

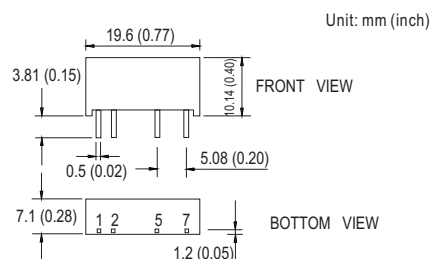
- Features :
- \*3000VDC I/O isolation
- \*Internal SMD technology
- \*Built-in EMI filter
- \*Protection: Short circuit
- \*Cooling by free air convection
- \*Non-conductive plastic case
- \*Single in line package
- \*100% full load burn-in test
- \*Low cost / High reliability
- \*2 years warranty



## SPECIFICATION

| ORDER NO.    | SPU02L-05                    | SPU02M-05                                                                | SPU02N-05    | SPU02L-12    | SPU02M-12  | SPU02N-12    | SPU02L-15    | SPU02M-15  | SPU02N-15    |
|--------------|------------------------------|--------------------------------------------------------------------------|--------------|--------------|------------|--------------|--------------|------------|--------------|
| OUTPUT       | DC OUTPUT VOLTAGE            | 5V                                                                       |              |              | 12V        |              |              | 15V        |              |
|              | CURRENT RANGE                | 80 ~ 400mA                                                               |              |              | 33 ~ 167mA |              |              | 27 ~ 133mA |              |
|              | EFFICIENCY (Typ.)            | 77%                                                                      | 79%          | 77%          | 80%        | 81%          | 80%          | 81%        | 82%          |
|              | RATED POWER                  | 2W                                                                       |              |              |            |              |              |            |              |
|              | RIPPLE & NOISE (max.) Note.2 | 100mVp-p                                                                 |              |              |            |              |              |            |              |
|              | LINE REGULATION Note.3       | ±1.2% for 1% input variation                                             |              |              |            |              |              |            |              |
|              | LOAD REGULATION Note.4       | ±8.0%                                                                    |              |              |            |              |              |            |              |
|              | VOLTAGE ACCURACY             | ±2.0%                                                                    |              |              |            |              |              |            |              |
| INPUT        | SWITCHING FREQUENCY          | 100KHz min.                                                              |              |              |            |              |              |            |              |
|              | VOLTAGE RANGE                | 4.5 ~ 5.5V                                                               | 10.8 ~ 13.2V | 21.6 ~ 26.4V | 4.5 ~ 5.5V | 10.8 ~ 13.2V | 21.6 ~ 26.4V | 4.5 ~ 5.5V | 10.8 ~ 13.2V |
|              | NORMAL VOLTAGE               | 5V                                                                       | 12V          | 24V          | 5V         | 12V          | 24V          | 5V         | 12V          |
|              | INPUT CURRENT                | Full load                                                                | 520mA        | 214mA        | 107mA      | 520mA        | 214mA        | 107mA      | 520mA        |
|              |                              | No load                                                                  | 60mA         | 20mA         | 15mA       | 60mA         | 20mA         | 15mA       | 60mA         |
| PROTECTION   | FILTER                       | Capacitor type                                                           |              |              |            |              |              |            |              |
|              | PROTECTION                   | Fuse recommended                                                         |              |              |            |              |              |            |              |
|              | OVERLOAD                     | Momentary                                                                |              |              |            |              |              |            |              |
| PROTECTION   | SHORT CIRCUIT                | Protection type : Broken                                                 |              |              |            |              |              |            |              |
|              |                              | Protection type : Broken                                                 |              |              |            |              |              |            |              |
| ENVIRONMENT  | WORKING TEMP.                | -40 ~ +71°C (Refer to "Derating Curve")                                  |              |              |            |              |              |            |              |
|              | WORKING HUMIDITY             | 20% ~ 90% RH non-condensing                                              |              |              |            |              |              |            |              |
|              | STORAGE TEMP., HUMIDITY      | -40 ~ +105°C, 10 ~ 95% RH                                                |              |              |            |              |              |            |              |
|              | TEMP. COEFFICIENT            | ±0.03%/°C (0 ~ 50°C)                                                     |              |              |            |              |              |            |              |
|              | VIBRATION                    | 10 ~ 500Hz, 2G 10min./1 cycle, period for 60min. each along X, Y, Z axes |              |              |            |              |              |            |              |
| SAFETY & EMC | WITHSTAND VOLTAGE            | I/P-O/P:3KVDC                                                            |              |              |            |              |              |            |              |
|              | ISOLATION RESISTANCE         | I/P-O/P: 100M Ohms / 500VDC / 25°C/ 70% RH                               |              |              |            |              |              |            |              |
|              | ISOLATION CAPACITANCE        | 80pF max.                                                                |              |              |            |              |              |            |              |
|              | EMC EMISSION                 | Compliance to EN55032 Class B, FCC part 15 Class B                       |              |              |            |              |              |            |              |
|              | EMC IMMUNITY                 | Compliance to EN61000-4-2,3,4,5,6,8, light industry level, criteria A    |              |              |            |              |              |            |              |
| OTHERS       | MTBF                         | 700khrs min. MIL-HDBK-217F(25°C)                                         |              |              |            |              |              |            |              |
|              | DIMENSION                    | 19.6*7.1*10.2mm or 0.77**0.28**0.40" inch (L*W*H)                        |              |              |            |              |              |            |              |
|              | WEIGHT                       | 2.3g                                                                     |              |              |            |              |              |            |              |

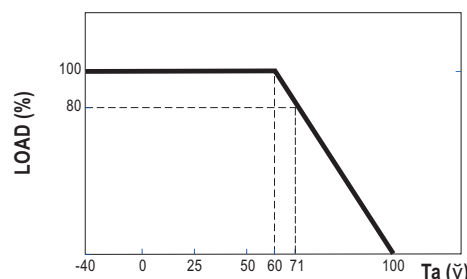
## Mechanical Specification



## Pin Configuration

| Pin No. | Output |
|---------|--------|
| 1       | +Vin   |
| 2       | -Vin   |
| 5       | -Vout  |
| 7       | +Vout  |

## Derating Curve



## NOTE

- 1.All parameters are specified at normal input, rated load, 25°C 70% RH ambient.
- 2.Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1uf & 47uf capacitor.
- 3.Line regulation is measured from low line to high line at rated load.
- 4.Load regulation is measured from 20% to 100% rated load.