

**FEATURES**

- 105°C Output Capacitor
- Low Cost, High Reliability
- Compact Size, Light Weight
- 100% Full Load Burn-In Tested
- Built-In EMI Filter, Low Ripple Noise
- High Efficiency, Low Working Temperature
- Short Circuit, Overload, and Over Voltage Protected



CE

**SPECIFICATIONS: DCSD-50 Series**

All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted.  
We reserve the right to change specifications based on technological advances.

**INPUT SPECIFICATIONS**

|               |   |
|---------------|---|
| Input Voltage | DCSD-50A: 9.2 ~ 18VDC<br>DCSD-50B: 19 ~ 36VDC<br>DCSD-50C: 36 ~ 72VDC     |
| DC Current    | DCSD-50A: 7A at 12VDC<br>DCSD-50B: 3A at 24VDC<br>DCSD-50C: 1.5A at 48VDC |

**OUTPUT SPECIFICATIONS**

|                                       |  |
|---------------------------------------|--|
| Output Voltage                        | See Table  |
| Output Voltage Tolerance (See Note 3) | 5V outputs: ±2%<br>12V & 24V outputs: ±1%                              |
| Voltage Adjustability                 | See Table  |
| Output Current                        | See Table  |
| Line Regulation                       | 5V outputs: ±0.5%<br>12V outputs: ±0.3%<br>24V outputs: ±0.2%          |
| Load Regulation                       | 5V outputs: ±0.5%<br>12V outputs: ±0.3%<br>24V outputs: ±0.2%          |
| Ripple & Noise                        | 5V outputs: 100mVp-p<br>12V outputs: 120mVp-p<br>24V outputs: 150mVp-p |
| Output Power                          | See Table  |
| Setup, Rise Time                      | 2.5s, 50ms   |

**PROTECTION**

|                         |   |
|-------------------------|---|
| Over Voltage Protection | 5V outputs: 5.75 ~ 6.75V / 10% Load<br>12V outputs: 16.8 ~ 20V / 10% Load<br>24V outputs: 31.5 ~ 37.5V / 10% Load |
| Over Load Protection    | 105%~150% Type: Foldback Current Limiting Reset: Auto recovery.   |

**GENERAL SPECIFICATIONS**

|                      |  |
|----------------------|--|
| Efficiency           | See Table  |
| Withstand Voltage    | 1.5KVAC (input to output), 1.5KVAC (input to FG), 0.5KVAC (output to FG) |
| Isolation Resistance | 500VDC / 100MΩ (input to output, input to FG, output to FG)              |

**ENVIRONMENTAL SPECIFICATIONS**

|                         |   |
|-------------------------|---|
| Working Temperature     | -10°C to +60°C (refer to output derating curve)         |
| Storage Temperature     | -20°C to +85°C  |
| Working Humidity        | 20% to 90% RH   |
| Storage Humidity        | 10% to 95% RH   |
| Vibration               | 10~500Hz, 2G 10min./1cycle, Period for 60min. each axes |
| Temperature Coefficient | ±0.03%/°C (0°C~50°C)                                    |

**PHYSICAL SPECIFICATIONS**

|            |                           |
|------------|---------------------------|
| Weight     | 500 grams                 |
| Dimensions | 159(L) x 97(W) x 38(H) mm |

**SAFETY & EMC**

|               |  |
|---------------|--|
| EMC Standards | EN55022 CLASS B (Radiation), EN61000-4-2,3,4,6,8 ENV50204 Verification |
|---------------|--|

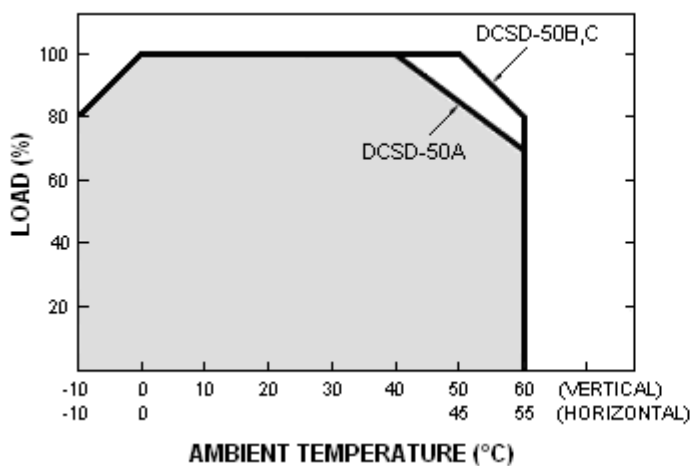
**OUTPUT VOLTAGE / CURRENT RATING CHART**

| Model       | Input Voltage            | Output Voltage | Voltage Adjustability | Rated Output Current | Output Ripple & Noise | Output Power | Efficiency |
|-------------|--------------------------|----------------|-----------------------|----------------------|-----------------------|--------------|------------|
| DCSD-50A-5  | 12 VDC<br>(9.2 ~ 18 VDC) | 5 VDC          | 4.5 ~ 5.5VDC          | 10A                  | 100mVp-p              | 50W          | 70%        |
| DCSD-50A-12 |                          | 12 VDC         | 11 ~ 16VDC            | 4.2A                 | 120mVp-p              | 50.4W        | 73%        |
| DCSD-50A-24 |                          | 24 VDC         | 23 ~ 30VDC            | 2.1A                 | 150mVp-p              | 50.4W        | 76%        |
| DCSD-50B-5  | 24 VDC<br>(19 ~ 36 VDC)  | 5 VDC          | 4.5 ~ 5.5VDC          | 10A                  | 100mVp-p              | 50W          | 72%        |
| DCSD-50B-12 |                          | 12 VDC         | 11 ~ 16VDC            | 4.2A                 | 120mVp-p              | 50.4W        | 75%        |
| DCSD-50B-24 |                          | 24 VDC         | 23 ~ 30VDC            | 2.1A                 | 150mVp-p              | 50.4W        | 78%        |
| DCSD-50C-5  | 48 VDC<br>(36 ~ 72 VDC)  | 5 VDC          | 4.5 ~ 5.5VDC          | 10A                  | 100mVp-p              | 50W          | 74%        |
| DCSD-50C-12 |                          | 12 VDC         | 11 ~ 16VDC            | 4.2A                 | 120mVp-p              | 50.4W        | 80%        |
| DCSD-50C-24 |                          | 24 VDC         | 23 ~ 30VDC            | 2.1A                 | 150mVp-p              | 50.4W        | 83%        |

**NOTES**

1. The DCSD-50 Series is designated as DCSD-50x-y where x can be **A** (9.2 ~ 18 VDC input voltage), **B** (19 ~ 36 VDC input voltage), or **C** (36 ~ 72 VDC input voltage) and y can be 5, 12, or 24 for output voltage.
2. All parameters are specified at rated input, rated load and 25°C 70% RH. ambient.
3. Tolerance includes setup tolerance, line regulation, and load regulation.
4. Ripple & noise are measured at 20MHz using a 12" twisted pair terminated with a 0.1uF & 47uF capacitor.
5. Line regulation is measured from low line to high line at rated load.
6. Load regulation is measured from 0% to 100% rated load.

**DERATING CURVE**



**STATIC CHARACTERISTICS (DCSD-50C-24)**

