ACDC_LinkSwitch-TN_BuckBoost_032514; Rev.2.6; Copyright Power Integrations 2014	INPUT	INFO	OUTPUT	UNIT	LinkSwitch-TN_BuckBoost_Rev2-6.xls: LinkSwitch-TN Design Spreadsheet
INPUT VARIABLES					Customer
VACMIN	100			Volts	Minimum AC Input Voltage
VACMAX	277			Volts	Maximum AC Input Voltage
FL	50			Hertz	Line Frequency
VO	23.20			Volts	Output Voltage
IO	0.350			Amps	Output Current
EFFICIENCY (User Estimate)	0.75				Overall Efficiency Estimate (Adjust to match Calculated, or enter Measured Efficiency)
EFFICIENCY (Calculated Estimate)			0.79		Calculated % Efficiency Estimate
CIN			22.00	uF	Input Filter Capacitor
Input Stage Resistance	8.2		8.2	ohms	Input Stage Resistance, Fuse & Filtering
Ambient Temperature			50	deg C	Operating Ambient Temperature (deg Celcius)
Input Rectification Type	F		F		Choose H for Half Wave Rectifier and F for Full Wave Rectification
DC INPUT VARIABLES					
VMIN			114.5	Volts	Minimum DC Bus Voltage
VMAX			391.7	Volts	Maximum DC Bus Voltage
LINKSWITCH-TN					
LINKSWITCH-TN	Auto		LNK306		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			0.482	Amps	Typical Current Limit
ILIMIT_MIN			0.450	Amps	Minimum Current Limit
ILIMIT_MAX			0.515	Amps	Maximum Current Limit
FSMIN			62000	Hertz	Minimum Switching Frequency
VDS			6.2	Volts	Maximum On-State Drain To Source Voltage drop
PLOSS_LNK		Caution	1.30	Watts	!!! Caution Device may become excessively hot. Verify thermal performance on bench
DIODE					
VD			0.70	Volts	Freewheeling Diode Forward Voltage Drop
VRR			600	Volts	Recommended PIV rating of Freewheeling Diode
IF			1	Amps	Recommended Diode Continuous Current Rating
TRR			35	ns	Recommended Reverse Recovery Time
Diode Recommendation			BYV26C		Suggested Freewheeling Diode
OUTPUT INDUCTOR					
L_TYP			2581.9	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			2.0	Ohms	DC Resistance of Inductor
OPERATING MODE			CCM		Continuous 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			0.833		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			0.40	Amps	Estimated RMS inductor current (at VMAX)
OUTPUT CAPACITOR					
DELTA_V			0.23	Volts	Target Output Voltage Ripple
MAX_ESR			2174	m-Ohms	Maximum Capacitor ESR
I RIPPLE			0.11	Amps	Output Capacitor Ripple current
FEEDBACK COMPONENTS					
RBIAS			2.00	k-Ohms	Bias Resistor. Use closest standard 1% value
RFB			24.68	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 output capacitance is greater than 100 uF, a soft start capacitor between 1uF and 10 uF is recommended. See AN-37 for details