



# ETA-USA

## HIGH QUALITY SWITCHING POWER SUPPLIES

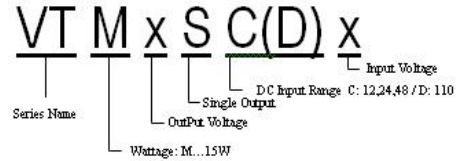
**DC/DC SWITCHING POWER SUPPLY**  
**DC INPUT 12,24,48, 110**  
**SINGLE OUTPUT**  
**15WATTS**

### VTM-SCx/VTM-SD 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	VTM05SC12	VTM12SC12	VTM15SC12	VTM24SC12
Input Voltage	Vdc	DC 12V			
Input Voltage Range	Vdc	DC 9.2V-16V			
Input Current (typ)	A	1.79	1.71	1.79	1.77
Inrush Current	A	Not Specified			
Efficiency (typical) *1	%	70	70	70	70
MTBF	H	900'000			
Switching Frequency	kHz	41 Fix	41 Fix	41 Fix	41 Fix

#### DC INPUT: 24V

Input Characteristics	Unit	VTM05SC24	VTM12SC24	VTM15SC24	VTM24SC24
Input Voltage	Vdc	DC 24V			
Input Voltage Range	Vdc	DC 19-32V			
Input Current (typ)	A	0.89	0.86	0.89	0.89
Inrush Current	A	Not Specified			
Efficiency (typical) *1	%	70	70	70	70
MTBF	H	880'000			
Switching Frequency	kHz	43 Fix.	43 Fix.	40 Fix.	40 Fix.

#### DC INPUT: 48V

Input Characteristics	Unit	VTM05SC48	VTM12SC48	VTM15SC48	VTM24SC48
Input Voltage	Vdc	DC 48V			
Input Voltage Range	Vdc	DC 38-63V			
Input Current (typ)	A	0.49	0.43	0.45	0.44
Inrush Current	A	Not Specified			
Efficiency (typical) *1	%	70	70	70	70
MTBF	H	880,000			
Switching Frequency	kHz	41 Fix.	41 Fix.	41 Fix.	41 Fix.

#### DC INPUT: 110V

Input Characteristics	Unit	VTM05SD	VTM12SD	VTM15SD	VTM24SD
Input Voltage	Vdc	DC 110V			
Input Voltage Range	Vdc	DC 85-140V			
Input Current (typ)	A	0.19	0.19	0.19	0.19
Inrush Current	A	Less than 20A at rated input/output ( at cold start)			
Efficiency (typical) *1	%	70	70	70	70
MTBF	H	850,000			
Switching Frequency	kHz	43 Fix.	43 Fix.	43 Fix.	43 Fix.





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### VTM-SC / VTM-SD

Output Characteristic	Unit	Models			
		VTM05SCx / SD	VTM12SCx / SD	VTM15SCx / SD	VTM24SCx / SD
Output Voltage	V	5	12	15	24
Output Current	A	3.0	1.2	1.0	0.62
Voltage Adjust Range	V	<b>+/-5% of Rated Output Voltage (at no load within input range)</b>			
Ripple Noise(max)*2	mVpp	100	170	200	290
Rise up time	mS	200mS(maximum) at 25°C and rated input/output			
Hold up time	mS	Not specified			
<b>Regulation</b>					
a. Line Regulation (max)	mV	40	96	120	192
b. Load Regulation (max)	mV	45	108	135	216
c. Temperature Coefficient *3	°C	0.03%/°C			
d. Drift(maximum) *4	mV	40	75	90	135
e. Dynamic Load Regulation (typ.)	mV	Not specified			
f. Recovery Time	mS	Not specified			

Conditions:

\*1 at rated input/output

\*2 measured by a bayonet probe at the output connector at a 0 to 100MHz bandwidth

\*3 at 0 to +50°C

\*4 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 AC1,500V for 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 <sup>2</sup> , 20minutes' period for 60minutes each along X, Y, Z axes (non-operating)
Shock	294m/s <sup>2</sup>
Cooling	Convection
Functions	
Over current Protection	Current Limiting with automatic recovery
Over voltage Protection	zener diode clamping
Remote Sense	not available
Remote On/Off	not available
Reverse Voltage Protection	by internal fuse
Line Conduction Noise	Not specified
Weight [g] (typical)	250 G
Dimension [mm]	80W × 118L × 25H



ETA USA

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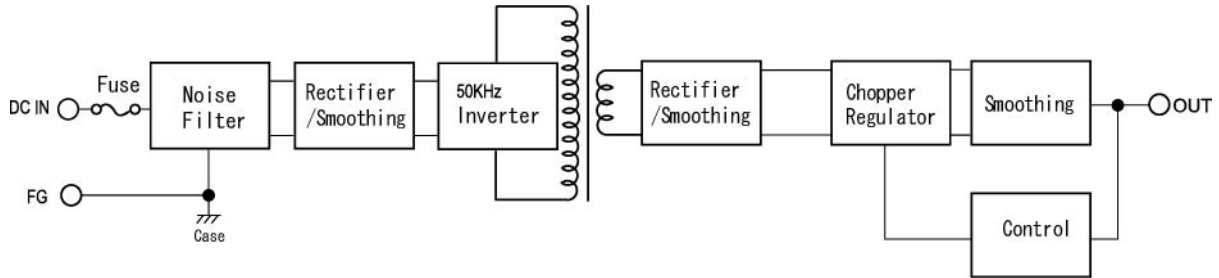
email at: [sales@eta-usa.com](mailto:sales@eta-usa.com)



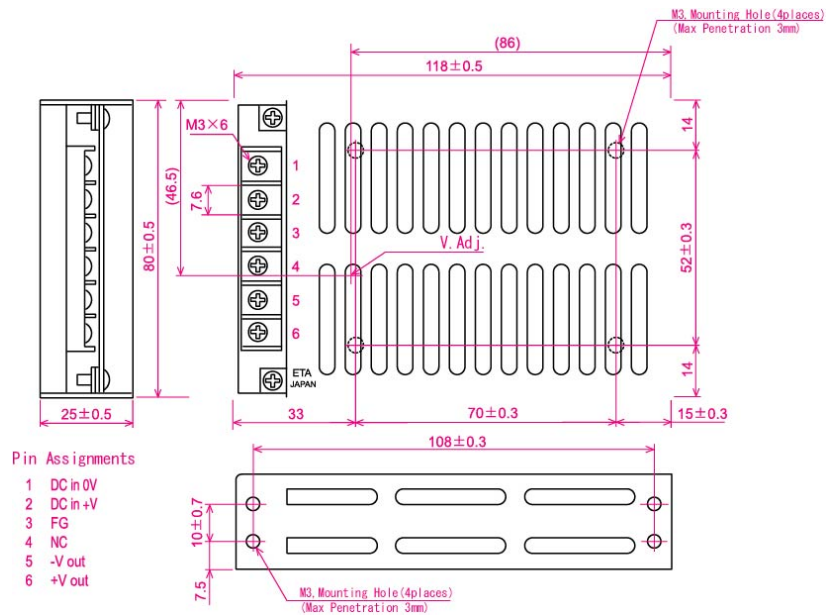
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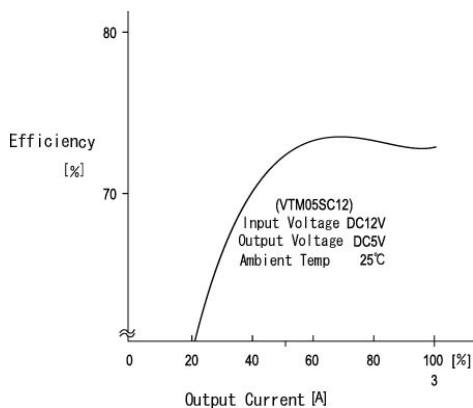
### BLOCK DIAGRAM



### DIMENSION DIAGRAM (mm)



### EFFICIENCY CURVE



### OCP CURVE

