

## 25Watt, Single & Dual Output ,AC/DC Power Module Converter



### FEATURES:

- Universal Input 90~264VAC
- High Efficiency Up To 85%
- Protection: Short Circuit /Overload/Over Voltage
- Fully Encapsulated Plastic Case
- Internal Input Filter
- 2 Years Warranty ● ROHS Compliant

$\frac{G}{A} \frac{A}{B} \frac{025}{C} - \frac{S}{D} \frac{03}{E}$

A:Series  
 B:Package  
 C:Output Watt  
 D:Single(S) Dual(D)  
 E:Output Voltage



Specifications typical at TA=25°C, nominal input voltage and rated output current unless otherwise specified

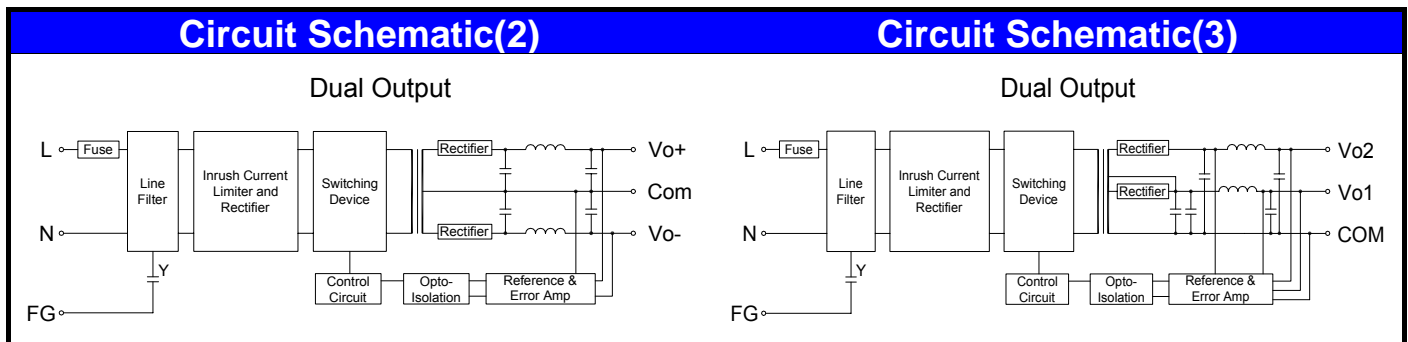
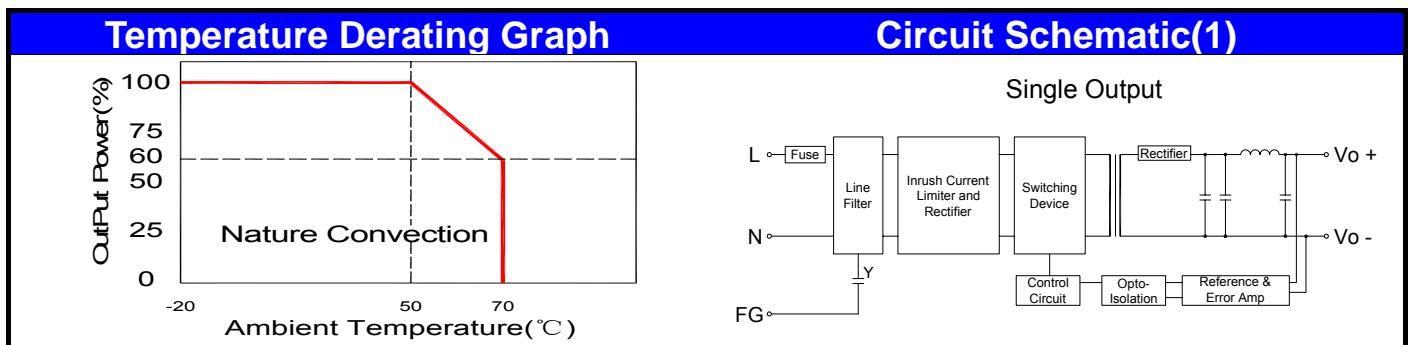
| Part Number | Output Wattage | Output Voltage  | Output Current    | Ripple & Noise       | Efficiency |
|-------------|----------------|-----------------|-------------------|----------------------|------------|
|             | (W)            | (VDC)           | (mA)              | (mV) max(Note)       | (TYP %)    |
| GA025-S03   | 16.5           | 3.3             | 5000              | 150                  | 75         |
| GA025-S05   | 20.0           | 5               | 4000              | 150                  | 75         |
| GA025-S06   | 24.0           | 6               | 4000              | 150                  | 78         |
| GA025-S07   | 21.0           | 7               | 3000              | 150                  | 78         |
| GA025-S08   | 24.0           | 8               | 3000              | 150                  | 78         |
| GA025-S09   | 22.5           | 9               | 2500              | 150                  | 78         |
| GA025-S10   | 25.0           | 10              | 2500              | 150                  | 78         |
| GA025-S12   | 25.0           | 12              | 2100              | 150                  | 80         |
| GA025-S13   | 26.0           | 13              | 2000              | 150                  | 80         |
| GA025-S14   | 26.0           | 14              | 1850              | 150                  | 80         |
| GA025-S15   | 26.0           | 15              | 1750              | 200                  | 82         |
| GA025-S16   | 26.0           | 16              | 1625              | 200                  | 82         |
| GA025-S18   | 26.0           | 18              | 1450              | 200                  | 82         |
| GA025-S24   | 26.4           | 24              | 1100              | 240                  | 85         |
| GA025-S27   | 27.0           | 27              | 1000              | 240                  | 85         |
| GA025-S36   | 27.0           | 36              | 750               | 240                  | 85         |
| GA025-S48   | 27.0           | 48              | 560               | 240                  | 85         |
| GA025-D05   | 25.0           | ±5              | ±2500             | 150                  | 75         |
| GA025-D12   | 24.0           | ±12             | ±1000             | 150                  | 78         |
| GA025-D15   | 24.0           | ±15             | ±800              | 150                  | 80         |
| GA025-D24   | 24.0           | ±24             | ±500              | 150                  | 80         |
| GA025-D0305 | 13.5           | Vo1=+3.3,Vo2=+5 | Io1=2500,Io2=1000 | 150(Vo1)<br>240(Vo2) | 76         |
| GA025-D0512 | 24.0           | Vo1=+5,Vo2=+12  | Io1=2400,Io2=1000 |                      | 76         |
| GA025-D0515 | 24.0           | Vo1=+5,Vo2=+15  | Io1=2400,Io2=800  |                      | 76         |
| GA025-D0524 | 24.0           | Vo1=+5,Vo2=+24  | Io1=2400,Io2=500  |                      | 78         |

| Input Specifications |                                       |           |     |         |     |       |
|----------------------|---------------------------------------|-----------|-----|---------|-----|-------|
| Parameters           | Conditions                            |           | Min | Typ     | Max | Units |
| Rated Input Voltage  | Vo,Io nom                             |           |     | 100~240 |     | Vac   |
| Voltage Range        | Vo,Io nom                             | AC in     | 90  |         | 264 | Vac   |
|                      |                                       | DC in     | 120 |         | 370 | Vdc   |
| Line frequency       | Vi nom,Io nom                         |           | 47  | 50/60   | 63  | Hz    |
| Inrush Current       | Io nom                                | Vi:115VAC |     |         | 12  | A     |
|                      |                                       | Vi:230VAC |     |         | 20  | A     |
| Input Fuse           | VDE/UL/CCC FUSE 2.5A/250V (Slow blow) |           |     |         |     |       |

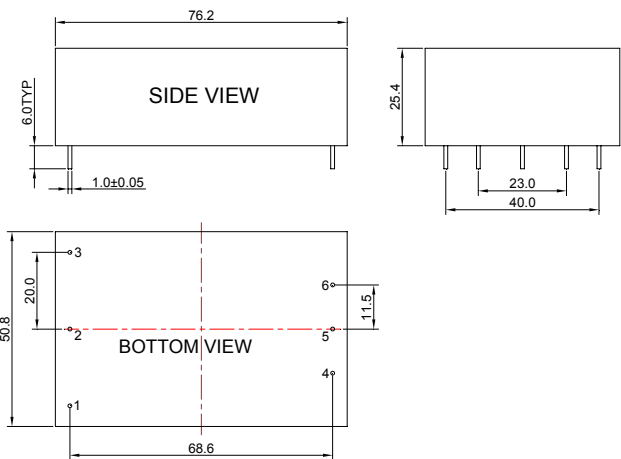
| Output Specifications   |                                  |                                 |  |       |     |       |
|-------------------------|----------------------------------|---------------------------------|--|-------|-----|-------|
| Parameters              | Conditions                       |                                 | Min  | Typ   | Max | Units |
| Output Voltage Accuracy | Vi nom,Io nom<br>(Single output) | 3.3...9V Models                 |  |       | ±3  | %     |
|                         |                                  | 10...48V Models                 |  |       | ±2  | %     |
|                         | Dual Output                      |                                 |  |       |     | ±5    |
| Minimum Load            | Vi nom                           | Single Output Models            | 0  |       |     | %     |
|                         |                                  | Dual Output Models(each output) | 20   |       |     | %     |
| Line Regulation         | Io nom,Vi min...Vi max           |                                 |  | ±1    |     | %     |
| Load Regulation         | Io min~<br>Io nom                | Single Output Models            |  | ±2    |     | %     |
|                         |                                  | Dual Output Models              |  | ±5    |     | %     |
| Transient Recovery time | Vi nom,Io nom = ←→0.5 Io nom     |                                 |  | 1,000 |     | µS    |
| Protection              | Overload                         |                                 | Above 110% rated output power  |       |     |       |
|                         | Short circuit                    |                                 | Protection type: Recovers automatically after fault condition is removed |       |     |       |
|                         | Over Voltage(Main Output)        |                                 | 120%-150% rated output Voltage   |       |     |       |
|                         |                                  |                                 | Protection type: Zener diode clamp                                       |       |     |       |

Note. Ripple & noise is measured by using 20 MHz bandwidth, measured with a 47µf paralleled with a high-frequency 0.47µf capacitor across each output by full load.

| General Specifications     |   |                  |     |     |       |
|----------------------------|---|------------------|-----|-----|-------|
| Parameters                 | Conditions                                      | Min              | Typ | Max | Units |
| Switching Frequency        | Vi nom,lo nom                                   |                  | 65  |     | KHz   |
| Isolation Voltage          | Input / Output                                  | 3KVac/ 5mA/5Secs |     |     |       |
| Isolation Resistance       | Input / Output,@500 Vdc                         | 100              |     |     | MΩ    |
| Operating Temperature      | Operating at Vi nom,lo nom                      | -20              |     | +70 | °C    |
| Derating                   | Vi nom,lo nom+51 to 71°C                        |                  |     | 2   | %/°C  |
| Storage Temperature        | Non Operational                                 | -40              |     | +85 | °C    |
| Relative Humidity          | Vi nom,lo nom                                   |                  |     | 95  | % RH  |
| Safety Standards           | EN60950-1 approved                              |                  |     |     |       |
| EMI Conduction & Radiation | Compliance to EN55022                           |                  |     |     |       |
| EMS Immunity               | Compliance to EN55024                           |                  |     |     |       |
| Dimension                  | L76.2x W50.8 x H25.4mm L3.0x W2.0 x H1.0 inches |                  |     |     |       |
| Cooling                    | Free air convection                             |                  |     |     |       |



## Markings and dimensions



| PIN | Model  |      |      |
|-----|--------|------|------|
|     | Single | Dual | Dual |
| 1   | FG     | FG   | FG   |
| 2   | ACN    | ACN  | ACN  |
| 3   | ACL    | ACL  | ACL  |
| 4   | -Vo    | -Vo  | +Vo2 |
| 5   | NO PIN | Com  | Com  |
| 6   | +Vo    | +Vo  | +Vo1 |

Unit: mm Unless otherwise specified, all tolerances are ±0.50