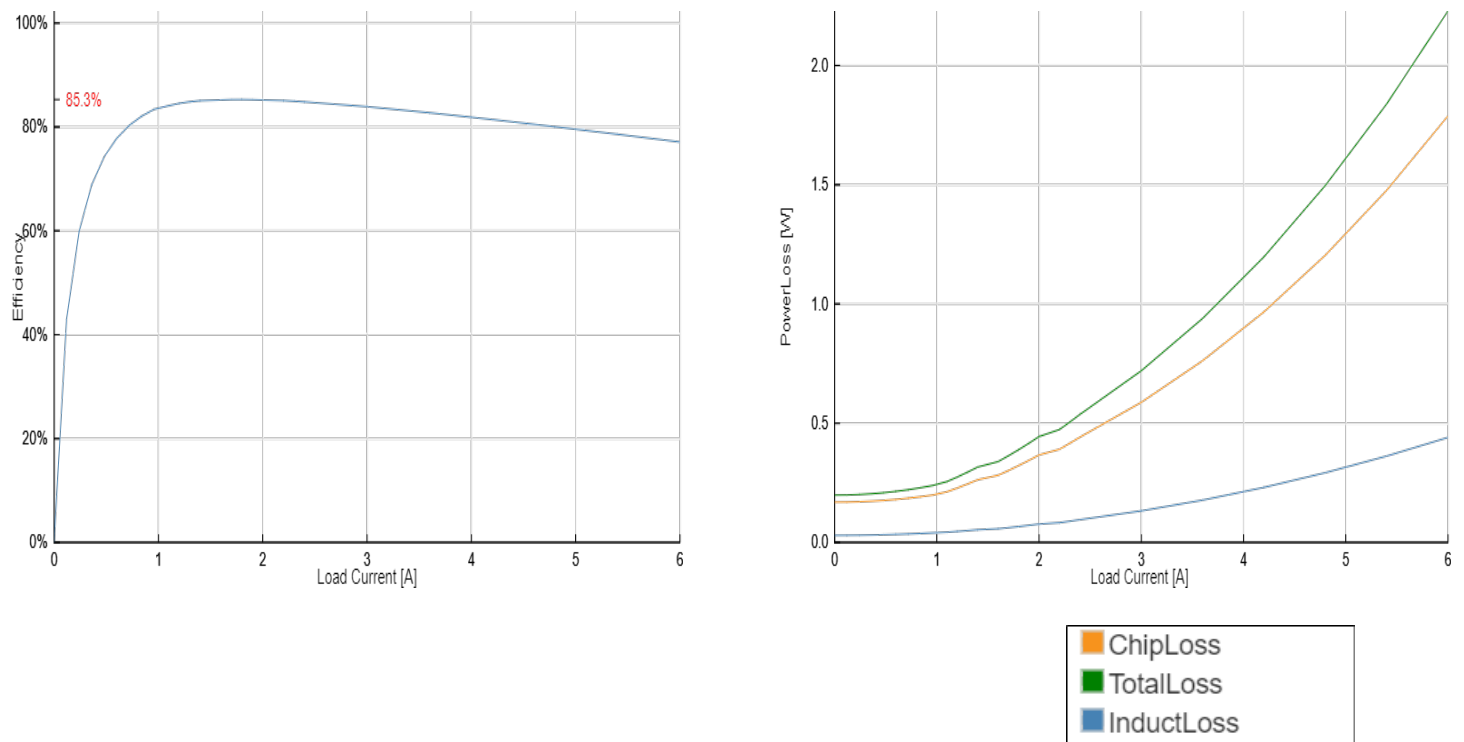
Bode Plot



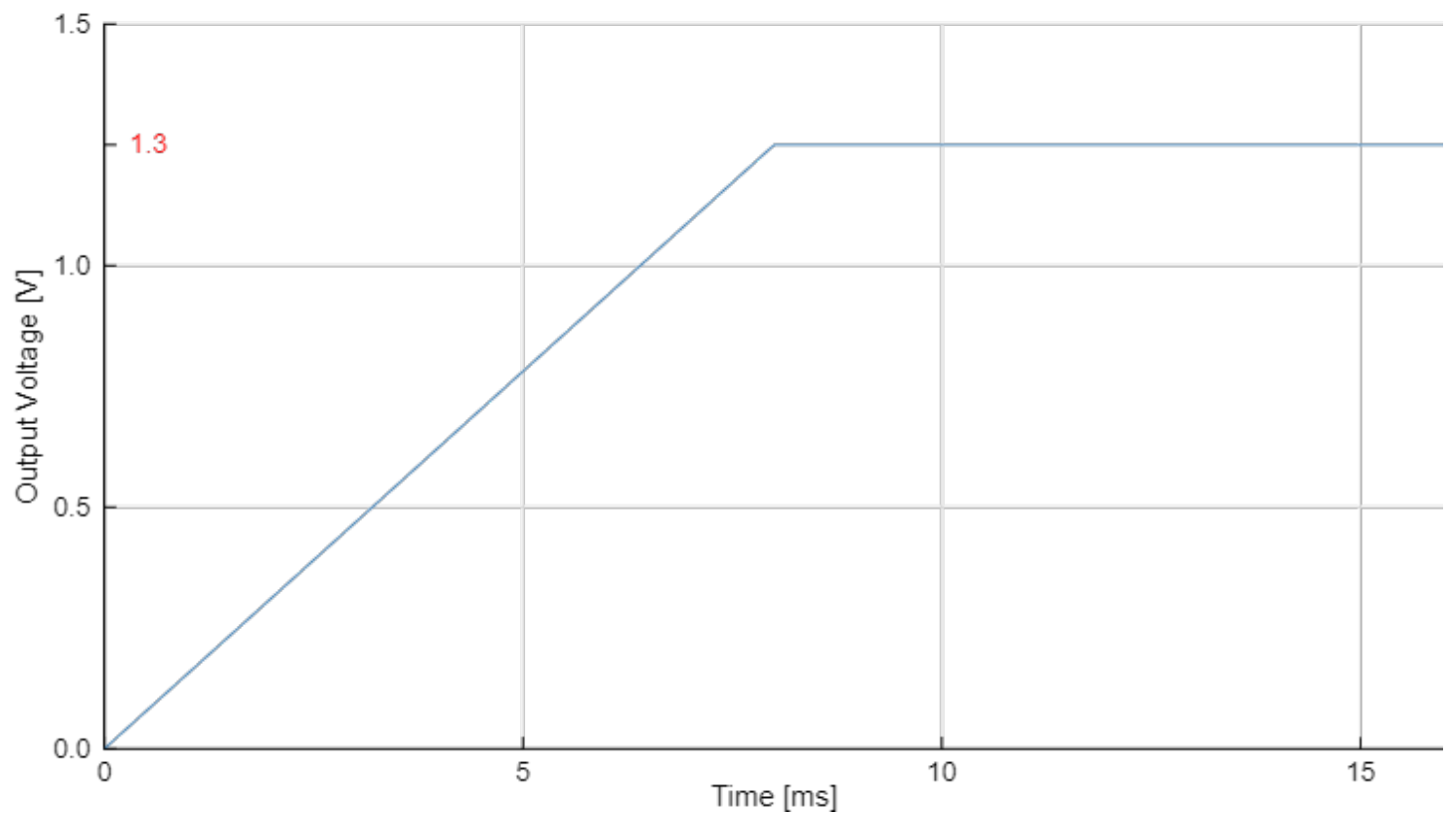
C200 PWM Sync Buck VM

AmP Power VREFP

Efficiency



Soft Start



C200 PWM Sync Buck VM

AmP Power VREFP

BoM

Part	Description	Recommended Attributes	Attributes	Quantity	Size (Imperial)	X(mm)	Y(mm)	Part Number	Spec	Manufacturer
C200	PWM Sync Buck VM		Vout5, 1.25V @ 3A	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text"/>		<input type="text" value="AnDAPT, LLC"/>
L	Inductor	3.267µH, 10mΩ, >2A	1µH, 11.40mΩ, >2A, W	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="5.4"/>	<input type="text" value="5.4"/>	<input type="text" value="74438366010"/>		<input type="text" value="Würth Elektronik"/>
Cout (Ceramic)	Output Capacitor (Ceramic)	160µF, <15mΩ, >1.25V	47µF, 6.3V	<input type="text" value="4"/>	<input type="text" value="0805"/>	<input type="text" value="2"/>	<input type="text" value="1.25"/>	<input type="text" value="885012107006"/>		<input type="text" value="Würth Elektronik"/>
Cout (Bulk)	Output Capacitor (Bulk)		0µF, >1.25V	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text"/>		<input type="text"/>
Cin	Capacitor	10µF, <15mΩ, >12V	22µF, 3mΩ, 16V	<input type="text" value="1"/>	<input type="text" value="1206"/>	<input type="text" value="3.2"/>	<input type="text" value="1.6"/>	<input type="text" value="885012108018"/>		<input type="text" value="Würth Elektronik"/>
Cbst	Capacitor	0.1µF, >6V	0.1µF, 25V	<input type="text" value="1"/>	<input type="text" value="0402"/>	<input type="text" value="1"/>	<input type="text" value="0.5"/>	<input type="text" value="885012205085R"/>		<input type="text" value="Würth Elektronik"/>
Cdrv	Capacitor	0.1µF, >6V	0.1µF, 25V	<input type="text" value="1"/>	<input type="text" value="0402"/>	<input type="text" value="1"/>	<input type="text" value="0.5"/>	<input type="text" value="885012205085R"/>		<input type="text" value="Würth Elektronik"/>
D1	Schottky Diode	200mA, 0.5V	200mA, 0.5V	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="1.2"/>	<input type="text" value="0.8"/>	<input type="text" value="RB521S30T5G"/>		<input type="text" value="ON Semiconductor"/>
R1	Resistor	0.0499kΩ, 1%, 0.063W	0.0499kΩ, 1%, 0.063W	<input type="text" value="1"/>	<input type="text" value="0402"/>	<input type="text" value="1"/>	<input type="text" value="0.5"/>	<input type="text"/>		<input type="text"/>
R2	Resistor	DNI	DNI	<input type="text" value="0"/>	<input type="text" value="Optional"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text"/>		<input type="text"/>
Rbst	Resistor	15Ω	15Ω	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text"/>		<input type="text"/>

Total BoM Area ≈ 101.61 mm²

C200 PWM Sync Buck VM

AmP Power VREFP

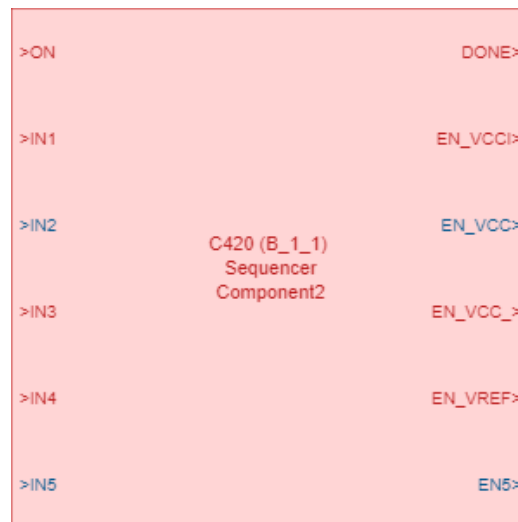
Parameters

Category	Parameter	Description	Value
Basic_Configuration	Fsw	Switching Frequency	571kHz
Basic_Configuration	Vin	Nominal Input Voltage	12V
Basic_Configuration	Vin_Name	Used in The Schematics View	PVin5
Basic_Configuration	Vout	Nominal Output Voltage	1.25V
Basic_Configuration	Vout_Name	Used in The Schematics View	Vout5
Basic_Configuration	V_Ripple	Output Voltage Ripple	2.3mV
Basic_Configuration	V_Overshoot	Max Overshoot for a transient of Iout Delta	0.01V
Basic_Configuration	Iout	Maximum Converter Current	3A
Basic_Configuration	I_Ripple	Desired Ripple. Used for LC Recommendations	65.37%
Basic_Configuration	I_Delta	Used to Calculate Overshoot and Transient Response	2A
Manual_LC	Inductor	Nominal Inductor Value	1μH
Manual_LC	Inductor_DCR	Nominal Inductor DC Resistance	11.4mΩ
Manual_LC	Capacitor	Nominal Capacitor value	188μF
Manual_LC	Cap_ESR	Nominal Capacitor Equivalent Series Resistance	15mΩ
Manual_LC	CapacitorBlk	Nominal Capacitor value	0μF
Manual_LC	Cap_ESR_BlK	Nominal Capacitor Equivalent Series Resistance	0mΩ
Manual_LC	Inductor_R\$	Nominal Inductor Value	0.667μH
Manual_LC	Inductor_DCR_R\$	Nominal Inductor DC Resistance	10mΩ
Manual_LC	Capacitor_R\$	Nominal Capacitor value	160μF
Manual_LC	Cap_ESR_R\$	Nominal Capacitor Equivalent Series Resistance	15mΩ
Manual_LC	Capacitor_R_BlK\$	Nominal Capacitor value	0μF
Manual_LC	Cap_ESR_R_BlK\$	Nominal Capacitor Equivalent Series Resistance	15mΩ
Manual_LC	fLC	LC Resonant Frequency	11.6kHz
Manual_Resistor	R1		0.0499kΩ
Manual_Resistor	R2		DNI
Manual_Resistor	Vfb	$Vfb = Vout * R2 / (R1 + R2)$	1.25V
Manual_Resistor	R3		1370kΩ
Manual_Resistor	R4		107kΩ
Manual_Resistor	PVinfb		0.362V
Manual_Resistor	Rbst		15Ω
Manual_Resistor	Ext_Div_Ratio		1
Manual_Resistor	Ext_Div_Ratio2		13.804
Controller	Gain	Proportional Gain	300
Controller	Fz1	First Compensation Zero	7kHz
Controller	Fz2	Second Compensation Zero	25kHz
Controller	Ki	Integral Gain	1.319469e+7
Controller	Kd	Derivative gain	1.909859e-3
Controller	Jitter	jitter/transient performance optimization	Best jitter
Controller	Controller_Type		0
PID_Nonlinear	Kp_a		0
PID_Nonlinear	Ki_a		0
PID_Nonlinear	Kd_a		0
PID_Nonlinear	Kp_b		0
PID_Nonlinear	Ki_b		0
PID_Nonlinear	Kd_b		0
PID_Nonlinear	Kp_alpha		0
PID_Nonlinear	Ki_min		0
PID_Nonlinear	Kd_min		0
PID_Nonlinear	Kd_max		0
UVLO_EN	UVLO	Input Under Voltage Lockout	5V
UVLO_EN	UVLOSense	Internal: Sensed through High Side Drain pin. External: Sensed through a GPIO	Internal
VoUVLO_Group	VoUVLO	Output Under Voltage Lockout Threshold	0.9V
OCP_Group	OCP	Cycle by Cycle Current Protection Level	4.25A
OVP_EN	OVP	Output Over Voltage Protection Level	1.375V
Soft_Start_EN	UseCM	Use CM	enable
Soft_Start_EN	Rise_Time	Soft Start Length	8ms
PGood_EN	PGood	Power Good percentage of Nominal Vout	85%
WebAdapter Compatibility	webAdapterCompatible	Enable Resource Optimization	disable
hidden	Cin		10μF
hidden	Cbst		0.1μF
hidden	Cdrv		0.1μF
hidden	D1		0.2A

C420 Sequencer

AmP Power Component2

Schematic



C420 Sequencer

AmP Power Component2

BoM

Part	Description	Recommended Attributes	Attributes	Quantity	Size (Imperial)	X(mm)	Y(mm)	Part Number	Spec	Manufacturer
C420	Sequencer			<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text"/>		<input type="text" value="AnDAPT, LLC"/>

Total BoM Area ≈ 0 mm²

C420 Sequencer

AmP Power Component2

Parameters

	Channels	Target Delay ms	Actual Delay ms
Group 1	1	4	4
Group 2	1	4	4
Group 3	2	4	4
Group 4	1	4	4
Group 5	0	0	2
Group 6	0	0	2
Group 7	0	0	2
Group 8	0	0	2

Global BoM

Component	Part	Description	Attributes	Quantity	Part Number	Manufacturer
Platform	AmP8DB6QF65	AmP Power IC	8 MOSFETS, 6A	1		AnDAPT, LLC
Platform	Cvin1	Capacitor	0.1µF, 25V	1	885012205085R	Würth Elektronik
Platform	Cvin2	Capacitor	1µF, 25V	1	885012106022	Würth Elektronik
Platform	Cvin3	Capacitor	10µF, 25V	1	885012106031	Würth Elektronik
Platform	Cvdd1	Capacitor	0.1µF, 25V	1	885012205085R	Würth Elektronik
Platform	Cvdd2	Capacitor	10µF, 6.3V	1	885012105020	Würth Elektronik
Platform	Cvcc1	Capacitor	0.1µF, 25V	1	885012205085R	Würth Elektronik
Platform	Cvcc2	Capacitor	1µF, 16V	1	885012105019	Würth Elektronik
Platform	C3v31	Capacitor	0.1µF, 25V	1	885012205085R	Würth Elektronik
Platform	C3v32	Capacitor	1µF, 16V	1	885012105019	Würth Elektronik
Platform	Cldoa1	Capacitor	0.1µF, 25V	1	885012205085R	Würth Elektronik
Platform	Cldoa2	Capacitor	1µF, 16V	1	885012105019	Würth Elektronik
Platform	Cldob1	Capacitor	0.1µF, 25V	1	885012205085R	Würth Elektronik
Platform	Cldob2	Capacitor	1µF, 16V	1	885012105019	Würth Elektronik
Platform	Cvcio23	Capacitor	0.1µF, 25V	1	885012205085R	Würth Elektronik
VCCINT	C200	PWM Sync Buck VM	Vout1, 0.95V @ 3.5A	1	231130	
VCCINT	L	Inductor	0.56µH, 2.90mΩ, >2.5A	1	744393440056	Würth Elektronik
VCCINT	Cout (Ceramic)	Output Capacitor (Ceramic)	47µF, 6.3V	9	885012107006	Würth Elektronik
VCCINT	Cout (Bulk)	Output Capacitor (Bulk)	0µF, >0.95V	1		
VCCINT	Cin	Capacitor	22µF, 3mΩ, 16V	1	885012108018	Würth Elektronik
VCCINT	Cbst	Capacitor	0.1µF, 25V	1	885012205085R	Würth Elektronik
VCCINT	Cdrv	Capacitor	0.1µF, 25V	1	885012205085R	Würth Elektronik
VCCINT	D1	Schottky Diode	200mA, 0.5V	1	RB521S30T5G	ON Semiconductor
VCCINT	R1	Resistor	0.0499kΩ, 1%, 0.063W	1		
VCCINT	R2	Resistor	DNI	0		
VCCINT	Rbst	Resistor	15Ω	1		
VCCAUX	C200	PWM Sync Buck VM	Vout3, 1.8V @ 1A	1	231130	
VCCAUX	L	Inductor	4.7µH, 137.00mΩ, >0.35A	1	74438336047	Würth Elektronik
VCCAUX	Cout (Ceramic)	Output Capacitor (Ceramic)	47µF, 6.3V	1	885012107006	Würth Elektronik
VCCAUX	Cout (Bulk)	Output Capacitor (Bulk)	0µF, >1.8V	1		
VCCAUX	Cin	Capacitor	22µF, 3mΩ, 16V	1	885012108018	Würth Elektronik
VCCAUX	Cbst	Capacitor	0.1µF, 25V	1	885012205085R	Würth Elektronik
VCCAUX	Cdrv	Capacitor	0.1µF, 25V	1	885012205085R	Würth Elektronik
VCCAUX	D1	Schottky Diode	200mA, 0.5V	1	RB521S30T5G	ON Semiconductor
VCCAUX	R1	Resistor	0.0499kΩ, 1%, 0.063W	1		
VCCAUX	R2	Resistor	DNI	0		
VCCAUX	Rbst	Resistor	15Ω	1		
VCC_IO	C200	PWM Sync Buck VM	Vout4, 1.8V @ 3A	1	231130	
VCC_IO	L	Inductor	1.1µH, 3.10mΩ, >3A	1	744314110	Würth Elektronik
VCC_IO	Cout (Ceramic)	Output Capacitor (Ceramic)	47µF, 6.3V	6	885012107006	Würth Elektronik
VCC_IO	Cout (Bulk)	Output Capacitor (Bulk)	0µF, >1.8V	1		
VCC_IO	Cin	Capacitor	22µF, 3mΩ, 16V	1	885012108018	Würth Elektronik
VCC_IO	Cbst	Capacitor	0.1µF, 25V	1	885012205085R	Würth Elektronik
VCC_IO	Cdrv	Capacitor	0.1µF, 25V	1	885012205085R	Würth Elektronik
VCC_IO	D1	Schottky Diode	200mA, 0.5V	1	RB521S30T5G	ON Semiconductor
VCC_IO	R1	Resistor	0.0499kΩ, 1%, 0.063W	1		
VCC_IO	R2	Resistor	DNI	0		
VCC_IO	Rbst	Resistor	15Ω	1		
VREFP	C200	PWM Sync Buck VM	Vout5, 1.25V @ 3A	1	231130	
VREFP	L	Inductor	1µH, 11.40mΩ, >2A	1	74438366010	Würth Elektronik
VREFP	Cout (Ceramic)	Output Capacitor (Ceramic)	47µF, 6.3V	4	885012107006	Würth Elektronik
VREFP	Cout (Bulk)	Output Capacitor (Bulk)	0µF, >1.25V	1		
VREFP	Cin	Capacitor	22µF, 3mΩ, 16V	1	885012108018	Würth Elektronik
VREFP	Cbst	Capacitor	0.1µF, 25V	1	885012205085R	Würth Elektronik
VREFP	Cdrv	Capacitor	0.1µF, 25V	1	885012205085R	Würth Elektronik
VREFP	D1	Schottky Diode	200mA, 0.5V	1	RB521S30T5G	ON Semiconductor
VREFP	R1	Resistor	0.0499kΩ, 1%, 0.063W	1		
VREFP	R2	Resistor	DNI	0		
VREFP	Rbst	Resistor	15Ω	1		
Component2	C420	Sequencer		1		

Category	Function	Part	Document Link
AmP Platform	AmPMIC	AmP8DB6QF65	https://www.andapt.com/docs/AnDAPT_AmP_Platform_B.pdf
PWM Switching Regulator	PWM Sync Buck VM	C200	https://www.andapt.com/docs/pc/AnDAPT_C200_B_I200_B_PWM_Sync_Buck_VM.pdf



Trademarks

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Features

- AmP PMIC enables programmable custom PMIC
- Integrate application targeted Power Components
- Power Blocks for a variety of topologies
 - Scalable Integrated N-channel MOSFETs (SIM)
 - Voltage, current sense for protection, telemetry, regulation
- Build Switching topologies - High/Low current buck, single/two phase DrMOS control
- Build Linear topologies - LDO, Load Switch
- Analog fabric connectivity for sensor signals
- Digital μ Logic fabric connectivity: Analog/Digital Blocks
- Industry first: Analog Proficiency - Digital Flexibility

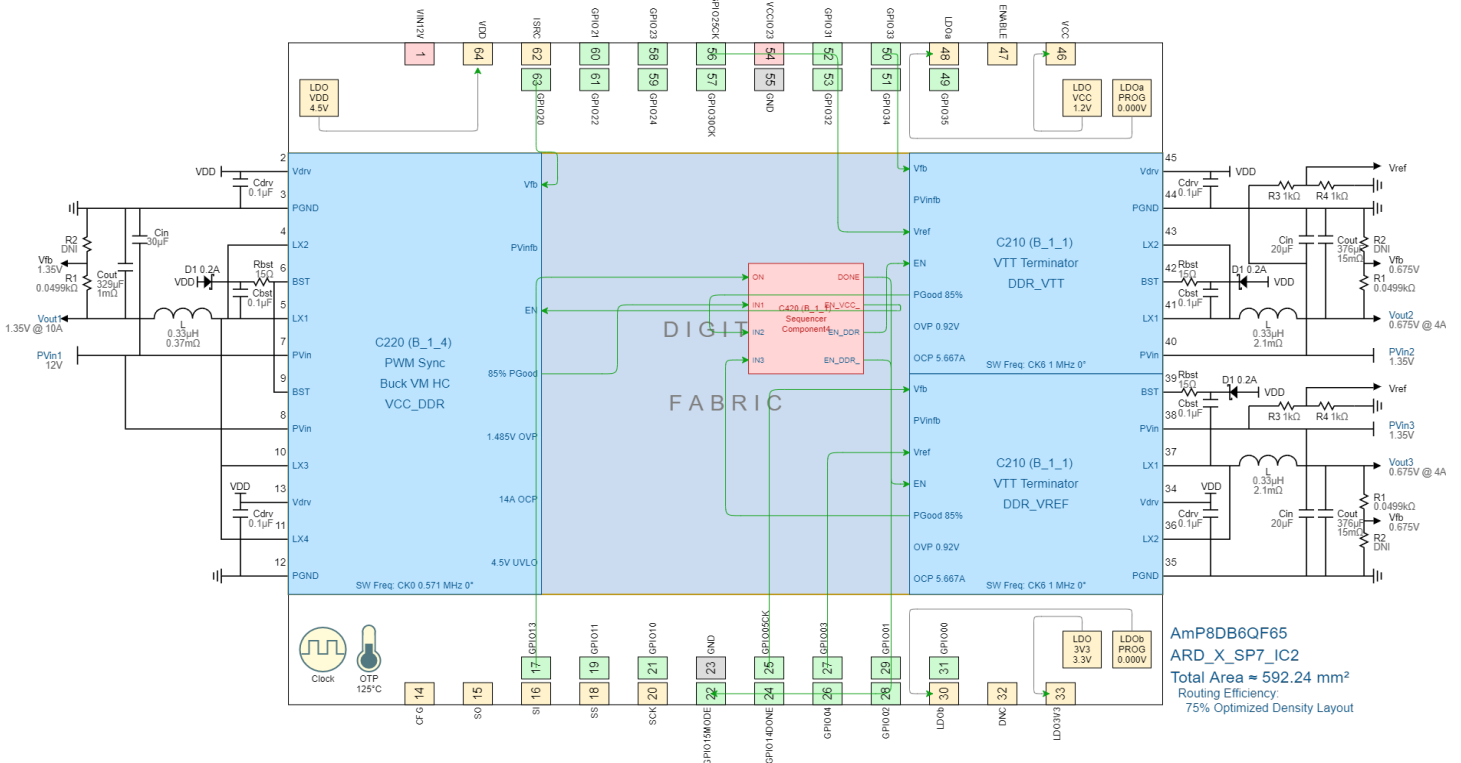
Order Information

Part Number	Package	Body Size
AmP8DB6QF65	QF65	5x5

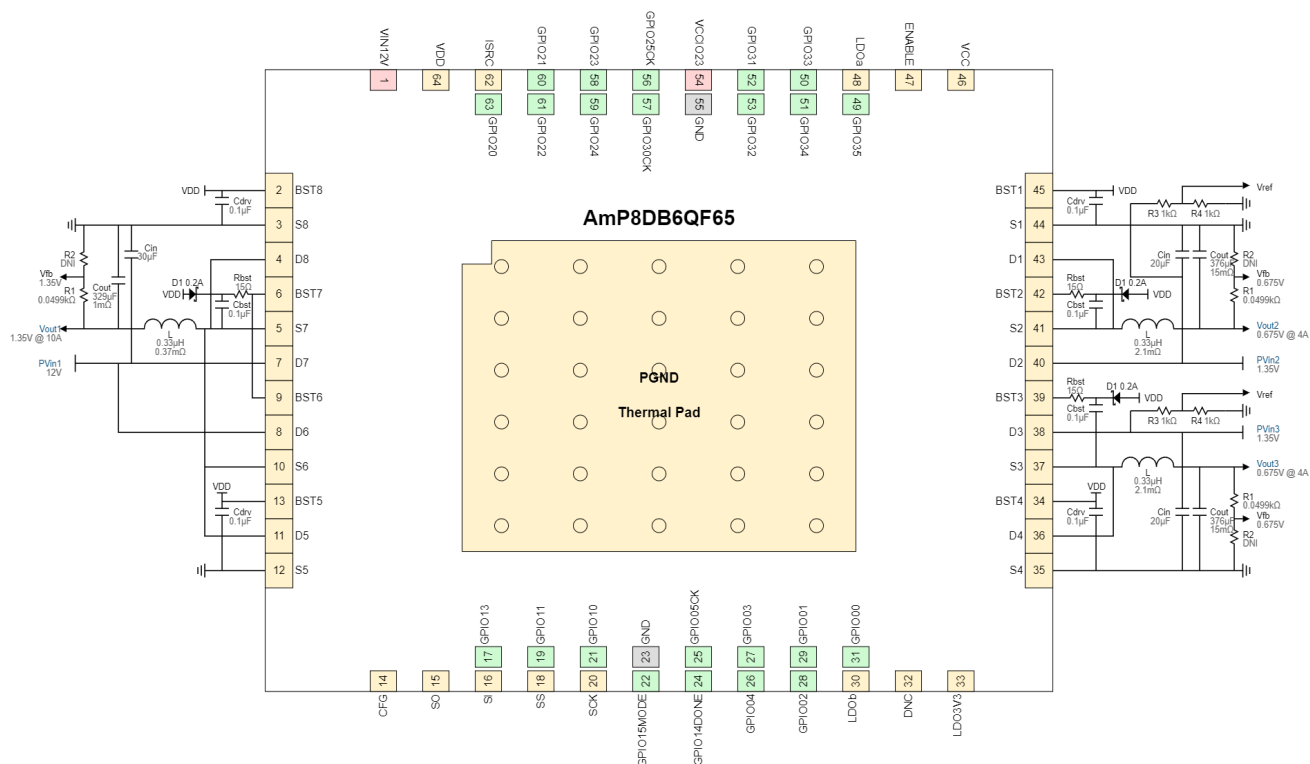
Power Component Summary

Spec	Category	Function	Part	Name	Key Parameter
	PWM Switching Regulator	PWM SyncBuck VM HC	C220	VCC_DDR	1.35V@10A
	PWM Switching Regulator	VTT Terminator	C210	DDR_VTT	0.675V@4A
	PWM Switching Regulator	VTT Terminator	C210	DDR_VREF	0.675V@4A
	Supervisor	Sequencer	C420	Component4	

Power Component View



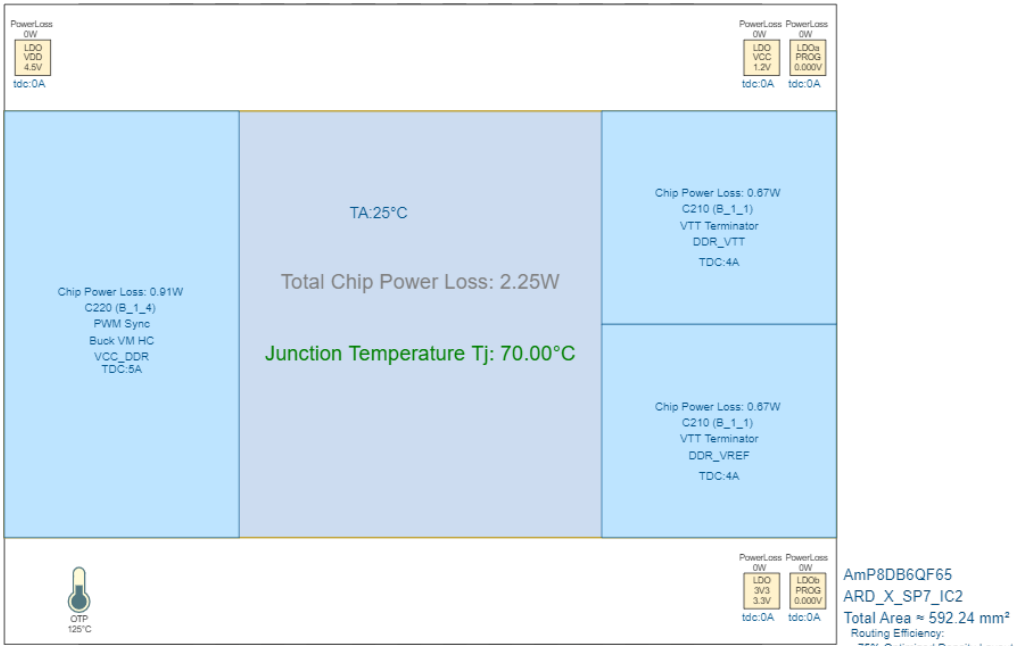
Package Top View (Pin and Thermal Pads are on bottom side)



Package Marking Example - QF65



Thermal View



Pin Configurations

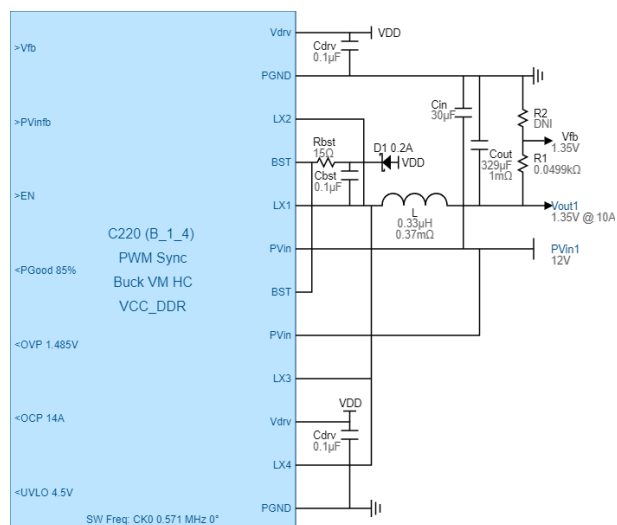
Pin Name	Design Name	Pin Number	Function
BST8		2	Boost
S8		3	Source
D8		4	Drain
BST7		6	Boost
S7		5	Source
D7		7	Drain
BST6		9	Boost
D6		8	Drain
S6		10	Source
BST5		13	Boost
D5		11	Drain
S5		12	Source
CFG		14	Configuration
SO		15	SPI serial out
SI		16	SPI serial in
GPIO13		17	GPIO
SS		18	SPI slave
GPIO11		19	GPIO
SCK		20	SPI clock
GPIO10		21	GPIO
GPIO15MODE		22	GPIO
GND		23	GND
GPIO14DONE		24	GPIO
GPIO05CK		25	GPIO
GPIO04		26	GPIO
GPIO03		27	GPIO
GPIO02		28	GPIO
GPIO01		29	GPIO
LDOb		30	LDO Prog.
GPIO00		31	GPIO
DNC		32	DNC
LDO3V3		33	LDO 3.3 V
S4		35	Source

Pin Name	Design Name	Pin Number	Function
D4		36	Drain
BST4		34	Boost
S3		37	Source
D3		38	Drain
BST3		39	Boost
D2		40	Drain
S2		41	Source
BST2		42	Boost
D1		43	Drain
S1		44	Source
BST1		45	Boost
VCC		46	LDO, 1.2 V
ENABLE		47	Enable AmP
LDOa		48	LDO, Prog.
GPIO35		49	GPIO
GPIO33		50	GPIO
GPIO34		51	GPIO
GPIO31		52	GPIO
GPIO32		53	GPIO
VCCIO23		54	IO bank supply
GND		55	GND
GPIO25CK		56	GPIO
GPIO30CK		57	GPIO
GPIO23		58	GPIO
GPIO24		59	GPIO
GPIO21		60	GPIO
GPIO22		61	GPIO
ISRC		62	LDO 3.3 V
GPIO20		63	GPIO
VDD		64	LDO 6 V
VIN		1	Supply
GND		65	GND Thermal Pad

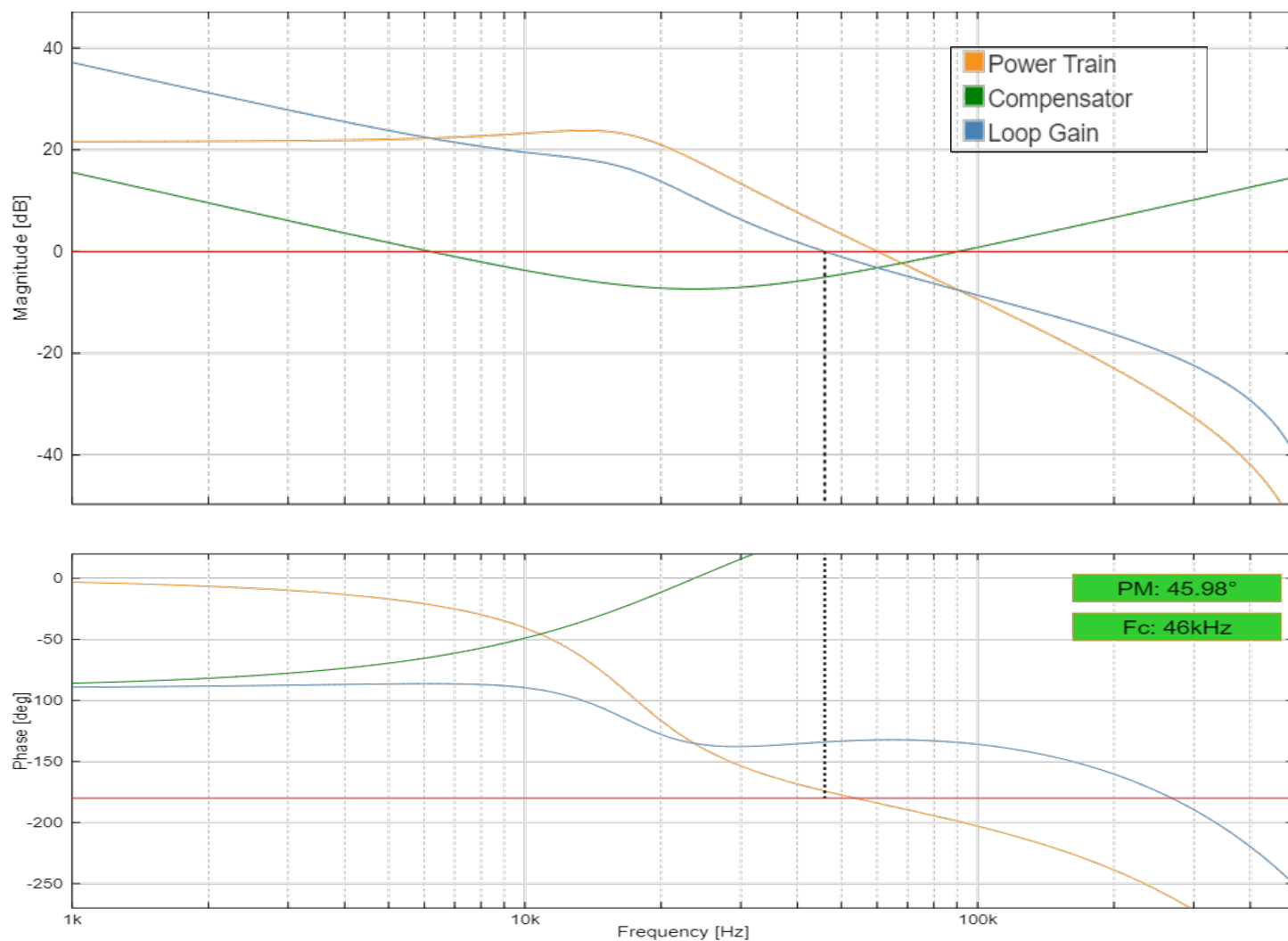
C220 PWM Sync Buck VM HC

AmP Power VCC_DDR

Schematic



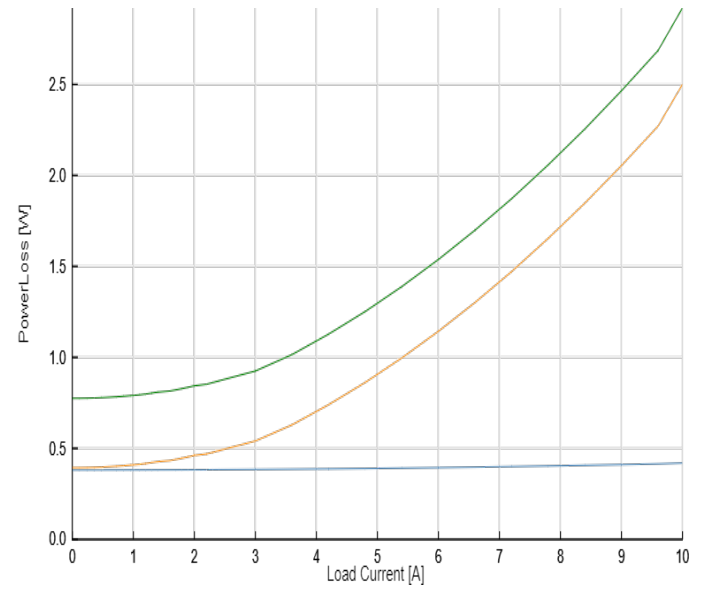
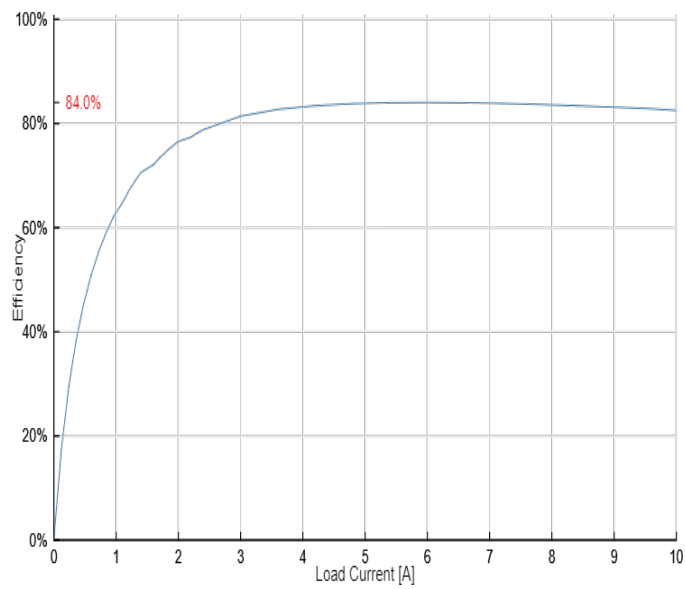
Bode Plot



C220 PWM Sync Buck VM HC

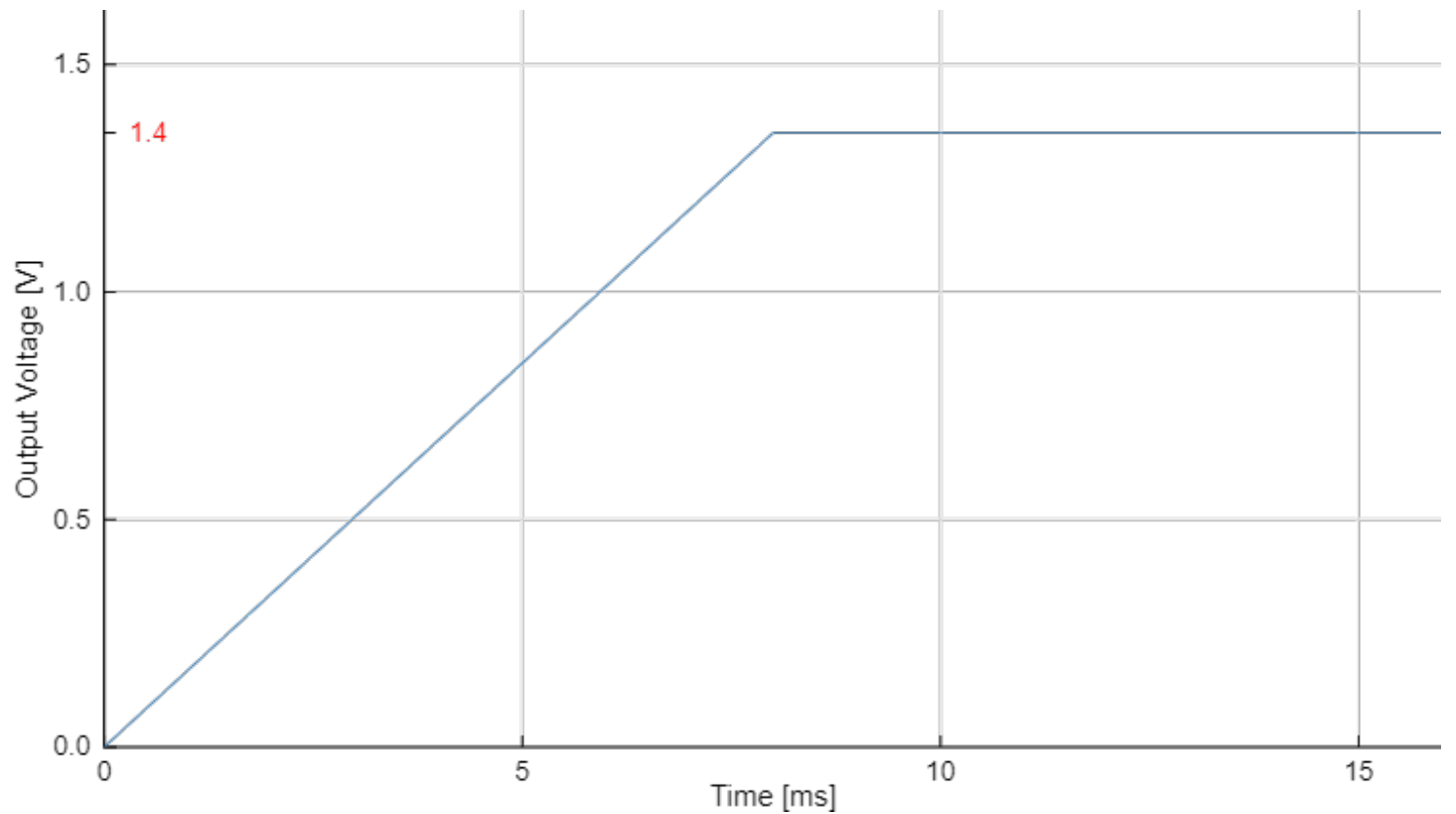
AmP Power VCC_DDR

Efficiency



ChipLoss
TotalLoss
InductLoss






Soft Start



C220 PWM Sync Buck VM HC

AmP Power VCC_DDR

BoM

Part	Description	Recommended Attributes	Attributes	Quantity	Size (Imperial)	X(mm)	Y(mm)	Part Number	Spec	Manufacturer
C220	PWM Sync Buck VM HC		Vout1, 1.35V @ 10A	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text"/>		AnDAPT, LLC
L	Inductor	0.33µH, 2.75mΩ, >10A	0.33µH, 0.40mΩ, 54.3A, 0.38W	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="10.1"/>	<input type="text" value="7"/>	<input type="text" value="744308033"/>		Würth Elektronik
Cout (Ceramic)	Output Capacitor (Ceramic)	306µF, <1mΩ, >1.35V	47µF, 6.3V	<input type="text" value="7"/>	<input type="text" value="0805"/>	<input type="text" value="2"/>	<input type="text" value="1.25"/>	<input type="text" value="885012107006"/>		Würth Elektronik
Cout (Bulk)	Output Capacitor (Bulk)		0µF, >1.35V	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text"/>		<input type="text"/>
Cin	Capacitor	30µF, <1mΩ, >12V	22µF, 3mΩ, 16V	<input type="text" value="2"/>	<input type="text" value="1206"/>	<input type="text" value="3.2"/>	<input type="text" value="1.6"/>	<input type="text" value="885012108018"/>		Würth Elektronik
Cbst	Capacitor	0.1µF, >6V	0.1µF, 25V	<input type="text" value="1"/>	<input type="text" value="0402"/>	<input type="text" value="1"/>	<input type="text" value="0.5"/>	<input type="text" value="885012205085R"/>		Würth Elektronik
Cdrv	Capacitor	0.1µF, >6V	0.1µF, 25V	<input type="text" value="1"/>	<input type="text" value="0402"/>	<input type="text" value="1"/>	<input type="text" value="0.5"/>	<input type="text" value="885012205085R"/>		Würth Elektronik
D1	Schottky Diode	200mA, 0.5V	200mA, 0.5V	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="1.2"/>	<input type="text" value="0.8"/>	<input type="text" value="RB521S30T5G"/>		ON Semiconductor
R1	Resistor	0.0499kΩ, 1%, 0.063W	0.0499kΩ, 1%, 0.063W	<input type="text" value="1"/>	<input type="text" value="0402"/>	<input type="text" value="1"/>	<input type="text" value="0.5"/>	<input type="text"/>		<input type="text"/>
R2	Resistor	DNI	DNI	<input type="text" value="0"/>	<input type="text" value="Optional"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text"/>		<input type="text"/>
Rbst	Resistor	15Ω	15Ω	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text"/>		<input type="text"/>

Total BoM Area ≈ 195.9 mm²

C220 PWM Sync Buck VM HC

AmP Power VCC_DDR

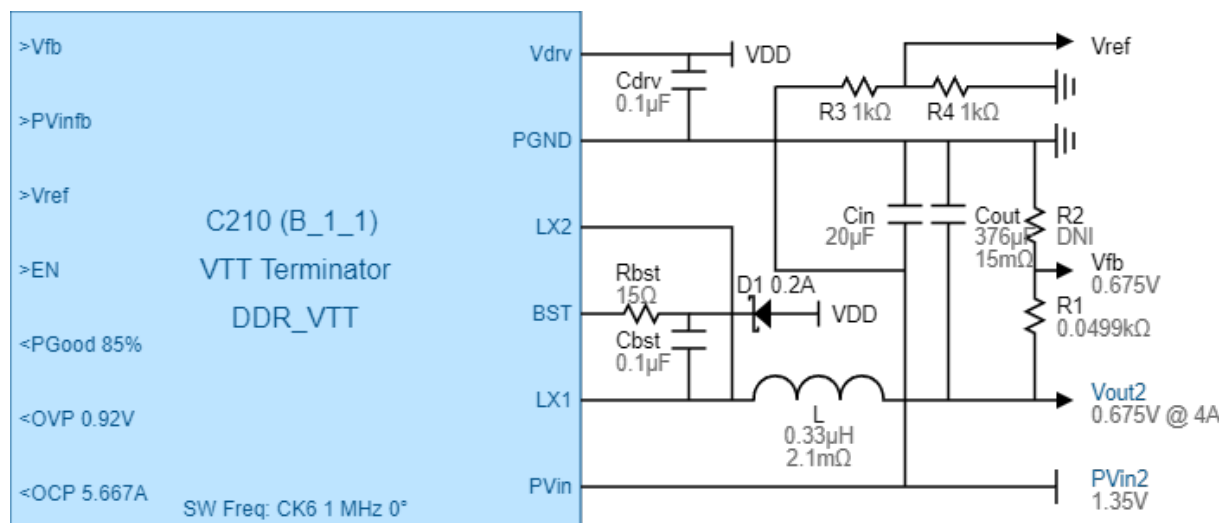
Parameters

Category	Parameter	Description	Value
Basic_Configuration	Fsw	Switching Frequency	571kHz
Basic_Configuration	Vin	Nominal Input Voltage	12V
Basic_Configuration	Vin_Name	Used in The Schematics View	PVin1
Basic_Configuration	Vout	Nominal Output Voltage	1.35V
Basic_Configuration	Vout_Name	Used in The Schematics View	Vout1
Basic_Configuration	V_Ripple	Output Voltage Ripple	4.2mV
Basic_Configuration	V_Overshoot	Max Overshoot for a transient of Iout Delta	0.01V
Basic_Configuration	Iout	Maximum Converter Current	10A
Basic_Configuration	I_Ripple	Desired Ripple. Used for LC Recommendations	63.58%
Basic_Configuration	I_Delta	Used to Calculate Overshoot and Transient Response	5A
Manual_LC	Inductor	Nominal Inductor Value	0.33μH
Manual_LC	Inductor_DCR	Nominal Inductor DC Resistance	0.37mΩ
Manual_LC	Capacitor	Nominal Capacitor value	329μF
Manual_LC	Cap_ESR	Nominal Capacitor Equivalent Series Resistance	1mΩ
Manual_LC	CapacitorBlk	Nominal Capacitor value	0μF
Manual_LC	Cap_ESR_BlK	Nominal Capacitor Equivalent Series Resistance	0mΩ
Manual_LC	Inductor_R\$	Nominal Inductor Value	0.33μH
Manual_LC	Inductor_DCR_R\$	Nominal Inductor DC Resistance	2.75mΩ
Manual_LC	Capacitor_R\$	Nominal Capacitor value	306μF
Manual_LC	Cap_ESR_R\$	Nominal Capacitor Equivalent Series Resistance	1mΩ
Manual_LC	fLC	LC Resonant Frequency	15.3kHz
Manual_Resistor	R1		0.0499kΩ
Manual_Resistor	R2		DNI
Manual_Resistor	Vfb	$V_{fb} = V_{out} * R2 / (R1 + R2)$	1.35V
Manual_Resistor	Rbst		15Ω
Manual_Resistor	Ext_Div_Ratio		1
Controller	Gain	Proportional Gain	300
Controller	Fz1	First Compensation Zero	14kHz
Controller	Fz2	Second Compensation Zero	40kHz
Controller	Ki	Integral Gain	2.638938e+7
Controller	Kd	Derivative gain	1.193662e-3
Controller	Controller_Type		0
PID_Nonlinear	Kp_a		0
PID_Nonlinear	Ki_a		0
PID_Nonlinear	Kd_a		0
PID_Nonlinear	Kp_b		0
PID_Nonlinear	Ki_b		0
PID_Nonlinear	Kd_b		0
PID_Nonlinear	Kp_alpha		0
PID_Nonlinear	Ki_min		0
PID_Nonlinear	Kd_min		0
PID_Nonlinear	Kd_max		0
UVLO_EN	UVLO	Input Under Voltage Lockout	4.5V
UVLO_EN	UVLOSense	Internal: Sensed through High Side Drain pin. External: Sensed through a GPIO	Internal
VoUVLO_Group	VoUVLO	Output Under Voltage Lockout Threshold	0.935V
OCP_Group	OCP	Cycle by Cycle Current Protection Level	14A
OVP_EN	OVP	Output Over Voltage Protection Level	1.485V
Soft_Start_EN	Rise_Time	Soft Start Length	8ms
PGood_EN	PGood	Power Good percentage of Nominal Vout	85%
hidden	Cin		30μF
hidden	Cbst		0.1μF
hidden	Cdrv		0.1μF
hidden	D1		0.2A

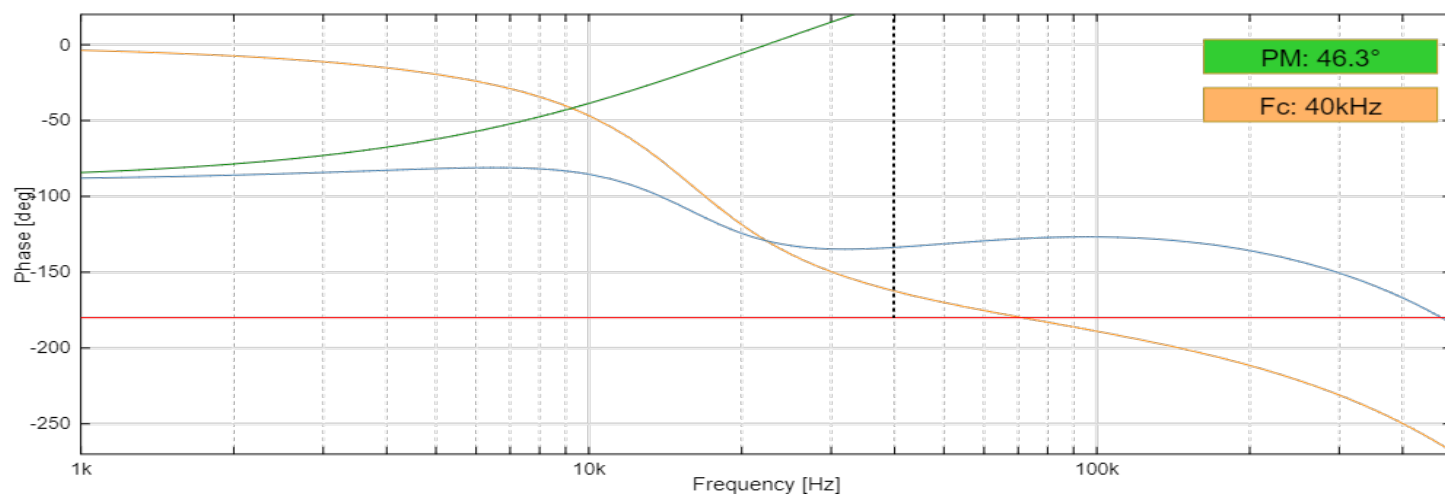
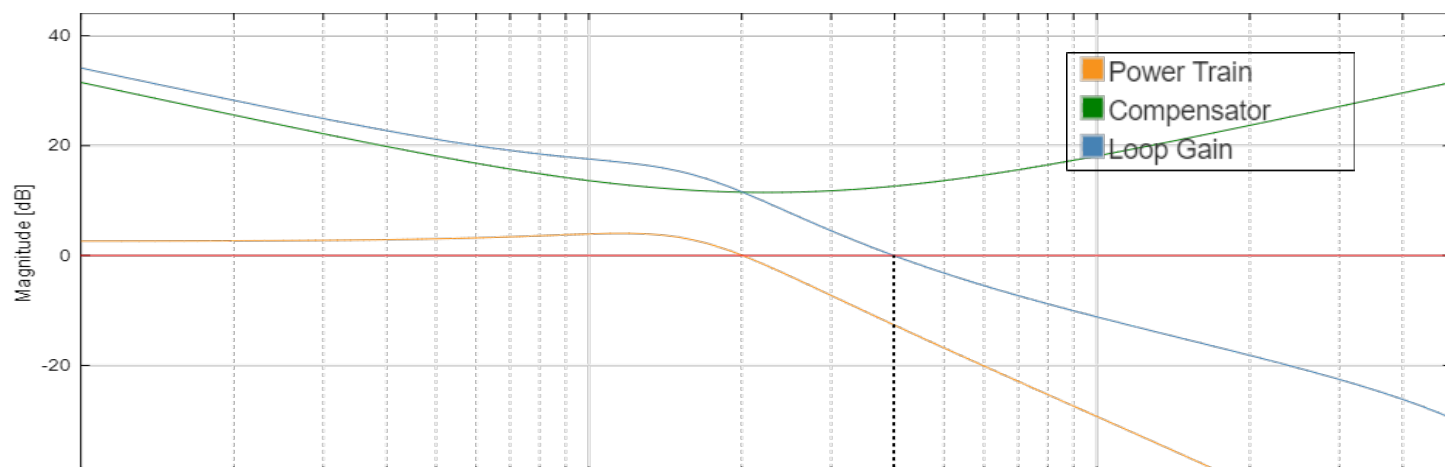
C210 VTT Terminator

AmP Power DDR_VTT

Schematic



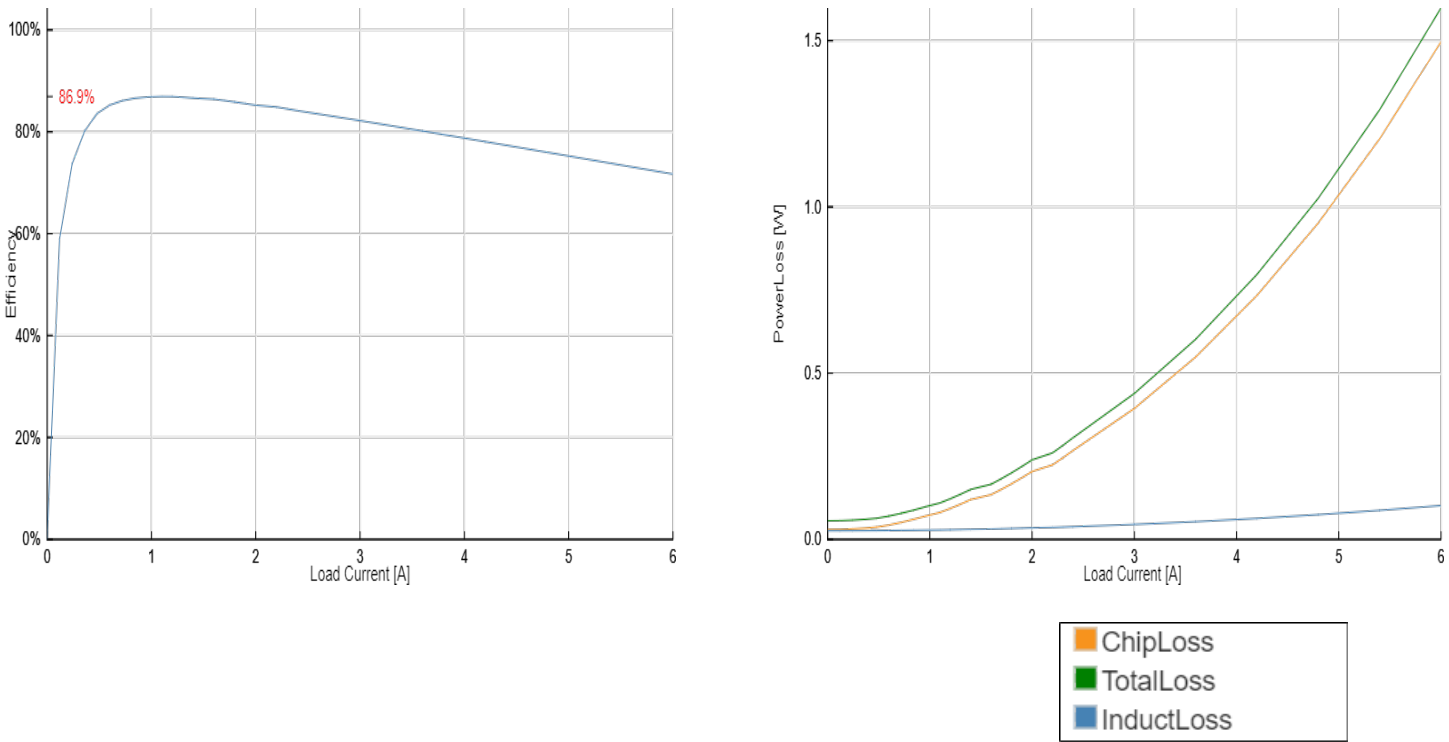
Bode Plot



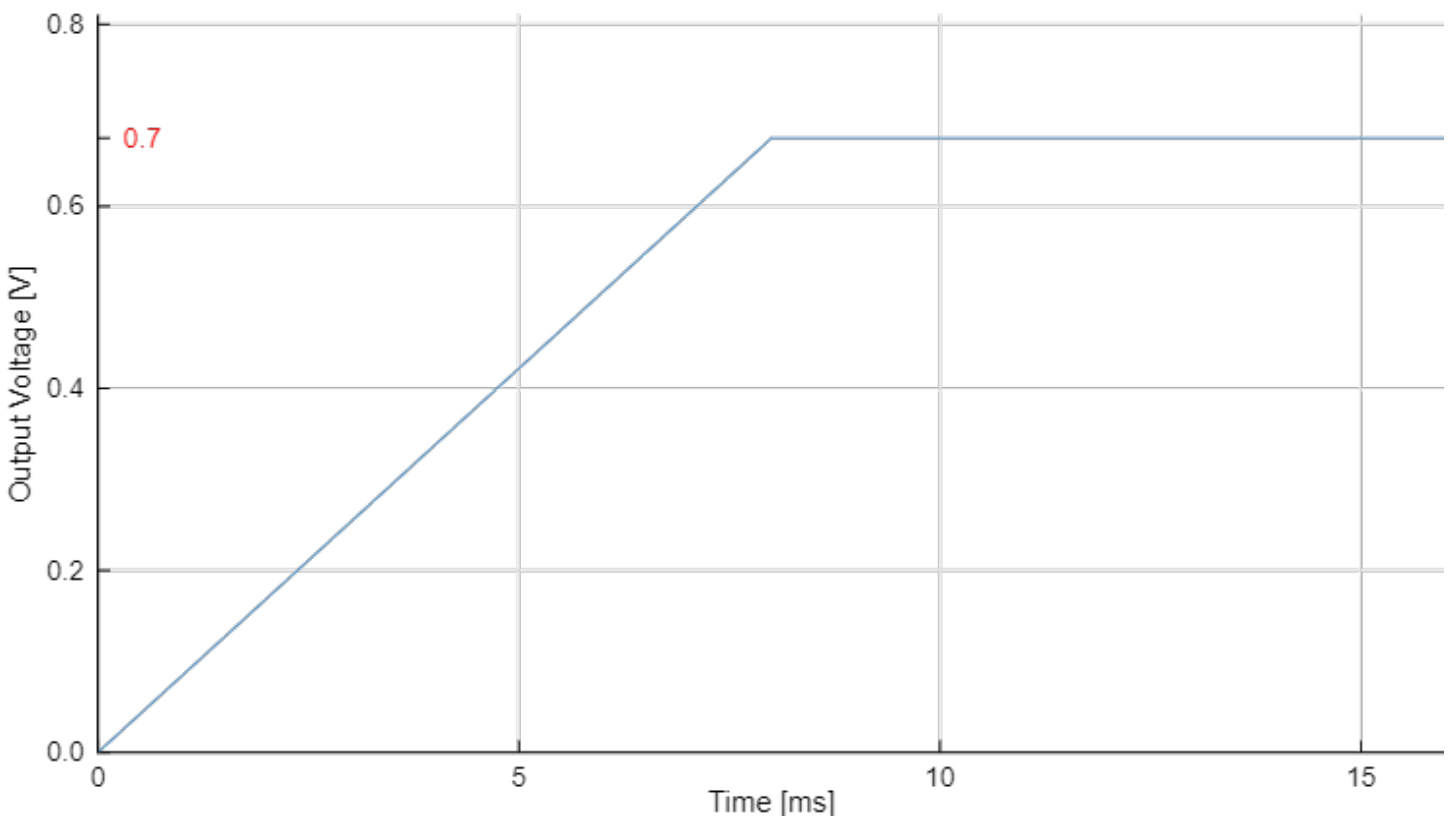
C210 VTT Terminator

AmP Power DDR_VTT

Efficiency



Soft Start



C210 VTT Terminator

AmP Power DDR_VTT

BoM

Part	Description	Recommended Attributes	Attributes	Quantity	Size (Imperial)	X(mm)	Y(mm)	Part Number	Spec	Manufacturer
C210	VTT Terminator		Vout2,0.675V @ 4A	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text"/>		<input type="text" value="AnDAPT, LLC"/>
L	Inductor	0.438μH, 10mΩ, >4A	0.33μH, 2.10mΩ, >4A, W	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="6.65"/>	<input type="text" value="6.45"/>	<input type="text" value="744393440033"/>		<input type="text" value="Würth Elektronik"/>
Cout (Ceramic)	Output Capacitor (Ceramic)	98μF, <15mΩ, >0.675V	47μF, 6.3V	<input type="text" value="8"/>	<input type="text" value="0805"/>	<input type="text" value="2"/>	<input type="text" value="1.25"/>	<input type="text" value="885012107006"/>		<input type="text" value="Würth Elektronik"/>
Cout (Bulk)	Output Capacitor (Bulk)		0μF, >0.675V	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text"/>		<input type="text"/>
Cin	Capacitor	20μF, <15mΩ, >1.35V	22μF, 3mΩ, 16V	<input type="text" value="1"/>	<input type="text" value="1206"/>	<input type="text" value="3.2"/>	<input type="text" value="1.6"/>	<input type="text" value="885012108018"/>		<input type="text" value="Würth Elektronik"/>
Cbst	Capacitor	0.1μF, >6V	0.1μF, 25V	<input type="text" value="1"/>	<input type="text" value="0402"/>	<input type="text" value="1"/>	<input type="text" value="0.5"/>	<input type="text" value="885012205085R"/>		<input type="text" value="Würth Elektronik"/>
Cdrv	Capacitor	0.1μF, >6V	0.1μF, 25V	<input type="text" value="1"/>	<input type="text" value="0402"/>	<input type="text" value="1"/>	<input type="text" value="0.5"/>	<input type="text" value="885012205085R"/>		<input type="text" value="Würth Elektronik"/>
D1	Schottky Diode	200mA, 0.5V	200mA, 0.5V	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="1.2"/>	<input type="text" value="0.8"/>	<input type="text" value="RB521S30T5G"/>		<input type="text" value="ON Semiconductor"/>
R1	Resistor	0.0499kΩ, 1%, 0.063W	0.0499kΩ, 1%, 0.063W	<input type="text" value="1"/>	<input type="text" value="0402"/>	<input type="text" value="1"/>	<input type="text" value="0.5"/>	<input type="text"/>		<input type="text"/>
R2	Resistor	DNI	DNI	<input type="text" value="0"/>	<input type="text" value="Optional"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text"/>		<input type="text"/>
R3	Resistor	1kΩ, 1%, 0.063W	1kΩ, 1%, 0.063W	<input type="text" value="1"/>	<input type="text" value="0402"/>	<input type="text" value="1"/>	<input type="text" value="0.5"/>	<input type="text"/>		<input type="text"/>
R4	Resistor	1kΩ, 1%, 0.063W	1kΩ, 1%, 0.063W	<input type="text" value="1"/>	<input type="text" value="0402"/>	<input type="text" value="1"/>	<input type="text" value="0.5"/>	<input type="text"/>		<input type="text"/>
Rbst	Resistor	15Ω	15Ω	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text"/>		<input type="text"/>

Total BoM Area ≈ 155.59 mm²

C210 VTT Terminator

AmP Power DDR_VTT

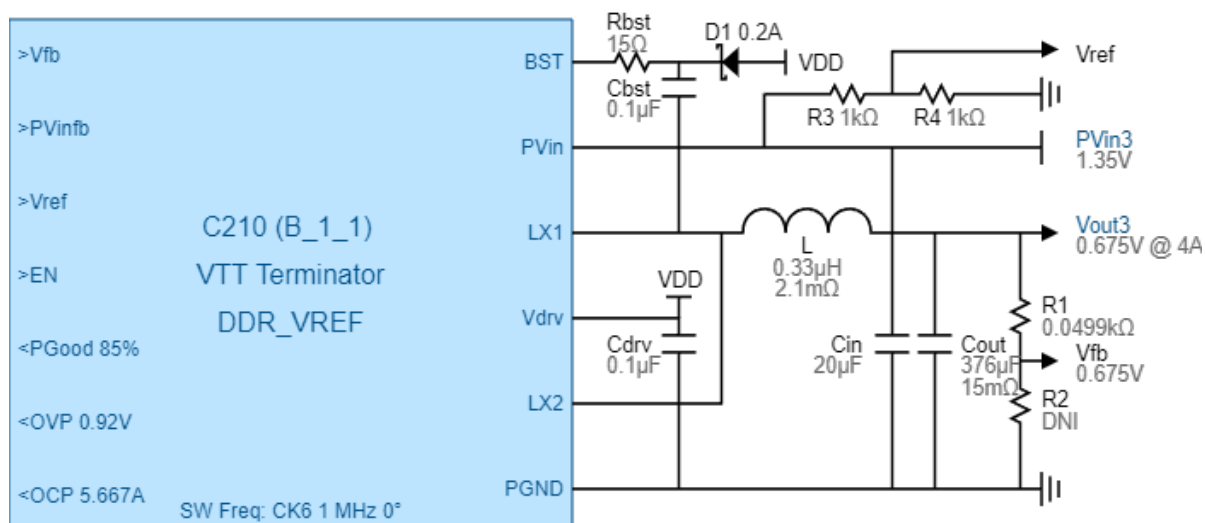
Parameters

Category	Parameter	Description	Value
Basic_Configuration	Fsw	Switching Frequency	1000kHz
Basic_Configuration	Vin	Nominal Input Voltage	1.35V
Basic_Configuration	Vin_Name	Used in The Schematics View	PVin2
Basic_Configuration	Vout	Nominal Output Voltage	0.675V
Basic_Configuration	Vout_Name	Used in The Schematics View	Vout2
Basic_Configuration	V_Ripple	Output Voltage Ripple	0.3mV
Basic_Configuration	V_Overshoot	Max Overshoot for a transient of Iout Delta	0V
Basic_Configuration	Iout	Maximum Converter Current	4A
Basic_Configuration	I_Ripple	Desired Ripple. Used for LC Recommendations	25.57%
Basic_Configuration	I_Delta	Used to Calculate Overshoot and Transient Response	2A
Manual_LC	Inductor	Nominal Inductor Value	0.33μH
Manual_LC	Inductor_DCR	Nominal Inductor DC Resistance	2.1mΩ
Manual_LC	Capacitor	Nominal Capacitor value	376μF
Manual_LC	Cap_ESR	Nominal Capacitor Equivalent Series Resistance	15mΩ
Manual_LC	CapacitorBlk	Nominal Capacitor value	0μF
Manual_LC	Cap_ESR_BlK	Nominal Capacitor Equivalent Series Resistance	0mΩ
Manual_LC	Inductor_R\$	Nominal Inductor Value	0.165μH
Manual_LC	Inductor_DCR_R\$	Nominal Inductor DC Resistance	10mΩ
Manual_LC	Capacitor_R\$	Nominal Capacitor value	98μF
Manual_LC	Cap_ESR_R\$	Nominal Capacitor Equivalent Series Resistance	15mΩ
Manual_LC	Capacitor_R_BlK\$	Nominal Capacitor value	0μF
Manual_LC	Cap_ESR_R_BlK\$	Nominal Capacitor Equivalent Series Resistance	15mΩ
Manual_LC	fLC	LC Resonant Frequency	14.3kHz
Manual_Resistor	R1		0.0499kΩ
Manual_Resistor	R2		DNI
Manual_Resistor	Vfb	$V_{fb} = V_{out} * R2 / (R1 + R2)$	0.675V
Manual_Resistor	R3		1kΩ
Manual_Resistor	R4		1kΩ
Manual_Resistor	PVinfb		nullV
Manual_Resistor	Rbst		15Ω
Manual_Resistor	Ext_Div_Ratio		1
Manual_Resistor	Ext_Div_Ratio2		2
Controller	Gain	Proportional Gain	1500
Controller	Fz1	First Compensation Zero	10kHz
Controller	Fz2	Second Compensation Zero	50kHz
Controller	Ki	Integral Gain	9.424778e+7
Controller	Kd	Derivative gain	4.774648e-3
Controller	Jitter	jitter/transient performance optimization	Best jitter
Controller	Controller_Type		0
PID_Nonlinear	Kp_a		0
PID_Nonlinear	Ki_a		0
PID_Nonlinear	Kd_a		0
PID_Nonlinear	Kp_b		0
PID_Nonlinear	Ki_b		0
PID_Nonlinear	Kd_b		0
PID_Nonlinear	Kp_alpha		0
PID_Nonlinear	Ki_min		0
PID_Nonlinear	Kd_min		0
PID_Nonlinear	Kd_max		0
VoUVLO_Group	VoUVLO	Output Under Voltage Lockout Threshold	0.4V
OCP_Group	OCP	Cycle by Cycle Current Protection Level	5.667A
OVP_EN	OVP	Output Over Voltage Protection Level	0.92V
Soft_Start_EN	UseCM	Use CM	enable
Soft_Start_EN	Rise_Time	Soft Start Length	8ms
PGood_EN	PGood	Power Good percentage of Nominal Vout	85%
hidden	Cin		20μF
hidden	Cbst		0.1μF
hidden	Cdrv		0.1μF
hidden	D1		0.2A

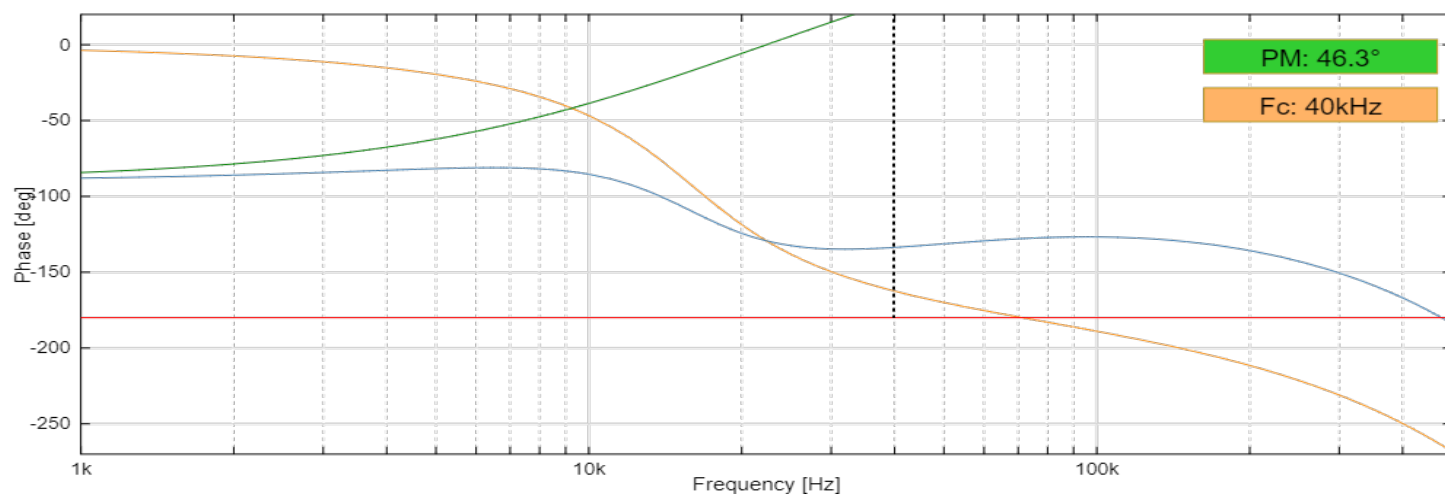
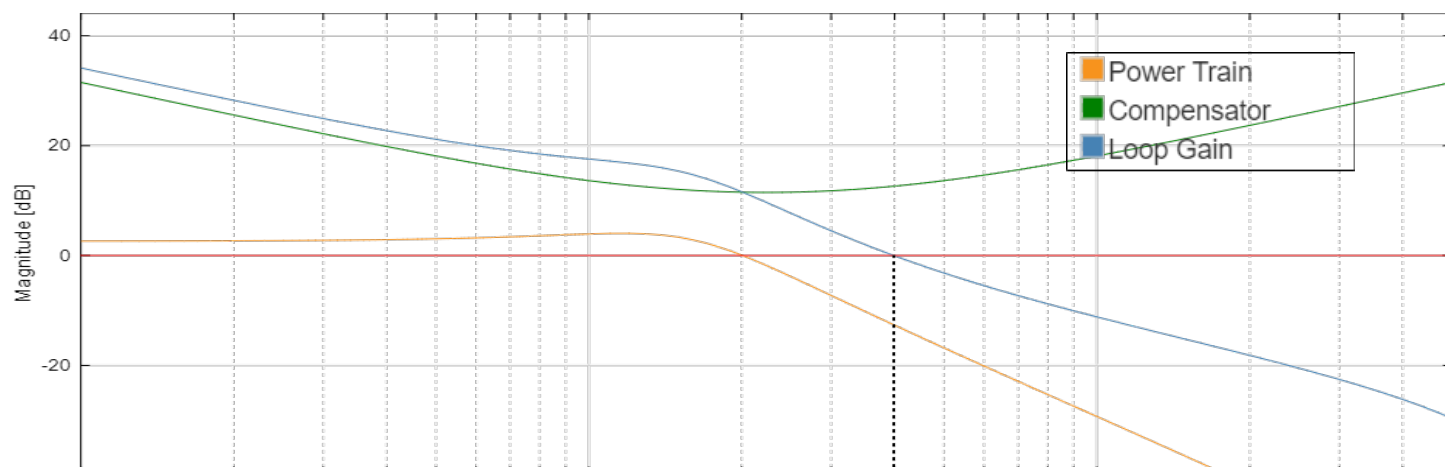
C210 VTT Terminator

AmP Power DDR_VREF

Schematic



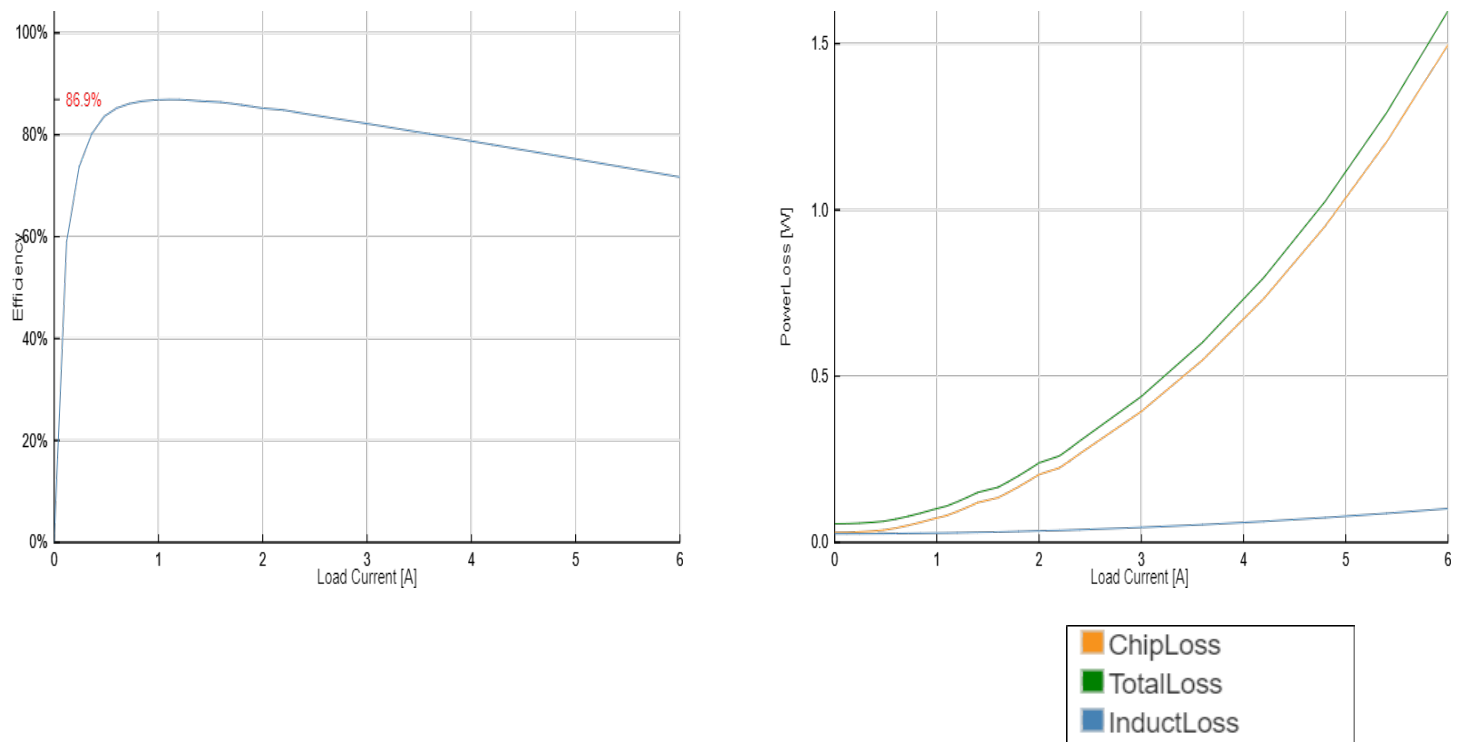
Bode Plot



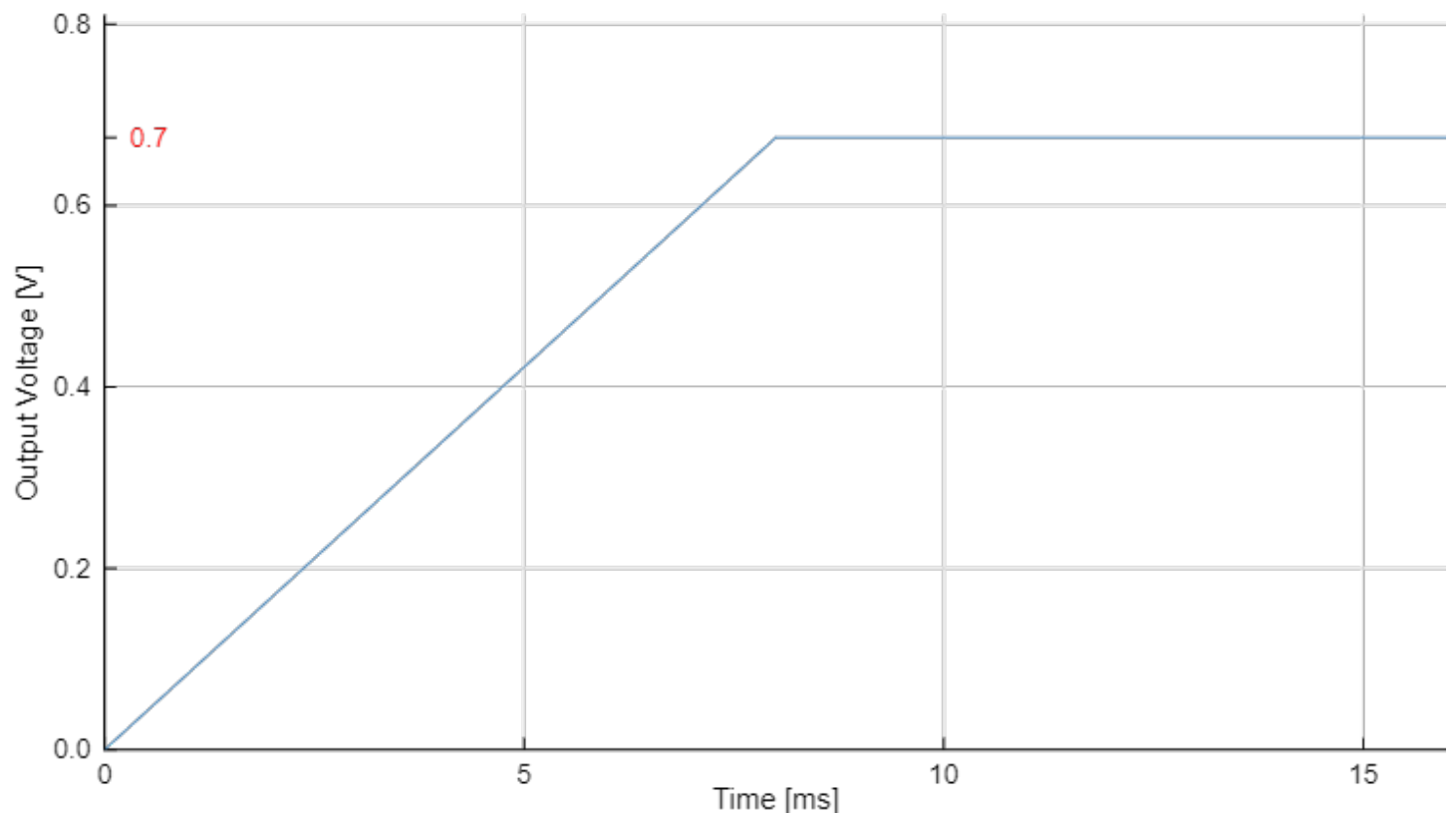
C210 VTT Terminator

AmP Power DDR_VREF

Efficiency



Soft Start



C210 VTT Terminator

AmP Power DDR_VREF

BoM

Part	Description	Recommended Attributes	Attributes	Quantity	Size (Imperial)	X(mm)	Y(mm)	Part Number	Spec	Manufacturer
C210	VTT Terminator		Vout3,0.675V @ 4A	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text"/>		<input type="text" value="AnDAPT, LLC"/>
L	Inductor	0.281μH, 10mΩ, >4A	0.33μH, 2.10mΩ, >4A, W	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="6.65"/>	<input type="text" value="6.45"/>	<input type="text" value="744393440033"/>		<input type="text" value="Würth Elektronik"/>
Cout (Ceramic)	Output Capacitor (Ceramic)	98μF, <15mΩ, >0.675V	47μF, 6.3V	<input type="text" value="8"/>	<input type="text" value="0805"/>	<input type="text" value="2"/>	<input type="text" value="1.25"/>	<input type="text" value="885012107006"/>		<input type="text" value="Würth Elektronik"/>
Cout (Bulk)	Output Capacitor (Bulk)		0μF, >0.675V	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text"/>		<input type="text"/>
Cin	Capacitor	20μF, <15mΩ, >1.35V	22μF, 3mΩ, 16V	<input type="text" value="1"/>	<input type="text" value="1206"/>	<input type="text" value="3.2"/>	<input type="text" value="1.6"/>	<input type="text" value="885012108018"/>		<input type="text" value="Würth Elektronik"/>
Cbst	Capacitor	0.1μF, >6V	0.1μF, 25V	<input type="text" value="1"/>	<input type="text" value="0402"/>	<input type="text" value="1"/>	<input type="text" value="0.5"/>	<input type="text" value="885012205085R"/>		<input type="text" value="Würth Elektronik"/>
Cdrv	Capacitor	0.1μF, >6V	0.1μF, 25V	<input type="text" value="1"/>	<input type="text" value="0402"/>	<input type="text" value="1"/>	<input type="text" value="0.5"/>	<input type="text" value="885012205085R"/>		<input type="text" value="Würth Elektronik"/>
D1	Schottky Diode	200mA, 0.5V	200mA, 0.5V	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="1.2"/>	<input type="text" value="0.8"/>	<input type="text" value="RB521S30T5G"/>		<input type="text" value="ON Semiconductor"/>
R1	Resistor	0.0499kΩ, 1%, 0.063W	0.0499kΩ, 1%, 0.063W	<input type="text" value="1"/>	<input type="text" value="0402"/>	<input type="text" value="1"/>	<input type="text" value="0.5"/>	<input type="text"/>		<input type="text"/>
R2	Resistor	DNI	DNI	<input type="text" value="0"/>	<input type="text" value="Optional"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text"/>		<input type="text"/>
R3	Resistor	1kΩ, 1%, 0.063W	1kΩ, 1%, 0.063W	<input type="text" value="1"/>	<input type="text" value="0402"/>	<input type="text" value="1"/>	<input type="text" value="0.5"/>	<input type="text"/>		<input type="text"/>
R4	Resistor	1kΩ, 1%, 0.063W	1kΩ, 1%, 0.063W	<input type="text" value="1"/>	<input type="text" value="0402"/>	<input type="text" value="1"/>	<input type="text" value="0.5"/>	<input type="text"/>		<input type="text"/>
Rbst	Resistor	15Ω	15Ω	<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text"/>		<input type="text"/>

Total BoM Area ≈ 155.59 mm²

C210 VTT Terminator

AmP Power DDR_VREF

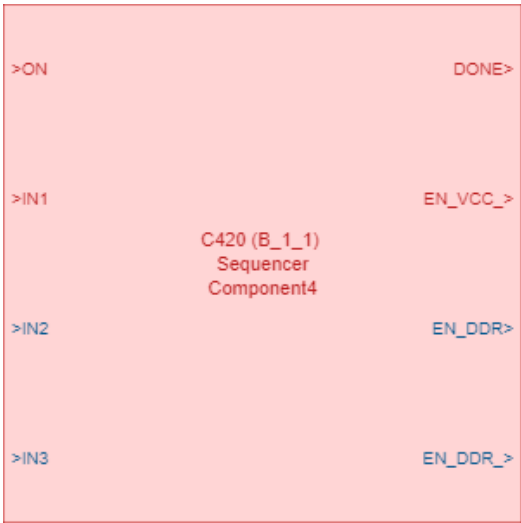
Parameters

Category	Parameter	Description	Value
Basic_Configuration	Fsw	Switching Frequency	1000kHz
Basic_Configuration	Vin	Nominal Input Voltage	1.35V
Basic_Configuration	Vin_Name	Used in The Schematics View	PVin3
Basic_Configuration	Vout	Nominal Output Voltage	0.675V
Basic_Configuration	Vout_Name	Used in The Schematics View	Vout3
Basic_Configuration	V_Ripple	Output Voltage Ripple	0.3mV
Basic_Configuration	V_Overshoot	Max Overshoot for a transient of Iout Delta	0V
Basic_Configuration	Iout	Maximum Converter Current	4A
Basic_Configuration	I_Ripple	Desired Ripple. Used for LC Recommendations	25.57%
Basic_Configuration	I_Delta	Used to Calculate Overshoot and Transient Response	2A
Manual_LC	Inductor	Nominal Inductor Value	0.33μH
Manual_LC	Inductor_DCR	Nominal Inductor DC Resistance	2.1mΩ
Manual_LC	Capacitor	Nominal Capacitor value	376μF
Manual_LC	Cap_ESR	Nominal Capacitor Equivalent Series Resistance	15mΩ
Manual_LC	CapacitorBlk	Nominal Capacitor value	0μF
Manual_LC	Cap_ESR_BlK	Nominal Capacitor Equivalent Series Resistance	0mΩ
Manual_LC	Inductor_R\$	Nominal Inductor Value	0.165μH
Manual_LC	Inductor_DCR_R\$	Nominal Inductor DC Resistance	10mΩ
Manual_LC	Capacitor_R\$	Nominal Capacitor value	98μF
Manual_LC	Cap_ESR_R\$	Nominal Capacitor Equivalent Series Resistance	15mΩ
Manual_LC	Capacitor_R_BlK\$	Nominal Capacitor value	0μF
Manual_LC	Cap_ESR_R_BlK\$	Nominal Capacitor Equivalent Series Resistance	15mΩ
Manual_LC	fLC	LC Resonant Frequency	14.3kHz
Manual_Resistor	R1		0.0499kΩ
Manual_Resistor	R2		DNI
Manual_Resistor	Vfb	$V_{fb} = V_{out} * R2 / (R1 + R2)$	0.675V
Manual_Resistor	R3		1kΩ
Manual_Resistor	R4		1kΩ
Manual_Resistor	PVinfb		nullV
Manual_Resistor	Rbst		15Ω
Manual_Resistor	Ext_Div_Ratio		1
Manual_Resistor	Ext_Div_Ratio2		2
Controller	Gain	Proportional Gain	1500
Controller	Fz1	First Compensation Zero	10kHz
Controller	Fz2	Second Compensation Zero	50kHz
Controller	Ki	Integral Gain	9.424778e+7
Controller	Kd	Derivative gain	4.774648e-3
Controller	Jitter	jitter/transient performance optimization	Best jitter
Controller	Controller_Type		0
PID_Nonlinear	Kp_a		0
PID_Nonlinear	Ki_a		0
PID_Nonlinear	Kd_a		0
PID_Nonlinear	Kp_b		0
PID_Nonlinear	Ki_b		0
PID_Nonlinear	Kd_b		0
PID_Nonlinear	Kp_alpha		0
PID_Nonlinear	Ki_min		0
PID_Nonlinear	Kd_min		0
PID_Nonlinear	Kd_max		0
VoUVLO_Group	VoUVLO	Output Under Voltage Lockout Threshold	0.4V
OCP_Group	OCP	Cycle by Cycle Current Protection Level	5.667A
OVP_EN	OVP	Output Over Voltage Protection Level	0.92V
Soft_Start_EN	UseCM	Use CM	enable
Soft_Start_EN	Rise_Time	Soft Start Length	8ms
PGood_EN	PGood	Power Good percentage of Nominal Vout	85%
hidden	Cin		20μF
hidden	Cbst		0.1μF
hidden	Cdrv		0.1μF
hidden	D1		0.2A

C420 Sequencer

AmP Power Component4

Schematic



C420 Sequencer

AmP Power Component4

BoM

Part	Description	Recommended Attributes	Attributes	Quantity	Size (Imperial)	X(mm)	Y(mm)	Part Number	Spec	Manufacturer
C420	Sequencer			<input type="text" value="1"/>	<input type="text" value="Custom Size"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text"/>		<input type="text" value="AnDAPT, LLC"/>

Total BoM Area ≈ 0 mm²

C420 Sequencer

AmP Power Component4

Parameters

	Channels	Target Delay ms	Actual Delay ms
Group 1	1	4	4
Group 2	2	4	4
Group 3	0	4	4
Group 4	0	4	4
Group 5	0	0	2
Group 6	0	0	2
Group 7	0	0	2
Group 8	0	0	2

Global BoM

Component	Part	Description	Attributes	Quantity	Part Number	Manufacturer
Platform	AmP8DB6QF65	AmP Power IC	8 MOSFETS, 6A	1		AnDAPT, LLC
Platform	Cvin1	Capacitor	0.1µF, 25V	1	885012205085R	Wurth Elektronik
Platform	Cvin2	Capacitor	1µF, 25V	1	885012106022	Wurth Elektronik
Platform	Cvin3	Capacitor	10µF, 25V	1	885012106031	Wurth Elektronik
Platform	Cvdd1	Capacitor	0.1µF, 25V	1	885012205085R	Wurth Elektronik
Platform	Cvdd2	Capacitor	10µF, 6.3V	1	885012105020	Wurth Elektronik
Platform	Cvcc1	Capacitor	0.1µF, 25V	1	885012205085R	Wurth Elektronik
Platform	Cvcc2	Capacitor	1µF, 16V	1	885012105019	Wurth Elektronik
Platform	C3v31	Capacitor	0.1µF, 25V	1	885012205085R	Wurth Elektronik
Platform	C3v32	Capacitor	1µF, 16V	1	885012105019	Wurth Elektronik
Platform	Cldoa1	Capacitor	0.1µF, 25V	1	885012205085R	Wurth Elektronik
Platform	Cldoa2	Capacitor	1µF, 16V	1	885012105019	Wurth Elektronik
Platform	Cldob1	Capacitor	0.1µF, 25V	1	885012205085R	Wurth Elektronik
Platform	Cldob2	Capacitor	1µF, 16V	1	885012105019	Wurth Elektronik
Platform	Cvccio23	Capacitor	0.1µF, 25V	1	885012205085R	Wurth Elektronik
VCC_DDR	C220	PWM Sync Buck VM HC	Vout1,1.35V @ 10A	1	231130	
VCC_DDR	L	Inductor	0.33µH, 0.40mΩ, 54.3A	1	744308033	Wurth Elektronik
VCC_DDR	Cout (Ceramic)	Output Capacitor (Ceramic)	47µF, 6.3V	7	885012107006	Wurth Elektronik
VCC_DDR	Cout (Bulk)	Output Capacitor (Bulk)	0µF, >1.35V	1		
VCC_DDR	Cin	Capacitor	22µF, 3mΩ, 16V	2	885012108018	Wurth Elektronik
VCC_DDR	Cbst	Capacitor	0.1µF, 25V	1	885012205085R	Wurth Elektronik
VCC_DDR	Cdrv	Capacitor	0.1µF, 25V	1	885012205085R	Wurth Elektronik
VCC_DDR	D1	Schottky Diode	200mA, 0.5V	1	RB521S30T5G	ON Semiconductor
VCC_DDR	R1	Resistor	0.0499kΩ, 1%, 0.063W	1		
VCC_DDR	R2	Resistor	DNI	0		
VCC_DDR	Rbst	Resistor	15Ω	1		
DDR_VTT	C210	VTT Terminator	Vout2,0.675V @ 4A	1	231130	
DDR_VTT	L	Inductor	0.33µH, 2.10mΩ, >4A	1	744393440033	Wurth Elektronik
DDR_VTT	Cout (Ceramic)	Output Capacitor (Ceramic)	47µF, 6.3V	8	885012107006	Wurth Elektronik
DDR_VTT	Cout (Bulk)	Output Capacitor (Bulk)	0µF, >0.675V	1		
DDR_VTT	Cin	Capacitor	22µF, 3mΩ, 16V	1	885012108018	Wurth Elektronik
DDR_VTT	Cbst	Capacitor	0.1µF, 25V	1	885012205085R	Wurth Elektronik
DDR_VTT	Cdrv	Capacitor	0.1µF, 25V	1	885012205085R	Wurth Elektronik
DDR_VTT	D1	Schottky Diode	200mA, 0.5V	1	RB521S30T5G	ON Semiconductor
DDR_VTT	R1	Resistor	0.0499kΩ, 1%, 0.063W	1		
DDR_VTT	R2	Resistor	DNI	0		
DDR_VTT	R3	Resistor	1kΩ, 1%, 0.063W	1		
DDR_VTT	R4	Resistor	1kΩ, 1%, 0.063W	1		
DDR_VTT	Rbst	Resistor	15Ω	1		
DDR_VREF	C210	VTT Terminator	Vout3,0.675V @ 4A	1	231130	
DDR_VREF	L	Inductor	0.33µH, 2.10mΩ, >4A	1	744393440033	Wurth Elektronik
DDR_VREF	Cout (Ceramic)	Output Capacitor (Ceramic)	47µF, 6.3V	8	885012107006	Wurth Elektronik
DDR_VREF	Cout (Bulk)	Output Capacitor (Bulk)	0µF, >0.675V	1		
DDR_VREF	Cin	Capacitor	22µF, 3mΩ, 16V	1	885012108018	Wurth Elektronik
DDR_VREF	Cbst	Capacitor	0.1µF, 25V	1	885012205085R	Wurth Elektronik
DDR_VREF	Cdrv	Capacitor	0.1µF, 25V	1	885012205085R	Wurth Elektronik
DDR_VREF	D1	Schottky Diode	200mA, 0.5V	1	RB521S30T5G	ON Semiconductor
DDR_VREF	R1	Resistor	0.0499kΩ, 1%, 0.063W	1		
DDR_VREF	R2	Resistor	DNI	0		
DDR_VREF	R3	Resistor	1kΩ, 1%, 0.063W	1		
DDR_VREF	R4	Resistor	1kΩ, 1%, 0.063W	1		
DDR_VREF	Rbst	Resistor	15Ω	1		
Component4	C420	Sequencer		1		

Category	Function	Part	Document Link
AmP Platform	AmPMIC	AmP8DB6QF65	https://www.andapt.com/docs/AnDAPT_AmP_Platform_B.pdf
PWM Switching Regulator	PWM Sync Buck VM HC	C220	https://www.andapt.com/docs/pc/AnDAPT_C220_B_PWM_Sync_Buck_VM_HC.pdf
PWM Switching Regulator	VTT Terminator	C210	https://www.andapt.com/docs/pc/AnDAPT_C210_B_VTT_Terminator.pdf



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