

SQT SERIES

10~15W DC/DC CONVERTERS Single Output & Dual Outputs



H7×W31×L47 (mm)

Features

- 7mm in Height
- High Efficiency 85~88%
- 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 RoHS2 Directive
- Not built-in aluminum and tantalum electrolytic capacitor
- 高さ7mm
- 高効率 85~88%
- 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
- 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

Specifications

Input

- Input Voltage, Range DC5, 12, 24, 48V (See Table 1)
- Input Current (No Load) 5V : 30mA typ.
12V : 18mA typ.
24V : 10mA typ.
48V : 7mA typ.
(3% Vin)Vp-p max.

Output

- Output Voltage, Current See Table 1
- Output Voltage Accuracy Single : ±2%
Dual : ±3%
- Output Voltage Range ±5% Adjustable (Used trimmer) (Single Output only)
- Remote ON/OFF Control ON : Short or 0~0.8V
OFF : Open or 2~10V (Between pin ②~③)
- Efficiency See Table 1
- Line Regulation 0.3% max. (at Vin Range)
- Load Regulation Single : ±0.5% max. (0~100% Load)
Dual : ±3% max. (10~100% Load)
- 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.

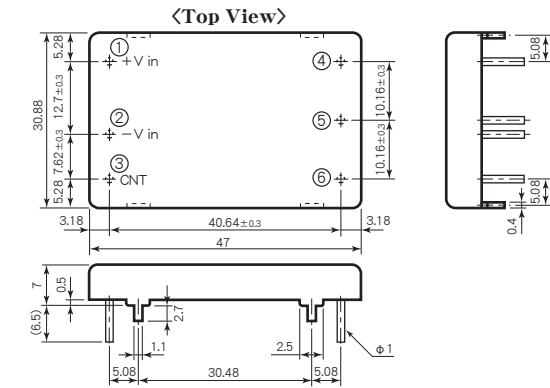
General

- Operating Ambient Temp. -40°C~+85°C (See Fig. 1)
- Max. Case Temperature +100°C
- Storage Temperature -55°C~+100°C
- Isolation Voltage AC1500V one minute (Input-Output-Case)
- Isolation Impedance 100MΩ min. (at DC1000V) (Input-Output-Case)
- Humidity 20~95% RH
- MTBF 1,000,000H (Ta : 25°C, 80% Load, Nominal Vin)
- Switching Frequency 210kHz (±10%)

Physical

- Weight 30g max.
- Shock 490m/s² (11msec 3directions)
- Vibration 10~55Hz 98m/s² (30minutes 3directions)
- Surface Structure 5 Sided Steel Case
- Soldering Conditions 260°C, for 15 seconds max.
360°C, for 5 seconds max.
- Warranty 5 years

Pin Outs & Dimensions (±0.5mm)



Pin Outs

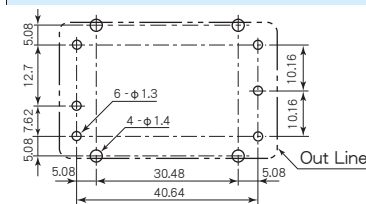
Single Output	Dual Outputs
① +Vdc in	① +Vdc in
② -Vdc in	② -Vdc in
③ CNT	③ CNT
④ +Vdc out	④ +Vdc out
⑤ -Vdc out	⑤ COM
⑥ TRM	⑥ -Vdc out

Application

ON/OFF Control and Vout Adjustment (Single Output)



Holes on PCB (Top View)



Vout (V)	VR (Ω)	Rx (Ω)
3.3V	50k	13k
5V	50k	3k
5.2V	50k	3k
6V	50k	6.8k
12V	50k	43k
15V	50k	62k
24V	50k	150k

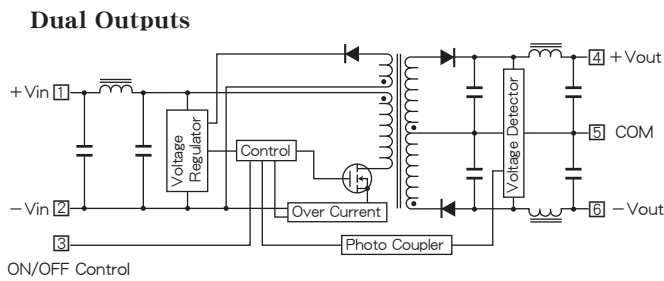
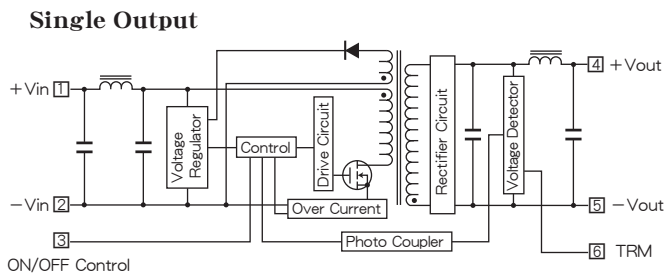
Selection Guide

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



Characteristic Curves

Fig. 1 Derating Curve

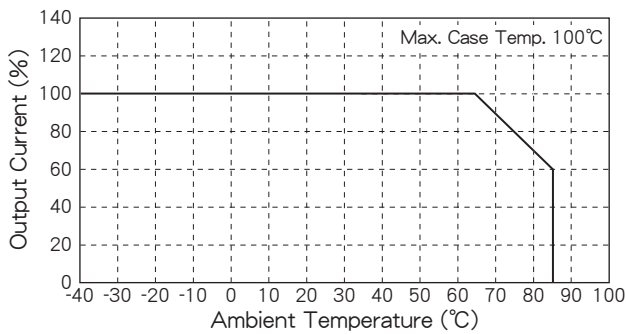


Fig. 2 Short Circuit Operating Area

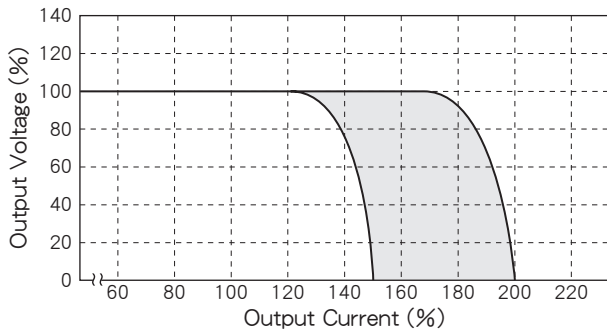


Fig. 3 Temperature Characteristic on Case Surface

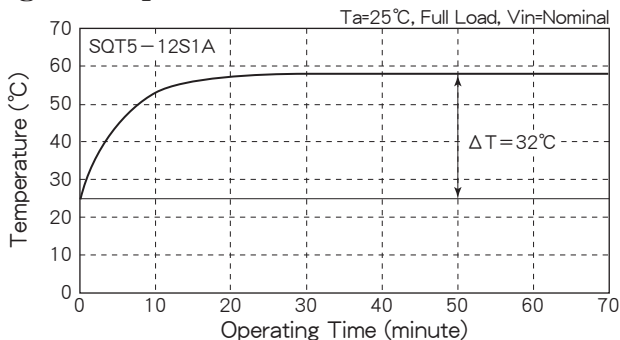


Fig. 4 Efficiency vs. Output Current

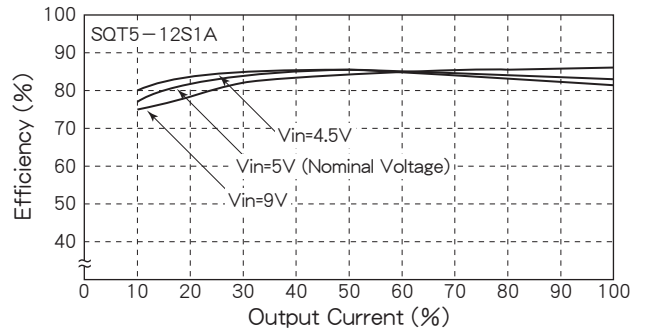


Fig. 5 Efficiency vs. Output Current

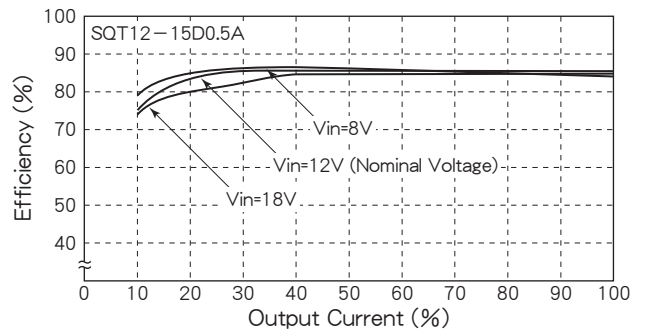


Fig. 6 Efficiency vs. Output Current

