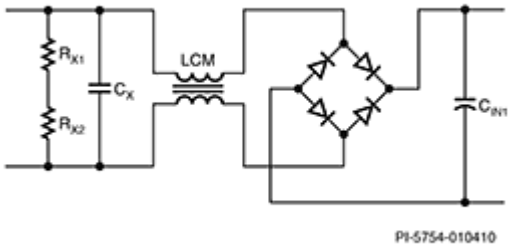
Power Supply Input

Var	*Value*	*Units*	*Description*
VACMIN	90	V	Minimum Input AC Voltage (Manual Input)
VACMAX	260	V	Maximum Input AC Voltage (Manual Input)
FL	60	Hz	Line Frequency (Manual Input)
TC	2,19	ms	Diode Conduction Time
Z	0,70		Loss Allocation Factor
ŋ	80,0	%	Efficiency Estimate
IAVG	1,62	A	Average Diode Bridge Current (DC Input Current)
VMIN	89,9	V	Minimum DC Input Voltage
VMAX	367,7	V	Maximum DC Input Voltage

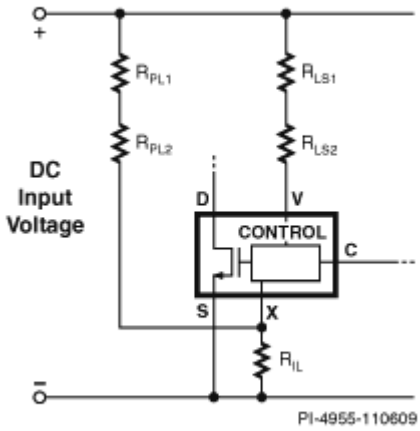
Input Section and EMI Filter

Var	*Value*	*Units*	*Description*
Fuse	2,50	A	Input Fuse Rated Current
Thermistor	5,00	Ω	Input Thermistor
Input Rectifier	KBL06		Recommended Input Diodes/Diode Bridge
CIN1	220,0	µF	Input Bulk Capacitor
LCM	6,2	mH	Common Mode Choke
CX	330,0	nF	X Capacitor
RX1	1,10	MΩ	Input Resistor
RX2	1,10	MΩ	Input Resistor
CY	2,20	nF	Y-Capacitor



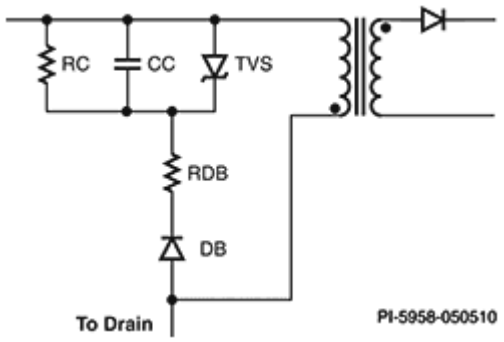
Device Variables

Var	*Value*	*Units*	*Description*
Device	**TOP271KG**		**PI Device Name. See Information section for detail**
PO	116,23	W	Total Output Power
VDRAIN Estimated	571,93	V	Actual Estimated Drain Voltage
VDS	7,90	V	On state Drain to Source Voltage
FS	66000	Hz	Switching Frequency
KP	0,51		Continuous/Discontinuous Operating Ratio
KI	1,00		Current Limit Reduction Factor
ILIMITEXT	4,81	A	Programmed Current Limit
ILIMITMIN	4,81	A	Minimum Current Limit
ILIMITMAX	5,53	A	Maximum Current Limit
CBP	0,10	µF	Device bypass capacitor
RIL	8,45	kΩ	Current Limit Resistor
RPL	9,10	MΩ	Power Limit Resistor
RPL2	9,10	MΩ	2nd Power Limit Resistor
RLS	2,2	MΩ	Line sense resistor
RLS2	2,2	MΩ	Line sense resistor
IP	3,48	A	Peak Primary Current (at VMIN)
IRMS	2,09	A	Primary RMS Current (at VMIN)
P_NO_LOAD	250	mW	Estimated No Load Input Power
DMAX	0,62		Maximum Duty Cycle
RTH_DEVICE	5,41	℃/W	PI Device Maximum Thermal Resistance
DEV_HSINK_TYPE	2 Oz (70 µ) Copper PCB		PI Device Heatsink Type
DEV_HSINK_AREA	56104	mm²	PI Device Heatsink Area



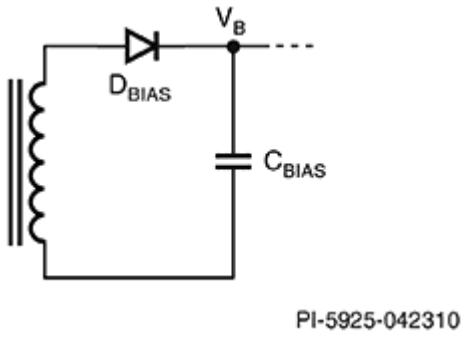
Clamp Circuit

Var	*Value*	*Units*	*Description*
DB	FR257		Recommended Blocking Diode
RCLAMP	24,00	kΩ	Clamping resistor
RC_NUM	4		Number of parallel Clamping resistors
CCLAMP	10,000	nF	Clamp Capacitor
RDB	5,10	Ω	Damping Resistor for Clamp Circuit
VCLAMP	167	V	Estimated average clamping voltage
VRZ	P6KE200A		Recommended Zener Clamp
Estimated Clamp Loss	4,49	W	Clamp Dissipation



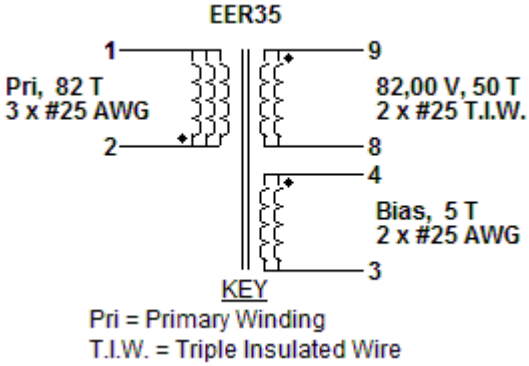
Bias Variables

Var	*Value*	*Units*	*Description*
VB	5,7	V	Bias Voltage
IB	0,006	A	Bias Current
VDB	1,20	V	Bias Diode Forward Voltage Drop
PIVB	28	V	Bias Rectifier Max Peak Inverse Voltage
CBIAS	10,0	µF	Bias Capacitor
NB	5		Bias Winding Number of Turns
Wire Size	25	AWG	Wire size of Bias windings
Winding Type	Bifilar (x2)		Wire type of Bias windings
Layers	0,19		Bias Winding Layers
Start Pin(s)	4		Starting pin(s) for Bias winding
Termination Pin(s)	3		Termination pin(s) for Bias winding



Transformer Construction Parameters

Var	*Value*	*Units*	*Description*
Core Type	EER35		Core Type (Manual Input)
Core Material	NC-2H (Nicera) or Equivalent		Core Material
Bobbin Reference	Generic, 7 pri. + 7 sec.		Bobbin Reference
Bobbin Orientation	Vertical		Bobbin type
Primary Pins	4		Number of Primary pins used
Secondary Pins	2		Number of Secondary pins used
LP	432	µH	Primary Inductance
LP_Tol	10,0	%	Primary Inductance Tolerance
LP_nom	480	µH	Nominal Primary Inductance
NP	81,3		Calculated Primary Winding Total Number of Turns
NSM	50		Secondary Main Number of Turns
CMA	490	Cmils/A	Primary Winding Current Capacity
VOR	135,0	V	Reflected Output Voltage
BW	26,10	mm	Bobbin Winding Width
ML	0,00	mm	Safety Margin on Left Width
MR	0,00	mm	Safety Margin on Right Width
FF	**138**	**%**	**Actual Transformer Fit Factor. 100% signifies fully utilized winding window. See Information section for detail**
AE	107,00	mm²	Core Cross Sectional Area



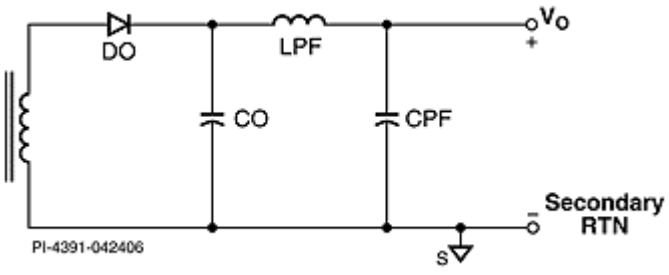
ALG	65	nH/T²	Gapped Core Effective Inductance
BM	1729	Gauss	Maximum Flux Density
BP	2995	Gauss	Peak Flux Density
BAC	440	Gauss	AC Flux Density for Core Loss
LG	**2,012**	**mm**	**Estimated Gap Length. See Warnings section for detail**
L_LKG	14,39	µH	Estimated primary leakage inductance
LSEC	20	nH	Secondary Trace Inductance

Primary Winding Section 1

Var	*Value*	*Units*	*Description*
NP1	82		Rounded (Integer) Number of Primary winding turns in the first section of primary
Wire Size	25	AWG	Wire size of primary winding
Winding Type	Trifilar (x3)		Primary winding number of parallel wire strands
L	4,76		Primary Number of Layers
DC Copper Loss	0,82	W	Primary 1 DC Losses
PIN_S	2		Starting pin(s) for first section of primary winding
PIN_T	1		Termination pin(s) for first section of primary winding

Output 1

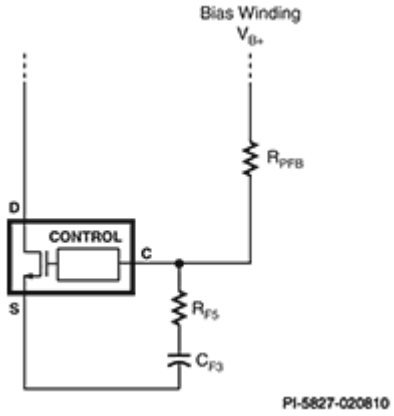
Var	*Value*	*Units*	*Description*
VO	82,00	V	Output Voltage
IO	1,40	A	Output Current
VOUT_ACTUAL	82,00	V	Actual Output Voltage
NS	50		Secondary Number of Turns
Wire Size	25	AWG	Wire size of secondary winding
Winding Type	Bifilar (x2)		Output winding number of parallel strands
L_S_OUT	2,49		Secondary Output Winding Layers
DC Copper Loss	1,61	W	Secondary DC Losses
Start Pin(s)	9		Starting pin(s) for Output winding
Termination Pin(s)	8		Termination pin(s) for Output winding
VD	1,00	V	Output Winding Diode Forward Voltage Drop
PIVS	306	V	Output Rectifier Maximum Peak Inverse Voltage
ISP	5,60	A	Peak Secondary Current
ISRMS	2,61	A	Secondary RMS Current
DO	Undefined		Recommended Output Diode
RTH_DIODE	25,48	℃/W	Output Diode Maximum Thermal Resistance
OD_HSINK_TYPE	Custom Aluminum		Output Diode Heatsink Type
OD_HSINK_AREA	1895	mm²	Output Diode Heatsink Area
RSNUB	680,0	Ω	Snubber Resistor
CSNUB	15	pF	Snubber Capacitor
CO	680 x 1	µF	Output Capacitor



IRIPPLE	2,21	A	Output Capacitor RMS Ripple Current
Expected Lifetime	**85837**	**hr**	**Expected Lifetime of Output Capacitor. See Information section for detail**
LPF	3,30	µH	Post Filter Inductor
CPF	100,00	µF	Post Filter Capacitor

Feedback Circuit

Var	*Value*	*Units*	*Description*
RF5	6,80	Ω	PI Device Control Pin Resistor
CF3	47	µF	PI Device Control Pin Capacitor
RPBP	15,00	Ω	Primary Side Feedback Resistor



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.