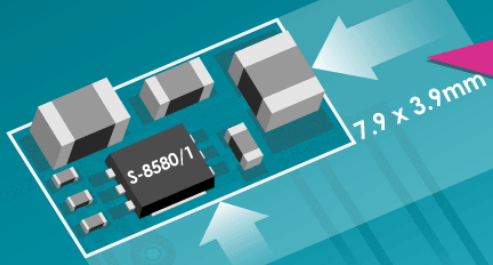


Reduces the footprint of a switching regulator

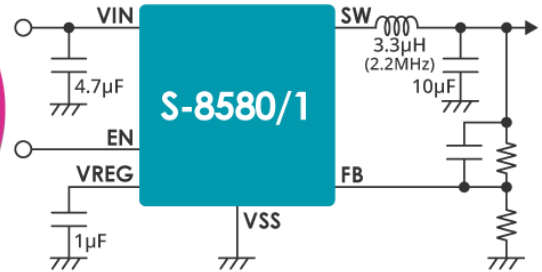
36V input, 600mA, Synchronous
Step-Down Switching Regulator

S-8580/1 Series



max.
57%
reduction*
in mounting area

<Example of recommended circuit configuration>



* When compared to products (diode rectifier products) with similar functionality from other manufacturer

for Industrial

Small sensor,
Motor driver
etc.



HTMSOP-8
4.0 x 2.9 x
t0.8mm max.



HSNT-8(2030)
3.0 x 2.0 x
t0.5mm max.



HSNT-6(2025)
2.46 x 1.96 x
t0.5mm max.



for Housing facilities

Water heater,
Fire alarming system
etc.



● Enables more compact application / module

36V(Absolute Maximum Ratings 45V) input and synchronous rectification switching regulator (DC-DC converter) adopt the ultra-small package HSNT-6 (2.46mm x 1.96mm).

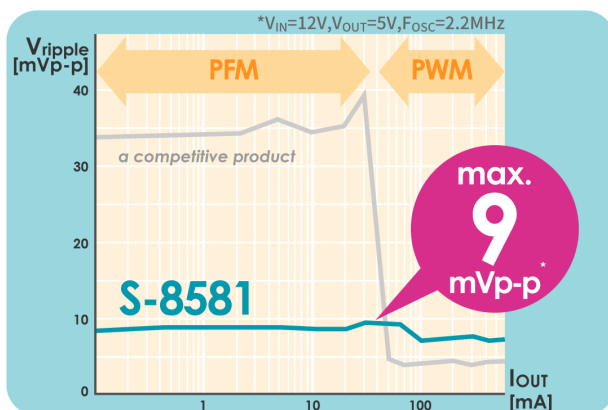
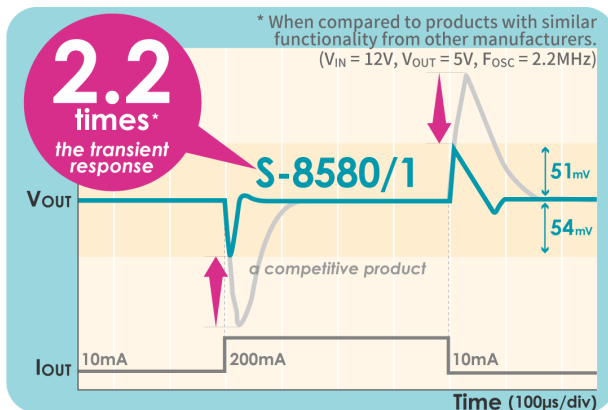
Suitable for industrial equipment, house facilities and house appliance, the S-8580/1 contributes to downsize the machines or modules.

The gull-wing type package, HTMSOP-8 is recommended when the mountability is required.

● There is no need for a large capacitor

Slope compensation circuits and phase compensation circuits in the S-8580/1 Series have been optimized to provide a high transient response.

The external high output capacitors used to compensate for overshoot and undershoot have been downsized, which has also contributed to lowering costs.



● External parts to reduce ripple are not required

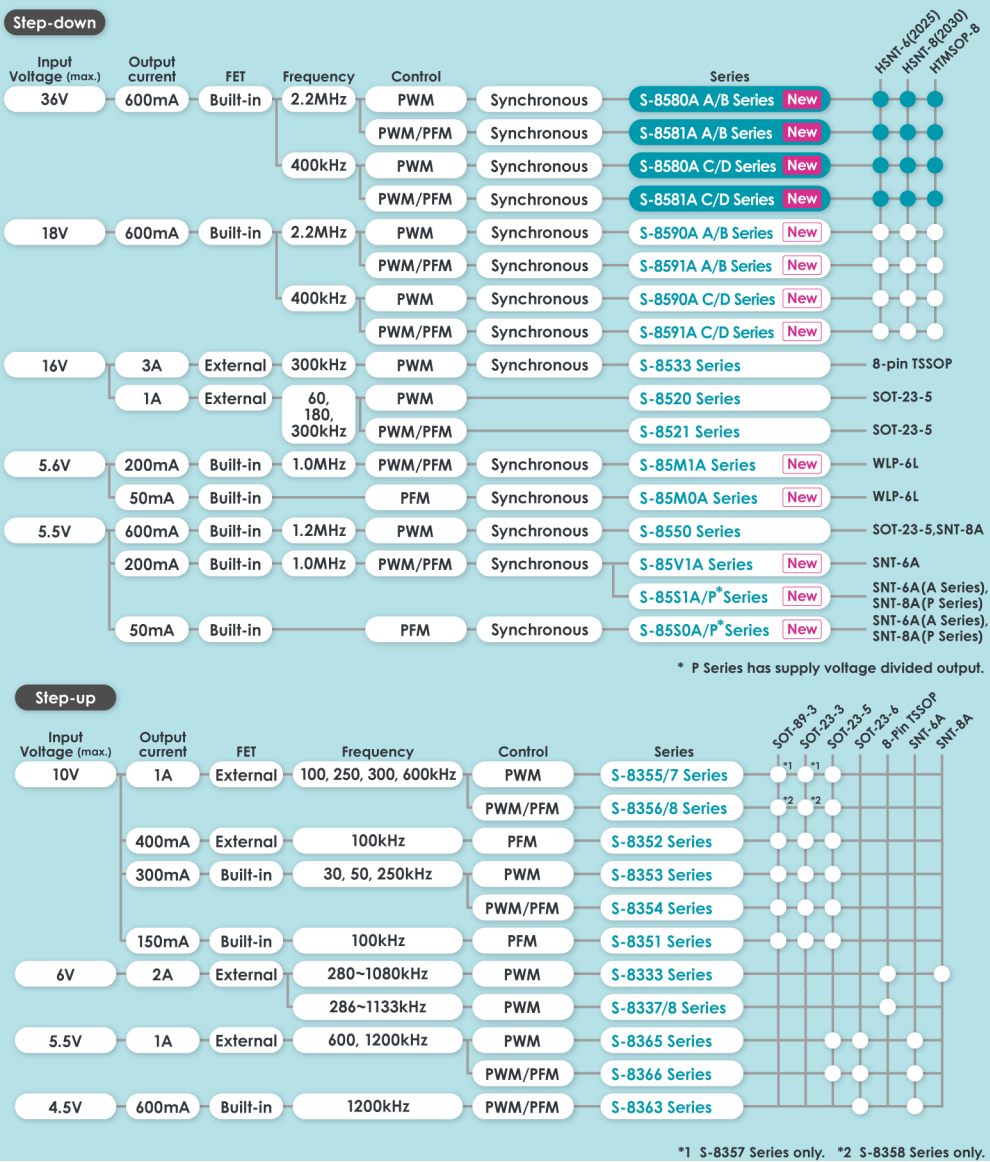
The S-8581 Series employs a proprietary low-ripple circuit that ensures low ripple without any external parts.

It achieves 9mVp-p across the full load current range including even during PFM control, which is especially prone to ripple.

There is no need to add external parts as a countermeasure to ripple.



ABLIC's Switching regulator lineup for general-use



Features

Product name	S-8580A A/B S-8581A A/B 2.2MHz	S-8580A C/D S-8581A C/D 400kHz
Input voltage	$V_{IN}=4.0$ to $36.0V$	$V_{IN}=4.0$ to $36.0V$
FB pin voltage accuracy	$\pm 1.5\%$	$\pm 1.5\%$
Efficiency	91%	95%
Overcurrent protection function	1.2A typ. (pulse-by-pulse method)	1.2A typ. (pulse-by-pulse method)
Thermal shutdown function	170°C typ. (detection temperature)	170°C typ. (detection temperature)
Short-circuit protection function	Hiccup control / Latch control(selectable) Hiccup control / Latch control(selectable)	
Duty cycle	100% duty cycle operation	100% duty cycle operation
Soft-start function	5.8ms typ.	5.8ms typ.

As of 4/28, 2022. All the information described herein is subject to change without notice.



ABLIC Inc.

The latest information
<https://hub.ablic.com/en/products/s-8580-8581?LF>

