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	110			Volts	Minimum AC Input Voltage
VACMAX	230			Volts	Maximum AC Input Voltage
FL	50			Hertz	Line Frequency
VO	5,00			Volts	Output Voltage
IO	0,063			Amps	Output Current
EFFICIENCY (User Estimate)	0,70				Overall Efficiency Estimate (Adjust to match Calculated, or enter Measured Efficiency)
EFFICIENCY (Calculated Estimate)			0,58		Calculated % Efficiency Estimate
CIN			1,00	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	H		**H**		Choose H for Half Wave Rectifier and F for Full Wave Rectification
DC INPUT VARIABLES					
VMIN			94,3	Volts	Minimum DC Bus Voltage
VMAX			325,3	Volts	Maximum DC Bus Voltage
LINKSWITCH-TN					
LINKSWITCH-TN	**LNK304**		LNK304		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			0,257	Amps	Typical Current Limit
ILIMIT_MIN			0,240	Amps	Minimum Current Limit
ILIMIT_MAX			0,275	Amps	Maximum Current Limit
FSMIN			62000	Hertz	Minimum Switching Frequency
VDS			11,4	Volts	Maximum On-State Drain To Source Voltage drop
PLOSS_LNK			0,16	Watts	Estimated LinkSwitch-TN losses
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			75	ns	Recommended Reverse Recovery Time
Diode Recommendation			**UF4005**		**Suggested Freewheeling Diode**
OUTPUT INDUCTOR					
L_TYP			253,6	uH	Required value of Inductance to deliver Output Power (Includes device and inductor tolerances) Choose next higher standard available value
L			**470**	**uH**	**Output Inductor, Recommended Standard Value**
L_R			2,0	Ohms	DC Resistance of Inductor
OPERATING MODE			**DCM**		**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			0,800		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			0,10	Amps	Estimated RMS inductor current (at VMAX)
OUTPUT CAPACITOR					
DELTA_V			0,05	Volts	Target Output Voltage Ripple
MAX_ESR			208	m-Ohms	Maximum Capacitor ESR
I RIPPLE			0,24	Amps	Output Capacitor Ripple current
FEEDBACK COMPONENTS					
RBIAS			2,00	k-Ohms	Bias Resistor. Use closest standard 1% value
RFB			3,84	k-Ohms	Feedback Resistor. Use closest standard 1% value
CFB			10	uF	Feedback Capacitor
C_SOFT_START				uF	