

# SQK SERIES

## 5~6W DC/DC CONVERTERS Single Output & Dual Outputs



H8.5×W30×L47 (mm)

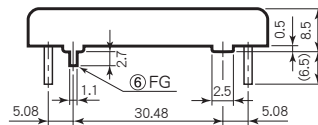
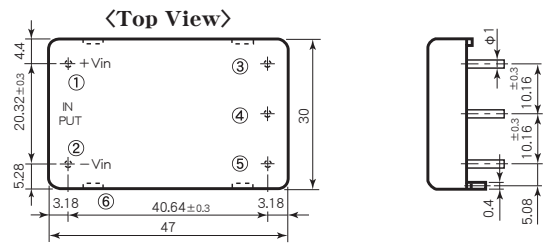
### Features

- Low Profile 8.5mm
- Built-in Input Filter
- Input-Output Isolation
- High Efficiency 80~85%
- Wide Input Voltage Range
- High Reliability
- Low No Load Current
- 5 Sided Metal Shielding
- Operating Ambient Temp. -40°C~+85°C
- Max. Case Temperature +100°C
- Conformity to RoHS Directive
- Not built-in aluminum and tantalum electrolytic capacitor
- 薄型 8.5mm
- 入力フィルタ内蔵
- 入出力間絶縁
- 高効率 80~85%
- 広範囲な入力電圧
- 高信頼性
- 無負荷電流が少ない
- 5面メタルシールド
- 動作周囲温度 -40°C~+85°C
- 最大ケース温度 +100°C
- RoHS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) DC 5, 12, 24, 48V (See Table 1)
- Output Voltage, Current See Table 1
- Output Voltage Accuracy ±3%
- Efficiency See Table 1
- Line Regulation 0.3% max. (at Vin Range)
- Load Regulation Single : ±0.5% max. (0~100% Load)  
Dual : ±3% max. (±5V Vout : ±5% max.) (10~100% Load)
- Reflected Input Ripple and Noise (2% Vin)Vp-p max.
- Output Ripple 20mVp-p max.
- Output Noise 100mVp-p max.
- 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)
- 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 Single : 720,000H  
Dual : 600,000H (Ta : 25°C, 80%Load, Nominal Vin)
- Warranty 5 years

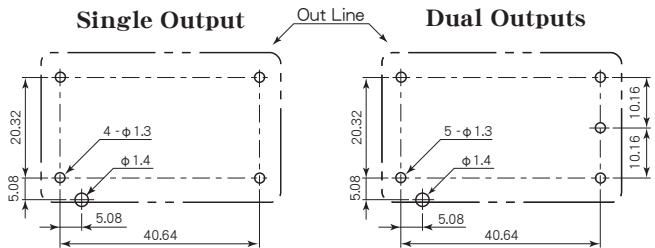
### Pin Outs & Dimensions (±0.5mm)



### Pin Outs

Single Output		Dual Outputs	
①	+Vdc in	①	+Vdc in
②	-Vdc in	②	-Vdc in
③	+Vdc out	③	+Vdc out
④	No Pin	④	Common
⑤	-Vdc out	⑤	-Vdc out
⑥	Frame Ground	⑥	Frame Ground

### Hole Configurations on PCB (Top View)



### Selection Guide

Table 1

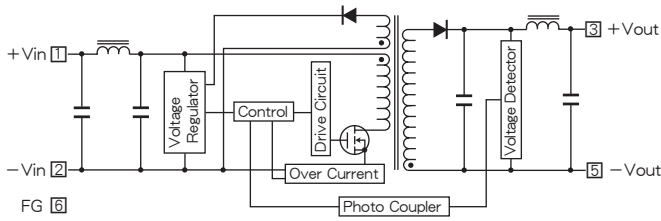
Model Number	Input Volt. (Range) (V. DC)	Output Voltage (V. DC)	Output Current (mA)	Efficiency (Typical) (%)	
SQK 5-5S1000	5 (4.5~9)	5	1000	84	
SQK 5-6S900		6	900	84	
SQK 5-12S500		12	500	84	
SQK 5-15S400		15	400	85	
SQK 5-24S250		24	250	85	
SQK 5-5D500		±5	±500	81	
SQK 5-12D250		±12	±250	85	
SQK 5-15D200		±15	±200	85	
SQK 12-5S1000		12 (8~18)	5	1000	80
SQK 12-6S900			6	900	80
SQK 12-12S500	12		500	83	
SQK 12-15S400	15		400	83	
SQK 12-24S250	24		250	83	
SQK 12-5D500	±5		±500	81	
SQK 12-12D250	±12		±250	83	
SQK 12-15D200	±15		±200	83	
SQK 24-5S1000	24 (16~36)	5	1000	80	
SQK 24-6S900		6	900	80	
SQK 24-12S500		12	500	84	
SQK 24-15S400		15	400	84	
SQK 24-24S250		24	250	83	
SQK 24-5D500		±5	±500	80	
SQK 24-12D250		±12	±250	83	
SQK 24-15D200		±15	±200	83	
SQK 48-5S1000	48 (32~72)	5	1000	80	
SQK 48-6S900		6	900	80	
SQK 48-12S500		12	500	84	
SQK 48-15S400		15	400	84	
SQK 48-24S250		24	250	84	
SQK 48-5D500		±5	±500	81	
SQK 48-12D250		±12	±250	83	
SQK 48-15D200		±15	±200	83	

※ 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.

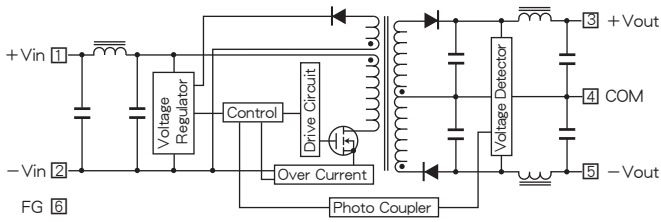
# SQK SERIES DATA SHEET

## Block Diagram

### Single Output



### Dual Outputs



## Characteristic Curves

Fig 1 Derating Curve

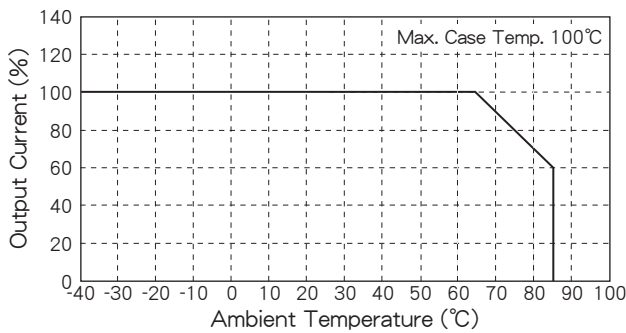


Fig 2 Short Circuit Operating Area

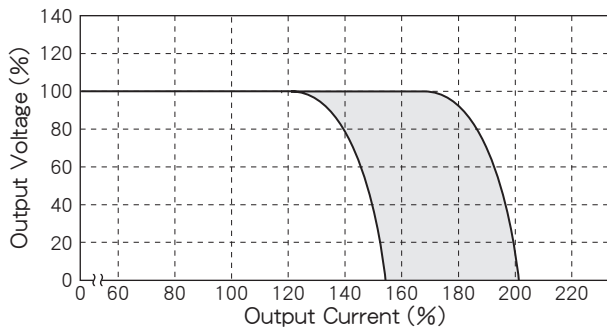


Fig 3 Temperature Characteristic on Case Surface

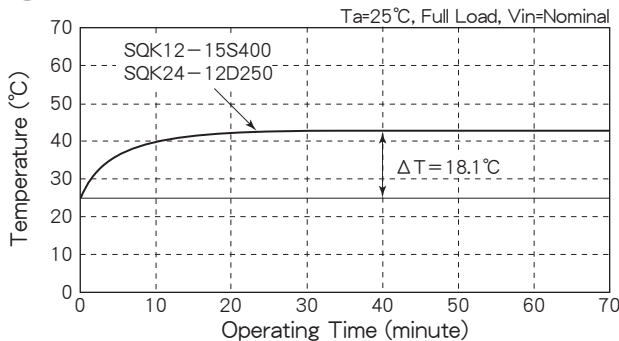


Fig 4 No Load Current vs. Input Voltage

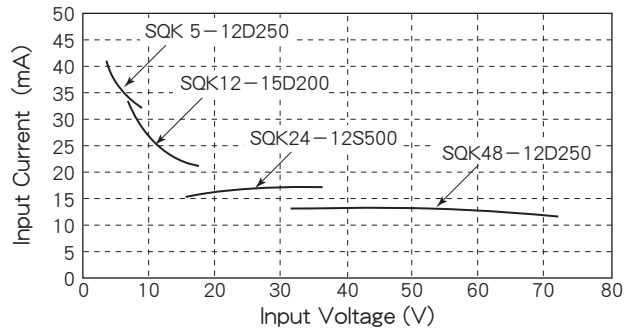


Fig 5 Efficiency vs. Output Current (Single Output)

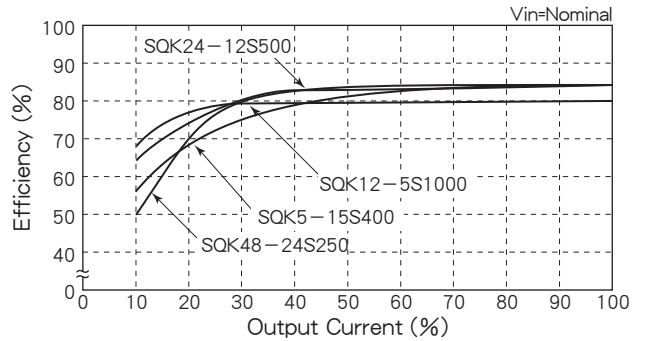


Fig 6 Efficiency vs. Output Current (Dual Outputs)

