

60 WATT AC-DC CONVERTER

ERB-HWA SERIES



Options

Case cover (add suffix “-P”)
“-P” model dimension is same as
“without cover” model

Features

1. Cost effective
2. High efficiency
3. No derating without cover and horizontal mounting
4. Over voltage protection

General Description

ER-series is an open frame, low cost switcher with high efficiency. 65 different models are available from low to medium power. Low power modules use a simple RCC circuit while higher power supplies employ a forward converter.



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HIGH QUALITY SWITCHING POWER SUPPLIES

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Specifications<AC/DC>		Model														
ERB**HWA 60WATTS/2OUTPUTS		ERB21HWA		ERB22HWA		ERB23HWA		ERB24HWA		ERB25HWA						
Input Voltage		AC 100V(DC 130V)														
Input Range		AC 85-132V(DC 110-175V)														
Input Frequency		50/60Hz														
Input Frequency Range		47-440Hz														
Phase		Single														
Inrush Current *1		30A(maximum)at AC 100V														
Efficiency [%] (typical) *2	81	81	83	79	83	79	83	79	83	79						
Output Characteristic																
Output Voltage [V]	5	24	12	12	15	15	5	12	12	24						
Output Current [A]	5.0(P2)	1.5(P4)	2.0(P4)	3.0(P2)	1.8	2.4	5.0	3.0	2.0	1.5						
Voltage Adjust Range	+/-10% of Rated Output Voltage(at no load within the input range)															
Ripple and Noise [mVp-p](maximum) *3	100	290	170	170	200	200	100	170	170	290						
Regulation																
a.Statistic Line Regulation [mV](maximum)	25	120	60	60	75	75	25	60	60	120						
b.Statistic Load Regulation [mV](maximum)	50	240	120	120	150	150	50	120	120	240						
c.Temperature Coefficient *4	0.03%/															
d.Drift[mV](maximum) *5	40	135	75	75	90	90	40	75	75	135						
e.Dynamic Load Regulation [mV](typical) *6	not specified															
f.Recovery Time *6	not specified															
Rise up time	200mS(maximum) at 25															
Hold up time	20mS(minimum) at 25															
Functions																
Overcurrent Protection	Current Limiting with automatic recovery															
Output Current[A]	5.75		2.3		2.07	2.52	5.75		2.3							
Overvoltage Protection	Zener diode clamping															
Output Voltage[V]	5.75	27.6	13.8	13.8	17.3	17.3	5.75	13.8	13.8	27.6						
Remote Sense	not available															
Remote On/Off	not available															
Environmental																
Operating Temperature	-5 to +50															
Operating Humidity	85% RH(non-condensing)															
Storage Temperature	-20 to +85															
Storage Humidity	85% RH(non-condensing)															
Withstanding Voltage	Primary-Secondary AC 1,500V for 1 minute Primary-Frame Ground AC 1,500V for 1 minute Secondary-Frame Ground AC 500V for 1 minute															
Isolation Resistance	Primary-Secondary-Frame Ground 50MΩ(minimum) by DC500V insulation tester															
Vibration	5-10Hz:10mm double amplitude,10-55Hz:19.6m/s ² ,20 minutes' period for 60 minutes each along X,Y,Z axes(non-operating)															
Shock	294m/s ²															
Cooling	Convection															
	1mA(maximum) at 25															
	Built to meet FCC Part15-B Class B															
	370g/enclosed type:410g															
	400,000															
	35	50	35	50	35	50	35	50	35	50						

Conditions:

*1 at cold start

*2 at DC130V input and rated output

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

*4 at -5 to +50

*5 for 7hour period after 1hour warm-up at 25

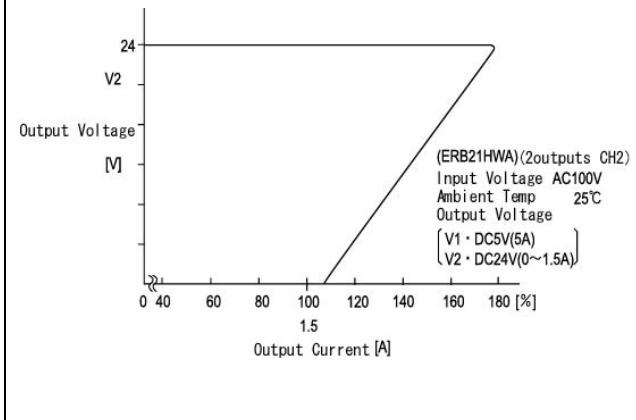
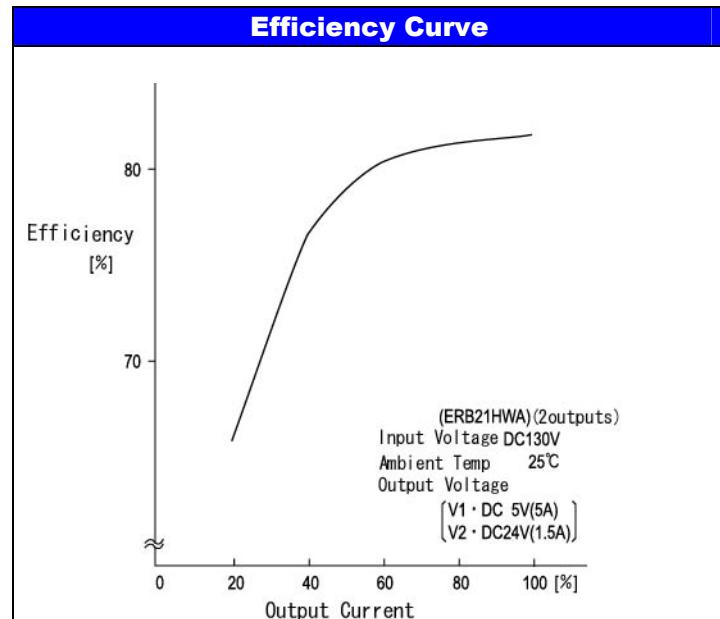
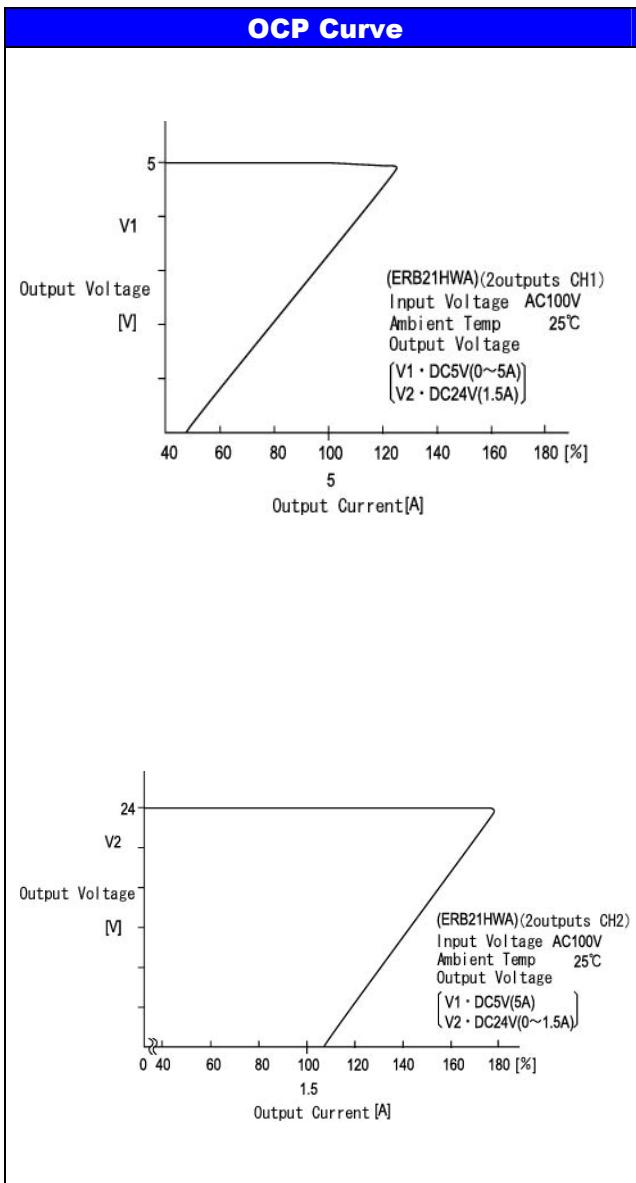
*6 when output current changed from 25% to 75% of rated output current rapidly at AC100V input

*7 variable on input voltage and load conditions


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