



ETA-POWER EUROPE LTD.

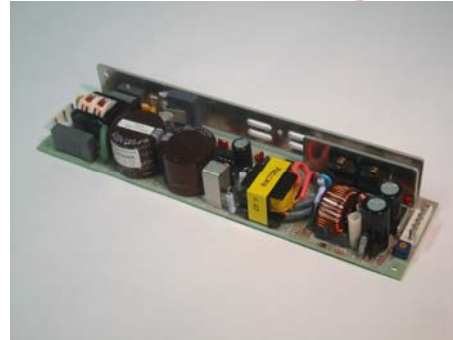
BWM-SX-U

AC/DC Power Supply
Single Output

15W



The BW-series is an open frame board with an optional cover. Simplified circuit design enabled cost optimisation and miniaturization. Safety design is applied to UL, CUL and VDE.



Features

Wide input voltage range (85-264Vac)
High efficiency & reliability
Output voltage +/-10%
Warranty: 2 years

Possible applications

Process control
Office equipment
Computer peripherals
Telecommunications
Industrial electronics & machines

Mechanical features

Dimensions (WxLxH): 50x125x21mm
Weight: 110g
Connector: JST connectors
Closed or open frame type
Optional: Wire harness for JST connectors (add -WH)
Cover (add -P)

Control features

Over voltage protection: Output shutdown
Over current protection: Current limiting, auto recovery

Standards

Safety: UL: UL60950; C-UL: CSA C22.2 No.60950;
VDE: EN60950; IEC60950; VDE 805
EMI : EN 55022 ClassB; FCC Part 15-B classB; VCCI classB

Specifications<AC/DC>	Model				
BWM**SX-U 15WATTS / SINGLE	BWM-3.3SX-U	BWM-05SX-U	BWM-12SX-U	BWM-15SX-U	BWM-24SX-U
Input Characteristics					
Input Voltage	AC100-230V				
Input Current	0.4A at AC100V / 0.2A at AC230V				
Input Range	AC85-264V (DC110-370V)				
Input Frequency	50/60Hz				
Input Frequency Range	47-440Hz				
Phase	Single				
Inrush Current *1	15A(maximum) at AC100V / 30A(maximum) at AC230V				
Efficiency [%] (typical) *2	71	76	81	81	83
Output Characteristics					
Output Voltage [V]	3.3	5	12	15	24
Output Current [A]	3.0	3.0	1.3	1.0	0.7
Voltage Adjust Range	+/- 10% of Rated Output Voltage(at no load within the input range)				
Ripple and Noise [mVp-p](maximum) *3	83	100	170	200	290
Regulation					
a.Statistic Line Regulation [mV](maximum)	26.4	40	96	120	192
b.Statistic Load Regulation [mV](maximum)	29.4	45	150	135	216
c.Temperature Coefficient *4	0.03%/°C				
d.Drift[mV] (maximum) *5	31.5	40	75	90	135
e.Dynamic Load Regulation [mV](typical) *6	99	150	360	450	720
f. Recovery Time *6	0.3mS(typical)				
Rise up time	200mS(maximum) at 25°C and rated input/output				
Hold up time	20mS(typical) at 25°C and rated input/output				
Functions					
Over current Protection	Current Limiting with automatic recovery				
>105% of Rated Output Current[A]	3.15	3.15	1.37	1.05	0.74
Over voltage Protection	Zener diode clamping				
>115% of Rated Output Voltage[V]	3.8	5.75	13.8	17.3	27.6
Remote Sense	not available				
Remote On/Off	not available				
Environmental					
Operating Temperature *7	Open board type:-10 to +50°C (-30 to +70°C) / enclosed type: -10 to +40°C				
Operating Humidity	20 to 90%RH(non-condensing)				
Storage Temperature	-20 to +85°C				
Storage Humidity	20 to 90%RH(non-condensing)				
Withstanding Voltage	Primary-Secondary AC3,000V for 1minute				
	Primary-Frame Ground AC2500V for 1minute				
	Secondary-Frame Ground AC500V for 1minute				
Insulation 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	196m/s ²				
Cooling	Convection				
Leakage Current	1mA (maximum) at 25°C,rated input/output and rated input frequency				
Line Conducted Noise	FCC Part15-B Class B				
	VCCI Class B				
	EN55022 Class B				
Safety	UL: UL60950				
	C-UL: CSA C22.2 No.60950				
	VDE: EN60950, IEC60950, VDE0805				
Weight (typical)	Open board type: 95g/ enclosed type:220g				
MTBF [H]	700'000				
Switching Frequency[kHz](typical) *8	60	50	50	50	50

Conditions:

*1 At cold start

*2 At DC130V input/ rated output and 25°C

*3 Measured by a bayonet probe at the end of a pair of 20cm long wires terminated with a 47μF electrolytic capacitor and 0.1μF film capacitor in parallel at a 0 to 100MHz bandwidth

*4 Open board type: At -10 to +50°C/ enclosed type: at -10 to +40°C

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

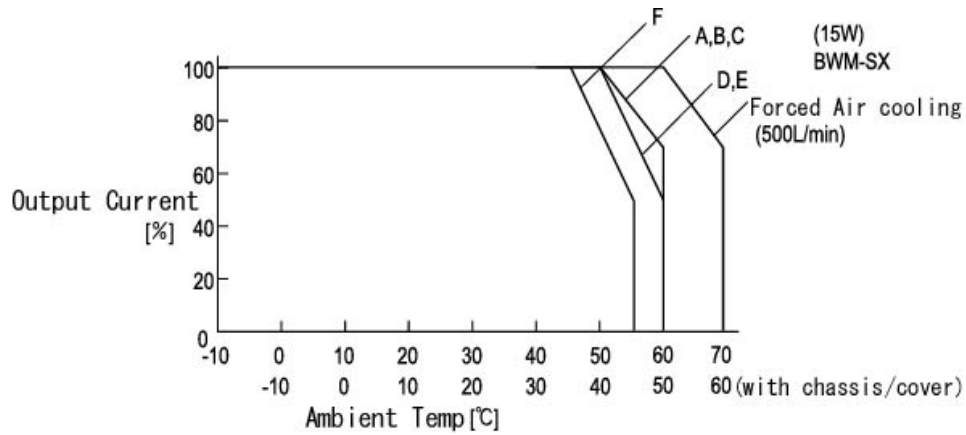
*6 For less than 1minute of over current and short circuit

*7 Safety approved at 25°C (contact technical sales)

*8 Variable on input voltage and load conditions

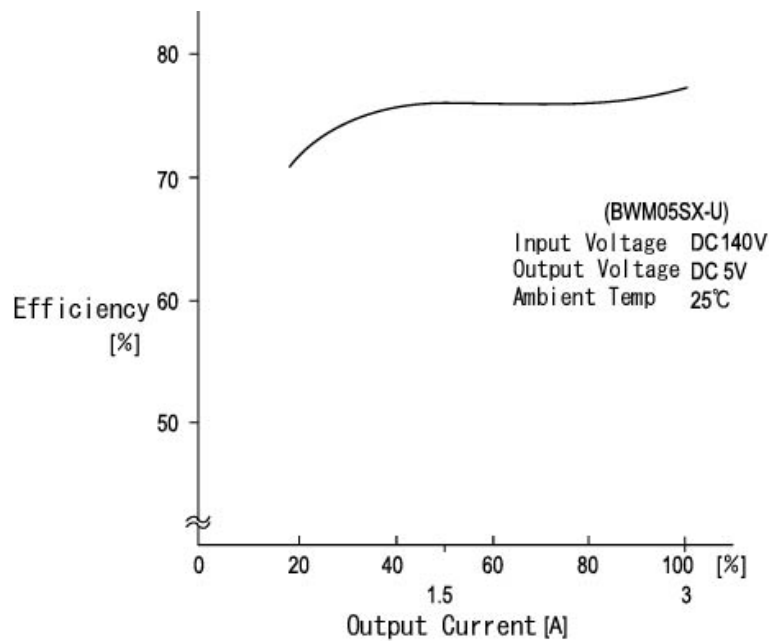


Derating

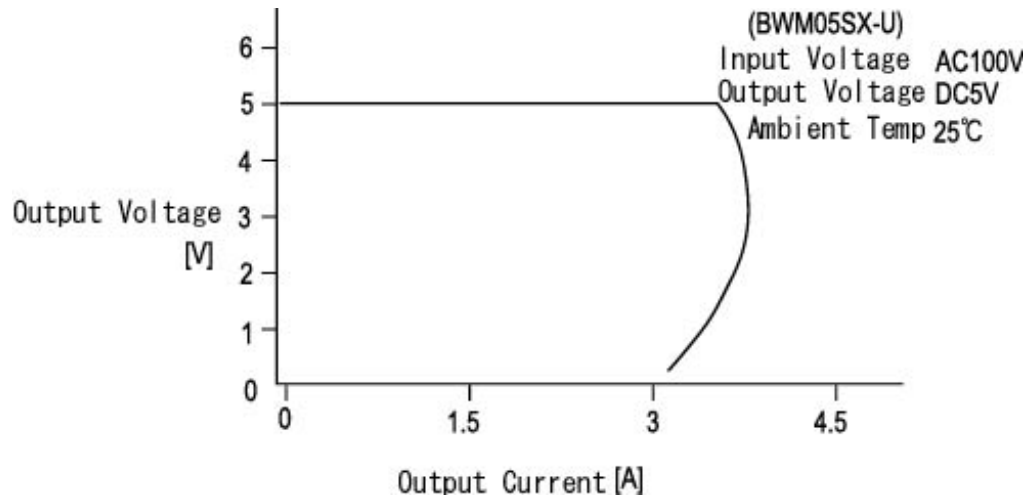


※For safety specification, contact ETA Sales Representative

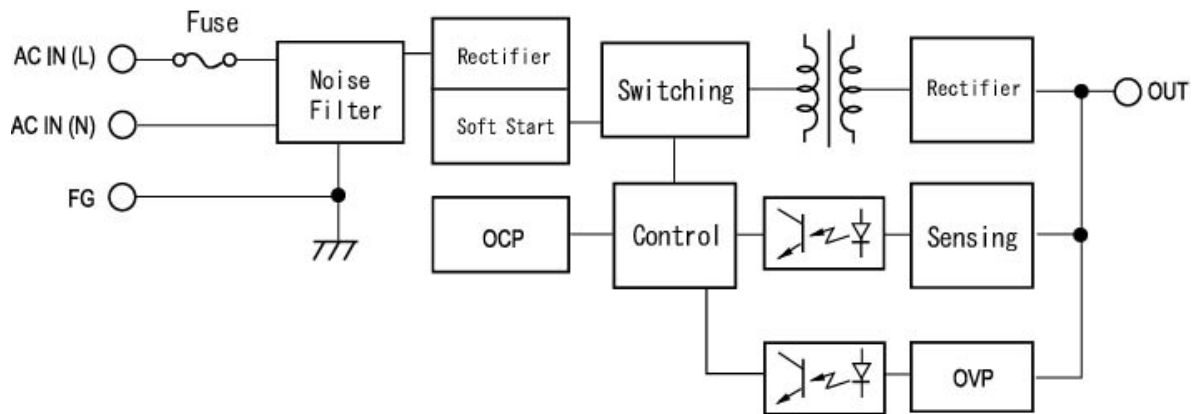
Efficiency



OCP

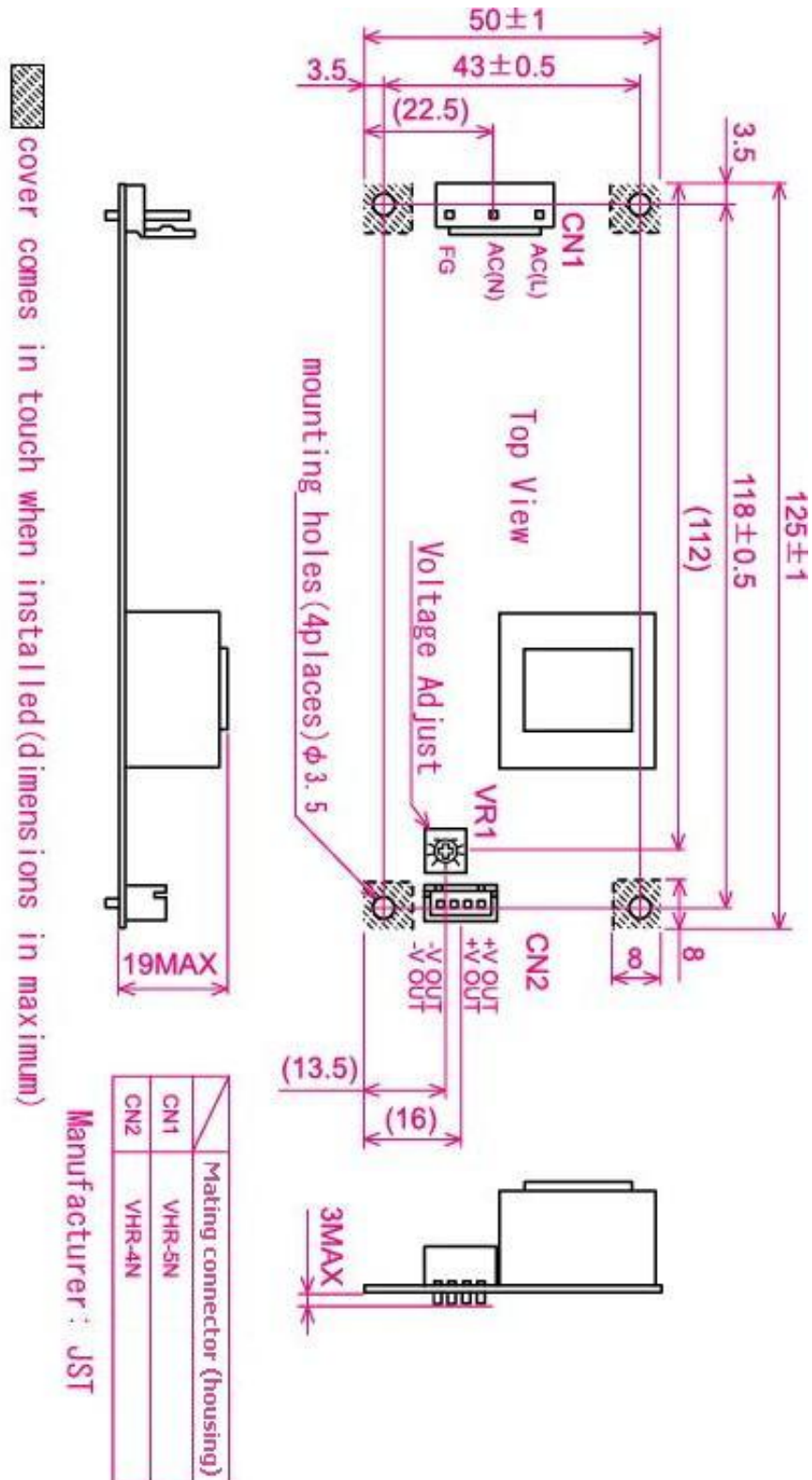


Block diagram





Dimensions (without cover):





Dimensions (with cover):

