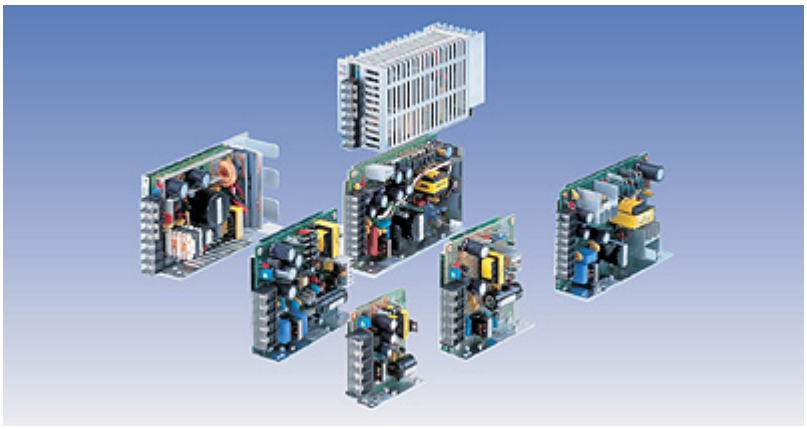
ETA-USA
Your power supply experts

# 25 WATT
## AC-DC CONVERTER
## ERA-SA SERIES



## Features

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

## General Description

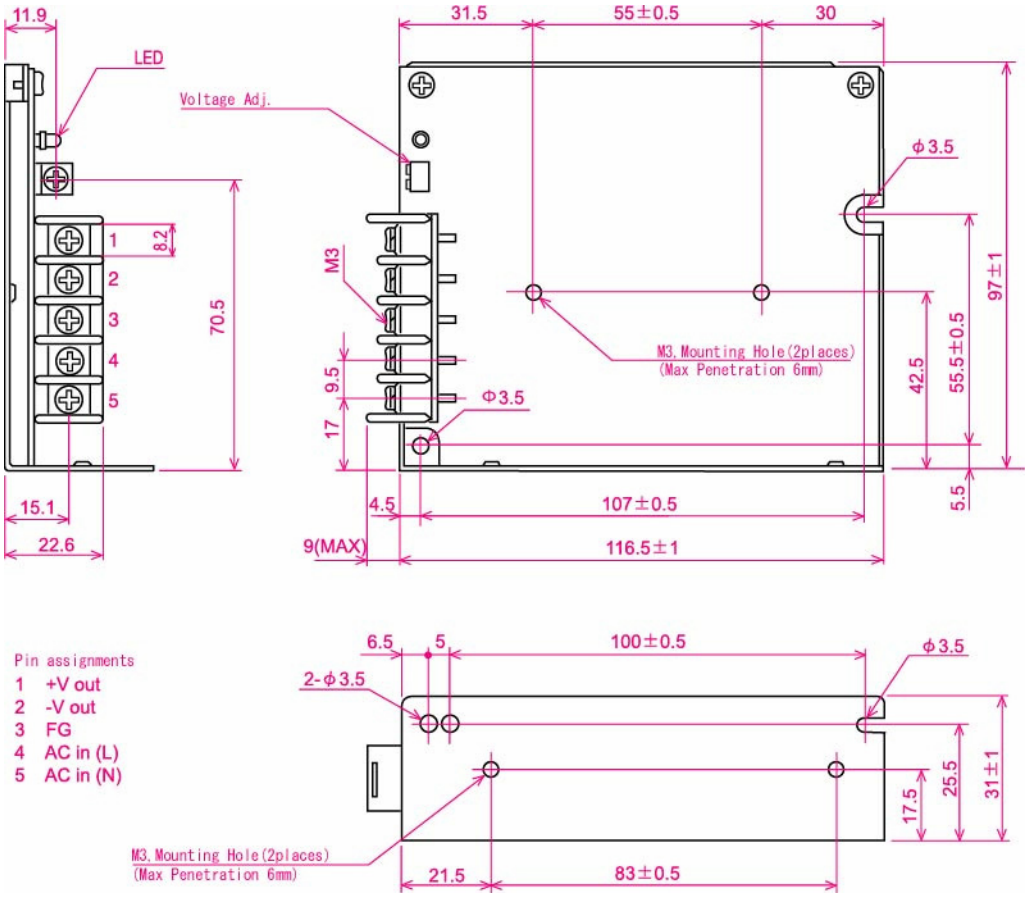
ER-series is an open frame, low cost switcher with high efficiency. 65 different models are available from low to medium power. Low power modules use a simple RCC circuit while higher power supplies employ a forward converter.

## Options

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


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## Dimension (mm)



## ERA**SA Specification

| Specifications<AC/DC> | Model | | | | |
|---|---|---|---|---|---|
| ERA**SA 25WATTS/SINGLE | ERA05SA | ERA12SA | ERA15SA | ERA24SA | ERA48SA |
| **Output Characteristic** | | | | | |
| Output Voltage [V] | 5 | 12 | 15 | 24 | 48 |
| Output Current [A] | 5.0 | 2.1 | 1.7 | 1.1 | 0.55 |
| Voltage Adjust Range | +/- 10% of Rated Output Voltage(at no load within the input range) | | | | |
| Ripple and Noise [mVp-p](maximum) *3 | 100 | 170 | 200 | 290 | 530 |
| Regulation | | | | | |
| Statistic Line Regulation [mV](maximum) | 25 | 60 | 75 | 120 | 240 |
| Statistic Load Regulation [mV](maximum) | 50 | 120 | 150 | 240 | 480 |
| Temperature Coefficient *4 | 0.03%/℃ | | | | |
| Drift[mV](maximum) *5 | 40 | 75 | 90 | 135 | 255 |
| 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] | Current Limiting with automatic recovery | | | | |
| | 5.25 | 2.21 | 1.79 | 1.16 | 0.58 |
| Overvoltage Protection ≧12% of Rated Output Voltage[V] | output shutdown(to reset,leave 30seconds after shut-off) | | | | |
| | 5.60 | 13.4 | 16.8 | 26.9 | 53.8 |
| 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 45℃at horizontal mount] | | | | |
| 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) | 280g/enclosed type:340g | | | | |
| ? MTBF [H] | 610,000 | | | | |
| ? Switching Frequency[kHz](typical) *7 | 25 | 40 | 40 | 40 | 40 |

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℃

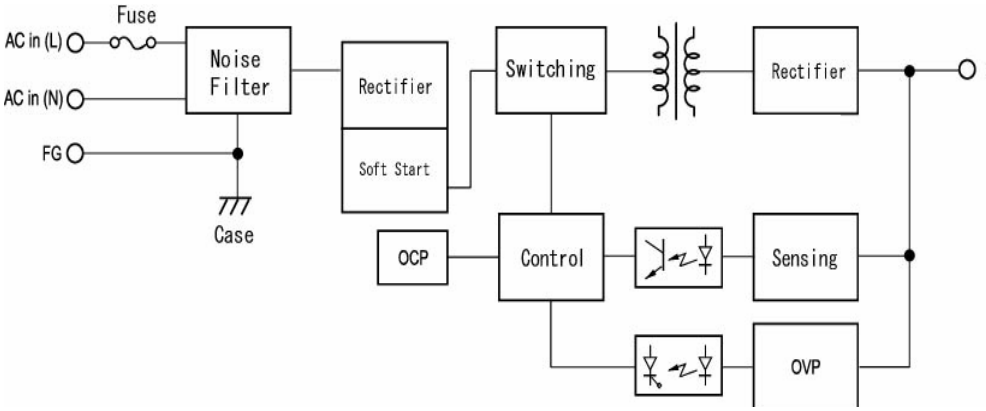
*5 for 7hour period after 1hour warm-up at 25℃and rated input/output

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

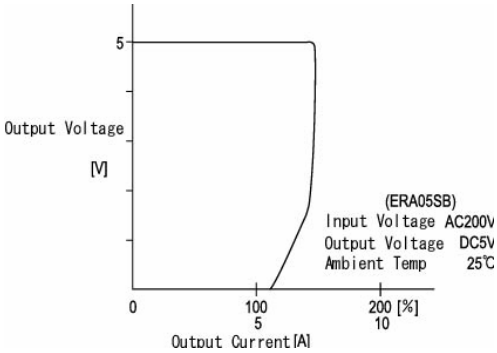
*7 variable on input voltage and load conditions


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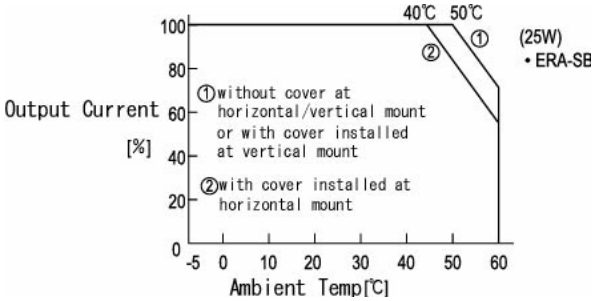
## Block Diagram




## OCP Curve




## Derating Curve





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