TECHNICAL DATASHEET

105-3.3

5 Watt, non isolated, single output buck converter

All parameters defined on Ta=25°C, IoNom = 1.5 ADC and UiNom = 24VDC

ABSOLUTE MAXIMUM RATINGS

parameter	unit	typ
Input peak voltage	VDC	38.00

THERMAL CHARACTERISTICS

parameter	min to max	typ
Ambient temperature range	-40°C / +85°C	
Max. case temperature for thermal shut down [°C]		+110°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

SPECIALS

parameter	unit	conditions	typ
Switching frequency	kHz		200
Efficiency at medium loads	%	0.5IoNom	88.00
Efficiency at full loads	%	IoNom	87.00
MTTF	h	SN29500 @ 70°	1 800 000

COMPLIANCE

parameter	fulfilled	notes
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	6	24	36
No load input current	mA	UiNom		2	
Max. input current	A	UiNom		1	
Input start up voltage	VDC	UiNom		3.9	
Undervoltage lockout	VDC	UiNom		3.7	
Input current overshoot during soft start ramp up	%	IoNom		130	
Generated AC-ripple on the supply (BW=20MHz)	mVp-p	UiNom/IoNom		60	
Generated HF-noise on the supply (BW=20MHz)	mVp-p	UiNom/IoNom		90	
Typical input noise slew rate (BW=500MHz)	mVp-p	UiNom/IoNom		120	

OUTPUT

parameter	unit	conditions	min	typ	max
Output voltage	VDC	IoNom		3.3	
Minimum required load to obtain the specified output voltage	%	UiNom		0	
Generated AC-ripple on the output (BW=20MHz)	mVp-p	UiNom/IoNom		25	
Generated HF-noise on the output (BW=20MHz)	mVp-p	UiNom/IoNom		20	
Typical output noise slew rate (BW=500MHz)	mVp-p	UiNom/IoNom		110	
Output voltage accuracy	%	IoNom		+/-1.50%	
Output voltage overshoot at initial switch-on	%	IoNom		overdamped	
Rated output power	W			5	

CONTROL

parameter	unit	conditions	min	typ	max
Static line regulation	%	IoNom/UiMin...UiMax		0.05	
Static load regulation	%	IoMin...IoMax/UiNom		0.1	
Dynamic load change adjusting time	ms	LoadChange 10...90%		0.50	
Dynamic load change deviation to nominal output voltage	V	LoadChange 10...90%		0.25	
Maximum admissible capacitive load	uF	IoNom		6600	
Initial switch on time	ms	IoNom		24	
Softstart ramp up time	ms	IoNom		12	

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MECHANICAL

parameter	unit	
Overall dimensions	mm	32x20x10
Weight	g	14

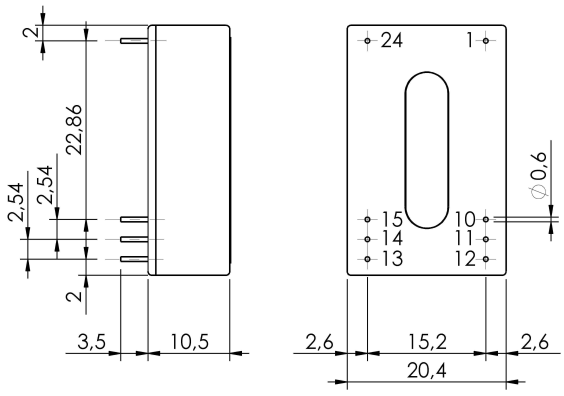
Pin No.	Function	Electrical Determination
1	Vi+	Input voltage positive
10	Vi-/Vo-	Input and output voltage neg
11	Vo+	Output voltage positive
12	Vi-/Vo-	Input and output voltage neg
13	Vi-/Vo-	Input and output voltage neg
14	Vo+	Output voltage positive
15	Vi-/Vo-	Input and output voltage neg
24	Vi+	Input voltage positive

Mechanical dimensions and Pin configuration

All dimensions in mm

Connector type: THT

Case: Dil24



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