

402T-3.3

3 Watt, isolated, single output forward converter

All parameters defined on Ta=25°C, IoNom = 1.0 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	
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		400
Efficiency at light loads	%	0.25IoNom	82.00
Efficiency at medium loads	%	0.5IoNom	84.00
Efficiency at full loads	%	IoNom	83.00
Coupling capacitance input to output	nF		1
Insulation strength primary to secondary	VDC		500
Insulation strength primary to case	VDC		500

COMPLIANCE

parameter	fulfilled	notes
61000-6-2 [EMC-Immunity standard for industrial environment]	✓	
61000-4-2 [immunity against ESD-electrostatic discharge]	✓	
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	8	24	36
No load input current	mA	UiNom		8	
Input start up voltage	VDC	UiNom		8.5	
Undervoltage lockout	VDC	UiNom		8.0	
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		20	

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		20	
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			3	

CONTROL

parameter	unit	conditions	min	typ	max
Static line regulation	%	IoNom/UiMin...UiMax		0.10	
Static load regulation	%	IoMin...IoMax/UiNom		0.3	
Dynamic load change adjusting time	ms	LoadChange 10...90%		0.20	
Dynamic load change deviation to nominal output voltage	V	LoadChange 10...90%		0.25	
Maximum admissible capacitive load	uF	IoNom		6800	
Initial switch on time	ms	IoNom		5	
Softstart ramp up time	ms	IoNom		5	

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MECHANICAL parameter

parameter	unit	
Overall dimensions	mm	32x20x10
Weight	g	13

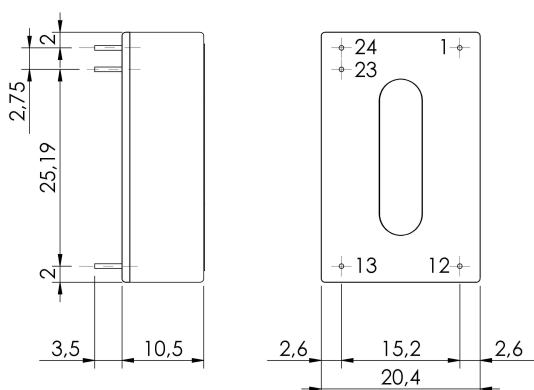
Pin No.	Function	Electrical Determination
1	Vi+	Input voltage positive
12	Vo-	Output voltage negative
13	Vo+	Output voltage positive
23	Vi-	Input voltage negative
24	Vi-	Input voltage negative

Mechanical dimensions and Pin configuration

All dimensions in mm

Connector type: THT

Case: DIL24



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