

FEATURES :

- 7PIN SIP Package
- High Efficiency up to 82%
- Output Continuous Short Circuit Protection
- Unregulated Output Types
- Internal SMD Construction
- 1KVDC & 1.5KVDC Isolation
- Industry Standard Pinout
- Operating Temperature:-40°C TO +105°C

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

| Part Number | Output Voltage | Output Current | Ripple & Noise | | Efficiency | Package Style |
|----------------------|----------------|----------------|----------------|-------------|------------|---------------|
| | Vdc | mA | Typ (mVp-p) | Max (mVp-p) | %Typ | |
| 14DB-05S05N (1.5KV) | 5 | 200 | 60 | 100 | 80 | 1 |
| 14DB-05S09N (1.5KV) | 9 | 112 | 60 | 100 | 80 | 1 |
| 14DB-05S12N (1.5KV) | 12 | 84 | 60 | 100 | 80 | 1 |
| 14DB-05S15N (1.5KV) | 15 | 67 | 60 | 100 | 80 | 1 |
| 14DB-12S05N (1.5KV) | 5 | 200 | 60 | 100 | 80 | 1 |
| 14DB-12S09N (1.5KV) | 9 | 112 | 60 | 100 | 80 | 1 |
| 14DB-12S12N (1.5KV) | 12 | 84 | 60 | 100 | 82 | 1 |
| 14DB-12S15N (1.5KV) | 15 | 67 | 60 | 100 | 81 | 1 |
| 14DB-15S05N2 (1.5KV) | 5 | 200 | 60 | 100 | 78 | 2 |
| 14DB-15S09N2 (1.5KV) | 9 | 112 | 60 | 100 | 79 | 2 |
| 14DB-15S12N2 (1.5KV) | 12 | 84 | 60 | 100 | 79 | 2 |
| 14DB-15S15N2 (1.5KV) | 15 | 67 | 60 | 100 | 79 | 2 |
| 14DB-24S05N2 (1.5KV) | 5 | 200 | 60 | 100 | 77 | 2 |
| 14DB-24S09N2 (1.5KV) | 9 | 112 | 60 | 100 | 79 | 2 |
| 14DB-24S12N2 (1.5KV) | 12 | 84 | 60 | 100 | 79 | 2 |
| 14DB-24S15N2 (1.5KV) | 15 | 67 | 60 | 100 | 79 | 2 |
| 14DB-24S24N2 (1.5KV) | 24 | 42 | 60 | 100 | 81 | 2 |
| 14DB-05D05N (1.5KV) | ±5 | ±100 | 60 | 120 | 80 | 1 |
| 14DB-05D09N (1.5KV) | ±9 | ±56 | 60 | 120 | 80 | 1 |
| 14DB-05D12N (1.5KV) | ±12 | ±42 | 60 | 120 | 80 | 1 |
| 14DB-05D15N (1.5KV) | ±15 | ±34 | 60 | 120 | 80 | 1 |
| 14DB-12D05N (1.5KV) | ±5 | ±100 | 60 | 120 | 80 | 1 |
| 14DB-12D09N (1.5KV) | ±9 | ±56 | 60 | 120 | 80 | 1 |
| 14DB-12D12N (1.5KV) | ±12 | ±42 | 60 | 120 | 82 | 1 |
| 14DB-12D15N (1.5KV) | ±15 | ±34 | 60 | 120 | 81 | 1 |
| 14DB-15D05N2 (1.5KV) | ±5 | ±100 | 60 | 120 | 78 | 2 |
| 14DB-15D09N2 (1.5KV) | ±9 | ±56 | 60 | 120 | 78 | 2 |
| 14DB-15D12N2 (1.5KV) | ±12 | ±42 | 60 | 120 | 78 | 2 |
| 14DB-15D15N2 (1.5KV) | ±15 | ±34 | 60 | 120 | 78 | 2 |
| 14DB-24D05N2 (1.5KV) | ±5 | ±100 | 60 | 120 | 78 | 2 |
| 14DB-24D09N2 (1.5KV) | ±9 | ±56 | 60 | 120 | 79 | 2 |
| 14DB-24D12N2 (1.5KV) | ±12 | ±42 | 60 | 120 | 79 | 2 |
| 14DB-24D15N2 (1.5KV) | ±15 | ±34 | 60 | 120 | 78 | 2 |

NOTE :

No suffix is standard isolation (1KVDC) e.g, 14DB-05S05N,14DB-15S05N2

*add suffix /1.5KV for 1.5KVDC isolation, e.g, 14DB-05S05N1.5KV,14DB-15S05N21.5KV

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DC-DC Converter

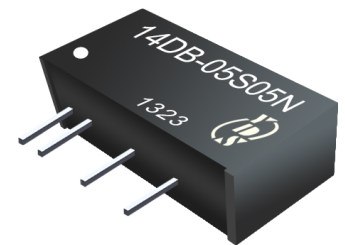
14DB SERIES

1Watt

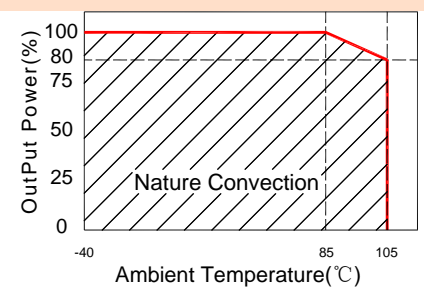
1KV & 1.5KV Isolated

Single & Dual Output

SIP7



Temperature Derating Graph



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Rev:1 2017/8/11

Input Specifications

| Parameters | Conditions | Min | Typ | Max | Units |
|-------------------|------------|-----|-----|-----|-------|
| Voltage Tolerance | Vo,Io Nom | | | ±10 | % |
| Filter | Capacitor | | | | |

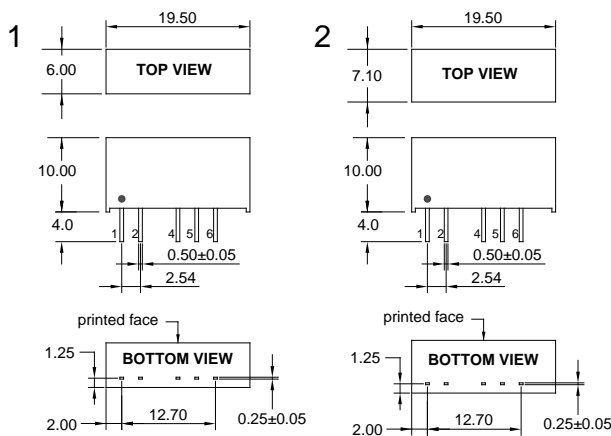
Output Specifications

| Parameters | Conditions | Min | Typ | Max | Units |
|--------------------------|-------------------------------|-----|-----|-----|-------|
| Voltage Tolerance | 100% full load | | | ±5 | % |
| Short Circuit Protection | Continuous | | | | |
| Line Regulation | For 1.0% OF Vin | | 1.2 | | % |
| Load Regulation | 5V,9V (10% To 100% F.L) | | | 15 | % |
| Load Regulation | 12~24V (10% To 100% F.L) | | | 10 | % |
| Load Regulation | ±5V,±9V (10% To 100% F.L) | | | 15 | % |
| Load Regulation | ±12~±24V (10% To 100% F.L) | | | 10 | % |

General Specifications

| Parameters | Conditions | Min | Typ | Max | Units |
|-----------------------|-----------------------------|------------------|---------------|------|-------|
| Isolation Resistance | 500Vdc | 1000 | | | MΩ |
| Switching Frequency | Full load, nominal input | | 100 | | KHz |
| Operating Temperature | | -40 | | +105 | °C |
| Storage Temperature | | -55 | | +125 | °C |
| Humidity | Non Condensing | | | 95 | % |
| Cooling | Free air Convection | | | | |
| Case material | DAP | | | | |
| MTBF | MIL-HDBK-217F @25°C | 3500000 | | | Hours |
| Weight | Package1 or Package2 | | 2.1 or 2.7 | | g |
| Dimensions | Package1 or Package2 | 19.5x6.0x10.0 or | 19.5x7.1x10.0 | | mm |

Markings and dimensions

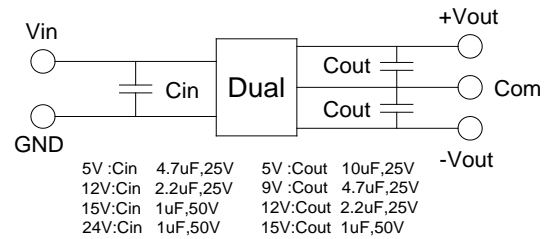
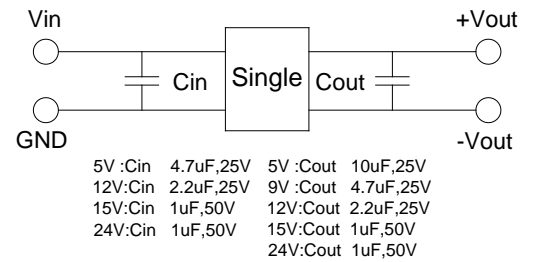


Unit : mm Unless otherwise specified, all tolerances are ±0.25

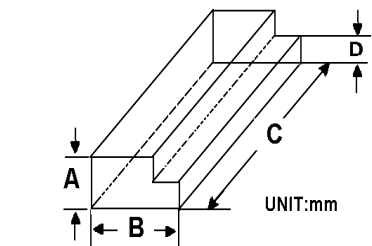
Part Number

| | |
|--------------------|--------------------------|
| 14DB - 05 S 05 N 2 | 14DB - 24 S 24 N 2 1.5KV |
| A B C D E F | A B C D E F G |
| A:Series | A:Series |
| B:Input Voltage | B:Input Voltage |
| C:Single(S)Dual(D) | C:Single(S) Dual(D) |
| D:Output Voltage | D:Output Voltage |
| E:Unregulated(N) | E:Unregulated(N) |
| F:Package | F:Package |
| | G:Isolation Voltage |

Recommended Test Circuit



Packaging



| Size(mm) | | | |
|----------|-------|-----|------|
| A | B | C | D |
| 9.50 | 16.50 | 522 | 5.00 |

PIN Connection

| PIN | 1 | 2 | 4 | 5 | 6 |
|--------|------|------|-------|--------|-------|
| Single | +Vin | -Vin | -Vout | No Pin | +Vout |
| Dual | +Vin | -Vin | -Vout | Com | +Vout |

