

# SQV SERIES

## 10~12W DC/DC CONVERTERS Single Output



H8.5×W30×L47 (mm)

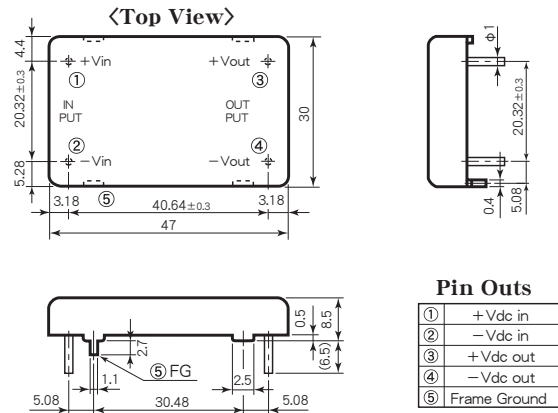
### Features

- High Efficiency 81~87%
- 8.5mm in Height
- Compact, Light Weight
- Built-in Input Filter
- Wide Input Voltage Range
- Input-Output Isolation
- Low No Load Current
- 5 Sided Metal Shielding
- High Reliability
- Operating Ambient Temperature -40°C~+85°C
- Max. Case Temperature +100°C
- Conformity to RoHS2 Directive
- Not built-in aluminum and tantalum electrolytic capacitor
- 高効率 81~87%
- 高さ8.5mm
- 小形、軽量
- 入力フィルタ内蔵
- 広範囲な入力電圧
- 入出力間絶縁
- 無負荷電流が少ない
- 5面メタルシールド
- 高信頼性
- 動作周囲温度 -40°C~+85°C
- 最大ケース温度 +100°C
- RoHS2指令対応
- アルミ電解コンデンサ及び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) DC5, 12, 24, 48V (See Table 1)
- Output Voltage, Current See Table 1
- Output Voltage Accuracy ±2% (12, 15, 24, 28V Vout)  
±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 (2% Vin)Vp-p max.
- Output Ripple 20mVp-p max.
- Output Noise 80mVp-p max. (0~20MHz)  
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)  
-30°C~+85°C (5V Vin only)
- Max. Case Temperature +100°C
- Storage Temperature -40°C~+100°C
- Isolation Voltage AC500V one minute  
(Input-Output-Case)
- Isolation Impedance 100MΩ min. (at DC1000V)  
(Input-Output-Case)
- Weight 30g max.
- Humidity 20~95% RH
- Shock 490m/s<sup>2</sup> (11msec 3directions)
- Vibration 10~55Hz 98m/s<sup>2</sup>  
(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  
(Ta : 25°C, 80% Load, Nominal Vin)
- Warranty 5 years

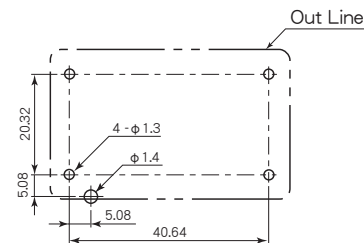
### Pin Outs & Dimensions (±0.5mm)



#### Pin Outs

①	+Vdc in
②	-Vdc in
③	+Vdc out
④	-Vdc out
⑤	Frame Ground

### Hole Configurations on PCB (Top View)



### Selection Guide

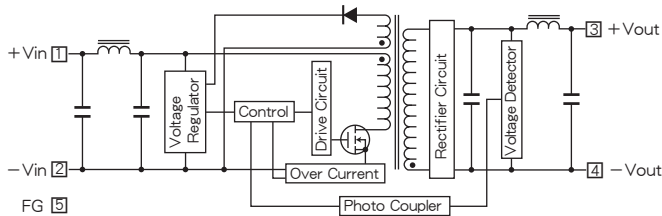
Table 1

Model Number	Input Volt. (Range) (V. DC)	Output Voltage (V. DC)	Output Current (mA)	Efficiency (Typical) (%)
SQV 5 - 3.3 S 3000	5 (4.5~9)	3.3	3000	81
SQV 5 - 5 S 2000		5	2000	82
SQV 5 - 6 S 1600		6	1600	82
SQV 5 - 12 S 800		12	800	85
SQV 5 - 15 S 640		15	640	83
SQV 5 - 24 S 400		24	400	83
SQV 5 - 28 S 350		28	350	83
SQV 12 - 3.3 S 3000	12 (8~18)	3.3	3000	83
SQV 12 - 5 S 2200		5	2200	85
SQV 12 - 6 S 2000		6	2000	85
SQV 12 - 12 S 1000		12	1000	87
SQV 12 - 15 S 800		15	800	87
SQV 12 - 24 S 500		24	500	87
SQV 12 - 28 S 400		28	400	87
SQV 24 - 3.3 S 3000	24 (16~36)	3.3	3000	83
SQV 24 - 5 S 2200		5	2200	85
SQV 24 - 6 S 2000		6	2000	85
SQV 24 - 12 S 1000		12	1000	87
SQV 24 - 15 S 800		15	800	87
SQV 24 - 24 S 500		24	500	87
SQV 24 - 28 S 400		28	400	87
SQV 48 - 3.3 S 3000	48 (32~72)	3.3	3000	83
SQV 48 - 5 S 2200		5	2200	85
SQV 48 - 6 S 2000		6	2000	85
SQV 48 - 12 S 1000		12	1000	87
SQV 48 - 15 S 800		15	800	87
SQV 48 - 24 S 500		24	500	87
SQV 48 - 28 S 400		28	400	87

※ 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.

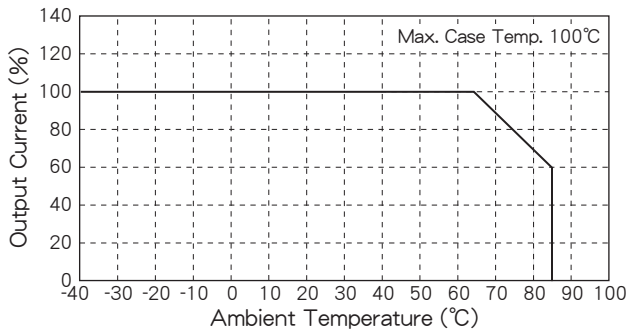
# SQV SERIES DATA SHEET

## Block Diagram

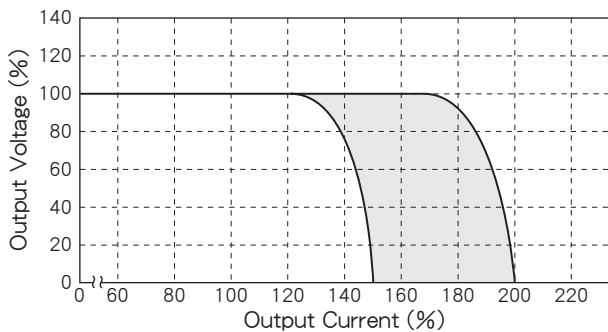


## Characteristic Curves

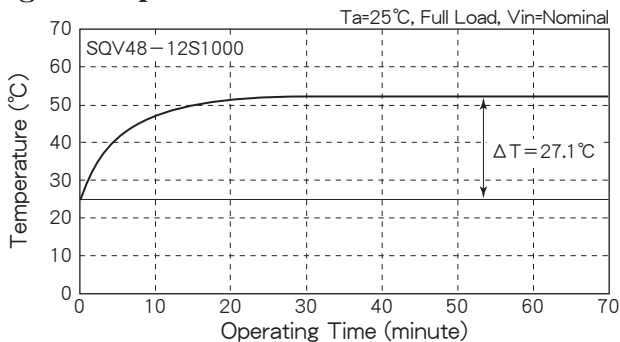
**Fig. 1 Derating Curve**



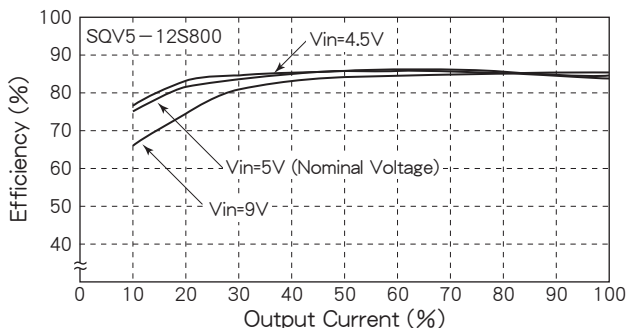
**Fig. 2 Short Circuit Operating Area**



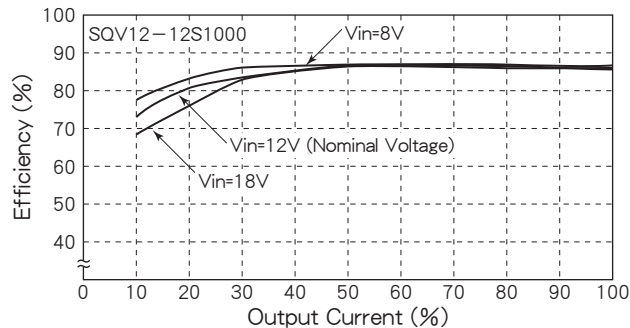
**Fig. 3 Temperature Characteristic on Case Surface**



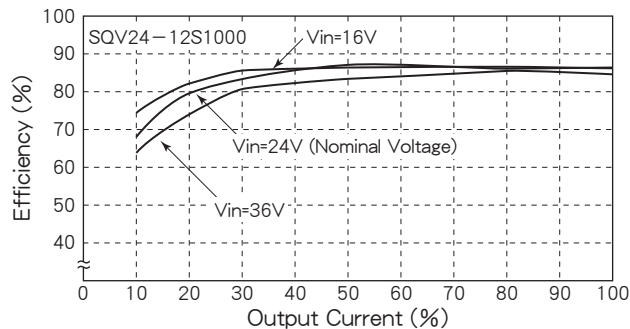
**Fig. 4 Efficiency vs. Output Current**



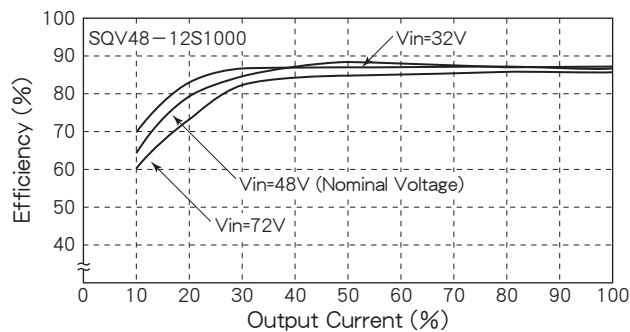
**Fig. 5 Efficiency vs. Output Current**



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



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



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

