145E-29-SD

250 Watt, non isolated, single output buck converter with internal decoupling diode All parameters defined on Ta=25°C, IoNom = 8.5 ADC and UiNom = 48VDC

ABSOLUTE MAXIMUM RATINGS

parameter	unit	typ
Input peak voltage	VDC	125.00
Output overvoltage protection	VDC	39.0

THERMAL CHARACTERISTICS

parameter	min to max	typ
Ambient temperature range	-40°C / +85°C	
Max. case temperature for thermal shut down [°C]		+90°C
Storage temperature (device not in operation)	-10°C / +65°C	
Relative maximum humidity under storage		75% RH
Storage under worst conditions [in days]		25

COMMUNICATION INTERFACE

parameter	unit	fulfilled	conditions	min to max
Option shut down (left open for operation)		\checkmark		
Shutdown voltage for transformer	VDC		loNom	-0.2 to 2.8

SPECIALS

unit	fulfilled	conditions	typ
kHz			142
%		0.25loNom	94.00
%		0.5loNom	96.00
%		loNom	96.00
	\checkmark		
	\checkmark		
	\checkmark		
	kHz % %	kHz %	kHz % 0.25loNom % 0.5loNom

COMPLIANCE

parameter	fulfilled	notes
61000-4-2 (immunity against ESD-electrostatic discharge)	\checkmark	
61000-4-3 (immunity High frequency electromagnetic fields)	\checkmark	
61000-4-4 (immunity against burst – electrical fast transients)	\checkmark	
61000-4-5 (immunity against surge - high energy surges)	\checkmark	
61000-4-6 (immunity against induced, conducted disturbances)	\checkmark	
61000-6-4 (EMC – Emission standard for industrial environment)	\checkmark	
55022 <a< td=""><td>\checkmark</td><td></td></a<>	\checkmark	

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TECHNICAL DATASHEET

145E-29-SD

250 Watt, non isolated, single output buck converter with internal decoupling diode

INPUT					
parameter	unit	conditions	min	typ	max
Input voltage range	VDC	loNom	32	48	100
No load input current	mA	UiNom		20	
Max. input current	А	UiNom		8	
Input start up voltage	VDC	UiNom		32.0	
Undervoltage lockout	VDC	UiNom		29.0	
Input quiescent current in shutdown mode	mA	UiNom		1.50	
Input current overshoot during soft start ramp up	%	loNom		20	
Generated AC-ripple on the supply (BW=20MHz)	mVp-p	UiNom/IoNom		50	
Generated HF-noise on the supply (BW=20MHz)	mVp-p	UiNom/IoNom		30	

OUTPUT

parameter	unit	conditions	min typ max
Output voltage	VDC	loNom	29.0
Minimum required load to obtain the specified output voltage	%	UiNom	0
Generated AC-ripple on the output (BW=20MHz)	mVp-p	UiNom/IoNom	50
Generated HF-noise on the output (BW=20MHz)	mVp-p	UiNom/IoNom	20
Output voltage accuracy	%	loNom	+/-2.00%
Output voltage overshoot at initial switch-on	%	loNom	overdamped
Rated output power	W		250

CONTROL

parameter	unit	conditions r	min typ	max
Static line regulation	%	loNom/UiMinUiMax	0.10	
Static load regulation	%	loMinloMax/UiNom	1.0	
Dynamic load change adjusting time	ms	LoadChange 1090%	0.20	
Dynamic load change deviation to nominal output voltage	V	LoadChange 1090%	2.00	
Maximum admissible capacitive load	uF	loNom	infinite	
Initial switch on time	ms	loNom	50	

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TECHNICAL DATASHEET

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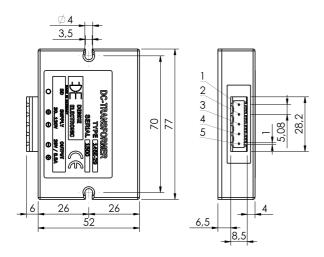
250 Watt, non isolated, single output buck converter with internal decoupling diode

MECHANICAL

parameter	unit	
Overall dimensions	mm	77x52x19
Weight	g	165

Pin No.	Function	Electrical Determination
1	SD	Shut down
2	Vi+	Input voltage positive
3	Vi-	Input voltage negative
4	Vo-	Output voltage negative
5	Vo+	Output voltage positive

Mechanical dimensions and Pin configuration All dimensions in mm Connector type: CCA 2,5/5-G-5,08 P26THR Case: FMC 77x52x19



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