

5.5V Input, 200mA Synchronous Step-down Switching Regulator with 260nA Quiescent Current



ULTRAHIGH EFFICIENCY SWITCHING REGULATOR

S-85S1A

S-85S1A Series

- 5.5V input, 200mA with 260nA quiescent current. Extends up to 2.5 times* battery operation time maximally
- Achieves fast transient response due to our original switching control system
- Housed in an industry's smallest class ultra-compact package

*Compared to standard LDO regulators

Actual size
■
SNT-6A

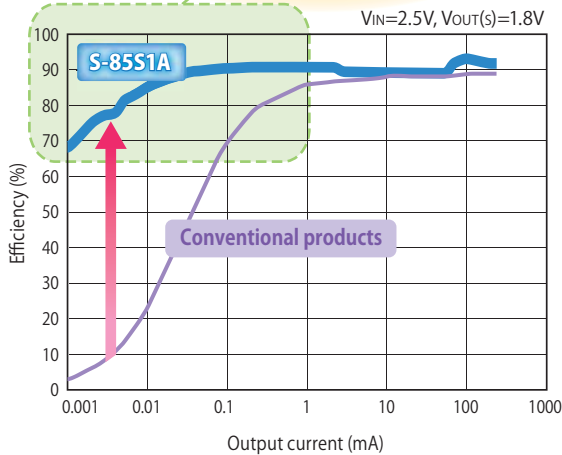
High efficiency 90.5% (at 100μA load)

The world's lowest current consumption of 260nA makes it possible to achieve high efficiency even under light load. Supports extended operation of wearable and other devices which are equipped with compact batteries.

*Based on available information

Efficiency comparison of S-85S1A with conventional products

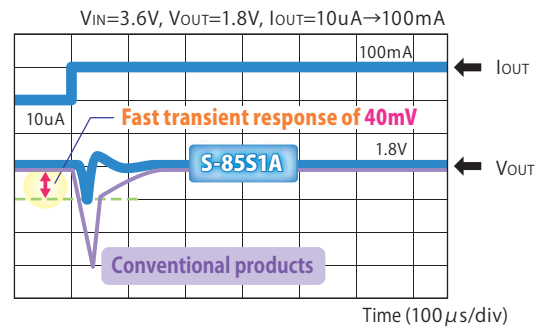
Significant improvement in efficiency when operating at light loads of 1mA or less



Fast transient response

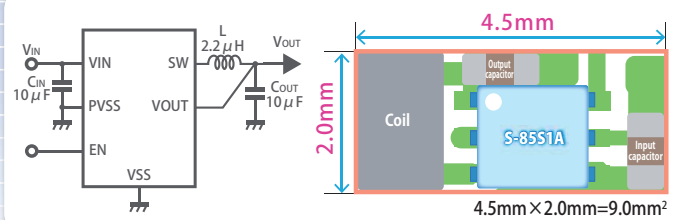
Our own COT (Constant On-Time) control system allows for fast response to load fluctuations.

Transient response comparison of S-85S1A with conventional products



Standard external circuit example

Allows for small footprint mounting, including surrounding components.



Specifications

Item	S-85S1A Series
Quiescent current	260nA
Efficiency (when under 100μA load)	90.5%
Input voltage	2.2 to 5.5V
Output voltage	0.7 to 2.5V (selectable in 0.05V steps), 2.6 to 3.9V (selectable in 0.1V steps)
Output voltage accuracy	±1.5% (1.0V ≤ VOUT ≤ 3.9V), ±15mV (0.7V ≤ VOUT < 1.0V)
Switching frequency	1.0MHz (at PWM operation)
High side power MOS FET on-resistance	420mΩ
Low side power MOS FET on-resistance	320mΩ
Protection function	Under voltage lockout function (UVLO), Thermal shutdown function, Overcurrent limit function, Automatic recovery type short-circuit protection function, Soft-start function
Operation temperature range	Ta = -40 to +85°C

Package

SNT-6A



1.8 × 1.57 × 0.5 (max.)

(Unit : mm)

Refer to the S-85S1A Series datasheet for the latest information. Contact our sales office for the information on samples.

Applications



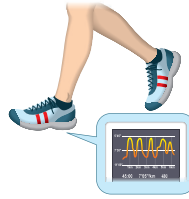
Smartwatch



Glass-like device



Activity meter band



Fitness sensor



Beacon



Hearing aid



ABLIC Inc.
www.ablicinc.com

Contact us
www.ablicinc.com/en/semicon/sales/

