

FEATURES :

- 15W DIL Package
- 4:1 Wide Input Voltage Range
- High Efficiency Up To 90%
- Regulated Output Types
- No Minimum Load Required
- Over Power and Short Circuit Protection
- Operating Temperature:-40°C To +84°C(with derating)
- UL94V-0 Package Material
- 100% Burned In
- 3 Years Warranty

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

Selection Guide

Part Number	Input Voltage Range	Input Current		Output Voltage	Output Current	Efficiency	Maximum capacitor Load
		No-Load	Full-Load				
	Vdc	mA (typ)	mA (typ)	Vdc	mA (typ)	% (typ)	μF
YTB15-24S05	9-36	10	702	5	3000	89	3300
YTB15-24S12	9-36	10	702	12	1250	89	1000
YTB15-24S15	9-36	10	710	15	1000	88	680
YTB15-24S24	9-36	10	702	24	625	89	360
YTB15-24D12	9-36	10	710	±12	±625	88	±560
YTB15-24D15	9-36	10	702	±15	±500	89	±360
YTB15-48S05	18-75	7	351	5	3000	89	3300
YTB15-48S12	18-75	7	351	12	1250	89	1000
YTB15-48S15	18-75	7	355	15	1000	88	680
YTB15-48S24	18-75	7	351	24	625	89	360
YTB15-48D12	18-75	7	351	±12	±625	89	±560
YTB15-48D15	18-75	7	347	±15	±500	90	±360

Part Number

YTB 15 - 48 S 12
A B C D E

A: Series
B: Output Power
C: Input Voltage
D: Single/Dual Output
E: Output Voltage

YUAN DEAN SCIENTIFIC



DC-DC Converter

YTB15 SERIES

15Watt

1600Vdc Isolated

4 : 1 Input Voltage Range

Single/Dual Output

DIP16 Package



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Rev: 1 2021/09/07

Input Specifications

Parameters	Conditions	Min	Typ	Max	Units
Input Voltage	24V Models	9		36	Vdc
	48V Models	18		75	
Input Surge Voltage (100 ms max.)	24V Models	-0.7		50	Vdc
	48V Models	-0.7		100	
Start-up Voltage	24V Models			9	Vdc
	48V Models			18	
Under Voltage Shutdown	24V Models		8		Vdc
	48V Models		15		
Start-up Time	Constant Resistive Load, Nominal Vin	Power-up		35	ms
Input Filter	All Models		Internal LC type		

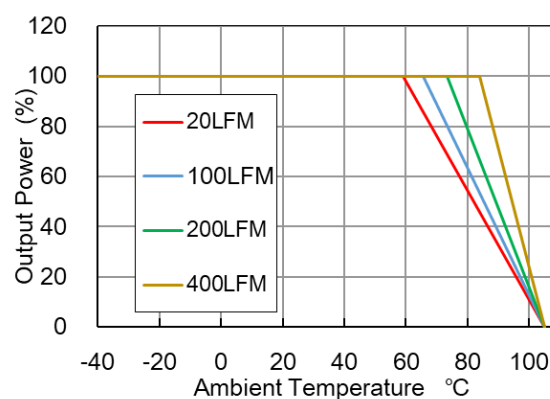
Output Specifications

Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance	100% Load	-2		+2	%
Line Regulation	Vin(min) to Vin(max) @100% Load	-0.5		+0.5	%
Load Regulation	0% Load to 100% Load	-0.5		+0.5	%
Load Cross Regulation	Asymmetrical Load 25% / 100% Load	Dual Output	-5.0	+5.0	%
Ripple & Noise (BW=20MHz)	All models		60	100	mVp-p
Transient Response Setting Time	25% Load Step Change		350	500	us
Transient Response Deviation	25% Load Step Change	-5	±3	+5	%
Temperature Coefficient		-0.02		+0.02	%/°C
Output Power Protection	% of Io, Hiccup mode, Auto-recovery	120	155	190	%
Short Circuit Protection	Continuous [Hiccup Mode] ,Auto-Recovery				
Over Voltage Protection	5Vout		6.2		Vdc
	12Vout		15		
	15Vout		18		
	24Vout		30		

General Specifications

Parameters	Conditions		Min	Typ	Max	Units			
Isolation Voltage	Input To Output (60sec)		1600			Vdc			
	Input(Output) To Case (60sec)		1000			Vdc			
Isolation Resistance	500Vdc		1000			MΩ			
Isolation Capacitance	100kHz, 1V		2200			pF			
Switching Frequency	100% Load, Nominal Input	5V Output	270			KHz			
		Other Output	390						
Operating Ambient Temperature (Power Derating See Derating Graph)	Nominal Vin, 100% Load	YTB15-24S05, YTB15-48S05 YTB15-24S12, YTB15-48S12 YTB15-24S24, YTB15-48S24 YTB15-24D15, YTB15-48D12	-40		59.2	°C			
		YTB15-24S15, YTB15-48S15 YTB15-24D12			54.5				
		YTB15-48D15			63.8				
		20LFM			24.7		°C/W		
		100LFM			21.2				
200LFM		17.1							
400LFM		11.3							
Maximum Case Temperature					105	°C			
Storage Temperature					-55	125	°C		
Humidity	Non Condensing		5		95	%			
Cooling	Natural Convection								
Thermal Shock	MIL-STD-810F								
Shock &Vibration Test	MIL-STD-810F								
Case Material	Copper, Black Coating								
Potting Material	Silicone (UL94-V0)								
MTBF	MIL-HDBK-217F@25°C (calculated)			7.05X10 ⁵		Hours			
Weight					11	g			
Dimensions	24.0 x 14.0 x 9.5					mm			

Temperature Derating Graph



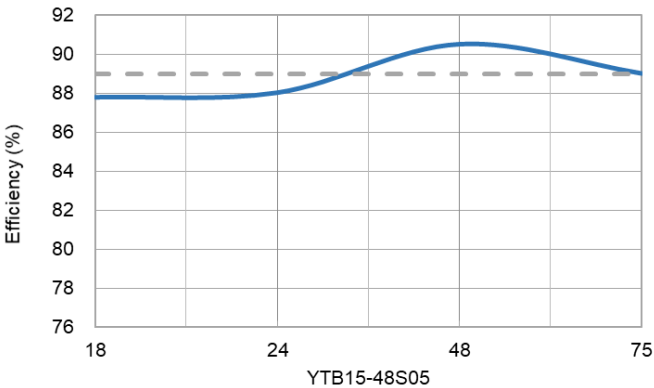
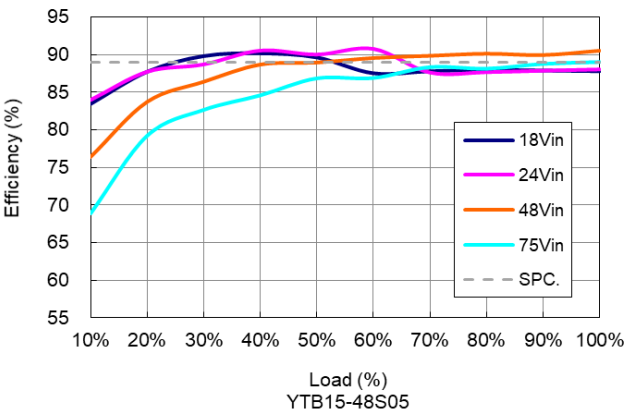
YTB15-48S05

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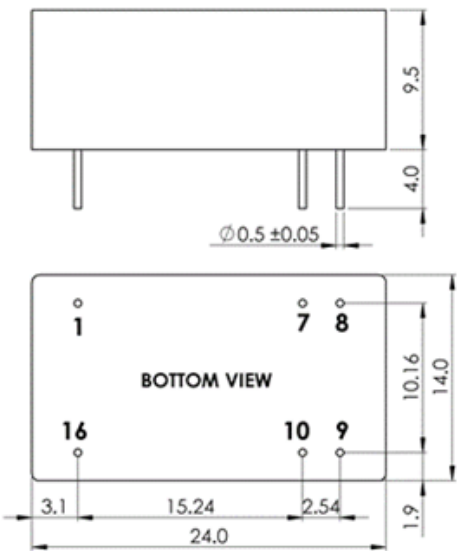
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Characteristic Curve



Dimensions



PIN Assignment

Pin	Single	Dual	Diameter
1	-Vin	-Vin	0.5mm[0.02"]
7	NC	NC	0.5mm[0.02"]
8	NC	Com	0.5mm[0.02"]
9	+Vout	+Vout	0.5mm[0.02"]
10	-Vout	-Vout	0.5mm[0.02"]
16	+Vin	+Vin	0.5mm[0.02"]