



ETA-USA

HIGH QUALITY SWITCHING POWER SUPPLIES

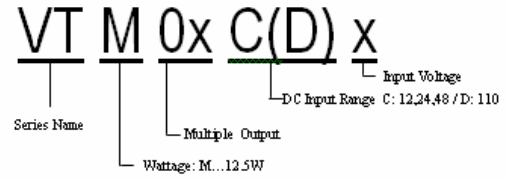
DC/DC SWITCHING POWER SUPPLY
DC INPUT 12,24,48, 110
MULTIPLE OUTPUT
12.5WATTS

VTM-00Cx/VTM-00D SERIES



Dimension: 80W × 118L × 25H

General Description



Features

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

DC INPUT: 12V

Input Characteristics	Unit	VTM01C12	VTM03C12	VTM04C12
Input Voltage	Vdc	DC 12V		
Input Voltage Range	Vdc	DC 9.2V-16V		
Inrush Current *1	A	Not Specified		
Efficiency (typical) *2	%	62		
MTBF	H	670'000		
Switching Frequency	kHz	42 Fix	42 Fix	42Fix

DC INPUT: 24V

Input Characteristics	Unit	VTM01C24	VTM03C24	VTM04C24
Input Voltage	Vdc	DC 24V		
Input Voltage Range	Vdc	DC 19-32V		
Inrush Current *1	A	Not Specified		
Efficiency (typical) *2	%	62		
MTBF	H	660'000		
Switching Frequency	kHz	42 Fix	42 Fix	42Fix

DC INPUT: 48V

Input Characteristics	Unit	VTM01C48	VTM03C48	VTM04C48
Input Voltage	Vdc	DC 48V		
Input Voltage Range	Vdc	DC 38-63V		
Inrush Current *1	A	Not Specified		
Efficiency (typical) *2	%	62		
MTBF	H	660'000		
Switching Frequency	kHz	42 Fix.	42 Fix.	42 Fix.

DC INPUT: 110V

Input Characteristics	Unit	VTM01D	VTM03D	VTM04D
Input Voltage	Vdc	DC 110V		
Input Voltage Range	Vdc	DC 85-140V		
Inrush Current *1	A	Not Specified		
Efficiency (typical) *2	%	62		
MTBF	H	690'000		
Switching Frequency	kHz	42 Fix.	42 Fix.	42 Fix.



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VTM-C / VTM-D

Output Characteristic	Unit	Models								
		VTM01Cx / D			VTM03Cx / D			VTM04Cx / D		
Output Voltage	V	+5	+12	-12	+5	+12	-5	+5	+15	-15
Output Current	A	1.8	0.15	0.15	1.8	0.15	0.15	1.8	0.12	0.12
Voltage Adjust Range	V	V1: +/-3% of Rated Output Voltage			V2,V3: +/-3.5% of Rated Output Voltage					
Ripple Noise(max)*3	mVpp	100	25	25	100	25	25	100	25	25
Rise up time	mS	200mS(maximum) at 25°C and rated input/output								
Hold up time	mS	Not specified (Vin=110 6mS)								
Regulation										
a. Line Regulation (max)	mV	20	6	6	20	6	2.5	20	7.5	7.5
b. Load Regulation (max)	mV	40	60	60	40	60	25	40	75	75
c. Temperature Coefficient *4	°C	0.02%/°C								
d. Drift(maximum) *5	mV	40	75	75	40	75	40	40	90	90
e. Dynamic Load Regulation (typ.)	mV	Not specified								
f. Recovery Time	mS	Not specified								

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

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	V1:automatic recovery V2,V3:short circuit for short time
Over voltage Protection	not available
Remote Sense	not available
Remote On/Off	not available
Reverse Voltage Protection	by internal fuse (Vin=110 by internal bridge diode)
Line Conduction Noise	Not specified
Weight [g](typical)	250 G
Dimension [mm]	80W × 118L × 25H



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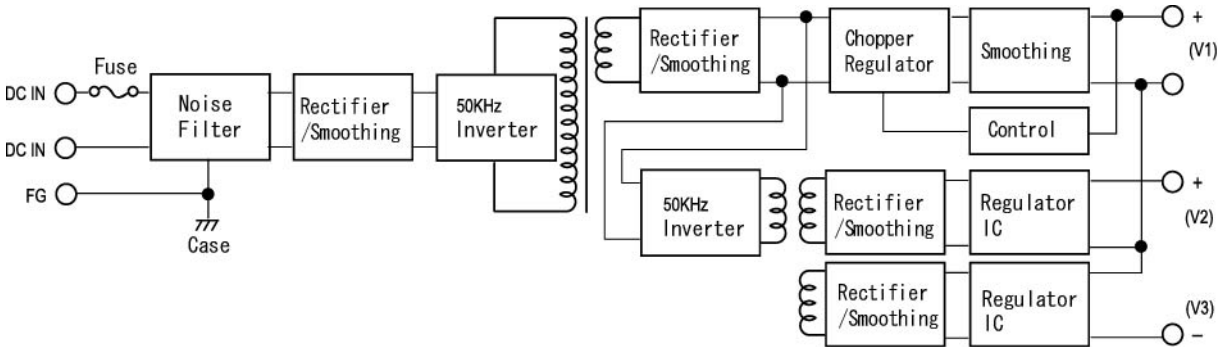
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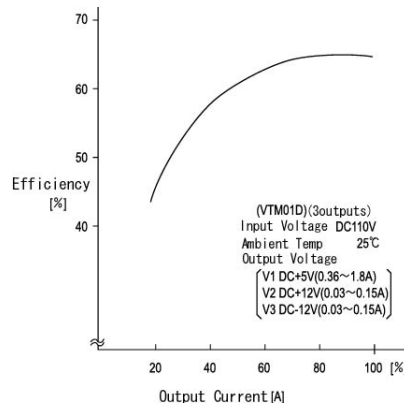
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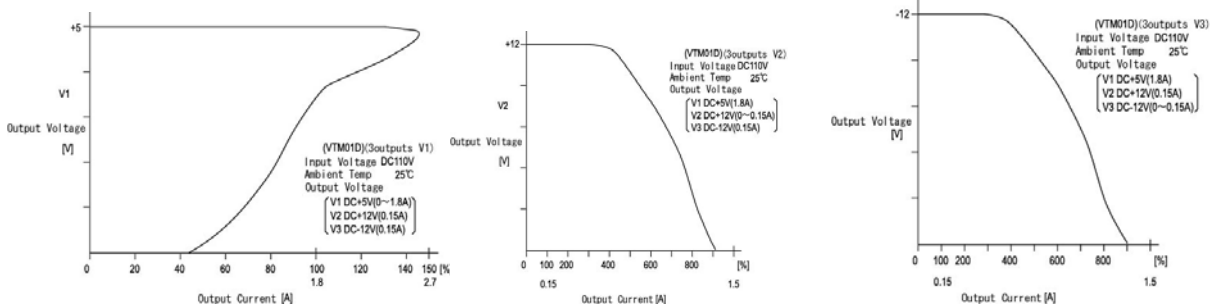
BLOCK DIAGRAM



EFFICIENCY CURVE



OCP CURVE



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