

## KEY FEATURES

- Switching Power Module for PCB Mountable
- Fully Encapsulated Plastic Case
- Regulated Output and Low Ripple and Noise
- Small Size as ANC 15Watt with 50Watt Higher Power
- Screw Terminal For Optional
- CE, UL Approval (Pending)
- 3-Years Product Warranty



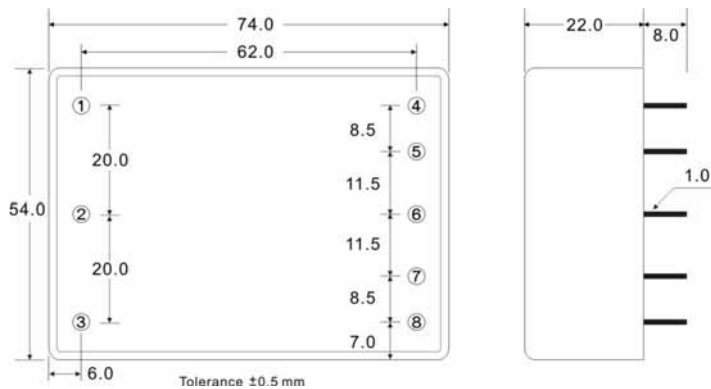
## ELECTRICAL SPECIFICATIONS

| Model No. ( Single Output ) |                                     | ANC50-5S                                                              | ANC50-9S | ANC50-12S | ANC50-15S | ANC50-18S | ANC50-24S | ANC50-48S |
|-----------------------------|-------------------------------------|-----------------------------------------------------------------------|----------|-----------|-----------|-----------|-----------|-----------|
| Max Output Wattage (W)      |                                     | 40W                                                                   | 40W      | 50W       | 50W       | 50W       | 50W       | 50W       |
| Input                       | Voltage                             | 90-264 VAC or 120-370 VDC                                             |          |           |           |           |           |           |
|                             | Frequency (Hz)                      | 47-63 Hz                                                              |          |           |           |           |           |           |
|                             | Current (Full load)                 | 1100 mA max. (115 VAC) / 600 mA max. (230 VAC)                        |          |           |           |           |           |           |
|                             | Inrush Current (<2ms)               | 30 A max. (115 VAC) / 50 A max. (230 VAC)                             |          |           |           |           |           |           |
|                             | Leakage Current                     | 0.75 mA max.                                                          |          |           |           |           |           |           |
|                             | External Fuse (recommend)           | 3.15 A slow blow type                                                 |          |           |           |           |           |           |
| Output                      | Voltage (V.DC.)                     | 5V                                                                    | 9V       | 12V       | 15V       | 18V       | 24V       | 48V       |
|                             | Voltage Accuracy                    | ±2%                                                                   |          |           |           |           |           |           |
|                             | Current (mA) max                    | 8000                                                                  | 4440     | 4167      | 3333      | 2780      | 2083      | 1040      |
|                             | Line Regulation (LL-HL) (typ.)      | ±1%                                                                   |          |           |           |           |           |           |
|                             | Load Regulation (5-100%) (typ.)     | ±1%                                                                   |          |           |           |           |           |           |
|                             | Minimum Load                        | 0%                                                                    |          |           |           |           |           |           |
|                             | Maximum Capacitive Load             | 80000 uF                                                              | 30000uF  | 20000 uF  | 18000 uF  | 10000uF   | 6000 uF   | 470uF     |
|                             | Ripple & Noise                      | 100mV                                                                 | 100mV    | 120mV     | 150mV     | 180mV     | 240mV     | 480mV     |
|                             | Efficiency (at 230 VAC)             | 86%                                                                   | 89%      | 90%       | 90%       | 90%       | 89%       | 89%       |
|                             | Hold-up Time                        | 12 ms min.                                                            |          |           |           |           |           |           |
|                             | Switching Frequency                 | 40~75 kHz                                                             |          |           |           |           |           |           |
| Protection                  | Over Power Protection               | Hiccup technique, auto-recovery                                       |          |           |           |           |           |           |
|                             | Over Voltage Protection             | Zener diode clamp                                                     |          |           |           |           |           |           |
|                             | Short Circuit Protection            | Hiccup mode, indefinite (automatic recovery)                          |          |           |           |           |           |           |
| Isolation                   | Input-Output (V.AC)                 | 3000V                                                                 |          |           |           |           |           |           |
|                             | Input-FG (V.AC)                     | 1500V                                                                 |          |           |           |           |           |           |
|                             | Output-FG (V.AC)                    | 500V                                                                  |          |           |           |           |           |           |
| Environment                 | Operating Temperature               | -25°C...+70°C (with derating)                                         |          |           |           |           |           |           |
|                             | Storage Temperature                 | -25°C...+85°C                                                         |          |           |           |           |           |           |
|                             | Temperature Coefficient             | ±0.02%/°C                                                             |          |           |           |           |           |           |
|                             | Humidity                            | 95% RH                                                                |          |           |           |           |           |           |
|                             | MTBF                                | >200,000 h @ 25°C (MIL-HDBK-217F)                                     |          |           |           |           |           |           |
| Physical                    | Dimension (L x W x H)               | 2.91 x 2.13 x 0.87 Inches ( 74.0 x 54.0 x 22.0 mm ) Tolerance ±0.5 mm |          |           |           |           |           |           |
|                             | Case Material                       | Plastic resin with Fiberglass (flammability to UL 94V-0)              |          |           |           |           |           |           |
|                             | Weight                              | 158 g                                                                 |          |           |           |           |           |           |
|                             | Cooling Method                      | Free air convection                                                   |          |           |           |           |           |           |
| Safety                      | Agency Approvals                    | CE, UL/cUL (Pending)                                                  |          |           |           |           |           |           |
| EMC                         | EMI (Conducted & Radiated Emission) | EN 55022 (Pending)                                                    |          |           |           |           |           |           |
|                             | EMS (Noise Immunity)                | EN 55024 (Pending)                                                    |          |           |           |           |           |           |

1.All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

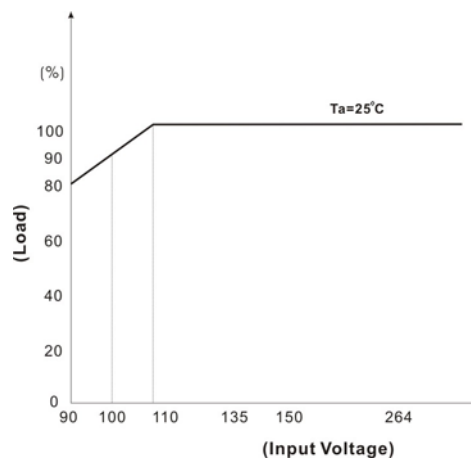
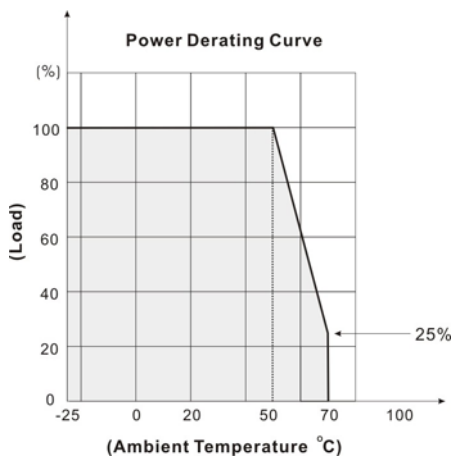
2.Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.

### MECHANICAL DIMENSION ( Top View )



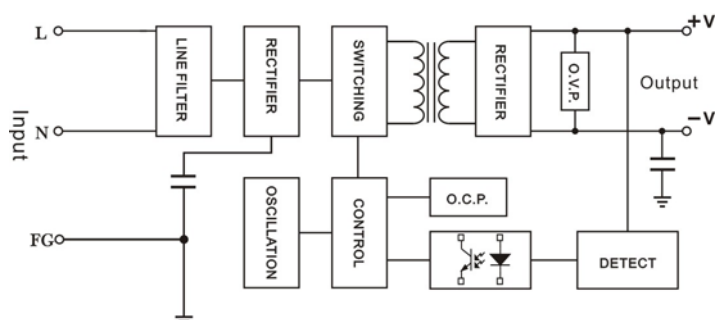
| PIN# | SINGLE    |
|------|-----------|
| 1    | FG        |
| 2    | AC IN (N) |
| 3    | AC IN (L) |
| 4    | NO PIN    |
| 5    | -DC OUT   |
| 6    | NO PIN    |
| 7    | +DC OUT   |
| 8    | NO PIN    |

## DERATING



### BLOCK DIAGRAM

### Single Output

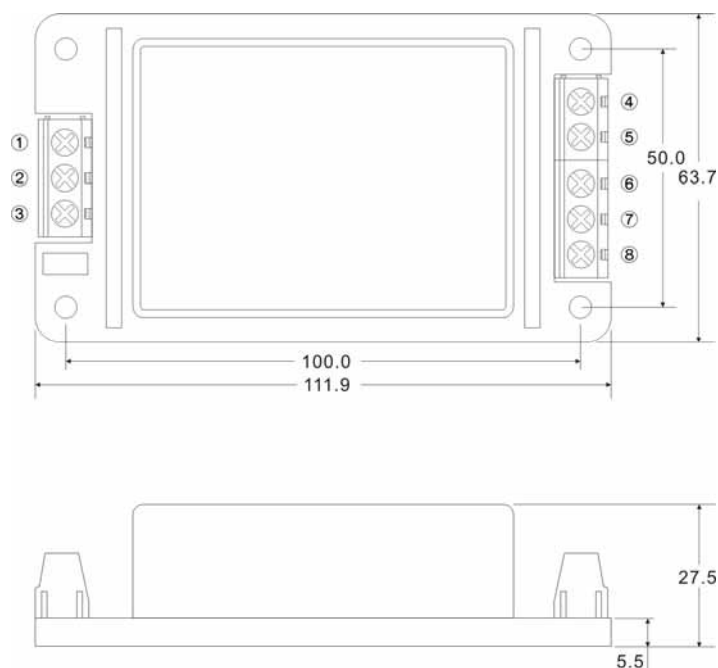


### SCREW TERMINAL

#### ANC50-A2



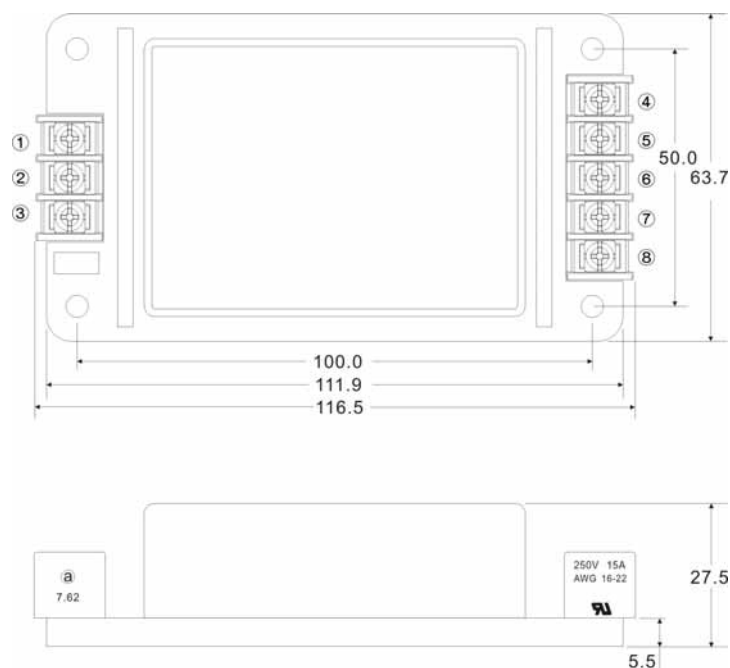
| PIN# | Single     |
|------|------------|
| 1    | FG         |
| 2    | AC IN (N)  |
| 3    | AC IN (L)  |
| 4    | NO CONNECT |
| 5    | -DC OUT    |
| 6    | NO CONNECT |
| 7    | +DC OUT    |
| 8    | NO CONNECT |



#### ANC50-A5



| PIN# | Single     |
|------|------------|
| 1    | FG         |
| 2    | AC IN (N)  |
| 3    | AC IN (L)  |
| 4    | NO CONNECT |
| 5    | -DC OUT    |
| 6    | NO CONNECT |
| 7    | +DC OUT    |
| 8    | NO CONNECT |

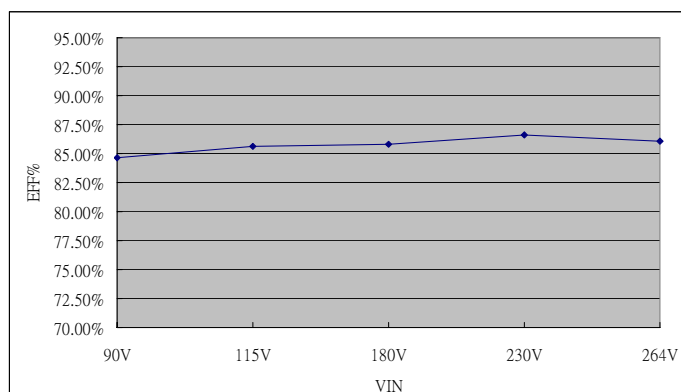


### EFFICIENCY VERSUS LOAD

#### ANC50-5S

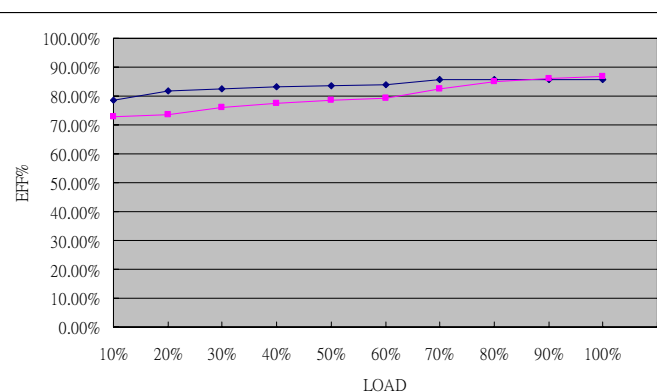
VIN VS Efficiency

| Input Voltage (V) | 90    | 115   | 180   | 230   | 264   |
|-------------------|-------|-------|-------|-------|-------|
| Efficiency (%)    | 84.60 | 85.60 | 85.83 | 86.63 | 86.05 |



LOAD VS Efficiency

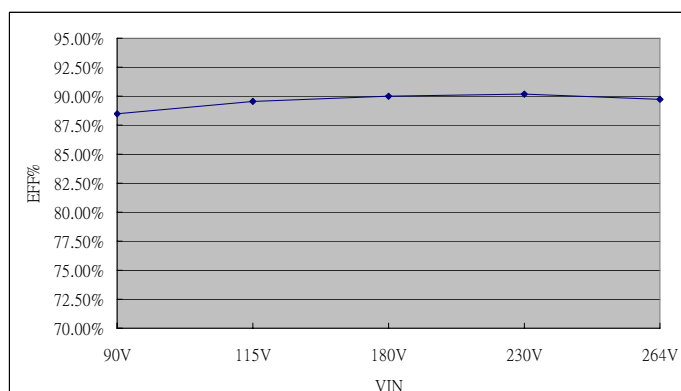
| Load (%) | 10    | 20    | 30    | 40    | 50    |  |
|----------|-------|-------|-------|-------|-------|--|
| 115V (%) | 78.74 | 81.95 | 82.52 | 83.06 | 83.50 |  |
| 230V (%) | 73.01 | 73.68 | 76.25 | 77.44 | 78.58 |  |
| Load (%) | 60    | 70    | 80    | 90    | 100   |  |
| 115V (%) | 84.08 | 85.79 | 85.79 | 85.71 | 85.60 |  |
| 230V (%) | 79.36 | 82.51 | 85.10 | 85.91 | 86.63 |  |



#### ANC50-9S

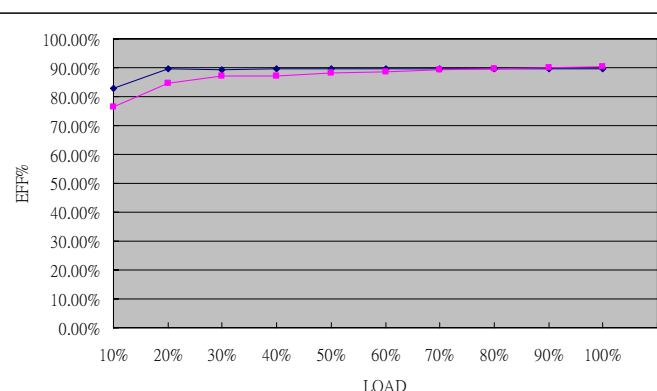
VIN VS Efficiency

| Input Voltage (V) | 90    | 115   | 180   | 230   | 264   |
|-------------------|-------|-------|-------|-------|-------|
| Efficiency (%)    | 88.51 | 89.59 | 89.99 | 90.19 | 89.69 |



LOAD VS Efficiency

| Load (%) | 10    | 20    | 30    | 40    | 50    |  |
|----------|-------|-------|-------|-------|-------|--|
| 115V (%) | 82.95 | 89.49 | 89.15 | 89.49 | 89.69 |  |
| 230V (%) | 76.57 | 84.78 | 87.22 | 87.07 | 88.11 |  |
| Load (%) | 60    | 70    | 80    | 90    | 100   |  |
| 115V (%) | 89.82 | 89.61 | 89.64 | 89.50 | 89.59 |  |
| 230V (%) | 88.50 | 89.35 | 89.64 | 89.95 | 90.19 |  |

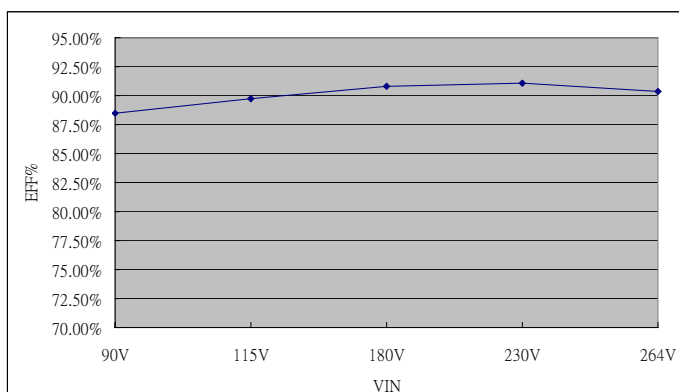


## EFFICIENCY VERSUS LOAD

### ANC50-12S

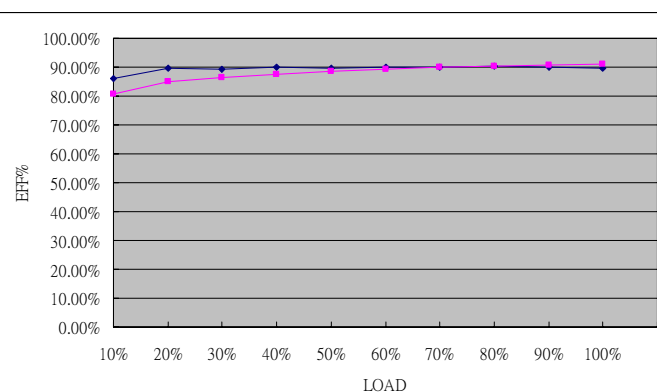
VIN VS Efficiency

| Input Voltage (V) | 90    | 115   | 180   | 230   | 264   |
|-------------------|-------|-------|-------|-------|-------|
| Efficiency (%)    | 88.45 | 89.73 | 90.78 | 91.05 | 90.36 |



LOAD VS Efficiency

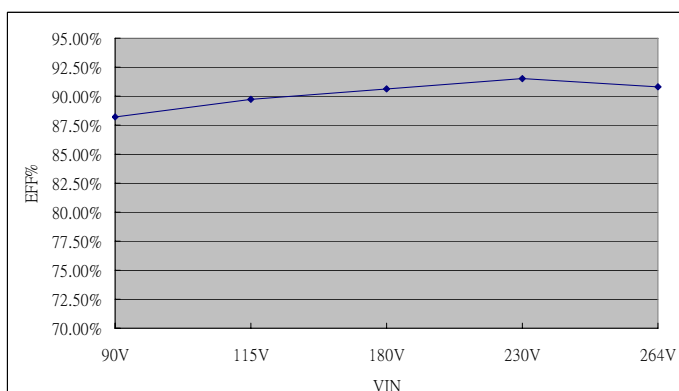
| Load (%) | 10    | 20    | 30    | 40    | 50    |  |
|----------|-------|-------|-------|-------|-------|--|
| 115V (%) | 86.06 | 89.59 | 89.42 | 89.99 | 89.73 |  |
| 230V (%) | 80.60 | 85.03 | 86.35 | 87.63 | 88.47 |  |
| Load (%) | 60    | 70    | 80    | 90    | 100   |  |
| 115V (%) | 90.14 | 90.13 | 90.19 | 89.99 | 89.73 |  |
| 230V (%) | 89.34 | 89.90 | 90.39 | 90.72 | 91.05 |  |



### ANC50-15S

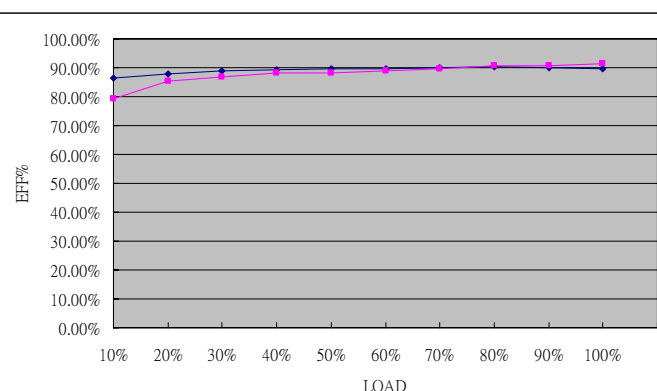
VIN VS Efficiency

| Input Voltage (V) | 90    | 115   | 180   | 230   | 264   |
|-------------------|-------|-------|-------|-------|-------|
| Efficiency (%)    | 88.17 | 89.69 | 90.60 | 91.51 | 90.84 |



LOAD VS Efficiency

| Load (%) | 10    | 20    | 30    | 40    | 50    |  |
|----------|-------|-------|-------|-------|-------|--|
| 115V (%) | 86.26 | 87.80 | 88.86 | 89.46 | 89.56 |  |
| 230V (%) | 79.30 | 85.51 | 86.77 | 88.25 | 88.29 |  |
| Load (%) | 60    | 70    | 80    | 90    | 100   |  |
| 115V (%) | 89.75 | 89.94 | 90.28 | 90.12 | 89.69 |  |
| 230V (%) | 89.01 | 89.47 | 90.69 | 90.85 | 91.51 |  |

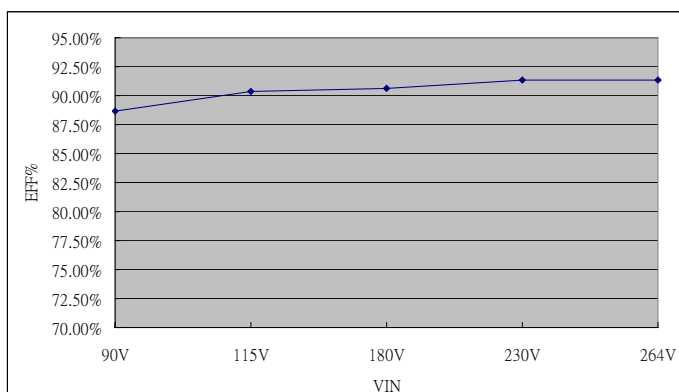


## EFFICIENCY VERSUS LOAD

### ANC50-18S

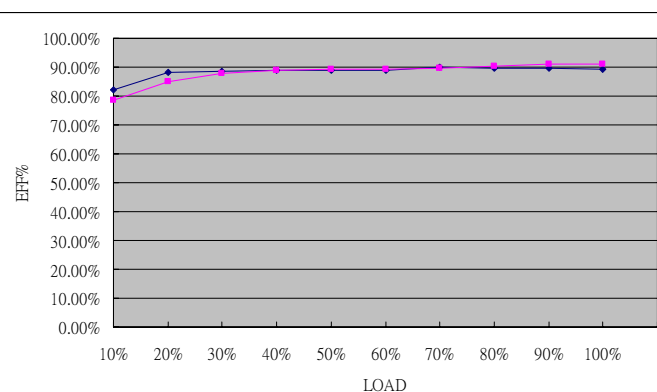
VIN VS Efficiency

| Input Voltage (V) | 90    | 115   | 180   | 230   | 264   |
|-------------------|-------|-------|-------|-------|-------|
| Efficiency (%)    | 88.70 | 90.37 | 90.64 | 91.36 | 91.30 |



LOAD VS Efficiency

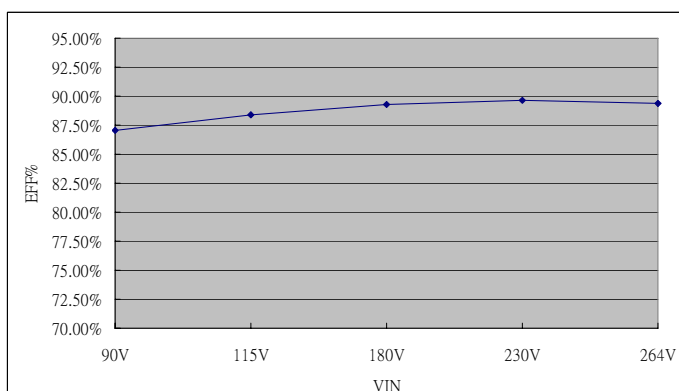
| Load (%) | 10    | 20    | 30    | 40    | 50    |  |
|----------|-------|-------|-------|-------|-------|--|
| 115V (%) | 82.30 | 88.04 | 88.58 | 88.80 | 88.96 |  |
| 230V (%) | 78.44 | 85.01 | 88.00 | 88.80 | 89.27 |  |
| Load (%) | 60    | 70    | 80    | 90    | 100   |  |
| 115V (%) | 89.06 | 89.83 | 89.60 | 89.78 | 89.43 |  |
| 230V (%) | 89.40 | 89.60 | 90.20 | 91.06 | 91.07 |  |



### ANC50-24S

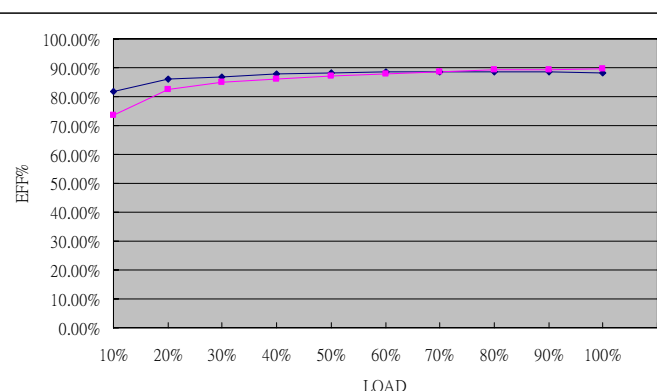
VIN VS Efficiency

| Input Voltage (V) | 90    | 115   | 180   | 230   | 264   |
|-------------------|-------|-------|-------|-------|-------|
| Efficiency (%)    | 87.04 | 88.38 | 89.29 | 89.61 | 89.41 |



LOAD VS Efficiency

| Load (%) | 10    | 20    | 30    | 40    | 50    |  |
|----------|-------|-------|-------|-------|-------|--|
| 115V (%) | 81.76 | 85.92 | 86.90 | 87.81 | 88.04 |  |
| 230V (%) | 73.46 | 82.42 | 84.96 | 85.95 | 87.13 |  |
| Load (%) | 60    | 70    | 80    | 90    | 100   |  |
| 115V (%) | 88.41 | 88.52 | 88.74 | 88.41 | 88.38 |  |
| 230V (%) | 87.69 | 88.52 | 89.13 | 89.46 | 89.61 |  |

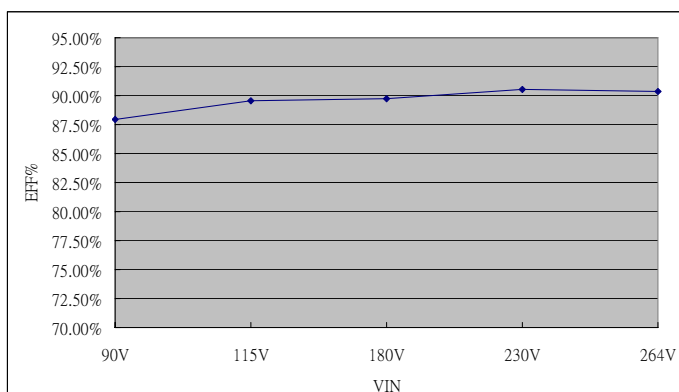


## EFFICIENCY VERSUS LOAD

### ANC50-48S

**VIN VS Efficiency**

| Input Voltage (V) | 90    | 115   | 180   | 230   | 264   |
|-------------------|-------|-------|-------|-------|-------|
| Efficiency (%)    | 87.97 | 89.55 | 89.75 | 90.53 | 90.33 |



**LOAD VS Efficiency**

| Load (%) | 10    | 20    | 30    | 40    | 50    |  |
|----------|-------|-------|-------|-------|-------|--|
| 115V (%) | 81.28 | 86.13 | 88.02 | 89.92 | 89.51 |  |
| 230V (%) | 76.12 | 83.27 | 86.47 | 88.72 | 88.28 |  |
| Load (%) | 60    | 70    | 80    | 90    | 100   |  |
| 115V (%) | 89.80 | 89.72 | 89.69 | 89.63 | 89.55 |  |
| 230V (%) | 89.29 | 89.93 | 90.27 | 90.32 | 90.53 |  |

