ACDC_LinkSwitch-TN_042413; Rev.2.6; Copyright Power Integrations 2007	INPUT	INFO	OUTPUT	UNIT	LinkSwitch-TN_Rev_2-6.xls: LinkSwitch-TN Design Spreadsheet
INPUT VARIABLES					Customer
VACMIN	207			Volts	Minimum AC Input Voltage
VACMAX	253			Volts	Maximum AC Input Voltage
FL	50			Hertz	Line Frequency
VO	15.00			Volts	Output Voltage
IO	0.063			Amps	Output Current
EFFICIENCY (User Estimate)	0.72				Overall Efficiency Estimate (Adjust to match Calculated, or enter Measured Efficiency)
EFFICIENCY (Calculated Estimate)			0.78		Calculated % Efficiency Estimate
CIN	100.00		100.00	uF	Input Filter Capacitor
Input Stage Resistance			0.00	ohms	Input Stage Resistance, Fuse & Filtering
Ambient Temperature			50	deg C	Operating Ambient Temperature (deg Celsius)
Switching Topology			Buck		Type of Switching topology
Input Rectification Type	H		H		Choose H for Half Wave Rectifier and F for Full Wave Rectification
DC INPUT VARIABLES					
VMIN			292.0	Volts	Minimum DC Bus Voltage
VMAX			357.8	Volts	Maximum DC Bus Voltage
LinkSwitch-TN					
LinkSwitch-TN	LNK302		LNK302		Selected LinkSwitch-TN. Ordering info - Suffix P/G indicates DIP 8 package; suffix D indicates SO8 package; second suffix N indicates lead free RoHS compliance
ILIMIT			0.136	Amps	Typical Current Limit
ILIMIT_MIN			0.126	Amps	Minimum Current Limit
ILIMIT_MAX			0.146	Amps	Maximum Current Limit
FSMIN			62000	Hertz	Minimum Switching Frequency
VDS			12.0	Volts	Maximum On-State Drain To Source Voltage drop
PLOSS_LNK			0.17	Watts	Estimated LinkSwitch-TN losses
DIODE					
VD	0.98		0.98	Volts	Freewheeling Diode Forward Voltage Drop
VRR			600	Volts	Recommended PIV rating of Freewheeling Diode
IF			1	Amps	Recommended Diode Continuous Current Rating
TRR			75	ns	Recommended Reverse Recovery Time
Diode Recommendation			UF4005		Suggested Freewheeling Diode
OUTPUT INDUCTOR					
L_TYP			2560.0	uH	Required value of Inductance to deliver Output Power (Includes device and inductor tolerances) Choose next higher standard available value
L			2700	uH	Output Inductor, Recommended Standard Value
L_R	6.0		6.0	Ohms	DC Resistance of Inductor
OPERATING MODE			MDCM		Mostly Discontinuous Conduction Mode (at VMIN)
KL_TOL			1.15		Inductor tolerance Factor. Accounts for basic (10% - 20%) Manufacturing Tolerances 1.1 < KL_TOL < 1.2 See AN-37 for detailed explanation

K_LOSS			0.813		Loss factor. Accounts for "off-state" power loss to be supplied by inductor Calculated efficiency < K_LOSS < 1. See AN-37 for detailed explanation
ILRMS			0.07	Amps	Estimated RMS inductor current (at VMAX)
OUTPUT CAPACITOR					
DELTA_V	0.10		0.10	Volts	Target Output Voltage Ripple
MAX_ESR			794	m-Ohms	Maximum Capacitor ESR (milli-ohms)
I RIPPLE			0.13	Amps	Output Capacitor Ripple current
FEEDBACK COMPONENTS					
RBIAS			2.00	k-Ohms	Bias Resistor. Use closest standard 1% value
RFB			15.29	k-Ohms	Feedback Resistor. Use closest standard 1% value
CFB			10	uF	Feedback Capacitor
C_SOFT_START			1 - 10	uF	If the output Voltage is greater than 12 V, or total output and system capacitance is greater than 100 uF, a soft start capacitor between 1uF and 10 uF is recommended. See AN-37 for details