

# SSV SERIES

## 5~6W DC/DC CONVERTERS Single Output



H8.5×W21×L33 (mm)

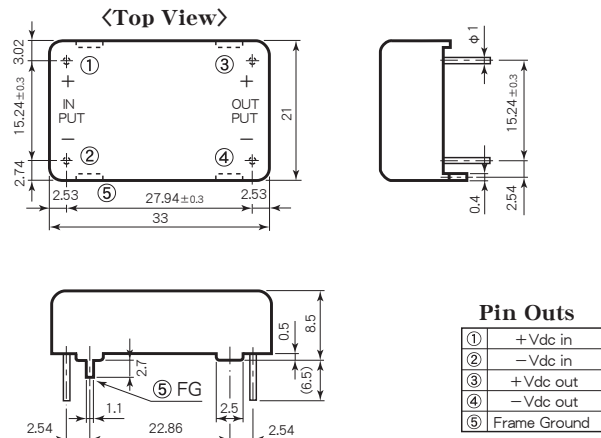
### Features

- |  |                                |
|--|--------------------------------|
| ● High Efficiency 81~88%                                       | ● 高効率 81~88%                   |
| ● 8.5mm in Height  | ● 高さ8.5mm                      |
| ● Compact, Light Weight  | ● 小形、軽量                        |
| ● Built-in Input Filter  | ● 入力フィルタ内蔵                     |
| ● Wide Input Voltage Range                                     | ● 広範囲な入力電圧                     |
| ● Input-Output Isolation                                       | ● 入出力間絶縁                       |
| ● Low No Load Current  | ● 無負荷電流が少ない                    |
| ● 5 Sided Metal Shielding                                      | ● 5面メタルシールド                    |
| ● High Reliability   | ● 高信頼性                         |
| ● Operating Ambient Temperature<br>-40°C~+85°C                 | ● 動作周囲温度<br>-40°C~+85°C        |
| ● Max. Case Temperature<br>+100°C                              | ● 最大ケース温度<br>+100°C            |
| ● Conformity to RoHS Directive                                 | ● RoHS指令対応                     |
| ● Not built-in aluminum and<br>tantalum electrolytic capacitor | ● アルミ電解コンデンサ及び<br>タンタルコンデンサ不使用 |

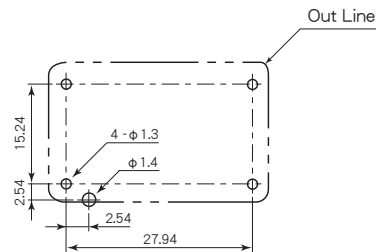
### General Characteristics

- |                                 |  |
|---------------------------------|--|
| ● Input Voltage, Range          | (at Ta : 25°C, Full Load, Nominal Vin)                         |
| ● Output Voltage, Current       | DC5, 12, 24, 48V (See Table 1)                                 |
| ● Output Voltage Accuracy       | See Table 1<br>±2% (12, 15, 24V Vout)<br>±3% (3.3, 5, 6V Vout) |
| ● Efficiency                    | See Table 1  |
| ● Line Regulation               | 0.3% max. (at Vin Range)                                       |
| ● Load Regulation               | ±0.5% max. (0~100% Load)                                       |
| ● Reflected Input Ripple, Noise | (3% Vin)Vp-p max.  |
| ● Output Ripple                 | 20mVp-p max.   |
| ● Output Noise                  | 80mVp-p max. (0~20MHz)<br>150mVp-p max. (0~100MHz)             |
| ● Short Circuit Protection      | Built-in, Auto-restart (See Fig. 2)                            |
| ● Temperature Coefficient       | 0.02%/°C max.  |
| ● Operating Ambient Temp.       | -40°C~+85°C (See Fig. 1)<br>-30°C~+85°C (5V Vin only)          |
| ● Max. Case Temperature         | +100°C   |
| ● Storage Temperature           | -40°C~+100°C   |
| ● Isolation Voltage             | AC500V one minute<br>(Input-Output-Case)                       |
| ● Isolation Impedance           | 100MΩ min. (at DC1000V)<br>(Input-Output-Case)                 |
| ● Weight                        | 15g max.   |
| ● Humidity                      | 20~95% RH  |
| ● Shock                         | 490m/s <sup>2</sup> (11msec 3directions)                       |
| ● Vibration                     | 10~55Hz 98m/s <sup>2</sup><br>(30minutes 3directions)          |
| ● Surface Structure             | 5 Sided Steel Case   |
| ● Soldering Conditions          |  |
| Soldering DIP                   | 260°C, for 15 seconds max.                                     |
| Soldering iron                  | 360°C, for 5 seconds max.                                      |
| ● MTBF                          | 1,000,000H<br>(Ta : 25°C, 80% Load, Nominal Vin)               |
| ● Warranty                      | 5 years  |

### Pin Outs & Dimensions (±0.5mm)



### Hole Configurations on PCB (Top View)



### Selection Guide

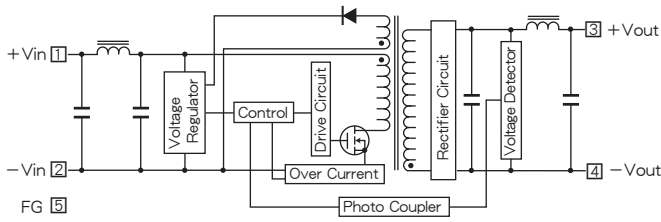
Table 1

Model Number	Input Volt. (Range) (V. DC)	Output Voltage (V. DC)	Output Current (mA)	Efficiency (Typical) (%)
SSV 5 - 3.3 S 1500	5 (4.5~9)	3.3	1500	81
SSV 5 - 5 S 1000		5	1000	83
SSV 5 - 6 S 800		6	800	83
SSV 5 - 12 S 400		12	400	83
SSV 5 - 15 S 320		15	320	83
SSV 5 - 24 S 200		24	200	83
SSV 12 - 3.3 S 1500	12 (8~18)	3.3	1500	83
SSV 12 - 5 S 1000		5	1000	85
SSV 12 - 6 S 900		6	900	85
SSV 12 - 12 S 500		12	500	87
SSV 12 - 15 S 400		15	400	87
SSV 12 - 24 S 250		24	250	87
SSV 24 - 3.3 S 1500	24 (16~36)	3.3	1500	83
SSV 24 - 5 S 1000		5	1000	85
SSV 24 - 6 S 900		6	900	85
SSV 24 - 12 S 500		12	500	87
SSV 24 - 15 S 400		15	400	87
SSV 24 - 24 S 250		24	250	87
SSV 48 - 3.3 S 1500	48 (32~72)	3.3	1500	84
SSV 48 - 5 S 1000		5	1000	86
SSV 48 - 6 S 900		6	900	86
SSV 48 - 12 S 500		12	500	88
SSV 48 - 15 S 400		15	400	88
SSV 48 - 24 S 250		24	250	88

※ 上記仕様以外にも対応可能ですので お問い合わせ下さい。  
Please consult with us about other specification.

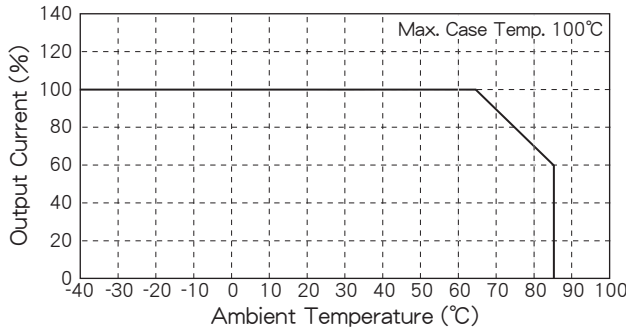
# SSV SERIES DATA SHEET

## Block Diagram

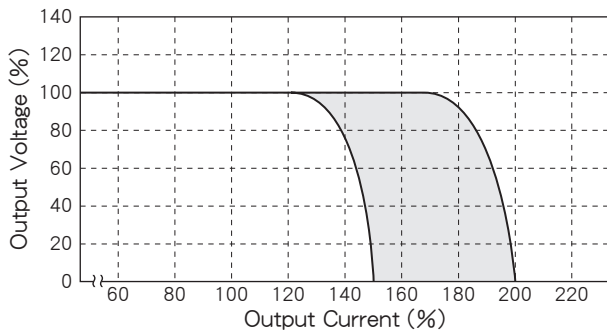


## Characteristic Curves

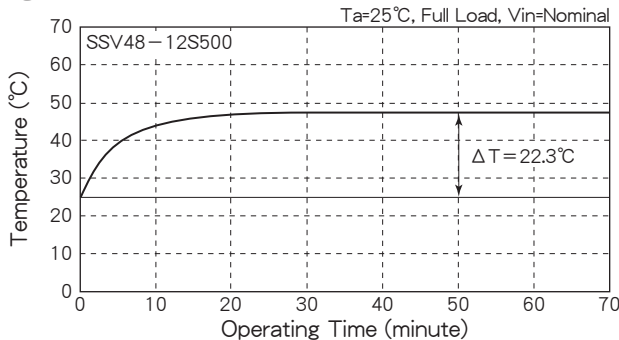
**Fig. 1 Derating Curve**



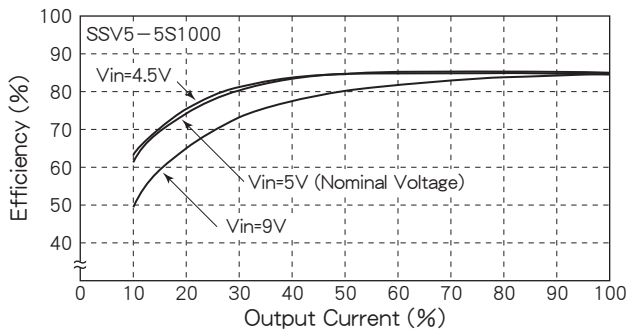
**Fig. 2 Short Circuit Operating Area**



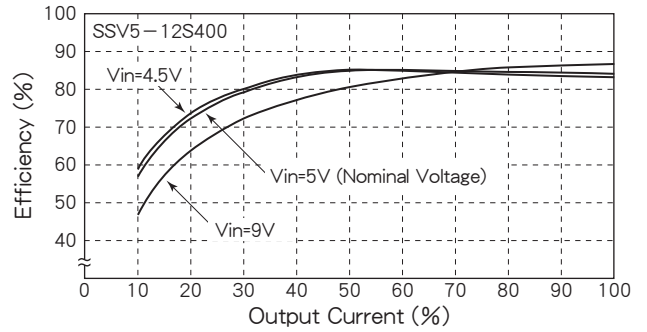
**Fig. 3 Temperature Characteristic on Case Surface**



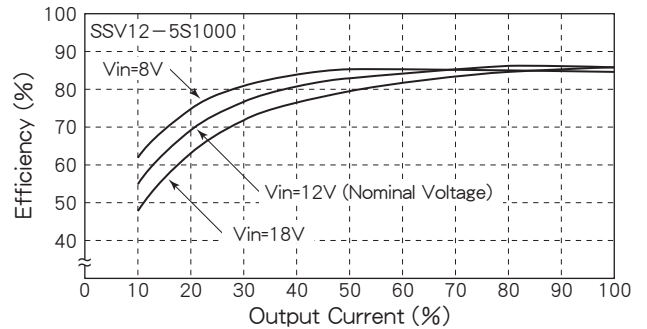
**Fig. 4 Efficiency vs. Output Current**



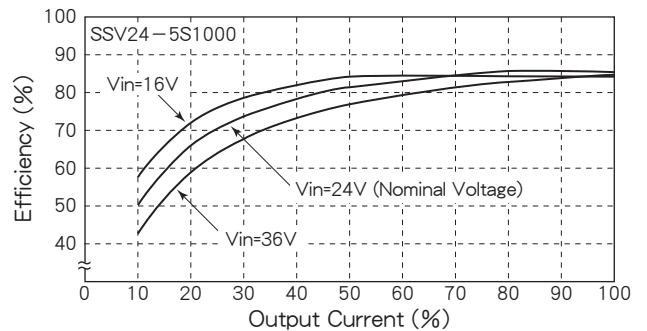
**Fig. 5 Efficiency vs. Output Current**



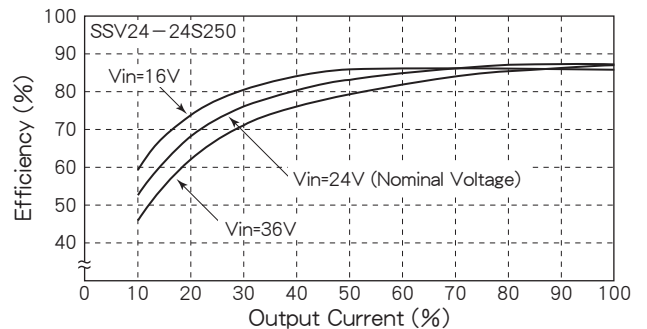
**Fig. 6 Efficiency vs. Output Current**



**Fig. 7 Efficiency vs. Output Current**



**Fig. 8 Efficiency vs. Output Current**



**Fig. 9 Efficiency vs. Output Current**

