DC/DC Converters

10 Watts
JTA10 Series

XPiQ inc.
Intelligent Design Quality Product

PRELIMINARY
Q3 2003

- Small Size 1.0” x 2.0” x 0.4”
- Ultra Wide 4:1 Input
- Full Power to +71 °C
- Industry Standard Pin Out
- Single & Dual Outputs
- Overvoltage & Overcurrent Protection
- UL Safety Approvals

Specification

Input

Input Voltage	•	*9-36 VDC* *18-75 VDC*
Input Current	•	*1.45 A max at 9 VDC input,* *10 W output*

Output

Output Voltage	•	*See Table*
Output Power	•	*10 Watts*
Minimum Load	•	*0 minimum load required*
Line Regulation	•	*±1% maximum*
Load Regulation	•	*±1% maximum for single output* *±2% maximum for dual output*
Setpoint Accuracy	•	*±2%*
Ripple & Noise	•	*50 mV pk-pk for single output* *75 mV pk-pk for dual output*
Transient Response	•	*4% max deviation,* *recovering to 1% of final value in less than 500 µs after a 25% load change*
Temperature Coefficient	•	*±0.02%/°C*
Overvoltage Protection	•	*See table*
Overcurrent Protection	•	*Continuous with auto recovery*

General

Efficiency	•	*See table*
MTBF	•	*1,000,000 hours minimum per MIL-HDBK-217F*
Isolation Voltage	•	*1500 VDC Input to Output*
Package Style	•	*Copper case with non-conductive base*
Size	•	*2.0” x 1.0” x 0.4”*
Weight	•	*28 grams approx*

Environmental

Operating Temperature	•	*-25 °C to +100 °C derate from 100% load at +71 °C to 0% load at +100 °C*
Cooling	•	*Convection cooled*
Storage Temperature	•	*-55 °C to +105 °C*
Humidity	•	*5-95% RH non-condensing*

EMC & Safety

Safety Approvals	•	*UL/cUL 1950*
EMI/EMC	•	*EN55022 Class B conducted*

** Preliminary datasheet - see website for current specs*

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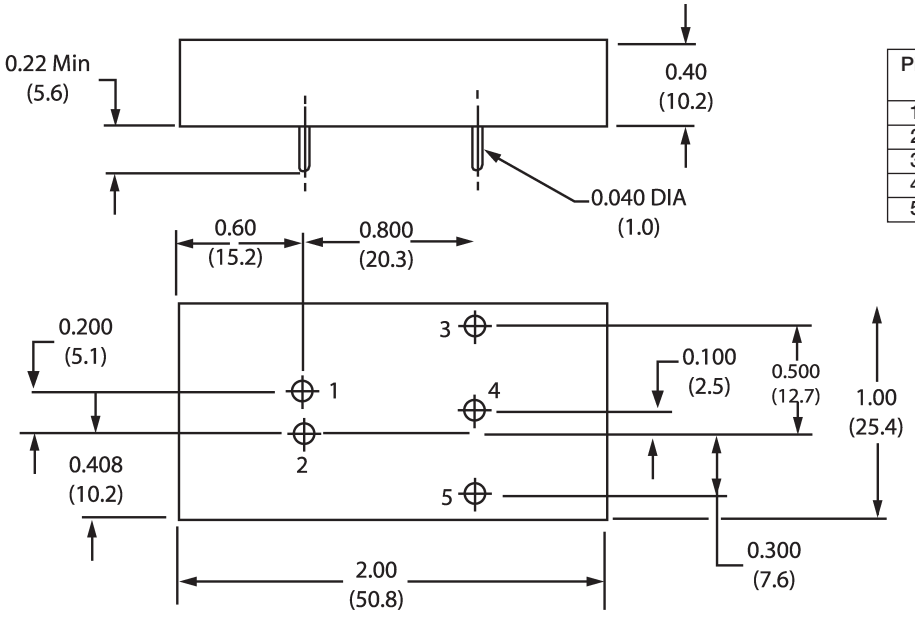
OUTPUT VOLTAGE & CURRENT RATINGS — JTA10

Input Voltage	Maximum Power	Overvoltage Protection	Output1		Output 2		Efficiency	Model Number
			V1nom	Imax	V2nom	Imax		
24 V (9-36)	6.6 W	3.9 V	3.3 V	2.00 A			77%	JTA1024S3V3
	10 W	6.8 V	5.0 V	2.00 A			79%	JTA1024S05
	10 W	15.0 V	12.0 V	0.83 A			81%	JTA1024S12
	10 W	18.0 V	15.0 V	0.67 A			81%	JTA1024S15
	10 W	6.8 V	5.0 V	1.00 A	-5.0 V	1.00 A	80%	JTA1024D01
	10 W	15.0 V	12.0 V	0.42 A	-12.0 V	0.42 A	80%	JTA1024D02
	10 W	18.0 V	15.0 V	0.33 A	-15.0 V	0.33 A	80%	JTA1024D03
48 V (18-75)	6.6 W	3.9 V	3.3 V	2.00 A			78%	JTA1048S3V3
	10 W	6.8 V	5.0 V	2.00 A			80%	JTA1048S05
	10 W	15.0 V	12.0 V	0.83 A			82%	JTA1048S12
	10 W	18.0 V	15.0 V	0.67 A			82%	JTA1048S15
	10 W	6.8 V	5.0 V	1.00 A	-5.0 V	1.00 A	81%	JTA1048D01
	10 W	15.0 V	12.0 V	0.42 A	-12.0 V	0.42 A	83%	JTA1048D02
	10 W	18.0 V	15.0 V	0.33 A	-15.0 V	0.33 A	83%	JTA1048D03

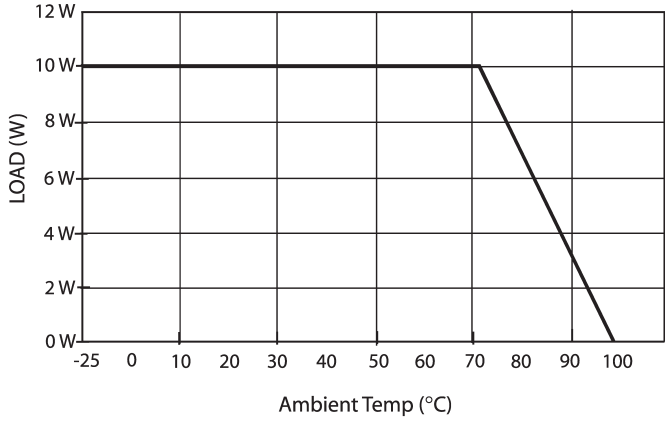
Mechanical Details



Pin	Single Output	Dual Output
1	+Input	+Input
2	-Input	-Input
3	+Output	+Output
4	No Pin	Common
5	-Output	-Output

Dimensions in inches (mm)

Derating Curve



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