

145-19-SD

190 Watt, non isolated, single output buck converter
All parameters defined on $T_a=25^{\circ}\text{C}$, $I_{oNom} = 10.0\text{ ADC}$ and $U_{iNom} = 80\text{VDC}$

ABSOLUTE MAXIMUM RATINGS

parameter	unit	typ
Input peak voltage	VDC	125.00
Output overvoltage protection	VDC	27.0

THERMAL CHARACTERISTICS

parameter	min to max	typ
Ambient temperature range	$-40^{\circ}\text{C} / +85^{\circ}\text{C}$	
Max. case temperature for thermal shut down [$^{\circ}\text{C}$]		$+90^{\circ}\text{C}$
Storage temperature [device not in operation]	$-10^{\circ}\text{C} / +65^{\circ}\text{C}$	
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]		✓		
Shutdown voltage for transformer	VDC		I_{oNom}	-0.2 to 2.8

SPECIALS

parameter	unit	fulfilled	conditions	typ
Switching frequency	kHz			140
Efficiency at light loads	%		$0.25I_{oNom}$	94.00
Efficiency at medium loads	%		$0.5I_{oNom}$	95.00
Efficiency at full loads	%		I_{oNom}	94.00
Drives high capacitive loads		✓		
CC/CV battery load characteristic		✓		
Insulation strength primary to case	VDC			1500

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INPUT

parameter	unit	conditions	min	typ	max
Input voltage range	VDC	IoNom	21	80	100
No load input current	mA	UiNom		15	
Max. input current	A	UiNom		11	
Input start up voltage	VDC	UiNom		19.4	
Undervoltage lockout	VDC	UiNom		16.2	
Input quiescent current in shutdown mode	mA	UiNom		0.50	
Input current overshoot during soft start ramp up	%	IoNom		10	
Generated AC-ripple on the supply [BW=20MHz]	mVp-p	UiNom/IoNom		100	
Generated HF-noise on the supply [BW=20MHz]	mVp-p	UiNom/IoNom		40	

OUTPUT

parameter	unit	conditions	min	typ	max
Output voltage	VDC	IoNom		19.0	
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	%	IoNom		+/-2.00%	
Output voltage overshoot at initial switch-on	%	IoNom		overdamped	
Rated output power	W			190	

CONTROL

parameter	unit	conditions	min	typ	max
Static line regulation	%	IoNom/UiMin...UiMax		0.05	
Static load regulation	%	IoMin...IoMax/UiNom		1.0	
Dynamic load change adjusting time	ms	LoadChange 10...90%		1.00	
Dynamic load change deviation to nominal output voltage	V	LoadChange 10...90%		1.50	
Maximum admissible capacitive load	uF	IoNom		infinite	
Initial switch on time	ms	IoNom		50	
Softstart ramp up time	ms	IoNom		15	

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MECHANICAL parameter

parameter	unit	
Overall dimensions	mm	77x52x19
Weight	g	165

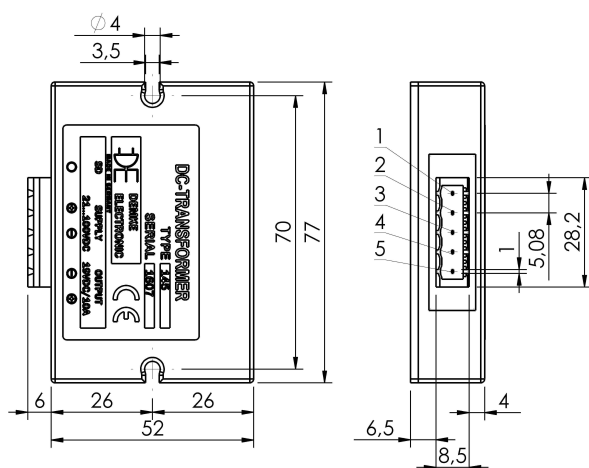
Pin No.	Function	Electrical Determination
1	SD	Shut down
2	Vi+	Input voltage positive
3	Vi-	Input voltage negative
4	Vo-	Output voltage negative
5	Vo+	Output voltage positive

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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