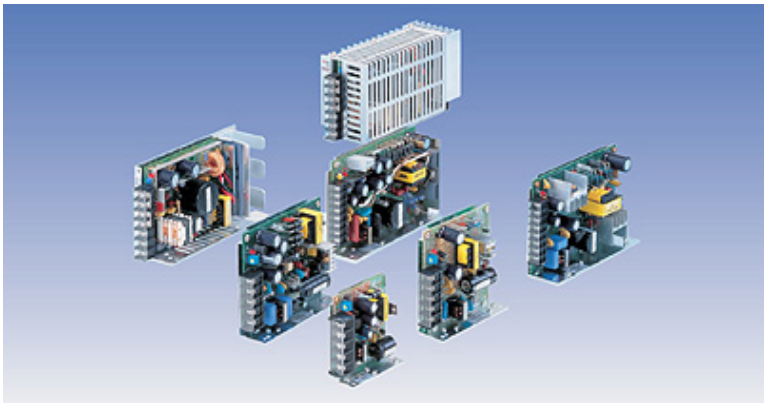
ETA-USA
Your power supply experts

30 WATT AC-DC CONVERTER

ERT-FWA SERIES



General Description

"ER"-Series AC/DC Switching power supplies are open frame, low cost with high efficiency. 65 different models are available from low to medium power. A low power modules use a simple RCC circuit while high power supplies employ a forward converter.

Features

1. Open Frame
2. Cost Effective
3. High Efficiency
4. No derating without cover and horizontal mounting
5. Input 170-264Vac
6. EMI : complies with FCC/A, FCC/B for ERD & ERE
7. Over voltage protection

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

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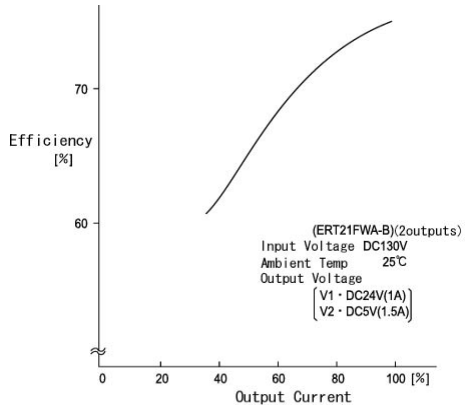
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Specifications<AC/DC>	Model					
ERT**FWA 30WATTS/2OUTPUTS	ERT21FWA-B		ERT22FWA-B		ERT24FWA-B	
Input Characteristic						
Input Voltage	AC100V(DC130V)					
Input Range	AC85-132V(DC110-170V)					
Input Frequency	50/60Hz					
Input Frequency Range	47-440Hz					
Phase	Single					
Inrush Current *1	30A(maximum)at AC100V					
Efficiency [%] (typical) *2	73		71		70	
Output Characteristic						
Output Voltage [V]	24	5	12	12	12	5
Output Current [A]	0.2-1.0(Peak1.5)	1.5	0.4-2.0(Peak2.7)	0.8	0.2-2.0(Peak2.7)	1.5
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	170	100
Regulation						
a.Statistic Line Regulation [mV](maximum)	120	25	60	60	60	25
b.Statistic Load Regulation [mV](maximum)	240	50	120	120	120	50
c.Temperature Coefficient *4	0.03%/℃					
d.Drift[mV](maximum) *5	135	40	75	75	75	40
e.Dynamic Load Regulation [mV](typical) *6	not specified					
f.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 characteristic					
	≧Peak	-	≧Peak	-	≧Peak	-
Overvoltage Protection ≧115% of Rated Output Voltage[V]	V1:Zener diode clamping V2:not available					
	27.6	-	13.8	-	17.25	-
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 moun					
Operating Humidity	85%RH(non-condensing)					
Storage Temperature	-20 to +85℃					
Storage Humidity	85%RH(non-condensing)					
Withstanding Voltage	Primary-Secondary AC1,500V for 1minute					
	Primary-Frame Ground AC1,500V 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:490g					
? MTBF [H]	670,000					
? Switching Frequency[kHz](typical) *7	35					

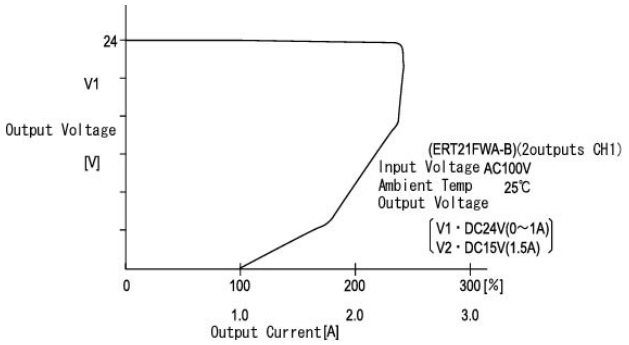
Conditions:
*1 at cold start
*2 at DC130V input and rated output
*3 measured by a bayonet probe at output connector at 0 to 100MHz bandwidth
*4 at -5 to +50℃ /enclosed type: at -5 to +40℃
*5 for 7hour period after 1hour warm-up at 25℃ and rated input/output
*6 when output current changed from 25% to 75% of rated output current rapidly at AC100V input
*7 variable on input voltage and load conditions

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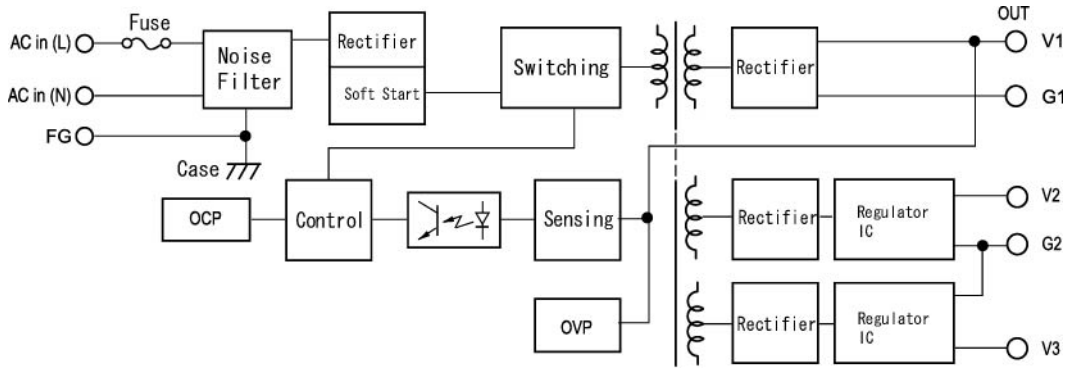
Efficiency Curve



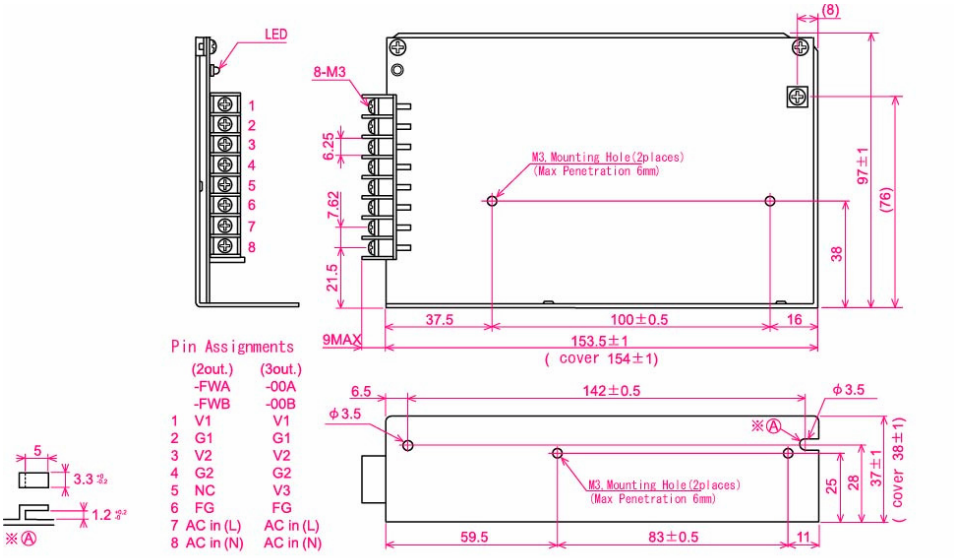
OCP Curve



Block Diagram



Dimension Diagram



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