

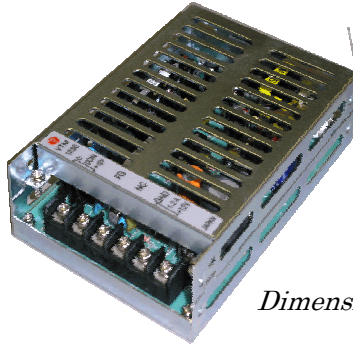


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HIGH QUALITY SWITCHING POWER SUPPLIES

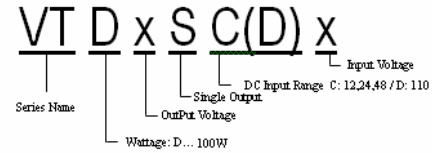
DC/DC SWITCHING POWER SUPPLY
DC INPUT 12,24,48, 110
SINGLE OUTPUT
100WATTS

VTD-SCx/VTD-SD SERIES



Dimension: 48W x 190L x 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.





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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				
Regulation						
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/s ² ,20minutes' period for 60minutes each along X,Y,Z axes(non-operating)
Shock	294m/s ²
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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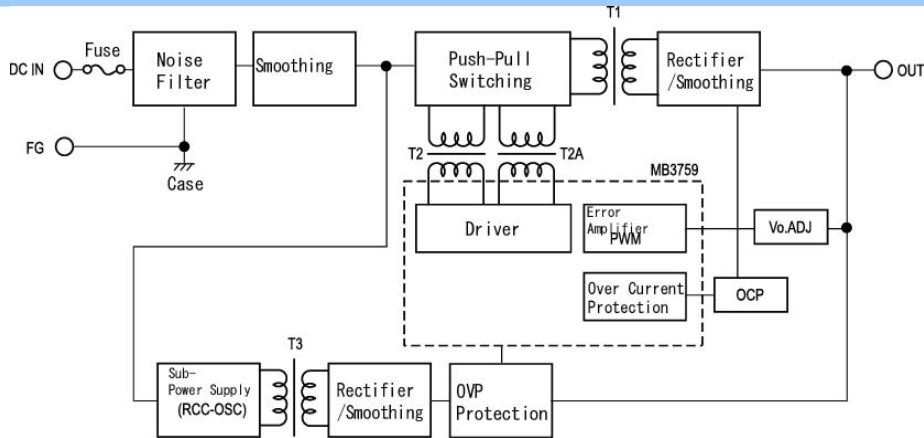
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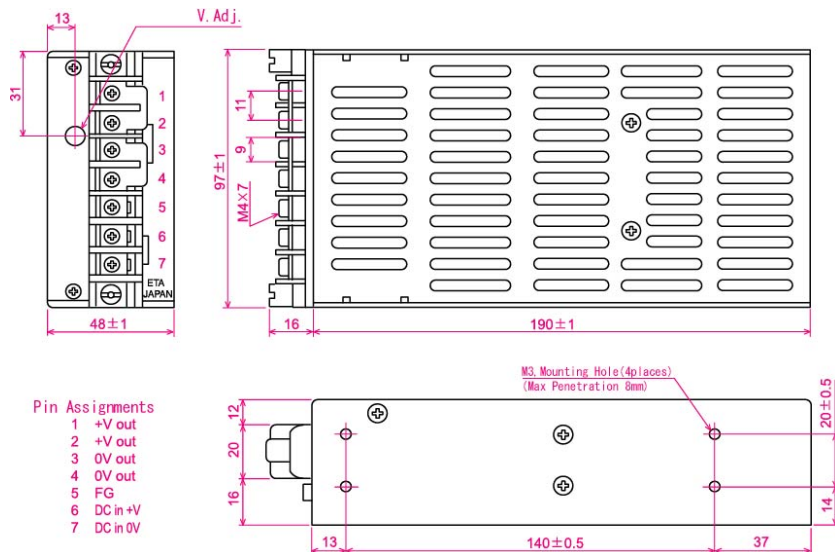
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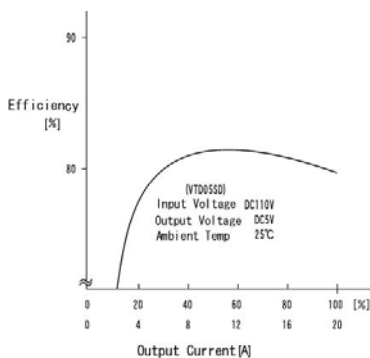
BLOCK DIAGRAM



DIMENSION DIAGRAM (mm)



EFFICIENCY CURVE



OCP CURVE

