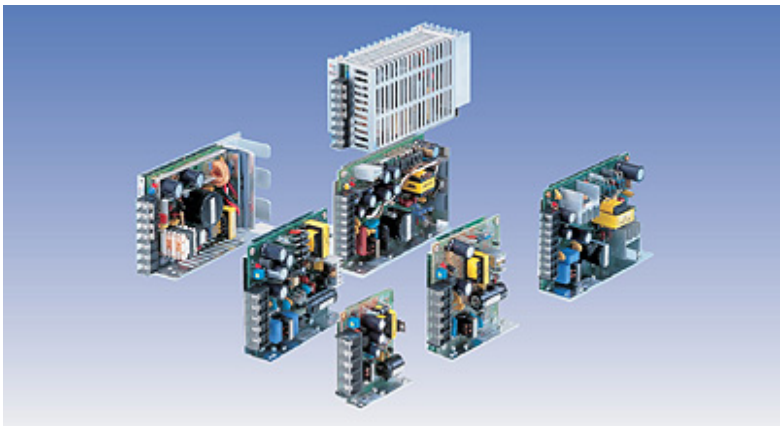
ETA-USA
Your power supply experts

25 WATT
AC-DC CONVERTER

ERA-FWB Series

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.



Features

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

Options

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

Specifications<AC/DC>	Model			
ERA**FWB 25WATTS/2OUTPUTS	ERA21FWB-B	ERA22FWB	ERA23FWB	ERA24FWB-B
Input Characteristic				
Input Voltage	AC200V(DC260V)			
Input Range	AC170-264V(DC220-350V)			
Input Frequency	50/60Hz			
Input Frequency Range	47-440Hz			
Phase	Single			
Inrush Current *1	30A(maximum)at AC200V			
Efficiency [%] (typical) *2	70	70	70	70

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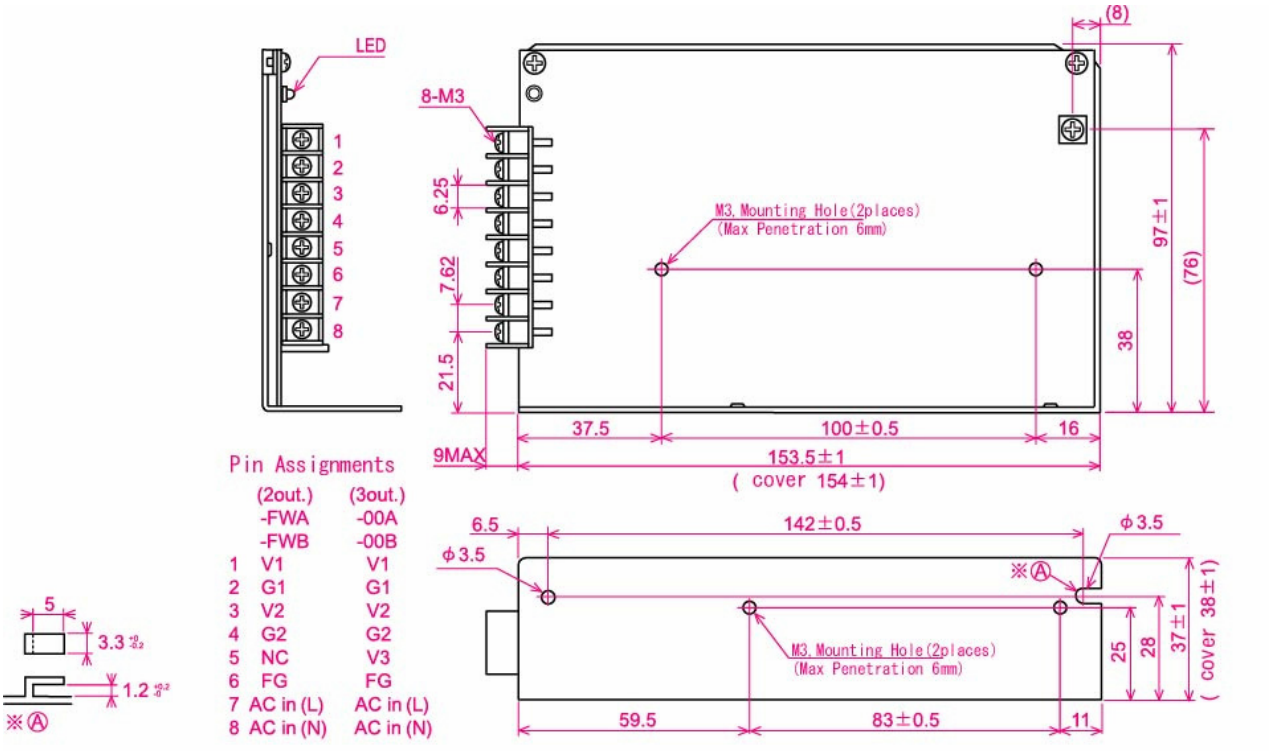
Dimension (mm)



ERT**FWA Specification

Specifications<AC/DC>	Model							
ERA**FWB 50WATTS/2OUTPUTS	ERA21FWB-B		ERA22FWB		ERA23FWB		ERA24FWB-B	
Output Characteristic								
Output Voltage [V]	24	5	12	12	15	15	24	5
Output Current [A]	0.2-0.85	0.9	0.2-1.2	0.9	0.2-0.85	0.85	0.2-1.7	0.9
Voltage Adjust Range	V1:+3%/-0% of Rated Output Voltage(at no load within the input range)							
	V2:fixed with tolerance of +/-3.5%(at no load within the input range)							
Ripple and Noise [mVp-p](maximum) *3	290	100	170	170	200	200	290	100
Regulation								
Statistic Line Regulation [mV](maximum)	120	25	60	60	75	75	120	25
Statistic Load Regulation [mV](maximum)	240	50	120	120	150	150	240	50
Temperature Coefficient *4	0.03%/℃							
Drift[mV](maximum) *5	135	40	75	75	90	90	135	40
Dynamic Load Regulation [mV](typical) *6	not specified							
Recovery Time *6	not specified							
Rise up time	200mS(maximum) at 25℃ and rated input/output							
Hold up time	20mS(minimum) at 25℃ and rated input/output							
Functions								
Overcurrent Protection ≧105% of Rated Output Current[A]	V1:Current Limiting with automatic recovery V2:by the regulator I.C's characteristics							
	≧Peak	-	≧Peak	-	1.89	-	≧Peak	-
Overvoltage Protection ≧112% of Rated Output Voltage[V]	V1:output shutdown(to reset,leave 30seconds after shut-off) V2:not available							
	26.9	-	13.4	-	16.8	-	26.9	-
Remote Sense	not available							
Remote On/Off	not available							
Environmental								
Operating Temperature	-5 to +50℃[enclosed type:-5 to 50℃ at vertical mount/-5 to 40℃ at horizontal mount]							
Operating Humidity	85%RH(non-condensing)							
Storage Temperature	-20 to +85℃							
Storage Humidity	85%RH(non-condensing)							
Withstanding Voltage	Primary-Secondary AC2,500V for 1minute							
	Primary-Frame Ground AC2,500V for 1minute							
	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							
? Leakage Current	1mA(maximum) at 25℃,rated input/output and rated input frequency							
? Line conducted noise	Built to meet FCC Part15-B Class B							
? Safety								
Weight (typical)	400g/enclosed type:450g							
? MTBF [H]	520,000							
? Switching Frequency[kHz](typical) *7	30	30	40	40	40	40	40	40

Conditions:

*1 at cold start

*2 at DC260V input and rated output

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

*4 at -5 to +50℃/enclosed type: at -5 to +40℃

*5 for 7hour period after 1hour warm-up at 25℃ and rated input/output

*6 when output current changed from 25% to 75% of rated output current rapidly at AC200V input

*7 variable on input voltage and load conditions

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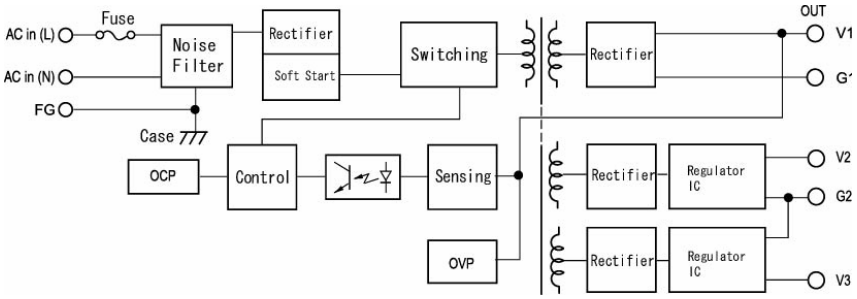
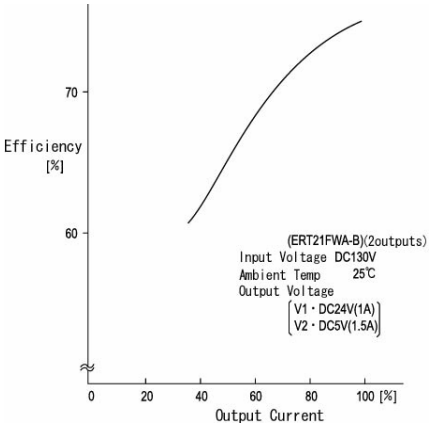
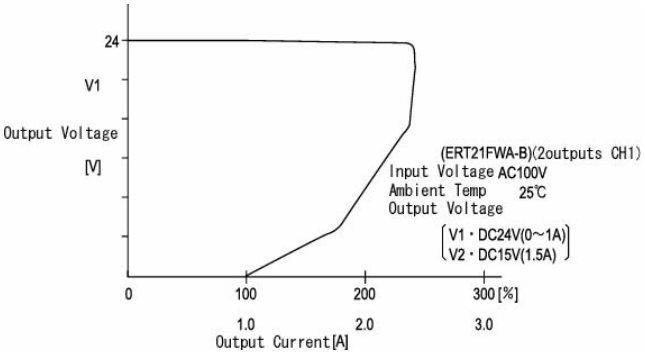
Block Diagram



Efficiency Curve



OCP Curve



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