

SQT SERIES

15W DC/DC CONVERTERS Single Output & Dual Outputs



H7×W31×L47 (mm)

Features

- 7mm in Height
 - High Efficiency 78~87%
 - Built-in Input Filter
 - Wide Input Voltage Range
 - Input-Output Isolation AC1500V
 - Low No Load Current
 - 5 Sided Metal Shielding
 - Remote ON/OFF Control
 - Operating Ambient Temperature -40°C~+85°C
 - Adjustable Output Voltage ±5% (Single Output Only)
 - Max. Case Temperature +100°C
 - Conformity to RoHS Directive
 - Not built-in aluminum and tantalum electrolytic capacitor
- 高さ7mm
 - 高効率 78~88%
 - 入力フィルタ内蔵
 - 広範囲な入力電圧
 - 入出力間絶縁 AC1500V
 - 無負荷電流が少ない
 - 5面メタルシールド
 - リモートON/OFFコントロール
 - 動作周囲温度 -40°C~+85°C
 - 出力電圧調整可能 ±5% (単出力のみ)
 - 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

Specifications

Input Specifications

- Input Voltage, Range
- Input Current (No Load)

DC 5, 12, 24, 48V (See Table 1)
 5V: 30mA typ.
 12V: 18mA typ.
 24V: 10mA typ.
 48V: 7mA typ.
 (3% Vin)Vp-p max.

- Reflected Input Ripple, Noise

Output Specifications

- Output Voltage, Current
- Output Voltage Accuracy

See Table 1
 Single: ±2%
 Dual: ±3%
 ±5% (Used trimmer)(Single Output only)
 ON: Short or 0~0.8V
 OFF: Open or 2~10V
 (Between pin ②~③)

- Efficiency
- Line Regulation
- Load Regulation

See Table 1
 0.3% max. (at Vin Range)
 Single: ±0.5% max. (0~100% Load)
 Dual: ±3% max. (10~100% Load)
 20mVp-p max.
 80mVp-p max. (0~20MHz)
 150mVp-p max. (0~100MHz)
 Built-in, Auto-restart (See Fig 2)
 0.02%/°C max.

- Output Ripple
- Output Noise

- Short Circuit Protection
- Temperature Coefficient

General Specifications

- Operating Ambient Temp.
- Max. Case Temperature
- Storage Temperature
- Isolation Voltage

-40°C~+85°C (See Fig 1)
 +100°C
 -55°C~+100°C
 AC1500V one minute
 (Input-Output-Case)

- Isolation Impedance

100MΩ min. (at DC1000V)
 (Input-Output-Case)

- Humidity
- MTBF

20~95% RH
 1,000,000H
 (Ta:25°C, 80%Load, Nominal Vin)
 210kHz (±10%)

Physical Specifications

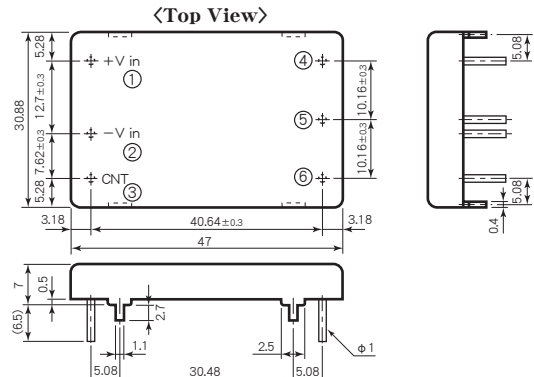
- Weight
- Shock
- Vibration

30g max.
 490m/s² (11msec 3directions)
 10~55Hz 98m/s²
 (30minutes 3directions)
 5 Sided Steel Case

- Surface Structure
- Soldering Conditions

260°C, for 15 seconds max.
 360°C, for 5 seconds max.
 5 years

Pin Outs & Dimensions (±0.5mm)



Pin Outs

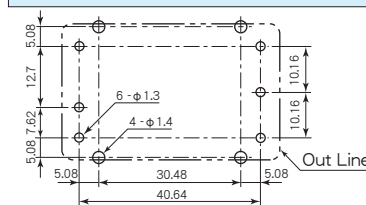
Single Output	Dual Outputs
① +Vdc in	① +Vdc in
② -Vdc in	② -Vdc in
③ CNT	③ CNT
④ +Vdc out	④ +Vdc out
⑤ -Vdc out	⑤ COM
⑥ TRM	⑥ -Vdc out

Application

ON/OFF Control and Vout Adjustment (Single Output)



Holes on PCB (Top View)



Vout (V)	VR (Ω)	Rx (Ω)	Ry (Ω)
1.5V	50k	270	560
1.8V	50k	2.7k	2.4k
2.5V	50k	2.7k	470
3.3V	50k	13k	0
5V	50k	3k	0
5.2V	50k	3k	0
6V	50k	6.8k	0
12V	50k	43k	0
15V	50k	62k	0
24V	50k	150k	0

Selection Guide

Table 1

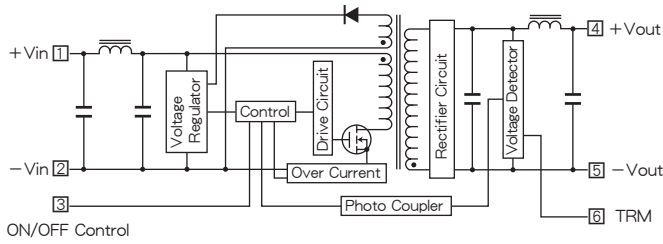
Model Number	Input Volt. (Range) (V. DC)	Output Voltage (V. DC)	Output Current (A)	Efficiency 20%Load (typ.)(%)	Efficiency 80%Load (typ.)(%)
SQT 5-1.5S 5A	5 (4.5~9)	1.5	5	78	78
SQT 5-1.8S4.5A		1.8	4.5	80	81
SQT 5-2.5S 4A		2.5	4	81	82
SQT 5-3.3S 3A		3.3	3	81	85
SQT 5- 5S2.2A		5	2.2	81	85
SQT 5-5.2S2.1A		5.2	2.1	81	85
SQT 5- 6S1.9A		6	1.9	83	85
SQT 5- 12S 1A		12	1	84	85
SQT 5- 15S0.8A		15	0.8	84	85
SQT 5- 24S0.5A		24	0.5	84	85
SQT 5- 12D0.5A		±12	±0.5	86	86
SQT 5- 15D0.4A		±15	±0.4	86	85
SQT12-1.5S 5A	12 (8~18)	1.5	5	76	79
SQT12-1.8S4.5A		1.8	4.5	76	80
SQT12-2.5S 4A		2.5	4	78	81
SQT12-3.3S3.6A		3.3	3.6	80	85
SQT12- 5S2.6A		5	2.6	82	86
SQT12-5.2S2.5A		5.2	2.5	82	85
SQT12- 6S2.3A		6	2.3	85	86
SQT12- 12S1.3A		12	1.3	85	87
SQT12- 15S 1A		15	1	85	88
SQT12- 24S0.6A		24	0.6	84	87
SQT12- 12D0.6A		±12	±0.6	85	87
SQT12- 15D0.5A		±15	±0.5	84	87
SQT24-1.5S 5A	24 (16~36)	1.5	5	76	79
SQT24-1.8S4.5A		1.8	4.5	76	79
SQT24-2.5S 4A		2.5	4	78	81
SQT24-3.3S3.6A		3.3	3.6	82	85
SQT24- 5S2.6A		5	2.6	82	87
SQT24-5.2S2.5A		5.2	2.5	83	87
SQT24- 6S2.3A		6	2.3	83	87
SQT24- 12S1.3A		12	1.3	86	88
SQT24- 15S 1A		15	1	84	87
SQT24- 24S0.6A		24	0.6	84	87
SQT24- 12D0.6A		±12	±0.6	85	87
SQT24- 15D0.5A		±15	±0.5	86	87
SQT48-1.5S 5A	48 (32~72)	1.5	5	76	79
SQT48-1.8S4.5A		1.8	4.5	76	79
SQT48-2.5S 4A		2.5	4	78	81
SQT48-3.3S3.6A		3.3	3.6	80	85
SQT48- 5S2.6A		5	2.6	82	87
SQT48-5.2S2.5A		5.2	2.5	82	87
SQT48- 6S2.3A		6	2.3	82	87
SQT48- 12S1.3A		12	1.3	84	87
SQT48- 15S 1A		15	1	84	87
SQT48- 24S0.6A		24	0.6	84	87
SQT48- 12D0.6A		±12	±0.6	84	87
SQT48- 15D0.5A		±15	±0.5	84	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.

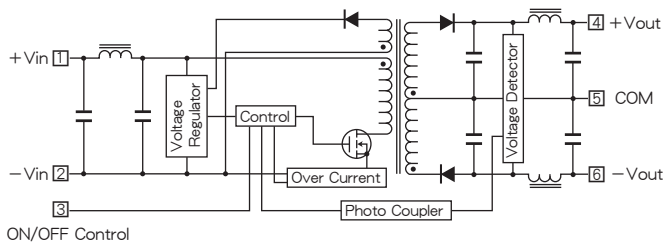
SQT SERIES DATA SHEET

Block Diagram

Single Output



Dual Outputs



Characteristic Curves

Fig 1 Derating Curve

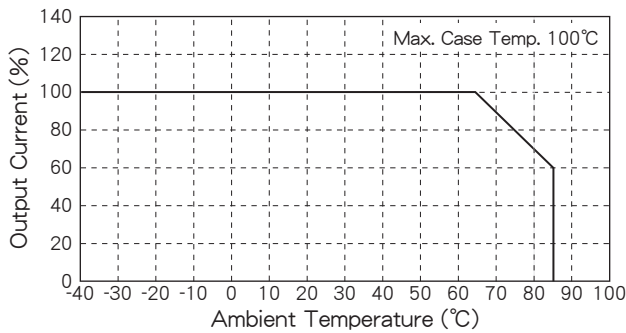


Fig 2 Short Circuit Operating Area

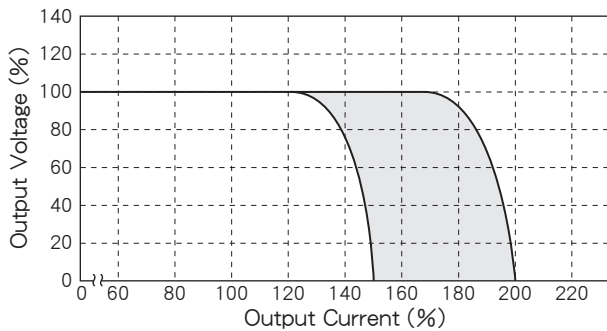


Fig 3 Temperature Characteristic on Case Surface

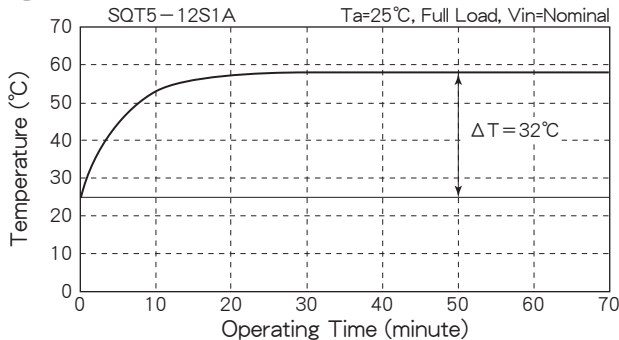


Fig 4 Efficiency vs. Output Current

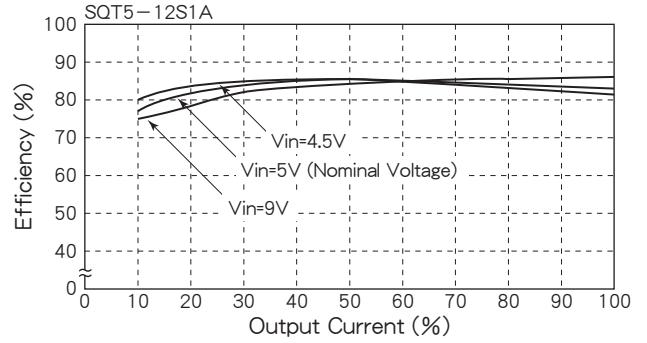


Fig 5 Efficiency vs. Output Current

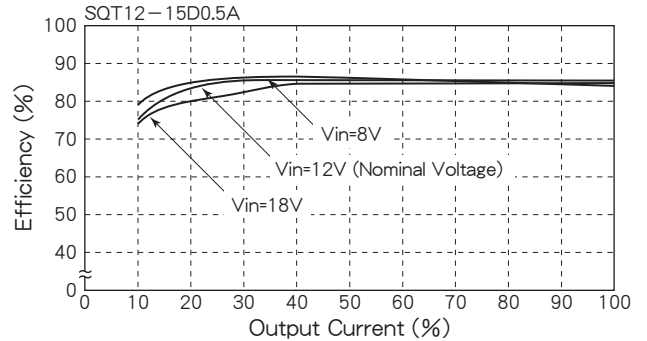


Fig 6 Efficiency vs. Output Current

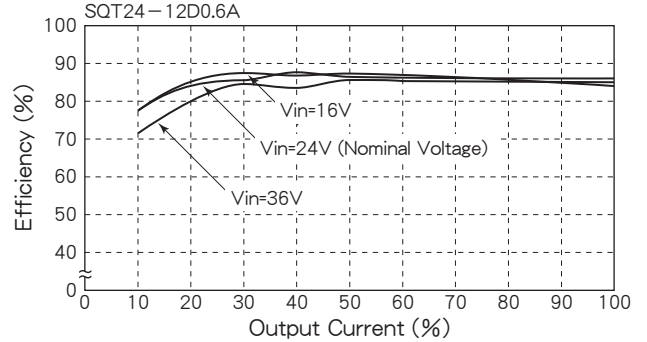


Fig 7 Efficiency vs. Output Current

