

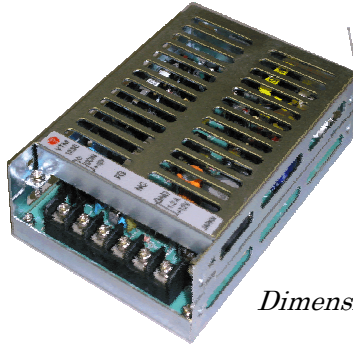


# ETA-USA

## HIGH QUALITY SWITCHING POWER SUPPLIES

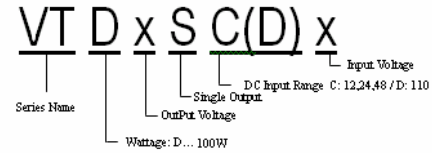
DC/DC SWITCHING POWER SUPPLY  
DC INPUT 12,24,48, 110  
SINGLE OUTPUT  
100WATTS

### VTD-SCx/VTD-SD SERIES



Dimension: 48W × 190L × 97H

#### General Description



#### Features

1. Variety of Models
2. Chassis mount type
3. Compact and High Efficiency

#### DC INPUT: 12V

Input Characteristics	Unit	VTD05SC12	VTD12SC12	VTD15SC15	VTD24SC12	VTD48SC12
Input Voltage	Vdc	DC 12V				
Input Voltage Range	Vdc	DC 9.2V-16V				
Input Current (typ)	A	9.49	11.11	10.54	11.69	11.14
Inrush Current *1	A	Not Specified				
Efficiency (typical) *2	%	79	81	83	85	85
MTBF	H	470'000				
Switching Frequency	kHz	91 Fix.	91 Fix.	91 Fix.	91 Fix.	91 Fix.

#### DC INPUT: 24V

Input Characteristics	Unit	VTD05SC24	VTD12SC24	VTD15SC24	VTD24SC24	VTD48SC24
Input Voltage	Vdc	DC 24V				
Input Voltage Range	Vdc	DC 19-32V				
Input Current (typ)	A	5.27	5.79	5.27	5.95	4.60
Inrush Current *1	A	Not Specified				
Efficiency (typical) *2	%	79	82	83	84	87
MTBF	H	700'000				
Switching Frequency	kHz	59 Fix.	59 Fix.	59 Fix.	59 Fix.	59 Fix.

#### DC INPUT: 48V

Input Characteristics	Unit	VTD05SC48	VTD12SC48	VTD15SC48	VTD24SC48	VTD48SC48
Input Voltage	Vdc	DC 48V				
Input Voltage Range	Vdc	DC 38-63V				
Input Current (typ)	A	2.64	2.74	2.64	2.98	2.30
Inrush Current *1	A	Not Specified				
Efficiency (typical) *2	%	81	84	85	86	89
MTBF	H	700'000				
Switching Frequency	kHz	74 Fix.	74 Fix.	74 Fix.	74 Fix.	74 Fix.

#### DC INPUT: 110V

Input Characteristics	Unit	VTD05SD	VTD12SD	VTD15SD	VTD24SD	VTD48SD
Input Voltage	Vdc	DC 110V				
Input Voltage Range	Vdc	DC 85-140V				
Input Current (typ)	A	1.14	1.18	1.12	1.25	1.09
Inrush Current *1	A	Not specified				
Efficiency (typical) *2	%	80	83	85	87	88
MTBF	H	500'000				
Switching Frequency	kHz	160 Fix.	160 Fix.	160 Fix.	160 Fix.	91 Fix.



ETA USA  
16170 Vineyard Blvd. Suite 180, Morgan Hill, CA 95037  
Phone: 1-800-ETA-POWER, (408) 778-2793 Fax: (408) 779-2753

Visit us at: [www.eta-usa.com](http://www.eta-usa.com)  
email at: [sales@eta-usa.com](mailto:sales@eta-usa.com)



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## HIGH QUALITY SWITCHING POWER SUPPLIES

### VTD-SC / VTD-SD

Output Characteristic	Unit	Models				
		VTD05SCx / SD	VTD12SCx / SD	VTD15SCx / SD	VTD24SCx / SD	VTD48SCx / SD
Output Voltage	V	5	12	15	24	48
Output Current Vin:12VDC Vin: 24,48,110 VDC	A	18	9.0	7.0	4.5	2.2
	A	20	9.0	7.0	5.0	2.0
Voltage Adjust Range	V	+/-10% of Rated Output Voltage(at no load within input range)				
Ripple Noise(max) *3	mVpp	100	170	200	290	530
Rise up time	mS	500mS(maximum) at 25°C and rated input/output(Vin=24,48,110 200mS)				
Hold up time	mS	Not specified				
<b>Regulation</b>						
a. Line Regulation (max)	mV	40	96	120	192	384
b. Load Regulation (max)	mV	45	108	135	216	432
c. Temperature Coefficient *4	°C	0.03%/°C				
d. Drift(maximum) *5	mV	40	75	90	135	255
e. Dynamic Load Regulation (typ.) *6	mV	150	360	450	720	1440
f. Recovery Time *6	mS	0.5mS				

Conditions:

\*1 at cold start

\*2 at rated input/output

\*3 measured by a bayonet probe at the output connector at a 0 to 100MHz bandwidth

\*4 at 0 to +50°C

\*5 for 7hour period after 1hour warm-up at 25°C and rated input/output

\*6 when output current changed between 25% and 75% of rated output current rapidly at rated input

Environmental Specification	
Operating Temperature	0 to +50°C
Operating Humidity	85%RH(non-condensing)
Storage Temperature	-20 to +85°C
Storage Humidity	-
Withstanding Voltage	Primary-Secondary AC1,500Vfor 1minute (Vin=110 2000) Primary-Frame Ground AC1,500V for 1minute(Vin=110 2000) Secondary-Frame Ground AC500V for 1minute
Isolation Resistance	Primary-Secondary-Frame Ground 50MΩ(minimum) by DC500V insulation tester
Vibration	5-10Hz:10mm double amplitude,10-55Hz:19.6m/s2,20minutes' period for 60minutes each along X,Y,Z axes(non-operating)
Shock	294m/s2
Cooling	Convection
Functions	
Over current Protection	Current Limiting with automatic recovery
Over voltage Protection	Output shutdown
Remote Sense	not available
Remote On/Off	not available
Reverse Voltage Protection	not available (Vin=110 by internal bridge diode)
Line Conduction Noise	not specified
Weight [g](typical)	800 G
Dimension [mm]	48W × 190L × 97H



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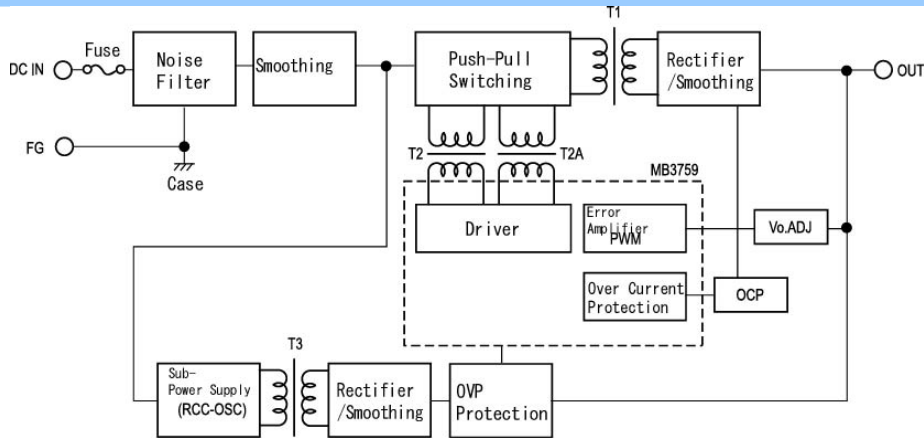
email at: [sales@eta-usa.com](mailto:sales@eta-usa.com)



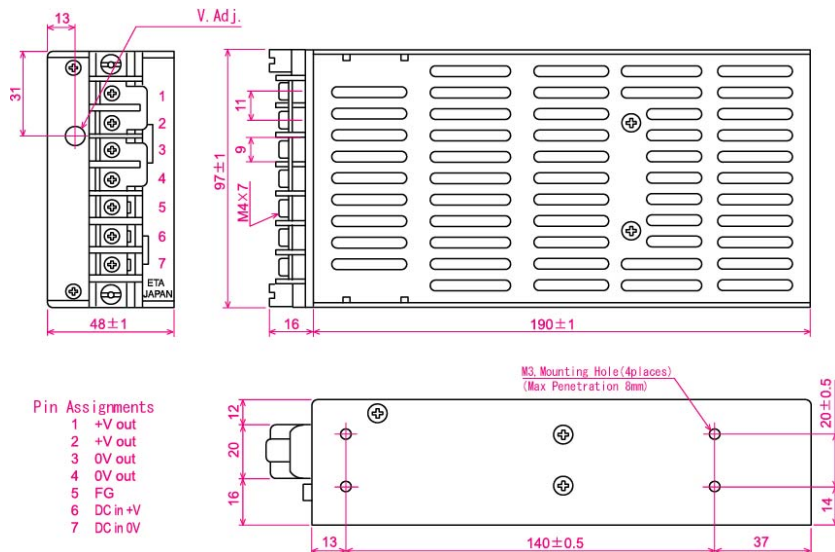
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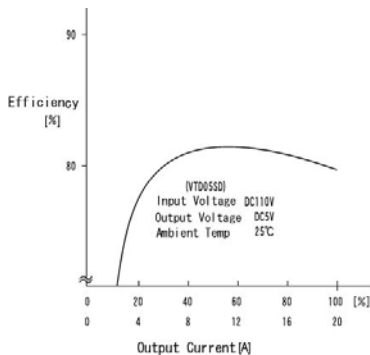
### BLOCK DIAGRAM



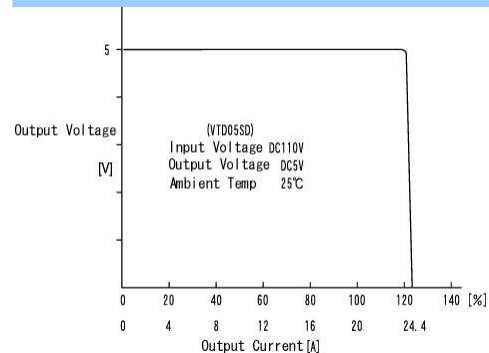
### DIMENSION DIAGRAM (mm)



### EFFICIENCY CURVE



### OCP CURVE



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