

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

YUAN DEAN SCIENTIFIC



DC-DC Converter

YTB15 SERIES

15Watt

1600Vdc Isolated

4 : 1 Input Voltage Range

Single/Dual Output

DIP16 Package

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 / A 15 / B - 48 / C S / D 12 / E

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



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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	

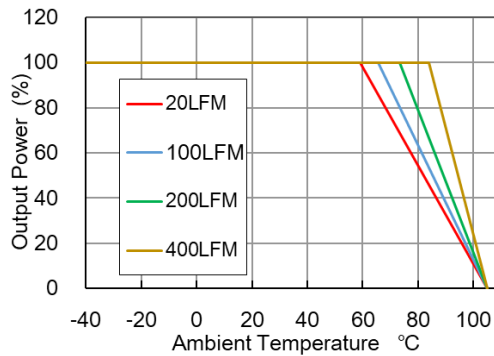
Output Specifications

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	
Thermal Impedance	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			
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 9.8			mm	

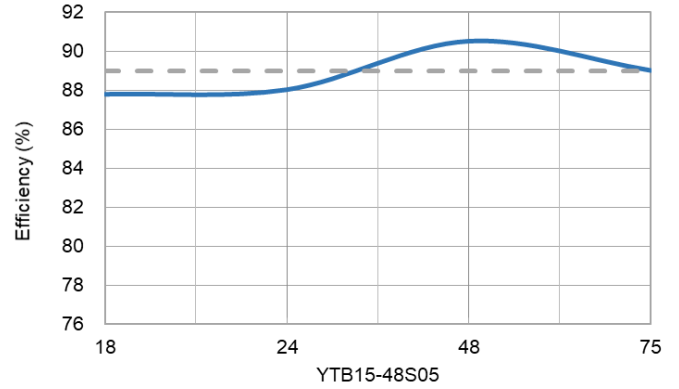
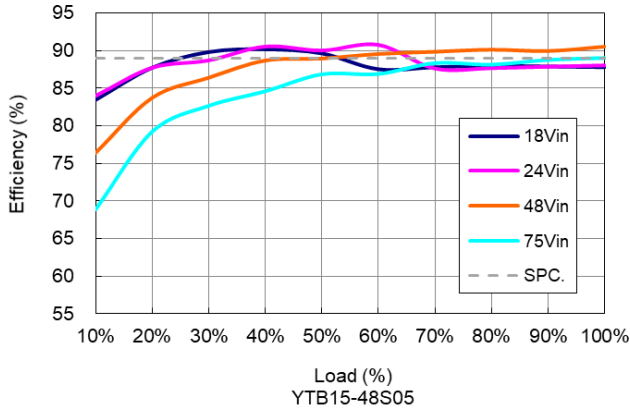
Temperature Derating Graph



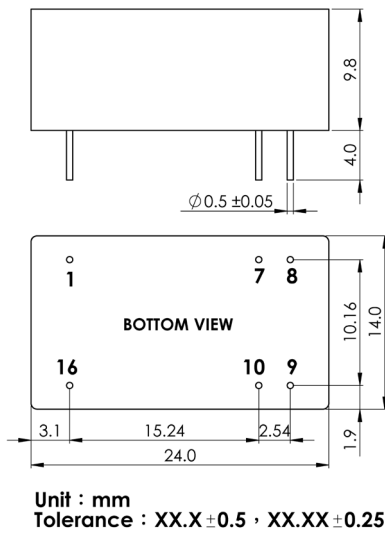
YTB15-48S05



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"]