

Product Catalogue

Sensors

2020-2021

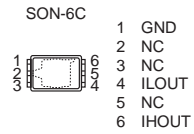


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S-5420**ULTRAVIOLET LIGHT SENSOR,
UV-A to UV-B SENSING Si PHOTODIODE****● Features**

- Wide-range sensitivity wavelength: $\lambda = 250 \text{ nm to } 1000 \text{ nm}$
- High-sensitivity ultraviolet light detection: $S_H = 0.17 \text{ A/W } (\lambda = 365 \text{ nm})$
- Ultraviolet components detection: As a result of the difference of output between two types of photodiodes
(Requirement: external parts)
- Lead-free, halogen-free



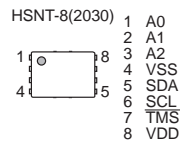
S-5852A Series

HIGH-ACCURACY DIGITAL TEMPERATURE SENSOR
WITH THERMOSTAT FUNCTION

● Features

- Temperature accuracy, high-accuracy temperature range^{*1}: $\pm 0.5^{\circ}\text{C}$ typ. / $\pm 1.0^{\circ}\text{C}$ max. ($T_a = 0^{\circ}\text{C}$ to $+65^{\circ}\text{C}$)
 $\pm 0.5^{\circ}\text{C}$ typ. / $\pm 1.0^{\circ}\text{C}$ max. ($T_a = +75^{\circ}\text{C}$ to $+95^{\circ}\text{C}$)
- Temperature resolution: 0.5°C , 0.25°C , 0.125°C , 0.0625°C
(Selectable by the resolution register)
- Temperature sample rate: 7 samples / s min.
- Hysteresis width: No hysteresis, 1.5°C , 3.0°C , 6.0°C
(Selectable by the configuration register)
- Current consumption:
Shutdown mode at serial bus non-active: $I_{DD3} = 0.3 \mu\text{A}$ typ., $I_{DD3} = 3.0 \mu\text{A}$ max.
Active mode at serial bus non-active: $I_{DD1} = 40.0 \mu\text{A}$ typ., $I_{DD1} = 100.0 \mu\text{A}$ max.
- Operation voltage range: 1.7 V to 3.6 V
- Operation frequency: 1.0 MHz max. ($V_{DD} = 2.2 \text{ V}$ to 3.6 V)
 400 kHz max. ($V_{DD} = 1.7 \text{ V}$ to 2.2 V)
- Thermostat function: Dual trip mode, single trip mode
(Selectable by the configuration register)
Schmitt trigger and noise filter on input pins (SCL, SDA)
 $T_a = -40^{\circ}\text{C}$ to $+125^{\circ}\text{C}$
- Noise suppression:
- Operation temperature range:
- Lead-free (Sn 100%), halogen-free

*1. The option of the high-accuracy temperature range can be selected.



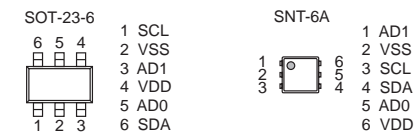
S-5851A Series

2-WIRE DIGITAL TEMPERATURE SENSOR

● Features

- Low voltage operation : V_{DD} (min.) = 2.7 V
- Low current consumption : $45 \mu\text{A}$ typ. ($+25^{\circ}\text{C}$)
 $1 \mu\text{A}$ typ. ($+25^{\circ}\text{C}$ at shutdown)
- High accuracy : $\pm 2.0^{\circ}\text{C}$ (max.) -25°C to $+85^{\circ}\text{C}$
 $\pm 3.0^{\circ}\text{C}$ (max.) -40°C to $+125^{\circ}\text{C}$
- Temperature resolution : 0.0625°C
- Digital output : 2-wire serial interface
- Maximum operating frequency : 400 kHz
- Low power supply voltage detection circuit
- Lead-free, Sn 100%, halogen-free^{*1}

*1. Refer to "■ Product Name Structure" for details.



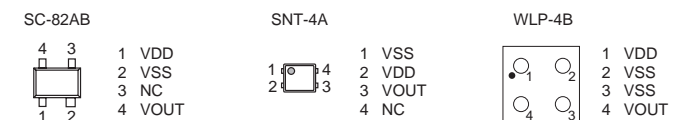
S-58LM20A Series

CMOS TEMPERATURE SENSOR IC

● Features

- Accuracy against temperature : $\pm 2.5^{\circ}\text{C}$ (-55°C to $+130^{\circ}\text{C}$)
- Linear output voltage : $-11.77 \text{ mV}/^{\circ}\text{C}$ Typ.
 $T_a = -30^{\circ}\text{C}$: 2.205 V Typ.
 $T_a = +30^{\circ}\text{C}$: 1.515 V Typ.
 $T_a = +130^{\circ}\text{C}$: 0.303 V Typ.
- Nonlinearity : $\pm 0.4\%$ Typ. (-20 to $+80^{\circ}\text{C}$)
- Operation in wide range of power supply voltage : $V_{DD} = 2.4$ to 5.5 V (-30°C to $+130^{\circ}\text{C}$)
 $V_{DD} = 2.7$ to 5.5 V (-55°C to $+130^{\circ}\text{C}$)
 $4.5 \mu\text{A}$ Typ. ($+25^{\circ}\text{C}$) $6.0 \mu\text{A}$ Max. (-55°C to $+130^{\circ}\text{C}$)
- Low current consumption
- Built-in operational amplifier
- Output voltage referred to V_{SS}
- Lead-free, Sn 100%, halogen-free^{*1}

*1. Refer to "■ Product Name Structure" for details.



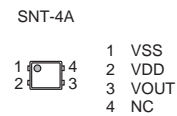
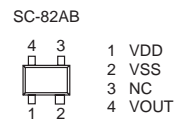
S-8110C/8120C Series

CMOS TEMPERATURE SENSOR IC

Features

- Temperature accuracy
S-8110C Series: $\pm 5.0^{\circ}\text{C}$ (-30°C to $+100^{\circ}\text{C}$)
S-8120C Series: $\pm 2.5^{\circ}\text{C}$ (-30°C to $+100^{\circ}\text{C}$)
-8.20 mV/ $^{\circ}\text{C}$ typ.
- Linear output voltage
Ta = -30°C : 1.951 V typ.
Ta = $+30^{\circ}\text{C}$: 1.474 V typ.
Ta = $+100^{\circ}\text{C}$: 0.882 V typ.
 $\pm 0.5\%$ typ. (-20°C to $+80^{\circ}\text{C}$)
- Nonlinearity
- Wide power supply voltage operation V_{DD} = 2.4 V to 10.0 V
- Low current consumption 4.5 μA typ. ($+25^{\circ}\text{C}$)
- Built-in operational amplifier
- V_{SS} standard output
- Lead-free, Sn 100%, halogen-free^{*1}

*1. Refer to "■ Product Name Structure" for details.

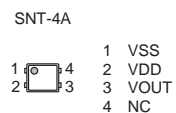


S-5813A/5814A Series

CMOS TEMPERATURE SENSOR IC

Features

- Temperature accuracy
S-5813A Series: $\pm 5.0^{\circ}\text{C}$ (-30°C to $+100^{\circ}\text{C}$)
S-5814A Series: $\pm 2.5^{\circ}\text{C}$ (-30°C to $+100^{\circ}\text{C}$)
-11.04 mV/ $^{\circ}\text{C}$ typ.
- Linear output voltage
Ta = -30°C : 2.582 V typ.
Ta = $+30^{\circ}\text{C}$: 1.940 V typ.
Ta = $+100^{\circ}\text{C}$: 1.145 V typ.
 $\pm 0.5\%$ typ. (-20°C to $+80^{\circ}\text{C}$)
- Nonlinearity
- Wide power supply voltage operation V_{DD} = 2.4 V to 10.0 V ($+25^{\circ}\text{C}$)
- Low current consumption 4.0 μA typ. ($+25^{\circ}\text{C}$)
- Built-in operational amplifier
- Output voltage referred to V_{SS}
- Lead-free (Sn 100%), halogen-free

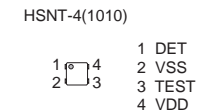
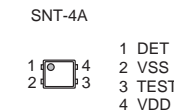
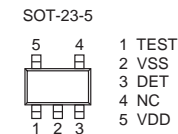


S-5844A Series

TEMPERATURE SWITCH IC (THERMOSTAT IC)

Features

- Detection temperature: T_{DET} = $+50^{\circ}\text{C}$ to $+100^{\circ}\text{C}$, $+5^{\circ}\text{C}$ step, detection accuracy: $\pm 2.5^{\circ}\text{C}$
- Low voltage operation: V_{DD} = 1.65 V min.
- Low current consumption: I_{DD} = 0.18 μA typ. (Ta = $+25^{\circ}\text{C}$)
- Hysteresis temperature: selectable in 5°C , 10°C , 15°C or 20°C
- Selectable output logic in active "H" or active "L"
- Selectable output form in CMOS or Nch open-drain
- Operation temperature range: Ta = -40°C to $+125^{\circ}\text{C}$
- Lead-free (Sn 100%), halogen-free



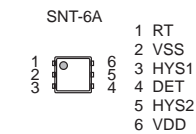
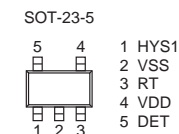
S-5841 Series

TEMPERATURE SWITCH IC (THERMOSTAT IC)

Features

- Detection temperature: T_{DET} = $+40^{\circ}\text{C}$ to $+100^{\circ}\text{C}$, $+1^{\circ}\text{C}$ step, detection accuracy: $\pm 2.5^{\circ}\text{C}$
- Low voltage operation: V_{DD} = 2.2 V min.
(Detection temperature = $+55^{\circ}\text{C}$ to $+100^{\circ}\text{C}$, Ta = -40°C to $+100^{\circ}\text{C}$)
- Low current consumption: I_{DD} = 10 μA typ. (Ta = $+25^{\circ}\text{C}$)
- Hysteresis temperature can be switched in 0°C , 2°C , 4°C and 10°C .
- Selectable output logic in active "H" or "L"
- Selectable output form in CMOS or Nch open drain
- Operation temperature range: Ta = -40°C to $+125^{\circ}\text{C}$
- Lead-free, Sn 100%, halogen-free^{*1}

*1. Refer to "■ Product Name Structure" for details.



S-5718 Series

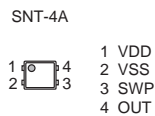
LOW VOLTAGE OPERATION
OMNIPOLAR / UNIPOLAR DETECTION TYPE
HALL EFFECT SWITCH IC WITH SWITCHABLE DETECTION POLE FUNCTION

Features

- Switchable detection pole function: Omnipolar detection, S pole detection, N pole detection
- Output logic^{*1}: Active "L"
Active "H"
- Output form: CMOS output
- Magnetic sensitivity (hysteresis width)^{*1}:
B_{OP} = 1.8 mT typ. (B_{HYS} = 0.7 mT typ.)
B_{OP} = 3.0 mT typ. (B_{HYS} = 0.8 mT typ.)
B_{OP} = 3.0 mT typ. (B_{HYS} = 1.3 mT typ.)
B_{OP} = 4.5 mT typ. (B_{HYS} = 1.0 mT typ.)
B_{OP} = 4.5 mT typ. (B_{HYS} = 2.5 mT typ.)
- Operating cycle (current consumption)^{*1}:
t_{CYCLE} = 102.1 ms typ. (I_{DD} = 1.4 μA typ.)
t_{CYCLE} = 50.5 ms typ. (I_{DD} = 2.0 μA typ.)
t_{CYCLE} = 5.7 ms typ. (I_{DD} = 12.0 μA typ.)
- Power supply voltage range^{*2}: V_{DD} = 1.45 V to 3.6 V
- Operation temperature range: T_a = -40°C to +85°C
- Lead-free (Sn 100%), halogen-free

*1. The option can be selected.

*2. Power supply voltage range is different by optional combination.



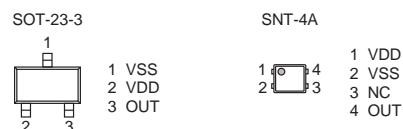
S-5712E Series

HIGH-SPEED LOW VOLTAGE OPERATION
OMNIPOLAR / UNIPOLAR DETECTION TYPE
HALL EFFECT SWITCH IC

Features

- Pole detection^{*1}: Detection of omnipolar, S pole or N pole
- Output logic^{*1}: Active "L", active "H"
- Output form^{*1}: Nch open-drain output, CMOS output
- Magnetic sensitivity^{*1}:
B_{OP} = 3.0 mT typ.
B_{OP} = 4.5 mT typ.
B_{OP} = 7.0 mT typ.
- Operating cycle (current consumption):
Product with omnipolar detection
t_{CYCLE} = 0.10 ms (I_{DD} = 640 μA) typ.
Product with S pole or N pole detection
t_{CYCLE} = 0.05 ms (I_{DD} = 640 μA) typ.
- Power supply voltage range: V_{DD} = 1.6 V to 3.5 V
- Operation temperature range: T_a = -40°C to +85°C
- Lead-free (Sn 100%), halogen-free

*1. The option can be selected.



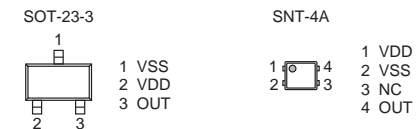
S-5712A/B/C Series

LOW VOLTAGE OPERATION
OMNIPOLAR / UNIPOLAR DETECTION TYPE
HALL EFFECT SWITCH IC

Features

- Pole detection^{*1}: Detection of omnipolar, S pole or N pole
- Output logic^{*1}: Active "L", active "H"
- Output form^{*1}: Nch open-drain output, CMOS output
- Magnetic sensitivity^{*1}:
B_{OP} = 1.8 mT typ.
B_{OP} = 3.0 mT typ.
B_{OP} = 4.5 mT typ.
B_{OP} = 7.0 mT typ.
- Operating cycle (current consumption)^{*1}:
Product with omnipolar detection
t_{CYCLE} = 5.70 ms (I_{DD} = 12.0 μA) typ.
t_{CYCLE} = 50.50 ms (I_{DD} = 2.0 μA) typ.
t_{CYCLE} = 204.10 ms (I_{DD} = 1.0 μA) typ.
Product with S pole or N pole detection
t_{CYCLE} = 6.05 ms (I_{DD} = 6.0 μA) typ.
t_{CYCLE} = 50.85 ms (I_{DD} = 1.4 μA) typ.
t_{CYCLE} = 204.05 ms (I_{DD} = 1.0 μA) typ.
- Power supply voltage range: V_{DD} = 1.6 V to 3.5 V
- Operation temperature range: T_a = -40°C to +85°C
- Lead-free (Sn 100%), halogen-free

*1. The option can be selected.



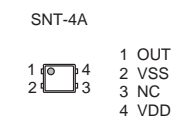
S-5717 Series

LOW VOLTAGE OPERATION
BOTH POLES / UNIPOLAR DETECTION TYPE HALL IC

Features

- Pole detection^{*1}: Detection of both poles, S pole or N pole
- Detection logic for magnetism^{*1}: Active "L", active "H"
- Output form^{*1}: Nch open-drain output, CMOS output
- Magnetic sensitivity:
B_{OP} = 3.3 mT typ.
- Operating cycle (current consumption)^{*1}:
Product with both poles detection
t_{CYCLE} = 50.50 ms (I_{DD} = 2.0 μA) typ.
Product with S pole or N pole detection
t_{CYCLE} = 50.85 ms (I_{DD} = 1.4 μA) typ.
- Power supply voltage range: V_{DD} = 1.6 V to 3.6 V
- Operation temperature range: T_a = -40°C to +85°C
- Lead-free (Sn 100%), halogen-free

*1. The option can be selected.



S-5715 Series

HIGH-SPEED / MIDDLE-SPEED LOW CURRENT CONSUMPTION BOTH POLES / UNIPOLAR DETECTION TYPE HALL IC

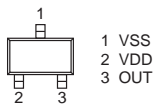
Features

- Pole detection^{*1}:
 - Detection logic for magnetism^{*1}:
 - Output form^{*1}:
 - Magnetic sensitivity:
 - Operating cycle (current consumption)^{*1}:
- Detection of both poles, S pole or N pole
Active "L", active "H"
Nch open-drain output, CMOS output
 $B_{OP} = 3.0$ mT typ.
- Product with both poles detection
 $t_{CYCLE} = 0.10$ ms (1400 μ A) typ.
 $t_{CYCLE} = 0.90$ ms (155 μ A) typ.
 $t_{CYCLE} = 5.70$ ms (26 μ A) typ.
- Product with S pole or N pole detection
 $t_{CYCLE} = 0.05$ ms (1400 μ A) typ.
 $t_{CYCLE} = 1.25$ ms (60 μ A) typ.
 $t_{CYCLE} = 6.05$ ms (13 μ A) typ.
- $V_{DD} = 2.7$ V to 5.5 V
 $T_a = -40^\circ\text{C}$ to $+85^\circ\text{C}$
- Power supply voltage range:
 - Operation temperature range:
 - Lead-free (Sn 100%), halogen-free^{*2}

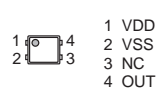
*1. The option can be selected.

*2. Refer to "■ Product Name Structure" for details.

SOT-23-3



SNT-4A



S-5716 Series

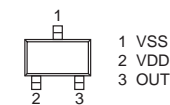
LOW CURRENT CONSUMPTION BOTH POLES / UNIPOLAR DETECTION TYPE HALL IC

Features

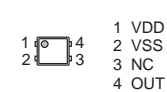
- Pole detection^{*1}:
 - Detection logic for magnetism^{*1}:
 - Output form^{*1}:
 - Magnetic sensitivity^{*1}:
- Detection of both poles, S pole or N pole
Active "L", active "H"
Nch open-drain output, CMOS output
 $B_{OP} = 1.8$ mT typ.
 $B_{OP} = 3.0$ mT typ.
 $B_{OP} = 3.4$ mT typ.
 $B_{OP} = 4.5$ mT typ.
 $B_{OP} = 7.0$ mT typ.
- Product with both poles detection
 $t_{CYCLE} = 50.50$ ms ($I_{DD} = 4.0$ μ A) typ.
- Product with S pole or N pole detection
 $t_{CYCLE} = 50.85$ ms ($I_{DD} = 2.6$ μ A) typ.
- $V_{DD} = 2.7$ V to 5.5 V
 $T_a = -40^\circ\text{C}$ to $+85^\circ\text{C}$
- Operating cycle (current consumption):
 - Power supply voltage range:
 - Operation temperature range:
 - Lead-free (Sn 100%), halogen-free

*1. The option can be selected.

SOT-23-3



SNT-4A



S-57B1 Series

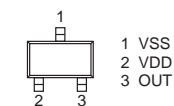
125°C OPERATION HIGH-SPEED UNIPOLAR DETECTION TYPE HALL IC

Features

- Pole detection:
 - Detection logic for magnetism^{*1}:
 - Output form^{*1}:
 - Magnetic sensitivity^{*1}:
- Detection of S pole
Active "L", active "H"
Nch open drain output, CMOS output
 $B_{OP} = 3.0$ mT typ.
 $B_{OP} = 4.5$ mT typ.
 $B_{OP} = 7.0$ mT typ.
- Operating cycle:
 $t_{CYCLE} = 50$ μ s typ.
- Power supply voltage range:
 $V_{DD} = 2.7$ V to 5.5 V
- Operation temperature range:
 $T_a = -40^\circ\text{C}$ to $+125^\circ\text{C}$
- Lead-free (Sn 100%), halogen-free

*1. The Option can be selected.

SOT-23-3



S-5724 Series

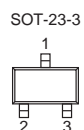
LOW VOLTAGE OPERATION HIGH-SPEED BIPOLAR HALL EFFECT LATCH

● Features

- Pole detection:
- Detection logic for magnetism^{*1}:
- Output form^{*1}:
- Magnetic sensitivity:
- Operating cycle (current consumption)^{*1}:
- Power supply voltage range:
- Operation temperature range:
- Built-in power-down circuit:
- Lead-free (Sn 100%), halogen-free

Bipolar latch
 $V_{OUT} = "L"$ at S pole detection
 $V_{OUT} = "H"$ at S pole detection
 Nch open-drain output, CMOS output
 $B_{OP} = 3.0 \text{ mT typ.}$
 $t_{CYCLE} = 50 \mu\text{s}$ ($I_{DD} = 640.0 \mu\text{A}$) typ.
 $t_{CYCLE} = 1.25 \text{ ms}$ ($I_{DD} = 26.0 \mu\text{A}$) typ.
 $t_{CYCLE} = 6.05 \text{ ms}$ ($I_{DD} = 6.0 \mu\text{A}$) typ.
 $V_{DD} = 1.6 \text{ V to } 3.5 \text{ V}$
 $T_a = -40^\circ\text{C to } +85^\circ\text{C}$
 Extends battery life (only SNT-4A)

*1. The option can be selected.



S-5725 Series

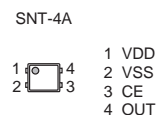
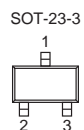
HIGH-SPEED BIPOLAR HALL EFFECT LATCH

● Features

- Pole detection:
- Detection logic for magnetism^{*1}:
- Output form^{*1}:
- Magnetic sensitivity^{*1}:
- Operating cycle (current consumption)^{*1}:
- Power supply voltage range:
- Operation temperature range:
- Built-in power-down circuit:
- Lead-free (Sn 100%), halogen-free

Bipolar latch
 $V_{OUT} = "L"$ at S pole detection
 $V_{OUT} = "H"$ at S pole detection
 Nch open-drain output, CMOS output
 $B_{OP} = 0.8 \text{ mT typ.}$
 $B_{OP} = 1.8 \text{ mT typ.}$
 $B_{OP} = 3.0 \text{ mT typ.}$
 $B_{OP} = 7.0 \text{ mT typ.}$
 $t_{CYCLE} = 50 \mu\text{s}$ ($I_{DD} = 1400.0 \mu\text{A}$) typ.
 $t_{CYCLE} = 1.25 \text{ ms}$ ($I_{DD} = 60.0 \mu\text{A}$) typ.
 $t_{CYCLE} = 6.05 \text{ ms}$ ($I_{DD} = 13.0 \mu\text{A}$) typ.
 $V_{DD} = 2.7 \text{ V to } 5.5 \text{ V}$
 $T_a = -40^\circ\text{C to } +85^\circ\text{C}$
 Extends battery life (only SNT-4A)

*1. The option can be selected.



S-57M1 Series

HIGH-SPEED BIPOLAR HALL EFFECT LATCH

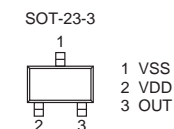
● Features

- Pole detection:
- Detection logic for magnetism^{*1}:
- Output form^{*1}:
- Magnetic sensitivity:
- Operation cycle (current consumption):
- Power supply voltage range:
- Operation temperature range:
- Lead-free (Sn 100%), halogen-free^{*2}

Bipolar latch
 $V_{OUT} = "L"$ at S pole detection
 $V_{OUT} = "H"$ at S pole detection
 Nch open-drain output, CMOS output
 $B_{OP} = 3.0 \text{ mT typ.}$
 $t_{CYCLE} = 50 \mu\text{s}$ ($1400 \mu\text{A}$) typ.
 $V_{DD} = 2.7 \text{ V to } 5.5 \text{ V}$
 $T_a = -40^\circ\text{C to } +125^\circ\text{C}$

*1. The option can be selected.

*2. Refer to "■ Product Name Structure" for details.



S-575D B Series

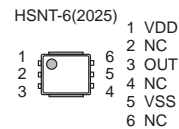
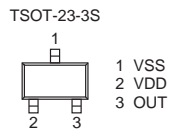
125°C OPERATION,
HIGH-WITHSTAND VOLTAGE, HIGH-SPEED,
OMNIPOLAR DETECTION TYPE HALL EFFECT SWITCH IC

Features

- Pole detection: Omnipolar detection
- Output logic^{*1}: Active "L"
Active "H"
- Output form^{*1}: Nch open-drain output
Nch driver + built-in pull-up resistor (1.2 kΩ typ.)
- Magnetic sensitivity^{*1}: $B_{OP} = 3.0$ mT typ.
 $B_{OP} = 6.0$ mT typ.
 $B_{OP} = 10.0$ mT typ.
 $B_{OP} = 15.0$ mT typ.
- Chopping frequency: $f_C = 500$ kHz typ.
- Output delay time: $t_D = 16.0$ μs typ.
- Power supply voltage range^{*2}: $V_{DD} = 2.7$ V to 26.0 V
- Built-in regulator
- Built-in output current limit circuit
- Operation temperature range: $T_a = -40$ °C to +125°C
- Lead-free (Sn 100%), halogen-free

*1. The option can be selected.

*2. $V_{DD} = 2.7$ V to 5.5 V when output form is Nch driver + built-in pull-up resistor (1.2 kΩ typ.)



S-575S/5N B Series

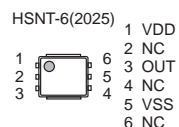
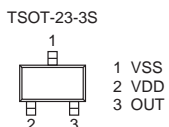
125°C OPERATION,
HIGH-WITHSTAND VOLTAGE, HIGH-SPEED,
UNIPOLAR DETECTION TYPE HALL EFFECT SWITCH IC

Features

- Pole detection: Unipolar detection
- Output logic^{*1}: Active "L"
Active "H"
- Output form^{*1}: Nch open-drain output
Nch driver + built-in pull-up resistor (1.2 kΩ typ.)
- Magnetic sensitivity^{*1}: $B_{OP} = 3.0$ mT typ.
 $B_{OP} = 6.0$ mT typ.
 $B_{OP} = 10.0$ mT typ.
 $B_{OP} = 15.0$ mT typ.
- Chopping frequency: $f_C = 500$ kHz typ.
- Output delay time: $t_D = 8.0$ μs typ.
- Power supply voltage range^{*2}: $V_{DD} = 2.7$ V to 26.0 V
- Built-in regulator
- Built-in output current limit circuit
- Operation temperature range: $T_a = -40$ °C to +125°C
- Lead-free (Sn 100%), halogen-free

*1. The option can be selected.

*2. $V_{DD} = 2.7$ V to 5.5 V when output form is Nch driver + built-in pull-up resistor (1.2 kΩ typ.)



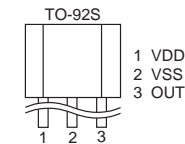
S-5732 B Series

125°C OPERATION
HIGH-WITHSTAND VOLTAGE HIGH-SPEED
UNIPOLAR DETECTION TYPE HALL EFFECT SWITCH IC

Features

- Pole detection^{*1}: Detection of S pole
Detection of N pole
- Output logic^{*1}: Active "L"
Active "H"
- Output form^{*1}: Nch open-drain output
Nch driver + built-in pull-up resistor
- Magnetic sensitivity^{*1}: $B_{OP} = 3.0$ mT typ.
 $B_{OP} = 6.0$ mT typ.
 $f_C = 250$ kHz typ.
 $t_D = 16.0$ μs typ.
 $V_{DD} = 3.5$ V to 26.0 V
- Chopping frequency:
- Output delay time:
- Power supply voltage range:
- Built-in regulator
- Built-in output current limit circuit
- Operation temperature range: $T_a = -40$ °C to +125°C
- Lead-free (Sn 100%), halogen-free

*1. The option can be selected.



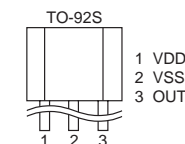
S-5732 I Series

HIGH-WITHSTAND VOLTAGE HIGH-SPEED
UNIPOLAR DETECTION TYPE HALL EFFECT SWITCH IC

Features

- Pole detection^{*1}: Detection of S pole
Detection of N pole
- Output logic^{*1}: Active "L"
Active "H"
- Output form^{*1}: Nch open-drain output
Nch driver + built-in pull-up resistor
- Magnetic sensitivity^{*1}: $B_{OP} = 3.0$ mT typ.
 $B_{OP} = 6.0$ mT typ.
 $f_C = 250$ kHz typ.
 $t_D = 16.0$ μs typ.
 $V_{DD} = 3.5$ V to 26.0 V
- Chopping frequency:
- Output delay time:
- Power supply voltage range:
- Built-in regulator
- Built-in output current limit circuit
- Operation temperature range: $T_a = -40$ °C to +85°C
- Lead-free (Sn 100%), halogen-free

*1. The option can be selected.



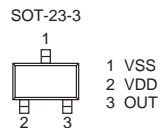
S-5731 Series

HIGH-WITHSTAND VOLTAGE HIGH-SPEED UNIPOLAR DETECTION TYPE HALL EFFECT SWITCH IC

Features

- Pole detection^{*1}: Detection of S pole, detection of N pole
- Output logic^{*1}: Active "L", active "H"
- Output form^{*1}: Nch open-drain output, Nch driver + built-in pull-up resistor
- Magnetic sensitivity^{*1}: $B_{OP} = 3.0 \text{ mT typ.}$, $B_{OP} = 6.0 \text{ mT typ.}$
- Chopping frequency: $f_C = 250 \text{ kHz typ.}$
- Output delay time: $t_D = 16.0 \mu\text{s typ.}$
- Power supply voltage range: $V_{DD} = 3.5 \text{ V to } 26.0 \text{ V}$
- Built-in regulator
- Built-in output current limit circuit
- Operation temperature range: $T_a = -40^\circ\text{C to } +85^\circ\text{C}$
- Lead-free (Sn 100%), halogen-free

*1. The option can be selected.



S-576Z B Series

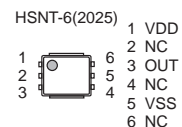
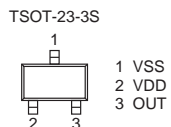
125°C OPERATION, HIGH-WITHSTAND VOLTAGE, HIGH-SPEED, ZCL™ HALL EFFECT IC

Features

- Pole detection: ZCL detection
- Output logic^{*1}: $V_{OUT} = \text{"L"}$ at S pole detection, $V_{OUT} = \text{"H"}$ at S pole detection
- Output form^{*1}: Nch open-drain output, Nch driver + built-in pull-up resistor (1.2 kΩ typ.)
- Zero crossing latch point: $B_Z = 0.0 \text{ mT typ.}$
- Release point (S pole)^{*1}: $B_{RS} = 3.0 \text{ mT typ.}$, $B_{RS} = 6.0 \text{ mT typ.}$
- Chopping frequency: $f_C = 500 \text{ kHz typ.}$
- Output delay time: $t_D = 8.0 \mu\text{s typ.}$
- Power supply voltage range^{*2}: $V_{DD} = 2.7 \text{ V to } 26.0 \text{ V}$
- Built-in regulator
- Built-in output current limit circuit
- Operation temperature range: $T_a = -40^\circ\text{C to } +125^\circ\text{C}$
- Lead-free (Sn 100%), halogen-free

*1. The option can be selected.

*2. $V_{DD} = 2.7 \text{ V to } 5.5 \text{ V}$ when output form is Nch driver + built-in pull-up resistor (1.2 kΩ typ.)



S-576Z R Series

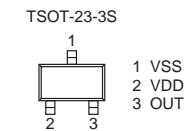
EXTENDED OPERATION TEMPERATURE RANGE, HIGH-WITHSTAND VOLTAGE, HIGH-SPEED, ZCL™ HALL EFFECT IC

Features

- Pole detection: ZCL detection
- Output logic^{*1}: $V_{OUT} = \text{"L"}$ at S pole detection, $V_{OUT} = \text{"H"}$ at S pole detection
- Output form^{*1}: Nch open-drain output, Nch driver + built-in pull-up resistor (1.2 kΩ typ.)
- Zero crossing latch point: $B_Z = 0.0 \text{ mT typ.}$
- Release point (S pole)^{*1}: $B_{RS} = 3.0 \text{ mT typ.}$, $B_{RS} = 6.0 \text{ mT typ.}$
- Chopping frequency: $f_C = 500 \text{ kHz typ.}$
- Output delay time: $t_D = 8.0 \mu\text{s typ.}$
- Power supply voltage range^{*2}: $V_{DD} = 2.7 \text{ V to } 26.0 \text{ V}$
- Built-in regulator
- Built-in output current limit circuit
- Operation temperature range: $T_a = -50^\circ\text{C to } +150^\circ\text{C}$
- Lead-free (Sn 100%), halogen-free

*1. The option can be selected.

*2. $V_{DD} = 2.7 \text{ V to } 5.5 \text{ V}$ when output form is Nch driver + built-in pull-up resistor (1.2 kΩ typ.)



S-576B B Series

125°C OPERATION,
HIGH-WITHSTAND VOLTAGE, HIGH-SPEED,
BIPOLAR HALL EFFECT LATCH IC

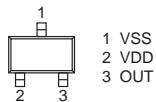
Features

- Pole detection: Bipolar latch
- Output logic^{*1}: $V_{OUT} = "L"$ at S pole detection
 $V_{OUT} = "H"$ at S pole detection
- Output form^{*1}: Nch open-drain output
Nch driver + built-in pull-up resistor (1.2 k Ω typ.)
- Magnetic sensitivity^{*1}: $B_{OP} = 0.5$ mT typ.
 $B_{OP} = 2.2$ mT typ.
 $B_{OP} = 3.0$ mT typ.
 $B_{OP} = 6.0$ mT typ.
 $B_{OP} = 10.0$ mT typ.
- Chopping frequency: $f_C = 500$ kHz typ.
- Output delay time: $t_D = 8.0$ μ s typ.
- Power supply voltage range^{*2}: $V_{DD} = 2.7$ V to 26.0 V
- Built-in regulator
- Built-in output current limit circuit
- Operation temperature range: $T_a = -40^\circ\text{C}$ to $+125^\circ\text{C}$
- Lead-free (Sn 100%), halogen-free

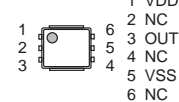
*1. The option can be selected.

*2. $V_{DD} = 2.7$ V to 5.5 V when output form is Nch driver + built-in pull-up resistor (1.2 k Ω typ.)

TSOT-23-3S



HSNT-6(2025)



S-5743 A Series

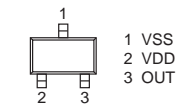
125°C OPERATION
HIGH-WITHSTAND VOLTAGE HIGH-SPEED
BIPOLAR HALL EFFECT LATCH IC

Features

- Pole detection: Bipolar latch
- Output logic^{*1}: $V_{OUT} = "L"$ at S pole detection
 $V_{OUT} = "H"$ at S pole detection
- Output form: Nch open-drain output
- Magnetic sensitivity^{*1}: $B_{OP} = 0.5$ mT typ.
 $B_{OP} = 1.5$ mT typ.
 $B_{OP} = 2.2$ mT typ.
 $B_{OP} = 3.0$ mT typ.
- Chopping frequency: $f_C = 500$ kHz typ.
- Output delay time: $t_D = 8.0$ μ s typ.
- Power supply voltage range: $V_{DD} = 2.7$ V to 26.0 V
- Built-in regulator
- Built-in output current limit circuit
- Operation temperature range: $T_a = -40^\circ\text{C}$ to $+125^\circ\text{C}$
- Lead-free (Sn 100%), halogen-free

*1. The option can be selected.

SOT-23-3S



S-5742 B Series

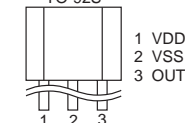
125°C OPERATION
HIGH-WITHSTAND VOLTAGE HIGH-SPEED
BIPOLAR HALL EFFECT LATCH IC

Features

- Pole detection: Bipolar latch
- Output logic^{*1}: $V_{OUT} = "L"$ at S pole detection
 $V_{OUT} = "H"$ at S pole detection
- Output form^{*1}: Nch open-drain output
Nch driver + built-in pull-up resistor
- Magnetic sensitivity^{*1}: $B_{OP} = 1.8$ mT typ.
 $B_{OP} = 3.0$ mT typ.
 $B_{OP} = 6.0$ mT typ.
- Chopping frequency: $f_C = 500$ kHz typ.
- Output delay time: $t_D = 8.0$ μ s typ.
- Power supply voltage range: $V_{DD} = 3.5$ V to 26.0 V
- Built-in regulator
- Built-in output current limit circuit
- Operation temperature range: $T_a = -40^\circ\text{C}$ to $+125^\circ\text{C}$
- Lead-free (Sn 100%), halogen-free

*1. The option can be selected.

TO-92S



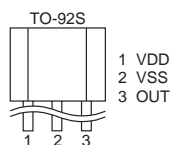
S-5742 I Series

HIGH-WITHSTAND VOLTAGE HIGH-SPEED
BIPOLAR HALL EFFECT LATCH IC

● Features

- Pole detection:
- Output logic^{*1}: Bipolar latch
 $V_{OUT} = "L"$ at S pole detection
 $V_{OUT} = "H"$ at S pole detection
- Output form^{*1}: Nch open-drain output
Nch driver + built-in pull-up resistor
- Magnetic sensitivity^{*1}:
 $B_{OP} = 1.8 \text{ mT typ.}$
 $B_{OP} = 3.0 \text{ mT typ.}$
 $B_{OP} = 6.0 \text{ mT typ.}$
 $f_C = 500 \text{ kHz typ.}$
 $t_D = 8.0 \mu\text{s typ.}$
 $V_{DD} = 3.5 \text{ V to } 26.0 \text{ V}$
- Chopping frequency:
- Output delay time:
- Power supply voltage range:
- Built-in regulator
- Built-in output current limit circuit
- Operation temperature range: $T_a = -40^\circ\text{C to } +85^\circ\text{C}$
- Lead-free (Sn 100%), halogen-free

*1. The option can be selected.



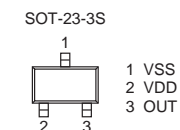
S-5741 B Series

125°C OPERATION
HIGH-WITHSTAND VOLTAGE HIGH-SPEED
BIPOLAR HALL EFFECT LATCH IC

● Features

- Pole detection:
- Output logic^{*1}: Bipolar latch
 $V_{OUT} = "L"$ at S pole detection
 $V_{OUT} = "H"$ at S pole detection
- Output form^{*1}: Nch open-drain output
Nch driver + built-in pull-up resistor
- Magnetic sensitivity^{*1}:
 $B_{OP} = 1.8 \text{ mT typ.}$
 $B_{OP} = 3.0 \text{ mT typ.}$
 $B_{OP} = 6.0 \text{ mT typ.}$
 $f_C = 500 \text{ kHz typ.}$
 $t_D = 8.0 \mu\text{s typ.}$
 $V_{DD} = 3.5 \text{ V to } 26.0 \text{ V}$
- Chopping frequency:
- Output delay time:
- Power supply voltage range:
- Built-in regulator
- Built-in output current limit circuit
- Operation temperature range: $T_a = -40^\circ\text{C to } +125^\circ\text{C}$
- Lead-free (Sn 100%), halogen-free

*1. The option can be selected.

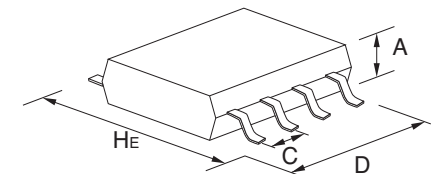


Package List

Package Type	Pin Count	Package Name	Package Size (mm)			Pitch (mm)
			H _E	D	A (max.)	C
Lead insertion type	3	TO-92	7.0	5.2	4.2	2.5/1.27
	3	TO-92S	4.95	4.1	1.62	2.5/1.27
Flat-lead type	3	SOT-89-3	4.0	4.5	1.6	1.5
	5	SOT-89-5	4.5	4.5	1.6	1.5
Gull-wing type	4	SC-82AB	2.1	2.0	1.1	1.3
	5	SC-88A	2.1	2.0	1.1	0.65
	3	SOT-23-3	2.8	2.9	1.3	1.9
	3	SOT-23-3S	2.8	2.9	1.2	1.9
	3	TSOT-23-3S	2.85	2.9	0.8	1.9
	5	SOT-23-5	2.8	2.9	1.3	0.95
	6	SOT-23-6	2.8	2.9	1.35	0.95
	6	SOT-23-6W	2.8	2.9	1.3	0.95
	8	8-Pin SOP (JEDEC)	6.0	5.02	1.75	1.27
	8	8-Pin TSSOP	6.4	3.0	1.1	0.65
	8	8-Pin TSSOP	6.4	3.0	1.1	0.65
	16	16-Pin TSSOP	6.4	5.1	1.1	0.65
	20	20-Pin TSSOP	6.4	6.5	1.2	0.65
	24	24-Pin SSOP	7.6	7.9	1.4	0.65
	8	TMSOP-8	4.0	2.9	0.8	0.65
	8	HTMSOP-8	4.0	2.9	0.8	0.65
	16	HTSSOP-16	6.4	5.12	1.1	0.65
	6	HSOP-6	6.0	5.02	1.75	1.91
	8	HSOP-8A	6.0	5.02	1.68	1.27
	8	HSOP-8A	6.0	5.02	1.65	1.27
	8	HSOP-8Q	6.0	5.02	1.68	1.27
	5	TO-252-5S(A)	6.5	6.5	1.4	1.27
	9	TO-252-9S	6.5	6.5	1.4	0.65

Package Type	Pin Count	Package Name	Package Size (mm)			Pitch (mm)
			H _E	D	A (max.)	C
Non-lead type	6	6-Pin HSON(A)	3.0	2.9	0.9	0.95
	6	SON-6C	2.55	1.56	0.65	0.5
	4	SNT-4A	1.6	1.2	0.5	0.65
	6	SNT-6A SNT-6A(H)	1.8	1.57	0.5	0.5
	8	SNT-8A	2.46	1.97	0.5	0.5
	4	HSNT-4(0808)	0.8	0.8	0.4	0.4
	4	HSNT-4(0808)B	0.8	0.8	0.41	0.4
	4	HSNT-4(1010)	1.0	1.0	0.4	0.65
	4	HSNT-4(1010)B	1.0	1.0	0.41	0.65
	6	HSNT-6(1212)	1.2	1.2	0.4	0.4
	6	HSNT-6A	2.46	1.96	0.5	0.5
	6	HSNT-6(2025)	2.46	1.96	0.5	0.5
	8	HSNT-8(1616)	1.6	1.6	0.4	0.4
	8	HSNT-8(2030)	3.0	2.0	0.5	0.5
	6	DFN-6(1414)A	1.4	1.4	0.6	0.5
	6	DFN-6(1518)A	1.8	1.5	0.33	0.5
	8	DFN-8(1616)A	1.6	1.6	0.6	0.4
	8	DFN-8(2030)	3.0	2.0	0.5	0.5
	8	DFN-8(2030)A	3.0	2.0	0.6	0.5
	8	DFN-8(2030)B	3.0	2.0	0.8	0.5

Remark Please contact our sales representatives regarding WLP package products.



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