TP10DA SERIES



DESCRIPTION : **10W 1.5KVDC isolated Wide Input Voltage DC/DC Converters**

The rated output power of TP08DA converters is 10W, 2:1 wide input Voltage range,the voltage range is 18V-36V, with Continuous SC protection, it can be widely used in telecommunications, railway transportation, automation ,instruments and etc.

FEATURES

High efficiency，low Ripple&Noise	Wide input Voltage range 2:1	Continuous SC protection,Auto recovery
Operating temperature: -40℃ to 85℃	Two isolated outputs	High reliability（MTTF≥100MHours）
Universal standard pinout	1.5KVDC isolation	/

SELECTION GUIDE

Part Number	Input Voltage		Output		Efficiency(Typ) %	Maximum capacitive load（uF)
	voltage （VDC)		voltage (VDC)	Current （A）		
	Rated	Range				
TP10DA24D12	24(2:1)	18-36	±12	±0.417	86	470

All specifications typical at TA=25°C, nominal input voltage and rated output current unless otherwise specified.

GENERAL CHARACTERISTICS

parameter	Test conditions	Min	Typ	Max	Units
Isolation voltage	Input to Output ,(test 1min. leakage current<1MA)	1500			VDC
Isolation resistance	500VDC	1000			MΩ
Storage humidity	No condensation	5		95	%
Operation temperature		-40		85	℃
Storage temperature		-55		125	℃
Case temperature rise during operation			25	35	℃
Pin solder-resistance temperature	The solder joint is 1.5MM from the case, 10 seconds			300	
Output SC protection		Continuous SC protection,Auto recovery			
MTTF		100			10Khrs
Net weight			18		G
Cooling	Free air convection				
Case material	Metal case				

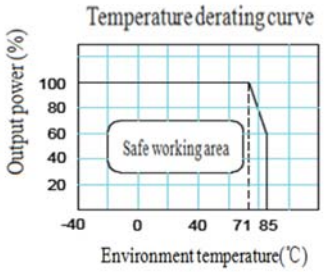
OUTPUT CHARACTERISTICS

parameter	Test conditions	Min	Typ	Max	Units
Output power		0.5		10	W
Main Output positive voltage accuracy			±1.0	±2.0	%
Auxiliary Output negative voltage accuracy			±2.0	±3.0	%
Line regulation (Main)	@ rated load，input voltage from low to high		±0.5	±1.0	%
Line regulation(Auxiliary)	@ rated load，input voltage from low to high		±1	±2	%
Load regulation (Main)	@ nominal input，load varies from 5% to 100%		±0.5	±1.0	%
Load regulation (Auxiliary)	@ nominal input，load varies from 5% to 100%		±1.0	±2.0	%
Temperature coefficient	@ rated load			±0.03	%/℃
Ripple and noise (Main)	20MHz bandwidth，Parallel line method		30	80	mVp-p
Ripple and noise (Auxiliary)	20MHz bandwidth，Parallel line method		50	100	mVp-p
Switch frequency	@ rated input voltage		300		KHz

- Case temperature under shall not exceed the maximum case temperature level.

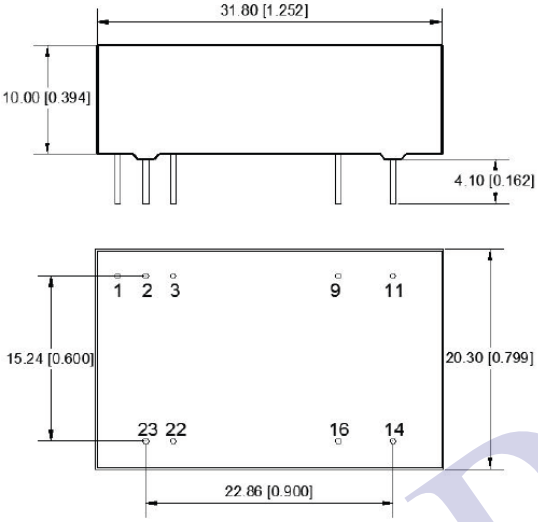
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DERATING CURVE



MECHANICAL DIMENSIONS

DIP package

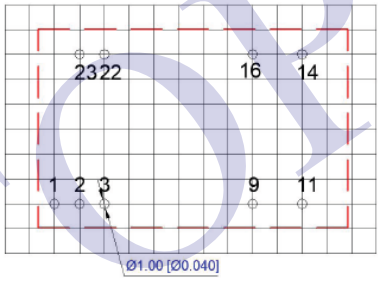


PIN DESIGN

Pin	Function
1	Ctrl
2,3	GND
9	0V
11	-Vo
14	+Vo
16	0V
22,23	Vin

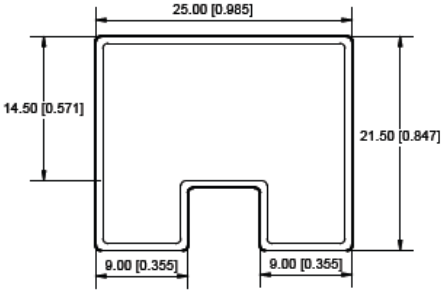
Pin standard: ϕ 0.6mm

RECOMMENDED FOOTPRINT DETAILS



Grid spacing: 2.54mm (0.1inch)

TUBE OUTLINE DIMENSIONS



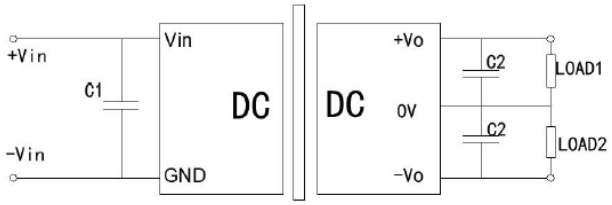
MODEL SELECTION

TP 10 D A 24 D 12 W

- W:4:1 Wide voltage input range
- Output voltage
- S:single output D:Dual output
- Input Rated Voltage
- Package type
- DC-DC
- Output rated power
- Brand name

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RECOMMEND APPLICATION CIRCUIT:



SELECTION Reference			
Input	External capacitor C1	Dual output	External capacitor C2
24VDC	47uF	±12VDC	100uF

USING ATTENTIONS

Try to avoid no-load use: when the load power consumption is less than 5% of the rated output power of the module, it is recommended to connect a dummy load to the output terminal or choose a module with a lower rated power. The dummy load (resistance) can be 5-10% of the rated power of the module, resistance value=U2/(5%*10W)

The output external capacitor should not be too large: The output capacitor should not be too large, otherwise it will easily cause overcurrent or poor startup when the module starts. The specific selection should be based on the external capacitor table.

TOPPOWER

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