## Supply Voltage Divided Output, 5.5V Input, 200mA Synchronous Step-down **Switching Regulator with 260nA Quiescent Current**



# **ULTRAHIGH EFFICIENCY SWITCHING REGULATOR**

## S-85S1P Series

- Capable of dividing and outputting battery voltage by its supply voltage divided output
- Housed in an industry's smallest class ultra-compact package
- 540nA quiescent current (during operation of supply voltage divider block). Improves light load efficiency of wearable and IoT devices significantly



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#### Also possible to easily carry out voltage monitoring using a low voltage microcontroller



 Cumbersome resistance selection Increased number of components due to

ON/OFF operation of division circuit



PMOUT

Input voltage is converted to V<sub>IN</sub>/2 or V<sub>IN</sub>/3 for output. This allows the S-85S1P Series to be used for monitoring of power supply voltage of battery operated devices

### Using the S-85S1P Series...

Possible to monitor battery voltage with a high degree of accuracy

Ensures long battery life due to super low current consumption

No need for external parts for voltage division

Enables fine control through analog output



Specifications

	ltem	S-85S1PC Series	S-85S1PD Series
DC-DC converter block	Quiescent current	260nA	
	Efficiency (when under 100 $\mu$ A 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≤Vouт≤3.9V), ±15mV (0.7V≤Vouт<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	
Supply voltage divider block	Current consumption	280nA	
	Input voltage	1.5 to 5.5V	
	Output voltage	V <sub>IN</sub> /2	V <sub>IN</sub> /3
Overall	Operation temperature range	Ta=-40 to +85°C	

Refer to the S-85S1P Series datasheet for the latest information. Contact our sales office for the information on samples







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