

5.5V Input, 100mA,
95nA Ultra-low Current Consumption

CMOS VOLTAGE REGULATOR

S-1318 Series up to 100mA

S-1318 Series 

- World's top class! Ultra-low current consumption of **95nA typ.** (at no load)
- An ON/OFF circuit reduces current consumption to **2nA typ.** during power-off, contributing to even longer battery life.
- The super-small 1.0mm square package makes even greater board miniaturization possible.



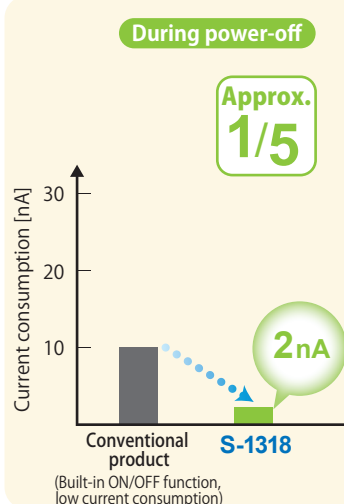
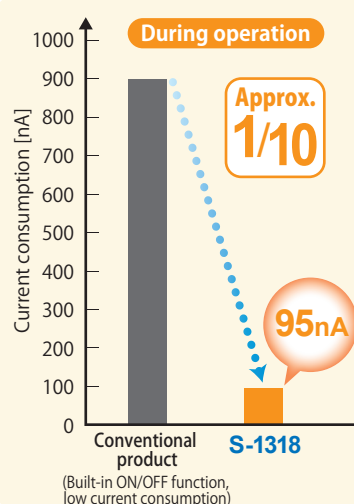
World's top class ultra-low current consumption!

The current consumption of S-1318 Series is greatly reduced compared to our conventional product. Suppressing current consumption during power-off to the limit level of 2nA contributes to longer battery life.

During operation
95nA typ.

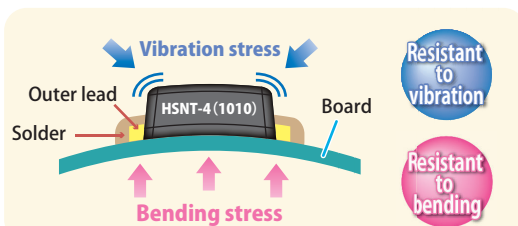
During power-off
2nA typ.

<Comparison of current consumption with our conventional product>



Resistant to vibration and bending despite small package

The HSNT-4(1010) is a 1.0×1.0mm super-small package. However, because the outer leads can be soldered, it can still provide higher mounting strength against stress.



Built-in discharge shunt function

The output capacitance can be simultaneously discharged when the ON/OFF pin is set to OFF level. This makes it possible to easily design a falling sequence.

Application examples



Headset



Glasses-like device



Hearing aid



Smartwatch



Beacon



Activity meter band

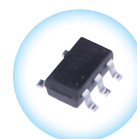
Energy harvesting
IoT sensor node

Specifications

Item	S-1318
Output voltage	1.2V, 1.8V, 2.2V, 2.3V, 2.5V, 2.8V, 3.0V, 3.3V
Input voltage	1.7 to 5.5V
Output voltage accuracy	±1.0% (1.2V output product: ±15mV) (Ta=+25°C)
Dropout voltage	45mV typ. (2.5V output product, at I _{OUT} =10mA) (Ta=+25°C)
Current consumption	During operation: 95nA typ. During power-off: 2nA typ.
Output current	75mA (1.2V output product, at V _{IN} ≥V _{OUT(S)} +1.0V) 100mA (1.8V, 2.2V, 2.3V, 2.5V, 2.8V, 3.0V, 3.3V output product, at V _{IN} ≥V _{OUT(S)} +1.0V)
Input / output capacitor	A ceramic capacitor (1.0μF or more)
Built-in ON / OFF circuit	Discharge shunt function "available" / "unavailable" is selectable. Pull-down function "available" / "unavailable" is selectable.
Added function	Overcurrent protection circuit

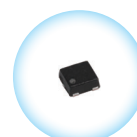
Refer to the S-1318 Series datasheet for the latest information.
Contact our sales office for information on samples.

Packages



SOT-23-5

2.8×2.9×t1.3 (max.) mm

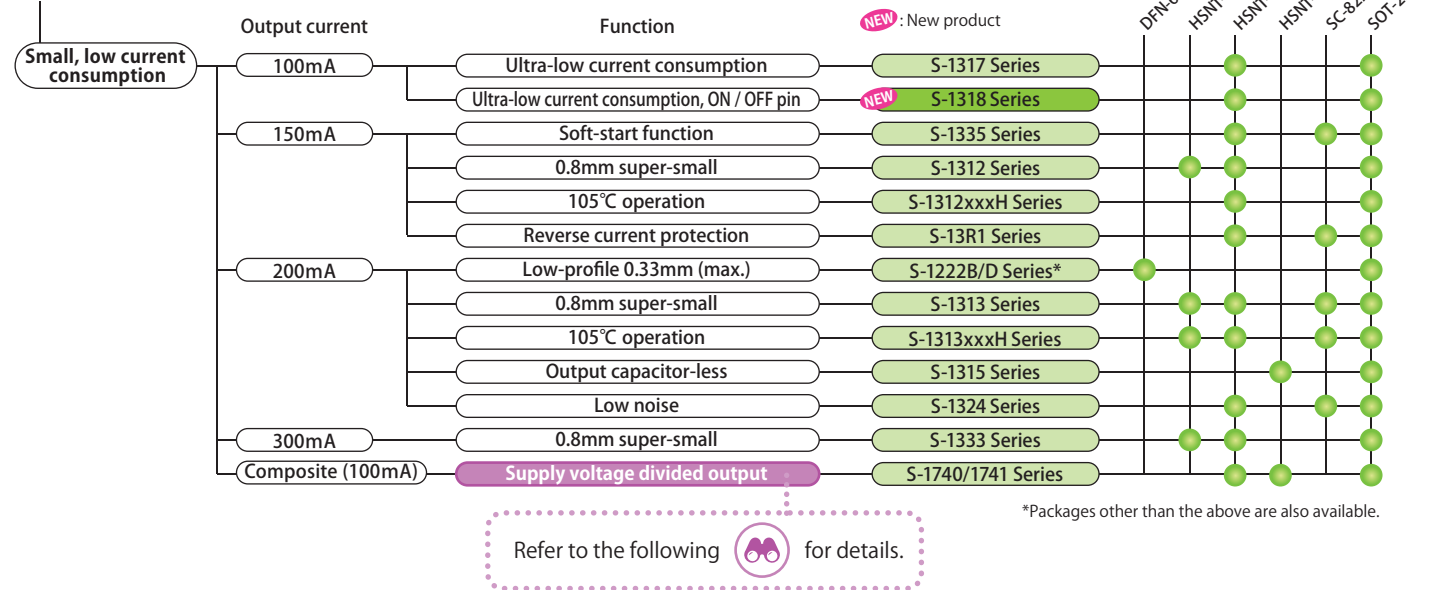


HSNT-4(1010)

1.0×1.0×t0.4 (max.) mm

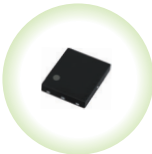
Lineup of small and low current consumption products

Voltage regulators



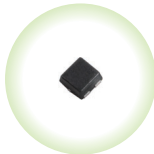
Packages (Unit : mm)

DFN-6(1518)A



1.8×1.5×0.33 (max.)

HSNT-4(0808)



0.8×0.8×0.4 (max.)

HSNT-4(1010)



1.0×1.0×0.4 (max.)

HSNT-6(1212)



1.2×1.2×0.4 (max.)

SC-82AB



2.1×2.0×1.1 (max.)

SOT-23-5



2.8×2.9×1.3 (max.)

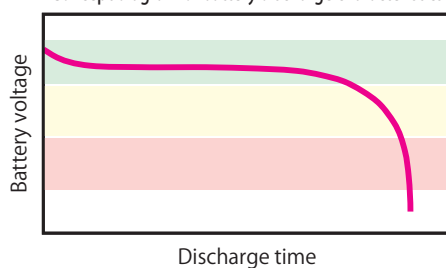


For monitoring of battery voltage!

Introducing the S-1740/1741 Series voltage regulator with supply voltage divided output

The supply voltage divided output allows for regulator input voltage to be divided into $V_{IN}/2$ or $V_{IN}/3$ and output. Using this function allows for a microcontroller to monitor battery voltage easily.

<Concept diagram of battery discharge characteristics>



Example: Battery voltage monitoring by microcontroller

Mode 1 : Full battery



Mode 2 : Medium battery



Mode 3 : Low battery



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S-1318 Series

