Power Supply Input

Var	Value	Units	Description
VACMIN	85	V	Minimum Input AC Voltage
VACMAX	265	V	Maximum Input AC Voltage
FL	50	Hz	Line Frequency
TC	2.69	ms	Diode Conduction Time
Z	0.60		Loss Allocation Factor
η	71.0	%	Efficiency Estimate
VMIN	84.6	V	Minimum DC Input Voltage
VMAX	374.8	V	Maximum DC Input Voltage

Input Section

Var	Value	Units	Description
Fuse	1.00	A	Input Fuse Rated Current
IAVG	0.40	A	Average Diode Bridge Current (DC Input Current)
Thermistor	16.00	Ω	Input Thermistor

Device Variables

Var	Value	Units	Description
Device	TOP264EG		PI Device Name
BVDSS	725		Drn-Src Bkdn Voltage
Device Mode	Default		Current Limit mode for device
OVP_FLAG	NO		Output Overvoltage Protection Enabled
PO	24.07	W	Total Output Power
VDRAIN Estimated	554.30	V	Actual Estimated Drain Voltage
VDS	12.94	V	On state Drain to Source Voltage
FS	132000	Hz	Switching Frequency
KP	0.71		Continuous/Discontinuous Operating Ratio
KI	1.00		Current Limit Reduction Factor
ILIMITEXT	1.21	A	Programmed Current Limit
ILIMITMIN	1.21	A	Minimum Current Limit
ILIMITMAX	1.39	A	Maximum Current Limit
PLIM_FLAG	NO		Enable Overload Power Limiting
IP	1.15	A	Peak Primary Current (at VMIN)
IRMS	0.57	A	Primary RMS Current (at VMIN)
DMAX	0.54		Maximum Duty Cycle
RTH_DEVICE	19.34	°C/W	PI Device Maximum Thermal Resistance
DEV_HSINK_TYPE	Custom Aluminum		PI Device Heatsink Type
DEV_HSINK_AREA	3427	mm²	PI Device Heatsink Area

Clamp Circuit

Var	Value	Units	Description
Clamp Type	RCD Clamp		Clamp Circuit Type
VCLAMP	95	V	Estimated average clamping voltage
Estimated Clamp Loss	0.83	W	Clamp Dissipation
VC_MARGIN	166.13	V	Clamp Voltage Safety Margin

Bias Variables

Var	Value	Units	Description
IB	0.006	A	Bias Current
PIVB	73	V	Bias Rectifier Max Peak Inverse Voltage

Transformer Construction Parameters

Var	Value	Units	Description
Core Type	EE25		Core Type
Core Material	NC-2H (Nicera) or Equivalent		Core Material
Bobbin Reference	Generic, 5 pri. + 5 sec.		Bobbin Reference
Bobbin Orientation	Vertical		Bobbin type
Primary Pins	4		Number of Primary pins used
Secondary Pins	4		Number of Secondary pins used
USE_SHIELDS	YES		Use shield Windings
LP_nom	402	µH	Nominal Primary Inductance
LP_Tol	10.0	%	Primary Inductance Tolerance
NP	61.3		Calculated Primary Winding Total Number of Turns
NSM	4		Secondary Main Number of Turns
CMA	282	Cmils/A	Primary Winding Current Capacity
VOR	84.1	V	Reflected Output Voltage
BW	9.80	mm	Bobbin Winding Width
ML	0.00	mm	Safety Margin on Left Width
MR	0.00	mm	Safety Margin on Right Width
FF	73	%	Actual Transformer Fit Factor. 100% signifies fully utilized winding window
AE	41.00	mm^2	Core Cross Sectional Area
ALG	96	nH/T^2	Gapped Core Effective Inductance

BM	1656	Gauss	Maximum Flux Density
BP	2207	Gauss	Peak Flux Density
BAC	588	Gauss	AC Flux Density for Core Loss
LG	0.511	mm	Estimated Gap Length
L_LKG	12.05	µH	Estimated primary leakage inductance
LSEC	15	nH	Secondary Trace Inductance

Primary Winding Section 1

Var	*Value*	*Units*	*Description*
NP1	62		Rounded (Integer) Number of Primary winding turns in the first section of primary
Wire Size	28	AWG	Wire size of primary winding
Winding Type	Single (x1)		Primary winding number of parallel wire strands
L	2.31		Primary Number of Layers
DC Copper Loss	0.21	W	Primary 1 DC Losses

Output 1

Var	*Value*	*Units*	*Description*
VO	5.00	V	Output Voltage
IO	2.40	A	Output Current
VOUT_ACTUAL	5.00	V	Actual Output Voltage
NS	4		Secondary Number of Turns
Wire Size	26	AWG	Wire size of secondary winding
Winding Type	Trifilar (x3)		Output winding number of parallel strands
L_S_OUT	0.55		Secondary Output Winding Layers
DC Copper Loss	0.21	W	Secondary DC Losses
VD	0.49	V	Output Winding Diode Forward Voltage Drop
PIVS	29	V	Output Rectifier Maximum Peak Inverse Voltage
ISP	8.79	A	Peak Secondary Current
ISRMS	4.03	A	Secondary RMS Current
RTH_DIODE	47.94	°C/W	Output Diode Maximum Thermal Resistance
OD_HSINK_TYPE	2 Oz (70 µ) Copper PCB		Output Diode Heatsink Type
OD_HSINK_AREA	228	mm²	Output Diode Heatsink Area
CO	2700 x 1	µF	Output Capacitor
IRIPPLE	3.24	A	Output Capacitor RMS Ripple Current
Expected Lifetime	40803	hr	Expected Lifetime of Output Capacitor

Output 2

Var	*Value*	*Units*	*Description*
VO	5.00	V	Output Voltage
IO	2.40	A	Output Current
VOUT_ACTUAL	5.00	V	Actual Output Voltage
NS	4		Secondary Number of Turns
Wire Size	26	AWG	Wire size of secondary winding
Winding Type	Trifilar (x3)		Output winding number of parallel strands
L_S_OUT	0.55		Secondary Output Winding Layers
DC Copper Loss	0.23	W	Secondary DC Losses
VD	0.49	V	Output Winding Diode Forward Voltage Drop
PIVS	29	V	Output Rectifier Maximum Peak Inverse Voltage
ISP	8.79	A	Peak Secondary Current
ISRMS	4.03	A	Secondary RMS Current
RTH_DIODE	47.94	°C/W	Output Diode Maximum Thermal Resistance
OD_HSINK_TYPE	2 Oz (70 µ) Copper PCB		Output Diode Heatsink Type
OD_HSINK_AREA	228	mm²	Output Diode Heatsink Area
CO	2700 x 1	µF	Output Capacitor
IRIPPLE	3.24	A	Output Capacitor RMS Ripple Current
Expected Lifetime	40803	hr	Expected Lifetime of Output Capacitor

Feedback Circuit

Var	*Value*	*Units*	*Description*
DUAL_OUTPUT_FB_FLAG	NO		Dual Output Feedback regulations use flag
SF_FLAG	NO		Soft Finish Circuits use flag
TYPE_3CTRL_FLAG	NO		Phase Boost Network flag

The regulation and tolerances do not account for thermal drifting and component tolerance of the output diode forward voltage drop and voltage drops across the LC post filter. The actual voltage values are estimated at full load only.

Please verify cross regulation performance on the bench.