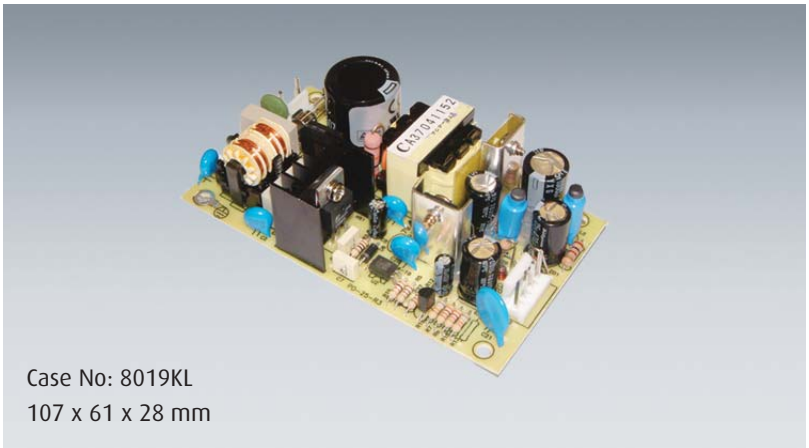
# PD-25 Series

25W Dual Output Switching Open Frame Power Supply



Case No: 8019KL
107 x 61 x 28 mm

## Features

- Universal AC input/ Full range
- Low leakage current <0.5mA
- Protections: Short circuit, Overload Over Temperature and Over voltage
- Cooling by free air convection
- 100% full load burn-in test
- Fixed switching frequency at 100KHz
- Low cost, High reliability

CB CE

## Specification

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **INPUT** | **Voltage** | 85V ~ 264VAC universal full range or 120V ~ 370VDC. | | | | | | | | | |
| | **Frequency** | 47 ----- 63 Hz | | | | | | | | | |
| | **Current** | <0.65A@115VAC; 0.4A@230VAC full load | | | | | | | | | |
| | **Inrush Current** | <32A Cold start | | | | | | | | | |
| | **Leakage Current** | <0.5mA@240VAC input | | | | | | | | | |
| **OUTPUT** | **MODEL No.** | **PD-25A** | | **PD-25B** | | **PD-2505** | | **PD-2512** | | **PD-2515** | |
| | **Channel No.** | CH1 | CH2 | CH1 | CH2 | CH1 | CH2 | CH1 | CH2 | CH1 | CH2 |
| | **Voltage** | 5V | 12V | 5V | 24V | 5V | -5V | 12V | -12V | 15V | -15V |
| | **Rated Current** | 2.1A | 1.2A | 1.2A | 0.8A | 2.5A | 2.5A | 1A | 1A | 0.8A | 0.8A |
| | **Current Range** | 0.2~2.5A | 0.1~1.5A | 0.2~2A | 0.1~1A | 0.1~3A | 0.1~2.5A | 0.1~1.2A | 0.1~1.2A | 0.1~1A | 0.1~1A |
| | **Output Tolerance** | ± 2% | ± 6% | ± 2% | ± 6% | ± 6% | ± 6% | ± 4% | ± 4% | ± 4% | ± 4% |
| | **Line Regulation** | ± 0.5% | ± 2% | ± 0.5% | ± 1% | ± 1% | ± 1% | ± 0.5% | ± 0.5% | ± 0.5% | ± 0.5% |
| | **Load Regulation** | ± 1% | ± 4% | ± 1% | ± 4% | ± 4% | ± 4% | ± 3% | ± 3% | ± 3% | ± 3% |
| | **Ripple Noise MAX.** | 50mV | 150mV | 50mV | 200mV | 50mV | 50mV | 50mV | 50mV | 50mV | 50mV |
| | **Efficiency** (TYP.) | 71% | | 77% | | 73% | | 74% | | 75% | |
| | **Rated Power** | 24.9W | | 25.2W | | 25W | | 24W | | 24W | |
| **PROTECTION** | **Over Voltage** | 5.75~6.75V | 13.8~16.2V | 5.75~6.75V | 27.6~32.4V | 5.75~6.75V | 5.75~6.75V | 13.8~16.2V | 13.8~16.2V | 17.3~20.3V | 17.3~20.3V |
| | | Shut off o/p voltage, clamping by zener diode | | | | | | | | | |
| | **Over Temperature** | Tj 135°C typically (U1) Detect on main control IC | | | | | | | | | |
| | | Shut down o/p voltage, re-power on to recover | | | | | | | | | |
| | **Over Load** | Above 105% rated output power<br>Hiccup mode, recovers automatically after fault condition is removed | | | | | | | | | |
| **ELEC. CHAR.** | **Rise Time** | <50mS@230VAC; 30mS@115VAC, full load | | | | | | | | | |
| | **Hold up Time** | >100mS@230VAC, 16mA@115VAC at full load | | | | | | | | | |
| | **Setup Time** | <0.25 Sec at full load | | | | | | | | | |
| **ENVIRONMENT** | **Temperature** | Operating: -10 ~ +60℃ ; Storage: -20~ +85℃ | | | | | | | | | |
| | **Humidity** | Operating: 20% ~ 90% RH (non condensing); Storage: 10% ~ 95% RH | | | | | | | | | |
| **SAFETY** | **Withstand Voltage** | I/P-O/P3KVAC; I/P-FG:1.5KVAC; O/P-FG:0.5KVAC | | | | | | | | | |
| | **Isolation Resistance** | I/P-O/P, I/P-FG, O/P-FG, 100MΩ/500VDC | | | | | | | | | |
| | **Safety Standard** | EN60950-1, TUV EB60950-1 Approved | | | | | | | | | |
| **EMC** | **EMI** | EN55022 (CISPR22) Class B; EN61000-3-2,3 | | | | | | | | | |
| | **EMS** | EN61000-4-2,3,4,5,6,8,11; Light industry level, criteria A | | | | | | | | | |
| **OTHERS** | **Cooling** | Cooling by free air convection | | | | | | | | | |
| | **M.T.B.F.** | 507.9K hrs min. MIL-HDBK-217F (°C) | | | | | | | | | |
| | **Packing** | 0.15Kg; 96pcs/15.9Kg/1.3 CUFT | | | | | | | | | |

1 All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature

2 Ripple & noise are measured at 20HMHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor

3 Tolerance: includes set up tolerance, line regulation and load regulation

4 The power supply is considered a component which will be installed into final equipment. The final equipment must be re-confirmed that it still meets EMC directives

5 Heat sink HA1, HS2, HS3 can not be shorted

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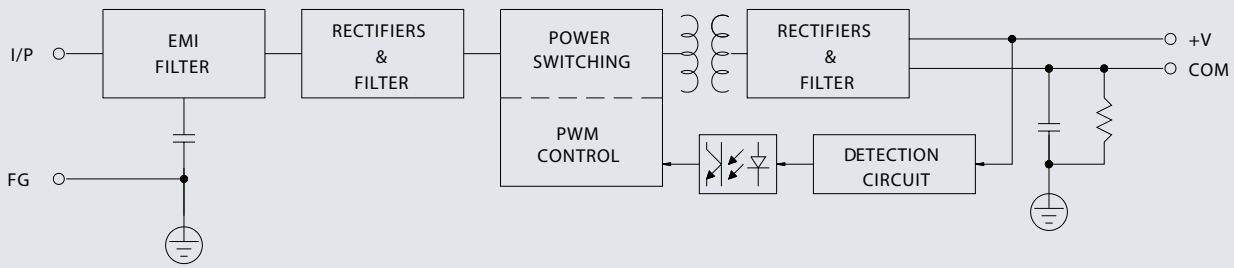
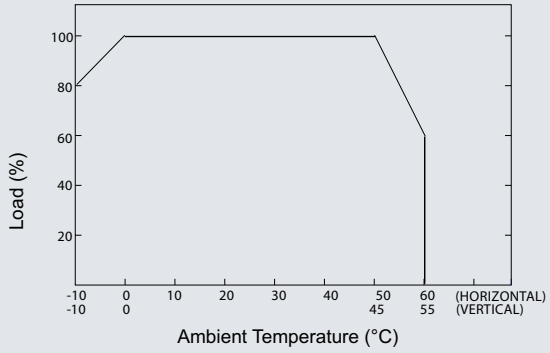
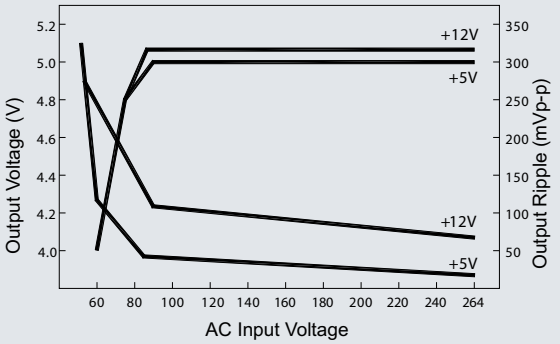
## Block Diagram




## De-Rating Curve




## Static Characteristics




## Dimensions

AC Input Connector (CN1): Molex 41791-03 or equivalent

| Pin No. | Assignment | Mating Housing | Terminal |
|---|---|---|---|
| 1 | AC/L | Molex 2139 or equivalent | Molex 2478 or equivalent |
| 2 | No Pin | Molex 2139 or equivalent | Molex 2478 or equivalent |
| 3 | AC/N | Molex 2139 or equivalent | Molex 2478 or equivalent |

DC Input Connector (CN2): Molex 41791-04 or equivalent

| Pin No. | Assignment | Mating Housing | Terminal |
|---|---|---|---|
| 1 | V1 | Molex 2139 or equivalent | Molex 2478 or equivalent |
| 2,3 | COM | Molex 2139 or equivalent | Molex 2478 or equivalent |
| 4 | V2 | Molex 2139 or equivalent | Molex 2478 or equivalent |