

## KEY FEATURES

- Switching Power Module for PCB Mountable
- Fully Encapsulated Plastic Case
- Universal Input Range 90-264VAC, 47-440 Hz
- Regulated Output
- Low Ripple and Noise
- High Efficiency
- CE, UL, TUV Approval
- 2-Years Product Warranty



## ELECTRICAL SPECIFICATIONS

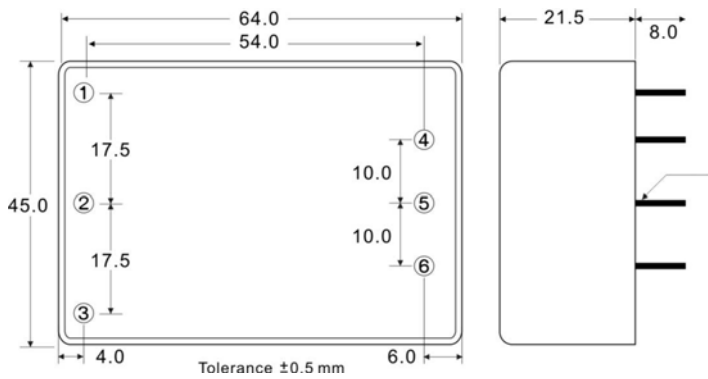
| Model No. ( Single Output )                  | ATC-3.3S  | ATC-5S | ATC-12S | ATC-15S | ATC-24S |
|--|---|--------|---------|---------|---------|
| Max Output Wattage (W)                       | 10W   | 10W    | 10W     | 10W     | 10W     |
| Input  | Voltage   |        |         |         |         |
|  | 90-264 VAC or 120-370 VDC   |        |         |         |         |
|  | Frequency (Hz)  |        |         |         |         |
|  | 47-440 Hz   |        |         |         |         |
|  | Current (Full load)   |        |         |         |         |
|  | 200 mA max. (115 VAC) / 130 mA max. (230 VAC)                         |        |         |         |         |
| Inrush Current (<2ms)                        |   |        |         |         |         |
| 10 A max. (115 VAC) / 20 A max. (230 VAC)    |   |        |         |         |         |
| Leakage Current                              |   |        |         |         |         |
| 0.75 mA max.                                 |   |        |         |         |         |
| External Fuse (recommend)                    |   |        |         |         |         |
| 1.5 A slow blow type                         |   |        |         |         |         |
| Output                                       | Voltage (V.DC.)   |        |         |         |         |
|  | 3.3V  | 5V     | 12V     | 15V     | 24V     |
|  | Voltage Accuracy  |        |         |         |         |
|  | ±2%   |        |         |         |         |
|  | Current (mA) max  |        |         |         |         |
|  | 3000  | 2000   | 833     | 666     | 426     |
|  | Line Regulation (LL-HL) (typ.)  |        |         |         |         |
|  | ±0.3%.  |        |         |         |         |
|  | Load Regulation (5-100%) (typ.)                                       |        |         |         |         |
|  | ±0.5%   |        |         |         |         |
|  | Minimum Load  |        |         |         |         |
|  | 4%  | 5%     | 5%      | 3%      | 5%      |
| Maximum Capacitive Load                      |   |        |         |         |         |
| 470-23,000µF depending on model              |   |        |         |         |         |
| Ripple                                       |   |        |         |         |         |
| <0.2% Vout +40mV max (Vp-p)                  |   |        |         |         |         |
| Noise  |   |        |         |         |         |
| <0.5% Vout +50mV max (Vp-p)                  |   |        |         |         |         |
| Efficiency                                   |   |        |         |         |         |
| 65%  | 71%   | 74%    | 71%     | 74%     |         |
| Hold-up Time                                 |   |        |         |         |         |
| 15 ms min.                                   |   |        |         |         |         |
| Switching Frequency                          |   |        |         |         |         |
| 100 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   |        |         |         |         |
|  | -40°C...+85°C   |        |         |         |         |
|  | Temperature Coefficient   |        |         |         |         |
| ±0.02%/°C                                    |   |        |         |         |         |
| Humidity                                     |   |        |         |         |         |
| 95% RH                                       |   |        |         |         |         |
| MTBF   |   |        |         |         |         |
| >250,000 h @ 25°C (MIL-HDBK-217F)            |   |        |         |         |         |
| Physical                                     | Dimension (L x W x H)   |        |         |         |         |
|  | 2.52 x 1.77 x 0.85 Inches ( 64.0 x 45.0 x 21.5 mm ) Tolerance ±0.5 mm |        |         |         |         |
|  | Case Material   |        |         |         |         |
|  | Plastic resin with Fiberglass (flammability to UL 94V-0)              |        |         |         |         |
| Weight                                       |   |        |         |         |         |
| 100 g  |   |        |         |         |         |
| Cooling Method                               |   |        |         |         |         |
| Free air convection                          |   |        |         |         |         |
| Safety                                       | Agency Approvals  |        |         |         |         |
| UL/cUL, CE, TUV                              |   |        |         |         |         |
| EMC  | EMI (Conducted & Radiated Emission)                                   |        |         |         |         |
|  | EN 55022 class B  |        |         |         |         |
| EMS (Noise Immunity)                         |   |        |         |         |         |
| EN 50082-1                                   |   |        |         |         |         |

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

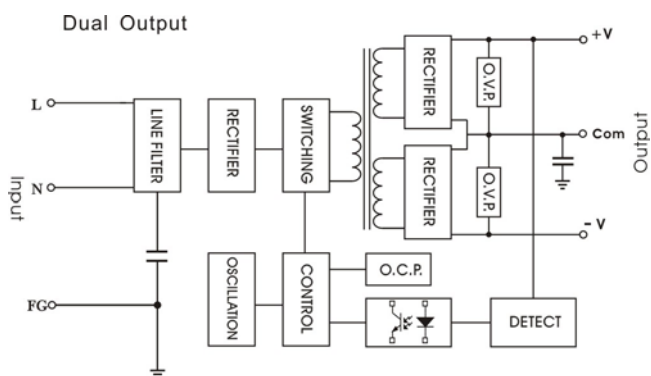
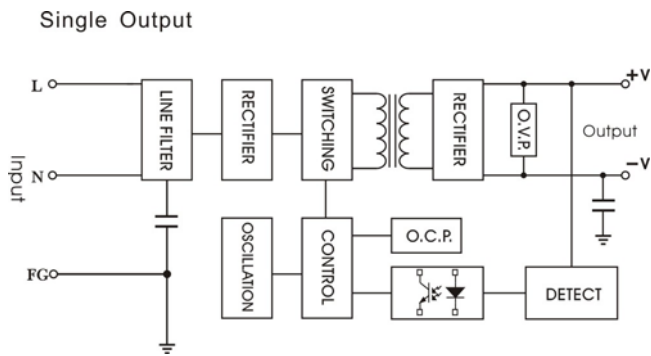
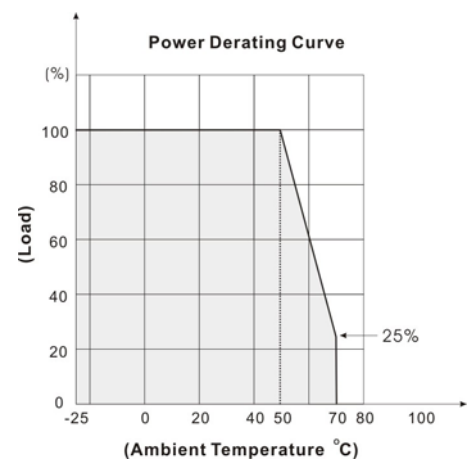
**ELECTRICAL SPECIFICATIONS**

| Model No. ( Dual Output )                 | ATC-5D  | ATC-12D   | ATC-15D |      |
|---|---|---|---------|------|
| Max Output Wattage (W)                    | 8W  | 10W   | 10W     |      |
| Input                                     | Voltage                                       |   |         |      |
|   | 90-264 VAC or 120-370 VDC                     |   |         |      |
|   | Frequency (Hz)                                |   |         |      |
|   | 47-440 Hz                                     |   |         |      |
|   | Current (Full load)                           |   |         |      |
|   | 200 mA max. (115 VAC) / 130 mA max. (230 VAC) |   |         |      |
| Inrush Current (<2ms)                     |   |   |         |      |
| 10 A max. (115 VAC) / 20 A max. (230 VAC) |   |   |         |      |
| Leakage Current                           |   |   |         |      |
| 0.75 mA max.                              |   |   |         |      |
| External Fuse (recommend)                 |   |   |         |      |
| 1.5 A slow blow type                      |   |   |         |      |
| Output                                    | Voltage (V.DC.)                               | ±5V   | ±12V    | ±15V |
|   | Voltage Accuracy                              | ±2%   |         |      |
|   | Current (mA) max                              | ±800  | ±380    | ±300 |
|   | Line Regulation (LL-HL) (typ.)                | ±0.3%.  |         |      |
|   | Load Regulation (5-100%) (typ.)               | ±0.5%   |         |      |
|   | Minimum Load                                  | 1%  | 3%      | 1%   |
|   | Maximum Capacitive Load                       | 470-23,000µF depending on model                                       |         |      |
|   | Ripple  | <0.2% Vout +40mV max (Vp-p)   |         |      |
|   | Noise   | <0.5% Vout +50mV max (Vp-p)   |         |      |
|   | Efficiency                                    | 71%   | 75%     | 72%  |
|   | Hold-up Time                                  | 15 ms min.  |         |      |
|   | Switching Frequency                           | 100 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                           | -40°C...+85°C   |         |      |
|   | Temperature Coefficient                       | ±0.02%/°C   |         |      |
|   | Humidity                                      | 95% RH  |         |      |
|   | MTBF  | >250,000 h @ 25°C (MIL-HDBK-217F)                                     |         |      |
| Physical                                  | Dimension (L x W x H)                         | 2.52 x 1.77 x 0.85 Inches ( 64.0 x 45.0 x 21.5 mm ) Tolerance ±0.5 mm |         |      |
|   | Case Material                                 | Plastic resin with Fiberglass (flammability to UL 94V-0)              |         |      |
|   | Weight  | 100 g   |         |      |
|   | Cooling Method                                | Free air convection   |         |      |
| Safety                                    | Agency Approvals                              | UL/cUL, CE, TUV   |         |      |
| EMC                                       | EMI (Conducted & Radiated Emission)           | EN 55022 class B  |         |      |
|   | EMS (Noise Immunity)                          | EN 50082-1  |         |      |

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

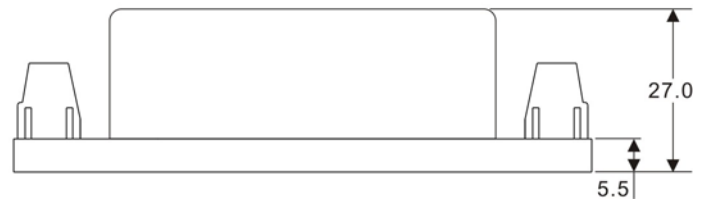
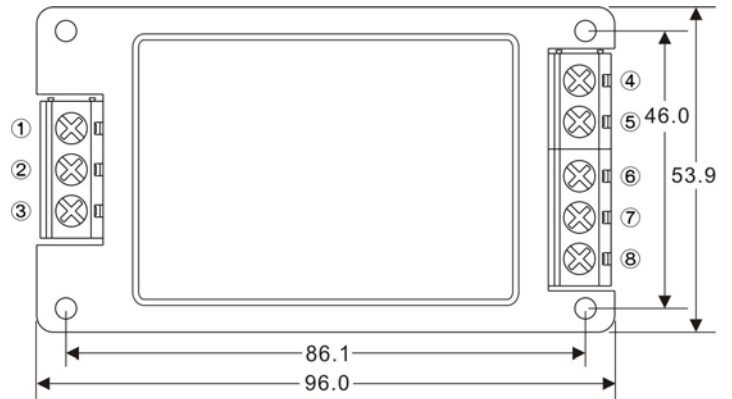
**MECHANICAL DIMENSION ( Top View )**


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

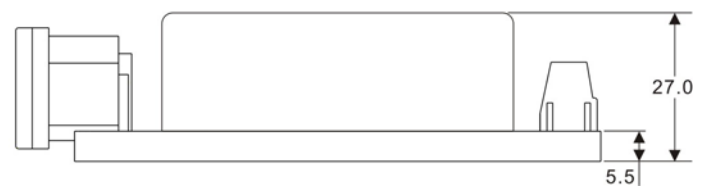
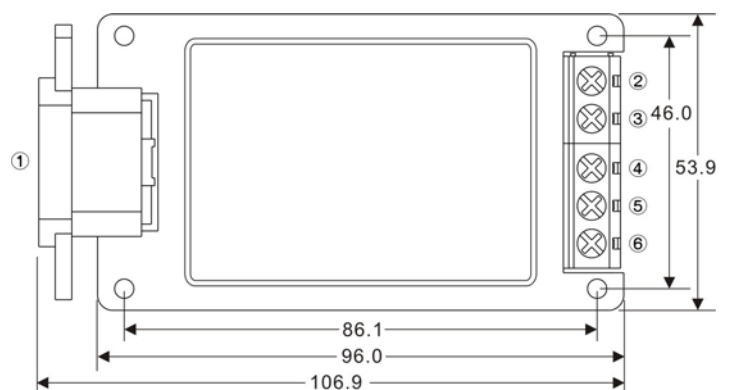
**BLOCK DIAGRAM**

**DERATING**


**ATC SERIES**
**10 Watts**
**SCREW TERMINAL**
**ATC-A2**


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


**ATC-A4**


| PIN# | Single     | Dual       |
|------|------------|------------|
| 1    | AC IN      | FG         |
| 2    | NO CONNECT | NO CONNECT |
| 3    | -DC OUT    | -DC OUT    |
| 4.   | NO CONNECT | COMMON     |
| 5    | +DC OUT    | +DC OUT    |
| 6    | NO CONNECT | NO CONNECT |



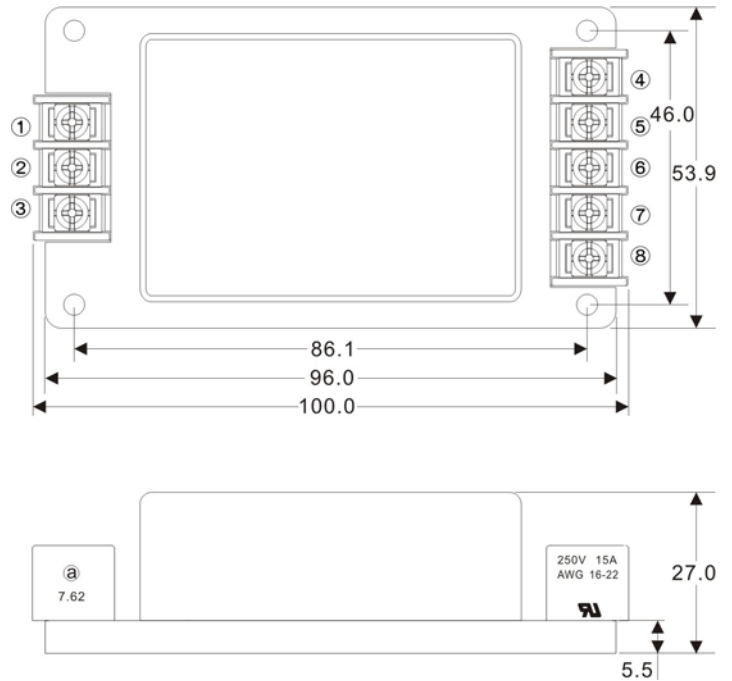
**ATC SERIES**

**10 Watts**

**ATC-A5**



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



**ATC-A7**



| PIN# | Single     | Dual       |
|------|------------|------------|
| 1    | AC IN      | FG         |
| 2    | NO CONNECT | NO CONNECT |
| 3    | -DC OUT    | -DC OUT    |
| 4.   | NO CONNECT | COMMON     |
| 5    | +DC OUT    | +DC OUT    |
| 6    | NO CONNECT | NO CONNECT |

