

## 257E-28-SD

360 Watt, non isolated, single output buck-boost converter

All parameters defined on  $T_a=25^{\circ}\text{C}$ ,  $I_{oNom} = 13.0\text{ ADC}$  and  $U_{iNom} = 24\text{VDC}$

### ABSOLUTE MAXIMUM RATINGS

parameter	unit	typ
Input peak voltage	VDC	37.00
Feedback protection against overvoltage on the output	VDC	45
Output overvoltage protection	VDC	32.0

### 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 2.0

### SPECIALS

parameter	unit	fulfilled	conditions	typ
Efficiency at medium loads	%		$0.5I_{oNom}$	97.00
Efficiency at full loads	%		$I_{oNom}$	96.00
For active loads or parallel connection		✓		
Drives high capacitive loads		✓		
CC/CV battery load characteristic		✓		

### COMPLIANCE

parameter	fulfilled	notes
61000-6-2 [EMC-Immunity standard for industrial environment]	✓	
61000-4-2 [immunity against ESD-electrostatic discharge]	✓	
61000-4-3 [immunity High frequency electromagnetic fields]	✓	
61000-4-4 [immunity against burst - electrical fast transients]	✓	
61000-4-5 [immunity against surge - high energy surges]	✓	
61000-4-6 [immunity against induced, conducted disturbances]	✓	
61000-6-4 [EMC - Emission standard for industrial environment]	✓	
55022<A	✓	

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### INPUT

parameter	unit	conditions	min	typ	max
Input voltage range	VDC	IoNom	15	24	35
No load input current	mA	UiNom		50	
Max. input current	A	UiNom		25	
Input start up voltage	VDC	UiNom		14.5	
Undervoltage lockout	VDC	UiNom		13.0	
Input current overshoot during soft start ramp up	%	IoNom		400	
Generated AC-ripple on the supply [BW=20MHz]	mVp-p	UiNom/IoNom		20	
Generated HF-noise on the supply [BW=20MHz]	mVp-p	UiNom/IoNom		100	

### OUTPUT

parameter	unit	conditions	min	typ	max
Output voltage	VDC	IoNom		28.0	
Minimum required load to obtain the specified output voltage	%	UiNom		0	
Output voltage accuracy	%	IoNom		+/-2.00%	
Output voltage overshoot at initial switch-on	%	IoNom		overdamped	
Rated output power	W			360	

### CONTROL

parameter	unit	conditions	min	typ	max
Static line regulation	%	IoNom/UiMin...UiMax		0.10	
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	90x90x26
Weight	g	360

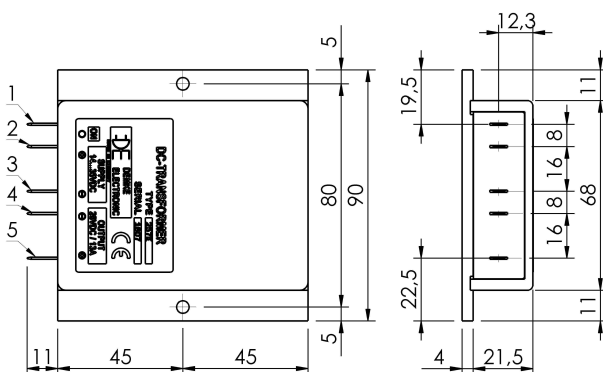
Pin No.	Function	Electrical Determination
1	SD	Shut down
2	Vi+	Input voltage positive
3	Vi-	Input voltage negative
4	Vo-	Output voltage negative
5	Vo+	Output voltage positive

### Mechanical dimensions and Pin configuration

All dimensions in mm

Connector type: Flat pin plug 6.3mm

Case: FMC 90x90x26



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