S-8473 Series

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WIRELESS POWER RECEIVER CONTROL IC WITH CHARGE FUNCTION

Rev.2.0_00

The S-8473 Series is Wireless Power Receiver Control IC, which is configured with an overvoltage detection circuit, a charge current control circuit, a VBAT voltage detection circuit, a UVLO circuit, high temperature / low temperature detection circuit, etc. This IC has a charge function to a small lithium-ion rechargeable battery.

■ Features

- Power supply voltage: V_{DD} = 2.2 V to 5.0 V
- Current consumption during charge operation: I_{SS1} = 250 μA typ.
- VBAT pin current consumption during power-down: I_{PDN} = 1.0 μA max.
- UVLO detection voltage: V_{UVLO-} = 2.0 V typ.
- Charge function to a small lithium-ion rechargeable battery
  - Charge current: I_{LIM} = 33 mA typ.
  - Precharge current: I_{PRE} = 3.3 mA typ.
  - Precharge completion voltage: 2.4 V to 3.4 V (50 mV step)
  - Charge completion voltage: 4.0 V to 4.5 V (50 mV step)
  - Recharge start voltage: 3.6 V to 4.45 V*1
  - Short-circuit detection voltage: 1.5 V to 2.0 V (50 mV step)
  - Charge timer function: The charge operation stops after the elapse of 4.0 hours. (C_{CT} = 4.7 nF) The time is settable by connecting an external capacitor to the CT pin.
- High temperature / low temperature protection function: Available by connecting a thermistor to the TH pin.
- Status display function: Available by connecting an external LED to the STATUS pin.
  - During charge operation: Lighting
  - During charge operation stop: Lights-out
  - During error detection: Blinking
- Operation temperature range: Ta = −40°C to +85°C
- Lead-free (Sn 100%), halogen-free

*1. Recharge start voltage = charge completion voltage − charge hysteresis voltage
(The charge hysteresis voltage can be selected from a range of 0.05 V to 0. 40 V in 50 mV step.)

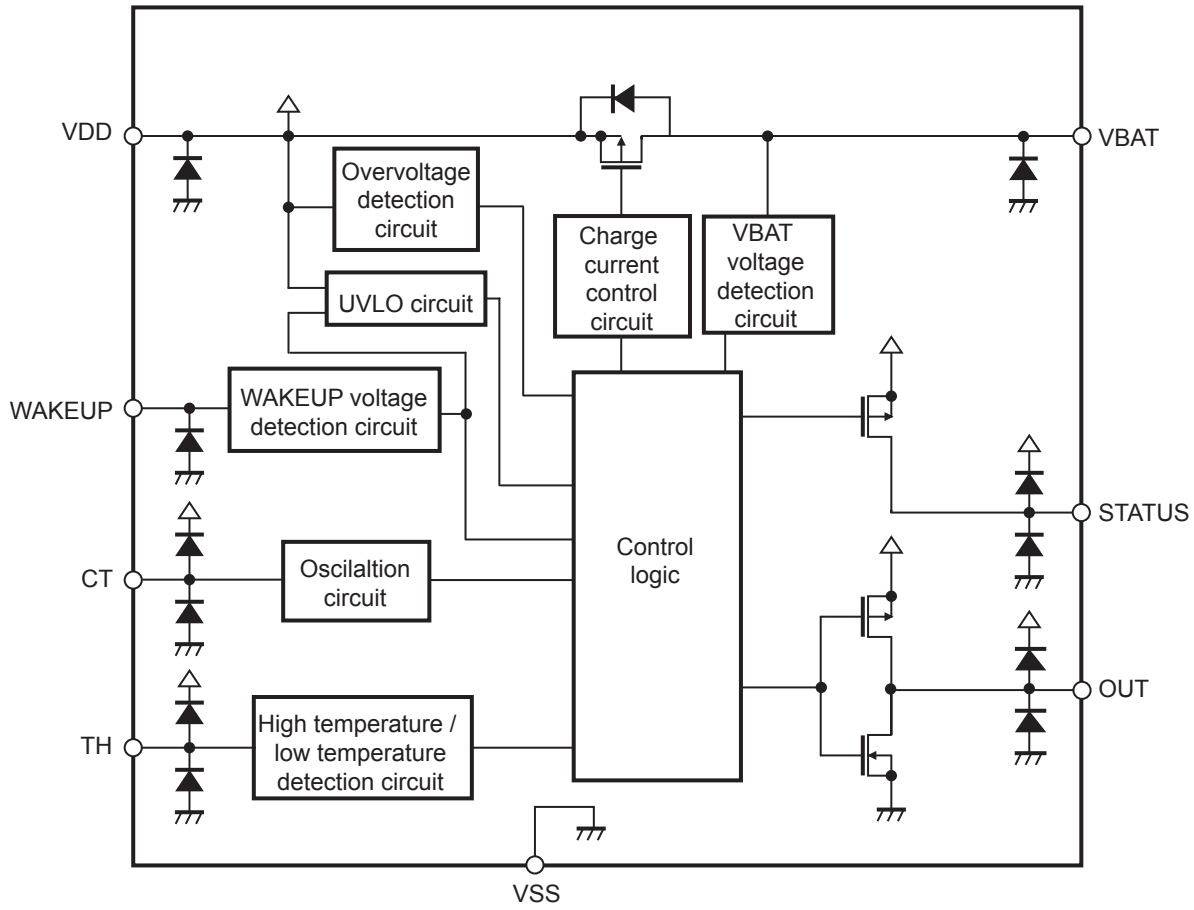
■ Applications

- Device for wireless power
- Small-sized wireless charge system

■ Package

- SNT-8A

■ Block Diagram

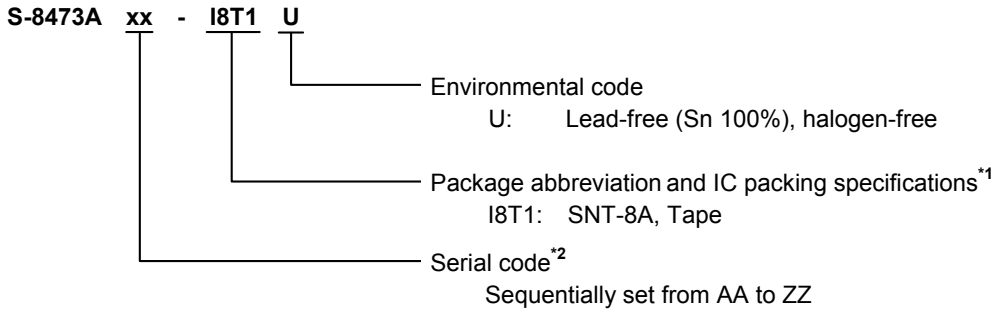


Remark All the diodes shown in the figure are parasitic diodes.

Figure 1

■ Product Name Structure

1. Product name



***1.** Refer to the tape drawing.

***2.** Refer to "**3. Product name list**".

2. Package

Table 1 Package Drawing Codes

Package Name	Dimension	Tape	Reel	Land
SNT-8A	PH008-A-P-SD	PH008-A-C-SD	PH008-A-R-SD	PH008-A-L-SD

3. Product name list

Table 2

Product Name	Charge Current [I_{LIM}]	Charge Completion Voltage [V_{END}]	Recharge Start Voltage [V_{RECHG}]	Precharge Completion Voltage [V_{PREH}]	Short-circuit Detection Voltage [V_{SHT}]
S-8473AAA-I8T1U	33 mA	4.2 V	4.0 V	3.0 V	2.0 V

Remark Please contact our sales office for products other than the above.

■ Pin Configuration

1. SNT-8A

Top view

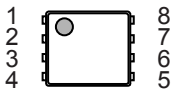


Figure 2

Table 3

Pin No.	Symbol	Description
1	VDD	Power supply voltage pin
2	VBAT	Connection pin of battery for charging
3	TH	Thermistor connection pin
4	STATUS	Output pin for status display
5	CT	Connection pin of capacitor for charge timer setting
6	WAKEUP	WAKEUP input pin
7	VSS	GND pin
8	OUT	FET gate drive pin for resonance

■ Absolute Maximum Ratings

Table 4

(Ta = +25°C unless otherwise specified)

Item	Symbol	Applied Pin	Absolute Maximum Rating	Unit
Input voltage between VDD pin and VSS pin	V_{DD}	VDD	V_{SS} – 0.3 to V_{SS} + 7.0	V
Input voltage between VBAT pin and VSS pin	V_{VBAT}	VBAT	V_{SS} – 0.3 to V_{SS} + 7.0	V
Input pin voltage	V_{IN}	TH, STATUS, CT, WAKEUP	V_{SS} – 0.3 to V_{DD} + 0.3	V
Output pin voltage	V_{OUT}	OUT	V_{SS} – 0.3 to V_{DD} + 0.3	V
Power dissipation	P_D	–	450*1	mW
Operation ambient temperature	T_{opr}	–	–40 to +85	°C
Storage temperature	T_{stg}	–	–40 to +125	°C

***1.** When mounted on board

[Mounted board]

(1) Board size: 114.3 mm × 76.2 mm × t1.6 mm

(2) Board name: JEDEC STANDARD51-7

Caution The absolute maximum ratings are rated values exceeding which the product could suffer physical damage. These values must therefore not be exceeded under any conditions.

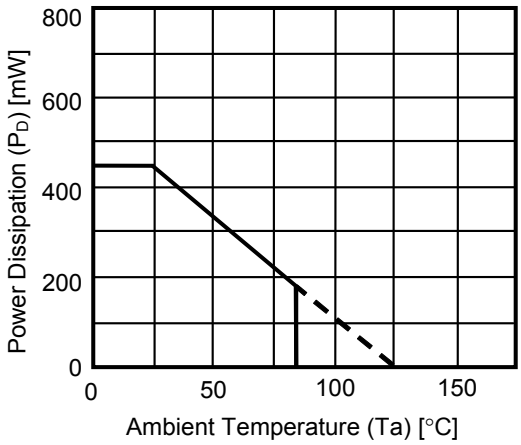


Figure 3 Power Dissipation of Package (When Mounted on Board)

■ Electrical Characteristics

Table 5

(V_{DD} = V_{BAT} = 4.5 V, Ta = +25°C unless otherwise specified)

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Power supply voltage	V_{DD}	–	2.2	–	5.0	V
Current consumption during charge operation	I_{SS1}	V_{DD} = V_{BAT} = V_{WAKEUP} = V_{END} − 0.1 V	–	250	400	μA
VBAT pin current consumption during power-down	I_{PDN}	V_{WAKEUP} = 0 V, VDD pin = open	–	0.1	1.0	μA
VDD pin current during charge operation completion	I_{END1}	V_{WAKEUP} = V_{DD}, V_{BAT} = V_{END} + 0.1 V	–	150	300	μA
VBAT pin current during charge operation completion	I_{END2}	V_{WAKEUP} = V_{DD}, V_{BAT} = V_{END} + 0.1 V	–	1.0	4.0	μA
UVLO detection voltage	V_{UVLO-}	–	1.9	2.0	2.1	V
UVLO release voltage	V_{UVLO+}	–	2.0	2.1	2.2	V
OUT pin sink current	I_{OUTN}	V_{OUT} = 0.5 V, V_{DD} = V_{END} + 0.4 V	1.4	–	–	mA
OUT pin source current	I_{OUTP}	V_{OUT} = V_{DD} − 0.5 V, V_{DD} = V_{END} + 0.2 V	–	–	−1.4	mA
WAKEUP pin input voltage "H"	V_{SH}	–	1.5	–	–	V
WAKEUP pin input voltage "L"	V_{SL}	–	–	–	0.4	V
WAKEUP pin input current "H"	I_{SH}	V_{WAKEUP} = V_{DD}	–	35	70	μA
WAKEUP pin input current "L"	I_{SL}	V_{WAKEUP} = 0 V	−0.1	–	0.1	μA
WAKEUP pin input disconnection delay time	t_{WUL}	–	40	85	130	ms
VBAT pin Pch driver on resistance	R_{ONP}	V_{DD} = V_{END} − 0.1 V	–	4.0	6.0	Ω
VBAT pin Pch driver leakage current	I_{LEAKP}	V_{WAKEUP} = 0 V	–	–	1.0	μA
Charge current threshold	I_{LIM}	V_{DD} = V_{END} − 0.1 V	29	33	37	mA
Precharge current	I_{PRE}	V_{DD} = V_{END} + 0.4 V	2.9	3.3	3.7	mA
Precharge completion voltage	V_{PREH}	–	V_{PREH} × 0.99	V_{PREH}	V_{PREH} × 1.01	V
Charge completion voltage	V_{END}	–	V_{END} × 0.99	V_{END}	V_{END} × 1.01	V
Overvoltage detection voltage	V_{OVP}	V_{OVP} = V_{END} + 0.3 V	V_{OVP} × 0.98	V_{OVP}	V_{OVP} × 1.02	V
Overvoltage release voltage	V_{OVPR}	V_{OVPR} = V_{END} + 0.2 V	V_{OVPR} × 0.98	V_{OVPR}	V_{OVPR} × 1.02	V
Recharge start voltage	V_{RECHG}	–	V_{RECHG} × 0.99	V_{RECHG}	V_{RECHG} × 1.01	V
Short-circuit detection voltage	V_{SHT}	–	V_{SHT} × 0.98	V_{SHT}	V_{SHT} × 1.02	V
Short-circuit release voltage	V_{SHTH}	V_{SHTH} = V_{SHT} + 0.1 V	V_{SHTH} × 0.98	V_{SHTH}	V_{SHTH} × 1.02	V
STATUS pin Pch driver on resistance	R_{ONPST}	–	–	20	30	Ω
STATUS pin leakage current	I_{STPL}	V_{STATUS} = 0 V, V_{BAT} = 0 V	–	0.1	1.0	μA
TH pin internal resistance	R_{LIN}	–	72.79	80.88	88.97	kΩ
TH pin high temperature protection detection voltage	V_{TSDH}	–	0.375	0.400	0.425	V
TH pin high temperature protection release voltage	V_{TSRH}	–	0.462	0.487	0.512	V
TH pin low temperature protection detection voltage	V_{TSDL}	–	0.950	0.975	1.000	V
TH pin low temperature protection release voltage	V_{TSRL}	–	0.900	0.925	0.950	V
Oscillation frequency for charge timer	f_{OSC}	C_{CT} = 4.7 nF	32.5	36.4	40.0	Hz
STATUS pin blinking cycle	t_{SW}	C_{CT} = 4.7 nF	0.79	0.88	0.97	s
STATUS pin blinking duty	D_{SW}	–	40	50	60	%

■ Test Circuit

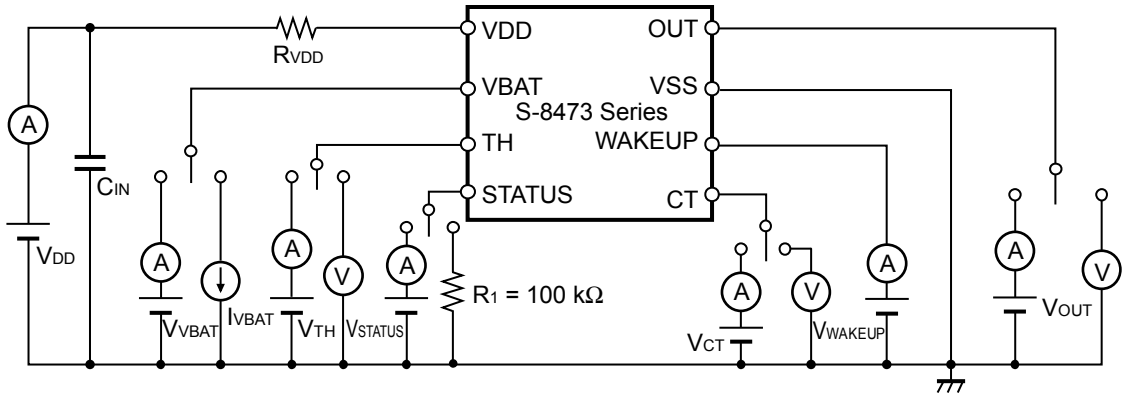


Figure 4

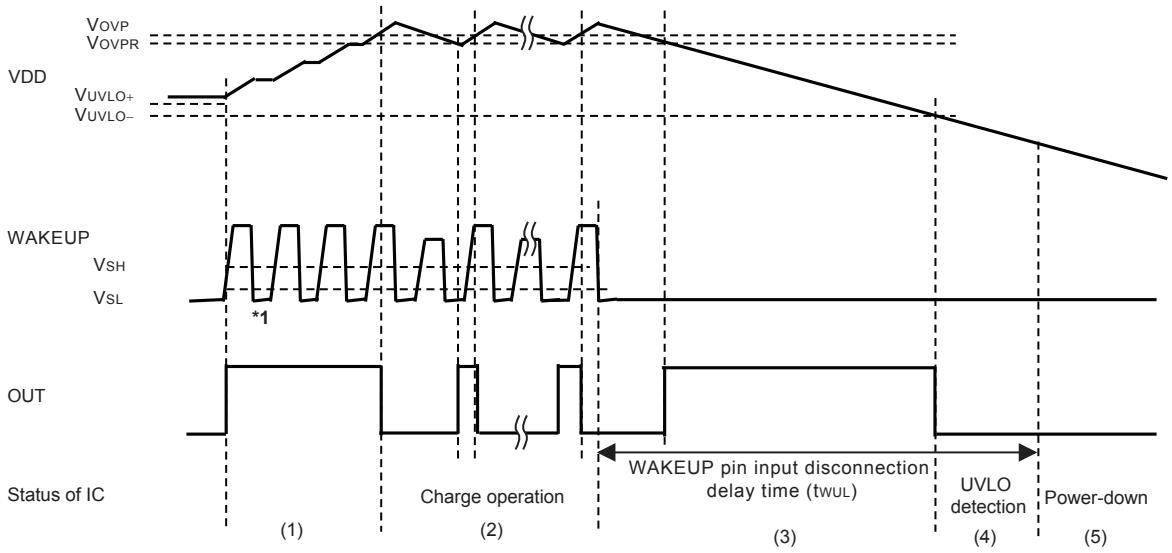
■ Operation

Remark Refer to "■ **Standard Circuit**".

1. Basic operation

1. 1 Power reception

(1) When the WAKEUP pin input voltage is the WAKEUP pin input voltage "H" (V_{SH}) or higher and the power supply voltage (V_{DD}) is the UVLO release voltage (V_{UVLO+}) or higher, the operations of all internal circuits are started. V_{DD} ("H") is output from the OUT pin until V_{DD} reaches the overvoltage detection voltage (V_{OVP}).
(2) The charge operation to a lithium-ion rechargeable battery is started. Refer to "**1. 2 Charge operation**" for details.
(3) The WAKEUP pin input voltage is disconnected, and then V_{DD} decreases gradually.
(4) When V_{DD} is the UVLO detection voltage (V_{UVLO-}) or lower, the IC changes to a UVLO detection status. In the UVLO detection status, the operations of all internal circuits other than the UVLO circuit are stopped, V_{SS} ("L") is output from the OUT pin, and the STATUS pin changes to "High-Z".
(5) The WAKEUP pin input voltage decreases to the WAKEUP pin input voltage "L" (V_{SL}) or lower, after the elapse of the WAKEUP pin input disconnection delay time (t_{WUL}), the IC changes to a power-down status. In the power-down status, the operations of all internal circuits are stopped, reducing the current consumption significantly. V_{SS} is output from the OUT pin and the STATUS pin changes to "High-Z".



***1.** If the time that the WAKEUP pin input voltage decreases to V_{SL} or lower is under t_{WUL}, the IC continues the operation.

Figure 5

Remark Between V_{SL} and V_{SH} or V_{UVLO+} and V_{UVLO-}, there is a hysteresis width for avoiding malfunctions due to generation of noise etc. in the input voltage, respectively.

1. 2 Charge operation

Power supply voltage (V_{DD}) is output from the OUT pin until V_{DD} reaches V_{OVP}. When V_{DD} exceeds the VBAT pin voltage (V_{BAT}) + 0.6 V typ., the charge operation is started.

(1) Precharge operation

When V_{BAT} is the short-circuit release voltage (V_{SHTH}) or higher and lower than the precharge completion voltage (V_{PREH}), the precharge operation is performed. The charge current during the precharge operation changes to the precharge current (I_{PRE}). During the precharge operation, V_{SS} is output from the OUT pin when V_{DD} is V_{OVP} or higher, and V_{DD} is output from the OUT pin when V_{DD} is the overvoltage release voltage (V_{OVPR}) or lower.

(2) Normal charge operation

When V_{BAT} is V_{PREH} or higher and lower than the charge completion voltage (V_{END}), the normal charge operation is performed.

In the normal charge operation, a Pch driver connected between the VDD pin and the VBAT pin is turned on, and a current flows from the VDD pin to the VBAT pin. V_{SS} is output from the OUT pin when the charge current is the charge current threshold (I_{LIM}) or higher, and V_{DD} is output from the OUT pin when the charge current is I_{LIM} or lower. When V_{BAT} is V_{END} or higher, I_{LIM} decreases and the IC continues the charge operation. Each time V_{BAT} reaches V_{END}, I_{LIM} decreases in four steps of $I_{LIM} \times 3/4$, $I_{LIM} \times 1/2$, $I_{LIM} \times 1/4$ and I_{PRE}.

(3) Charge operation completion

At the time when V_{BAT} reaches V_{END} after I_{LIM} changes to I_{PRE}, the charge operation is completed.

A Pch driver is turned off when the charge operation is completed, V_{SS} is output from the OUT pin when V_{DD} is V_{OVP} or higher, and V_{DD} is output from the OUT pin when V_{DD} is V_{OVPR} or lower.

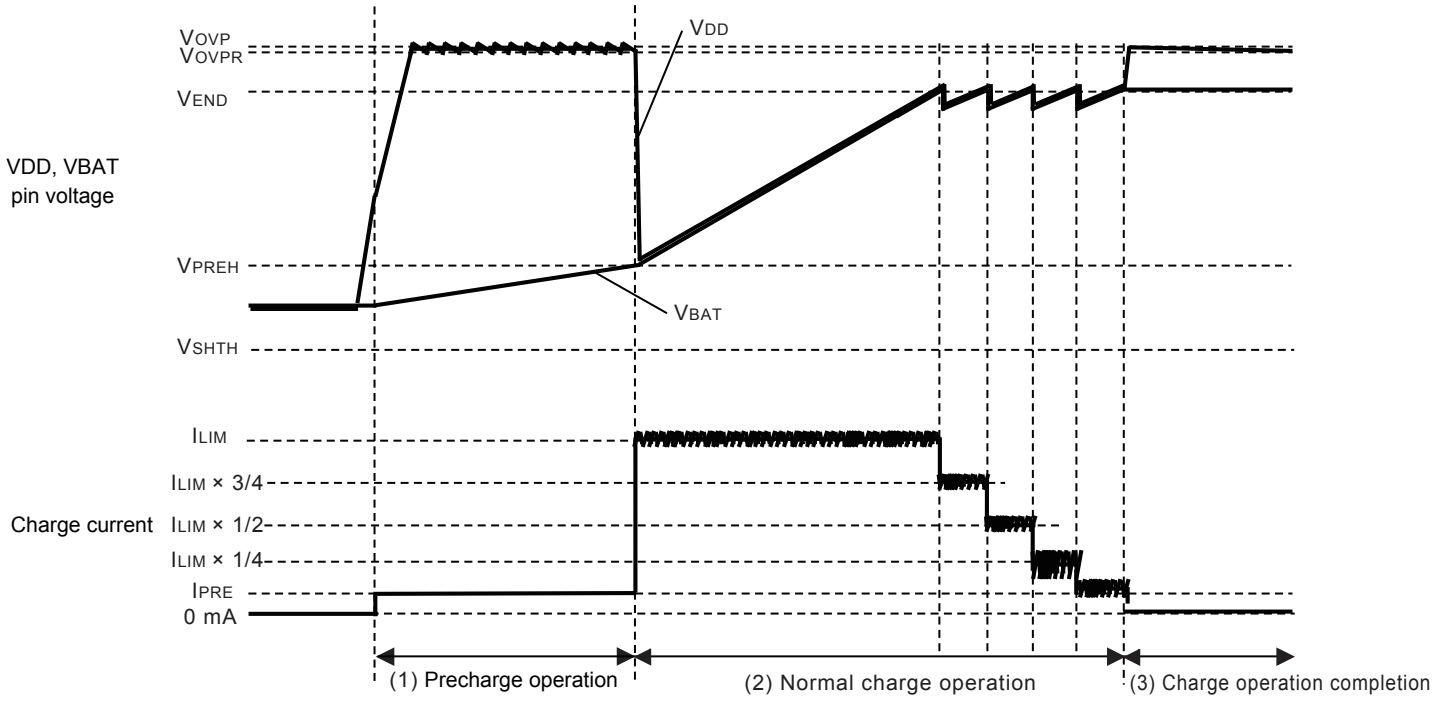


Figure 6

Remark When V_{BAT} decreases to the recharge start voltage (V_{RECHG}) after the charge operation is completed, the charge operation is resumed.

1. 3 Short-circuit detection

In the S-8473 Series, the charge operation is stopped when V_{BAT} decreases due to a battery abnormality, a short-circuit, etc. The charge operation is stopped when V_{BAT} is short-circuit detection voltage (V_{SHT}) or lower, "H" and "High-Z" are output from the STATUS pin, and the operation is repeated with the STATUS pin blinking cycle (t_{SW}). Also, V_{SS} is output from the OUT pin when V_{DD} is V_{OVP} or higher, and V_{DD} is output from the OUT pin when V_{DD} is V_{OVPR} or lower. When V_{BAT} increases to the short-circuit release voltage (V_{SHTH}) or higher, the charge operation is started.

2. Charge timer function

In the S-8473 Series, a charge timer can be set by connecting an external capacitor to the CT pin. The precharge timer which sets the time from the charge operation start to the precharge operation completion and the charge completion timer which sets the time from the charge operation start to the charge operation completion are prepared. The charge operation is stopped due to a time-out of the charge timer, the IC changes to a charge time-out status, "H" and "High-Z" are output from the STATUS pin, and the operation is repeated with t_{SW}. Also, V_{SS} is output from the OUT pin when V_{DD} is V_{OVP} or higher, and V_{DD} is output from the OUT pin when V_{DD} is V_{OVPR} or lower.
By setting the IC power-down status or decreasing V_{DD} to V_{UVLO-} or lower, the charge time-out status can be reset.
Depending on the oscillation frequency for charge timer (f_{OSC}) which is determined by the capacitance of the CT pin, the precharge timer or the charge completion timer can be set by using the following equation.

$$\text{Precharge timer: } \frac{1}{f_{OSC}\ [\text{Hz}]} \times 2^{16}\ [\text{s}] \qquad \text{Charge completion timer: } \frac{1}{f_{OSC}\ [\text{Hz}]} \times 2^{19}\ [\text{s}]$$

For example, when C_{CT} = 4.7 nF, settings of the precharge timer and the charge completion timer are approximately 30 minutes and approximately 4.0 hours, respectively.
f_{OSC} is calculated by the following equation.

$$f_{OSC}\ [\text{Hz}] = \frac{170.77}{C_{CT}\ [\text{nF}]}$$

Select the external capacitor (C_{CT}) in the range of 0.22 nF to 47 nF, and connect it between the CT pin and the VSS pin.

3. High temperature / low temperature protection function

By connecting an external thermistor to the TH pin, a temperature abnormal status can be prevented.

3. 1 High temperature protection function

When the temperature of external components increases and the resistance of thermistor decreases to the resistance calculated by equation (1) (R_{TH}), the status changes to a high temperature protection status. In the high temperature protection status, the charge operation is resumed when R_{TH} increases to the resistance calculated by equation (2).

$$(1)\ R_{TH}\ [\text{k}\Omega] = \frac{R_{LIN}\ [\text{k}\Omega] \times V_{TSDH}\ [\text{V}]}{(1.2 - V_{TSDH}\ [\text{V}])} \qquad (2)\ R_{TH}\ [\text{k}\Omega] = \frac{R_{LIN}\ [\text{k}\Omega] \times V_{TSRH}\ [\text{V}]}{(1.2 - V_{TSRH}\ [\text{V}])}$$

3. 2 Low temperature protection function

When the temperature of external components decreases and the resistance of R_{TH} increases to the resistance calculated by equation (3), the status changes to a low temperature protection status. In the low temperature protection status, the charge operation is resumed when R_{TH} decreases to the resistance calculated by equation (4).

$$(3)\ R_{TH}\ [\text{k}\Omega] = \frac{R_{LIN}\ [\text{k}\Omega] \times V_{TSDL}\ [\text{V}]}{(1.2 - V_{TSDL}\ [\text{V}])} \qquad (4)\ R_{TH}\ [\text{k}\Omega] = \frac{R_{LIN}\ [\text{k}\Omega] \times V_{TSRL}\ [\text{V}]}{(1.2 - V_{TSRL}\ [\text{V}])}$$

In the high temperature / low temperature protection status, the charge function and the charge timer function are stopped, and V_{SS} is output from the OUT pin. However, the internal other circuits operate during the period unlike the power-down status, so caution should be exercised.
Connect a thermistor between the TH pin and the VSS pin. An NTC thermistor of R = 100 kΩ (R_{25}) at Ta = +25°C is recommended. For example, if an NTC thermistor of R_{25} and $B_{25/50}$ (B constant (25°C/50°C)) = 4250 K is used, the high temperature protection function begins to operate at approximately +45°C, and the low temperature protection function begins to operate at approximately 0°C.
When not using the high temperature / low temperature protection function, connect a resistor of 100 kΩ.

4. Status display function

The S-8473 Series can display the operation status by connecting an external LED to the STATUS pin.
During the charge operation, a Pch driver of the STATUS pin is turned on, "H" is output from the STATUS pin, and the external LED is lighted on.
During the charge operation stop, the Pch driver of the STATUS pin is turned off, the STATUS pin changes to "High-Z", and the external LED is lighted off.
During the error detection, the Pch driver of the STATUS pin is turned on and off repeatedly. Also, "H" and "High-Z" are output from the STATUS pin, the operation is repeated with t_{SW}, and the external LED is blinked.
When not using the status display function, set the STATUS pin open.

Table 6

Status		STATUS Pin	External LED
During charge operation	Precharge operation	"H"	Lighting
	Normal charge operation		
During charge operation stop	Power-down status	"High-Z"	Lights-out
	Charge operation completion		
During error detection	Short-circuit detection	"H" ↔ "High-Z"	Blinking
	Charge time-out status		
High temperature / low temperature protection status		Maintaining*1	Maintaining*1

***1.** The status before the high temperature / low temperature protection function operates is maintained.

■ Standard Circuit

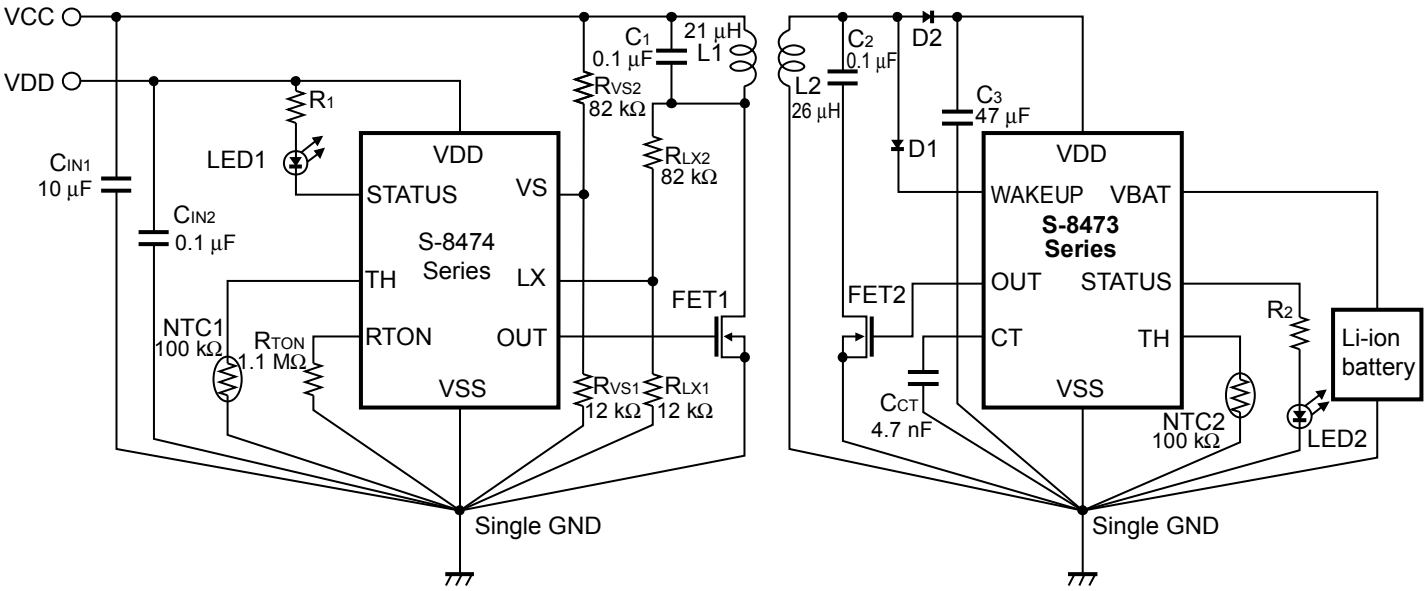


Figure 7

Caution The above connection diagram and constant will not guarantee successful operation. Perform thorough evaluation using the actual application to set the constant.

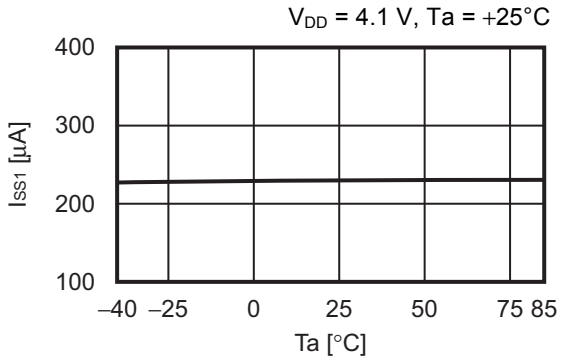
■ Precautions

- Mount an external resistor, a capacitor, a diode, an FET, etc. as close as possible to the IC so as to make the single GND.
- When the wiring impedance is high, the operation may be unstable due to the resonance circuit or the noise caused by switching of the output pin, so perform thorough evaluation using the actual application when designing.
- The power dissipation of the IC greatly varies depending on the size and material of the board to be mounted. Perform thorough evaluation using the actual application when designing.
- Do not apply an electrostatic discharge to this IC that exceeds the performance ratings of the built-in electrostatic protection circuit.
- ABLIC Inc. claims no responsibility for any and all disputes arising out of or in connection with any infringement by products including this IC of patents owned by a third party.

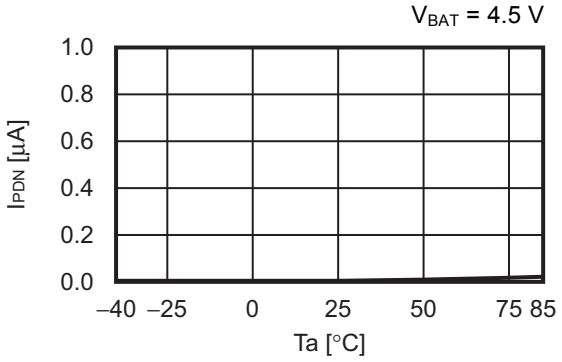
■ Characteristics (Typical Data)

1. Current consumption

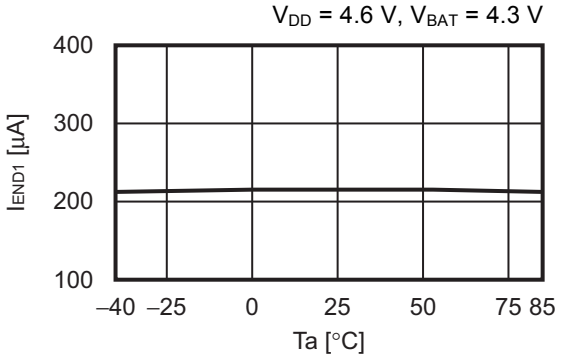
1. 1 I_{SS1} vs. Ta



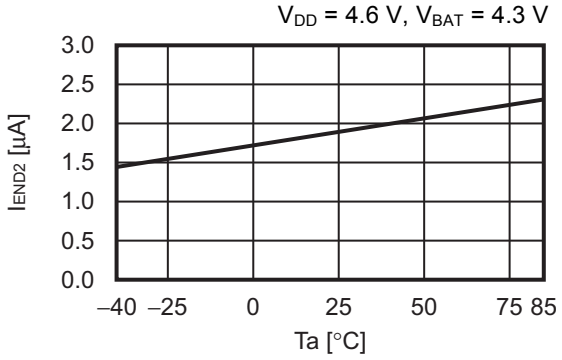
1. 2 I_{PDN} vs. Ta



1. 3 I_{END1} vs. Ta

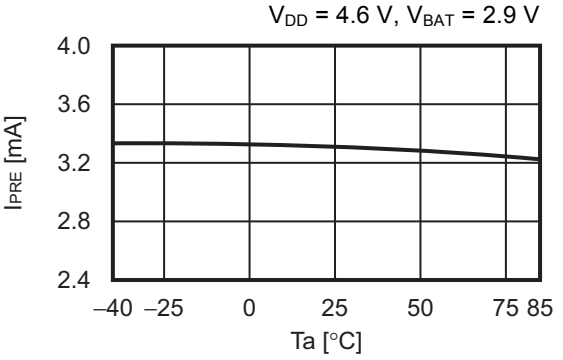


1. 4 I_{END2} vs. Ta

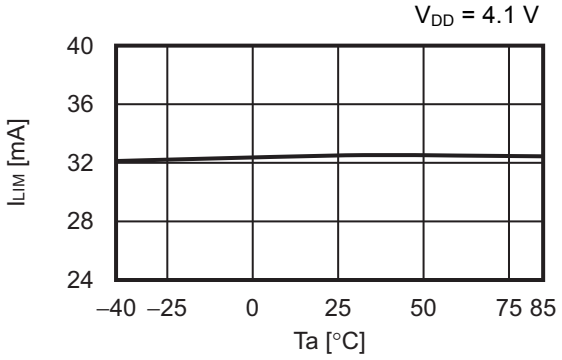


2. Precharge current, charge current threshold

2. 1 I_{PRE} vs. Ta

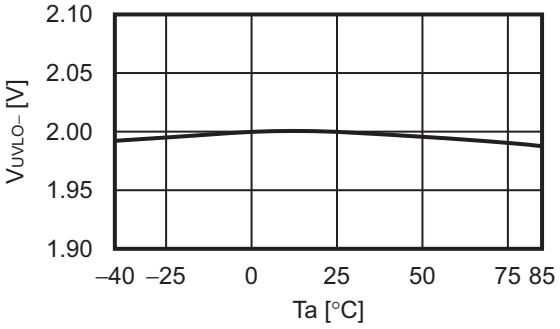


2. 2 I_{LIM} vs. Ta

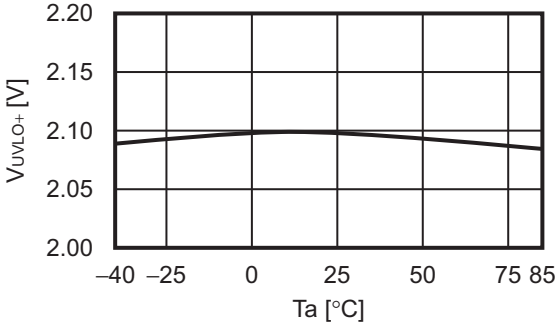


3. UVLO detection / release voltage, precharge completion voltage, charge completion voltage, overvoltage detection / release voltage, recharge start voltage, short-circuit detection / release voltage

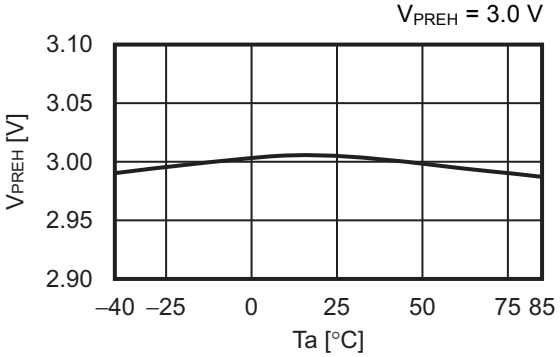
3. 1 V_{UVLO-} vs. Ta



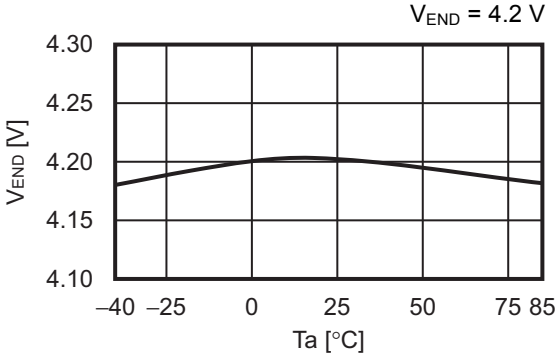
3. 2 V_{UVLO+} vs. Ta



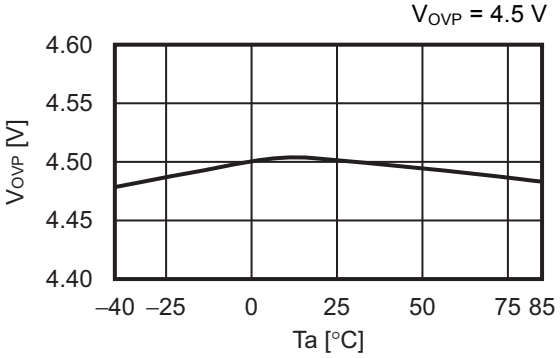
3. 3 V_{PREH} vs. Ta



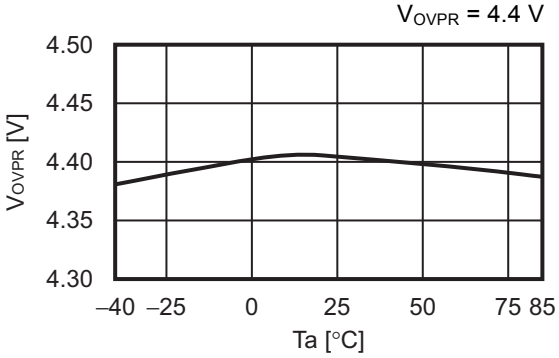
3. 4 V_{END} vs. Ta



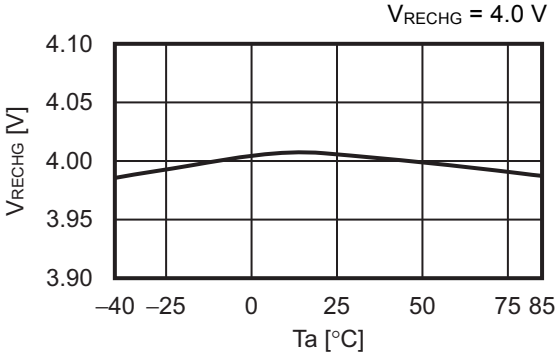
3. 5 V_{OVP} vs. Ta



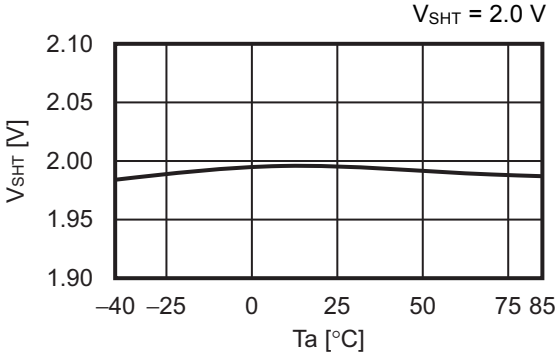
3. 6 V_{OVPR} vs. Ta



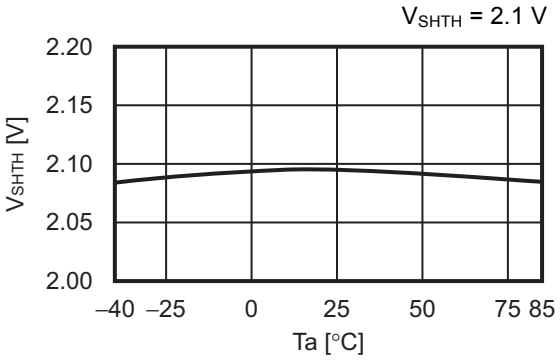
3. 7 V_{RECHG} vs. Ta



3. 8 V_{SHT} vs. Ta

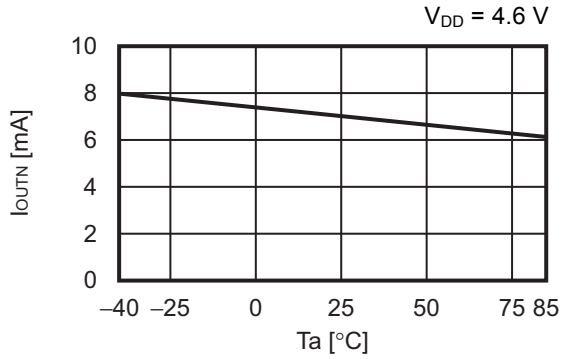


3. 9 V_{SHTH} vs. Ta

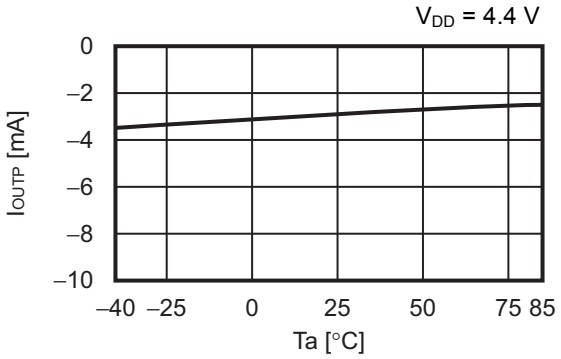


4. Output current, Pch driver on resistance for charging, Pch driver on resistance for STATUS pin

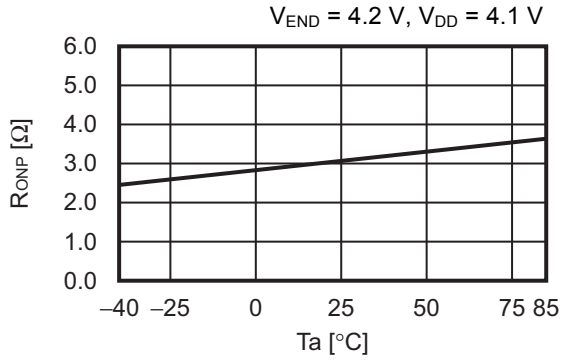
4. 1 I_{OUTN} vs. Ta



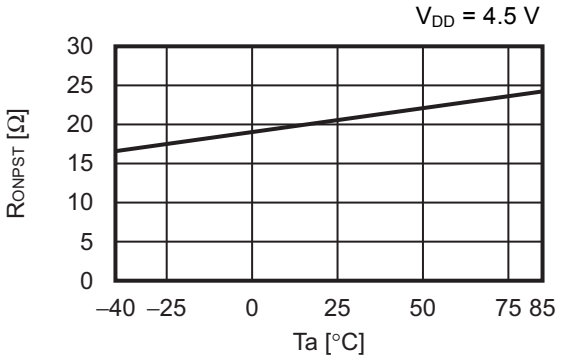
4. 2 I_{OUTP} vs. Ta



4. 3 R_{ONP} vs. Ta

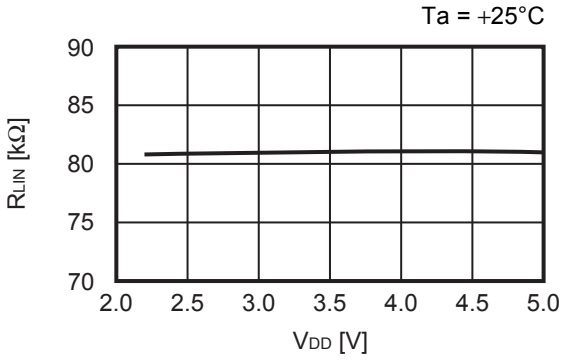


4. 4 R_{ONPST} vs. Ta

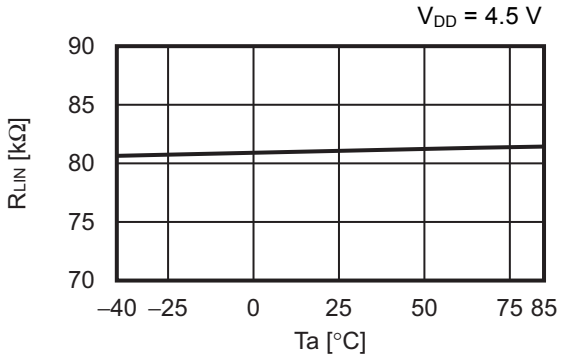


5. TH pin internal resistance, TH pin high temperature protection detection / release voltage, TH pin low temperature protection detection / release voltage

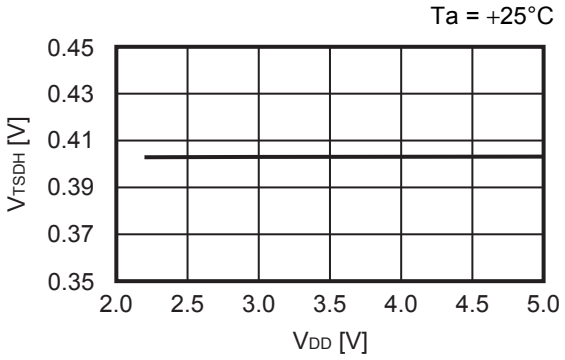
5. 1 R_{LIN} vs. V_{DD}



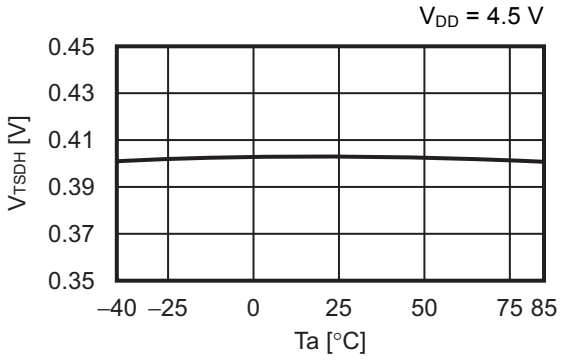
5. 2 R_{LIN} vs. Ta



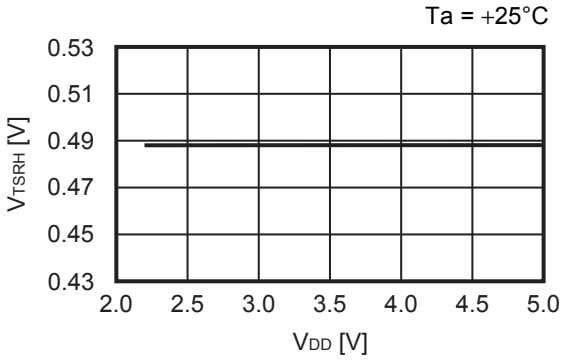
5. 3 V_{TSDH} vs. V_{DD}



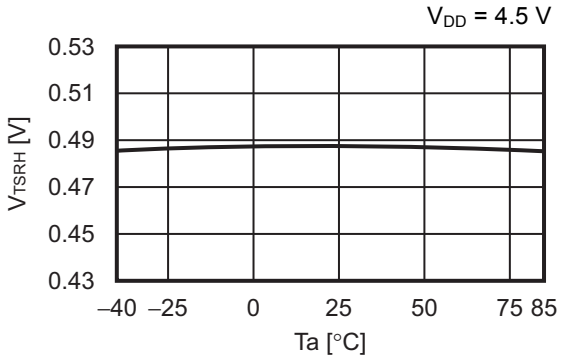
5. 4 V_{TSDH} vs. Ta



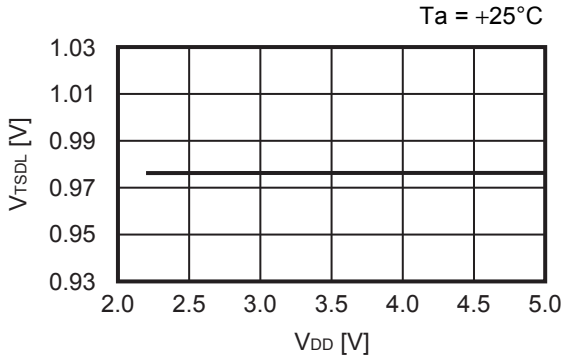
5. 5 V_{TSRH} – V_{DD}



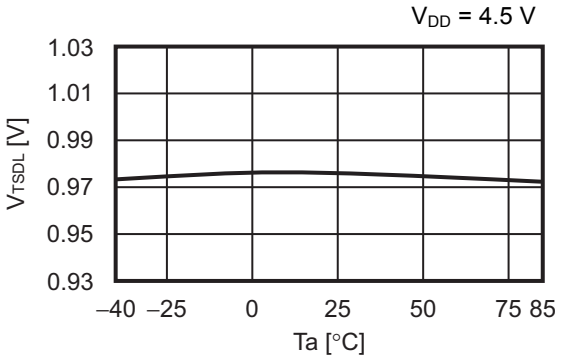
5. 6 V_{TSRH} – Ta



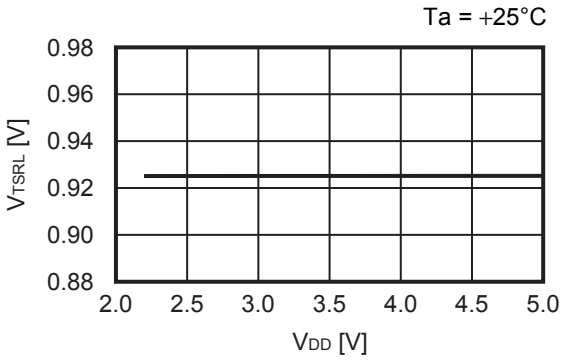
5. 7 V_{TSDL} vs. V_{DD}



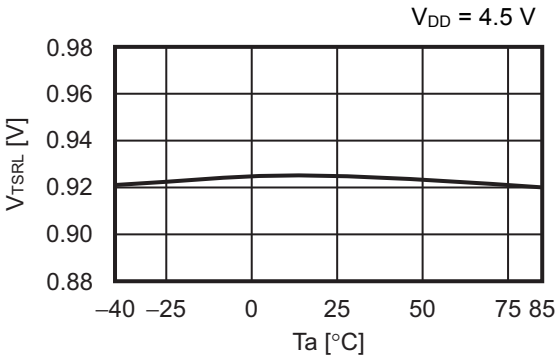
5. 8 V_{TSDL} vs. Ta



5. 9 V_{TSRL} vs. V_{DD}

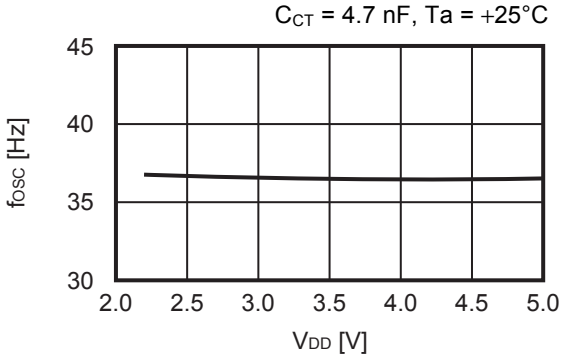


5. 10 V_{TSRL} vs. Ta

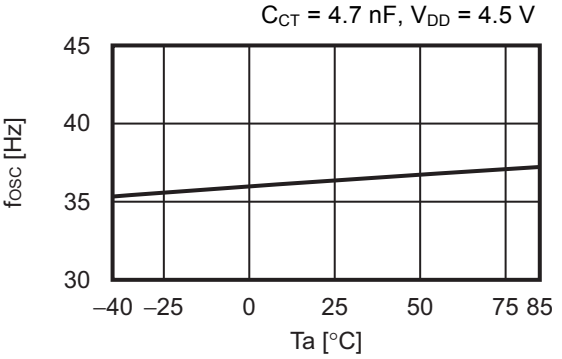


6. Oscillation frequency for charge timer, STATUS pin blinking cycle

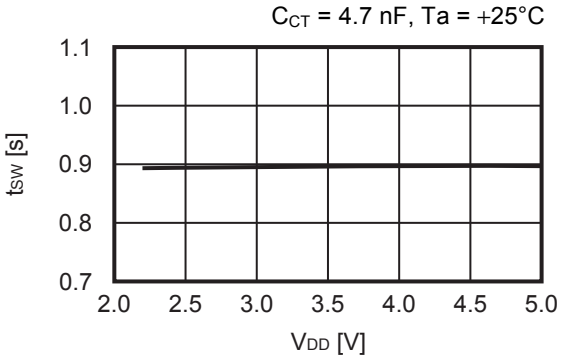
6. 1 f_{OSC} vs. V_{DD}



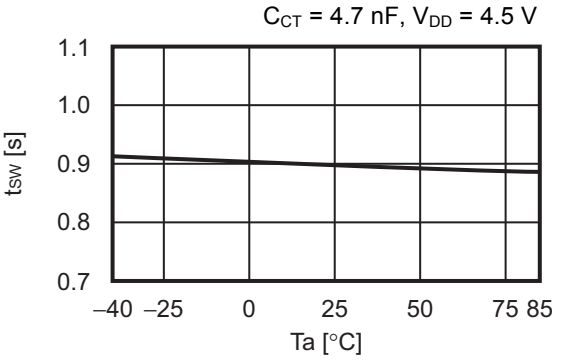
6. 2 f_{OSC} vs. Ta

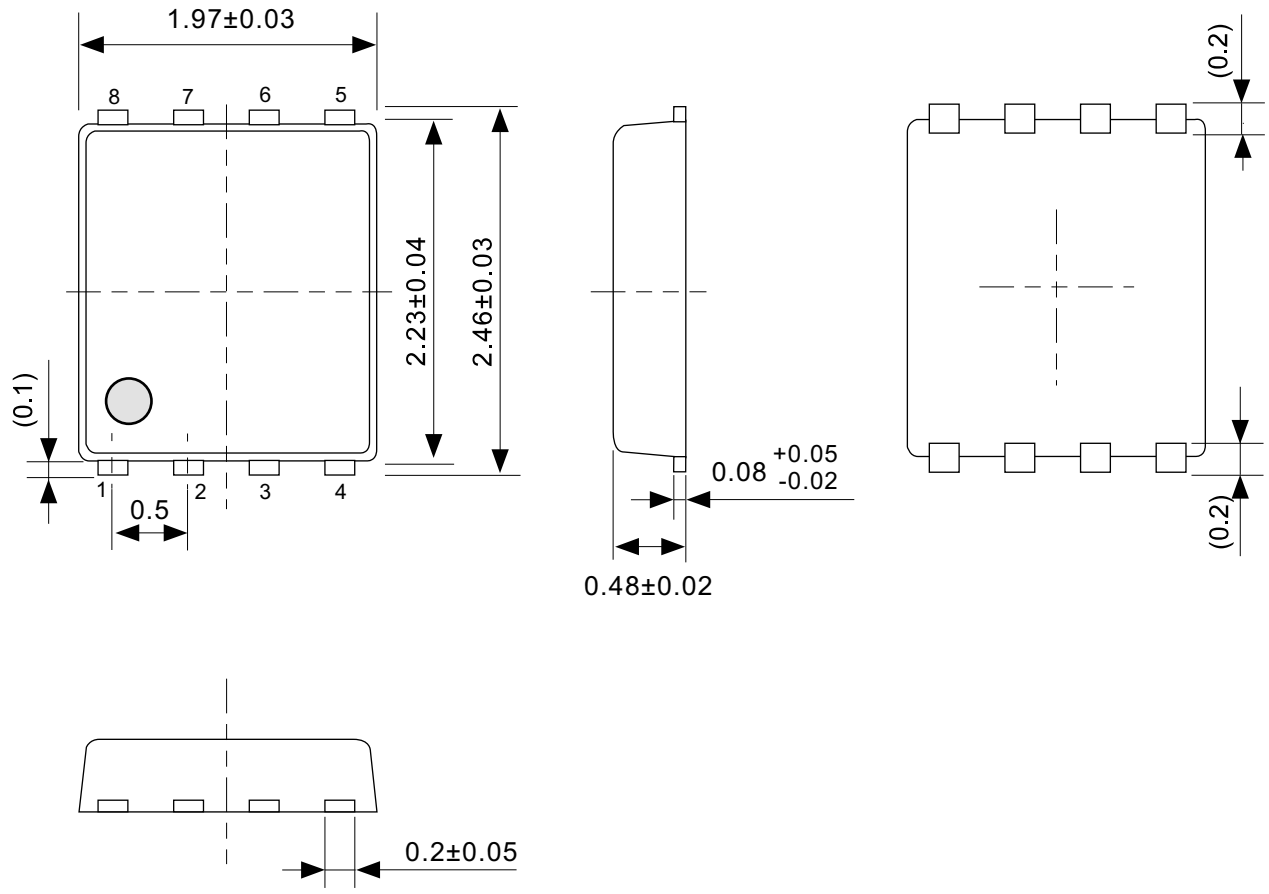


6. 3 t_{SW} vs. V_{DD}



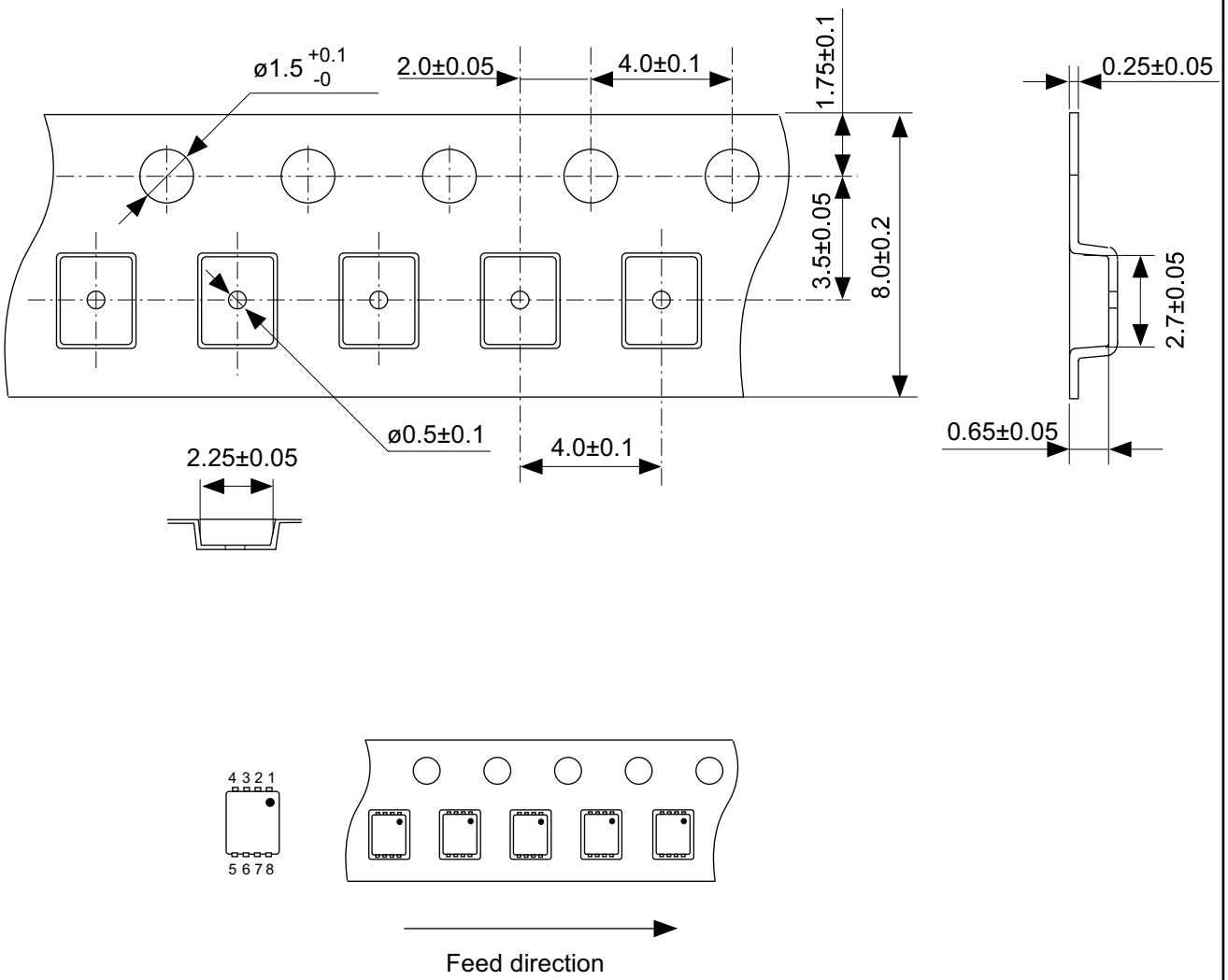
6. 4 t_{SW} vs. Ta





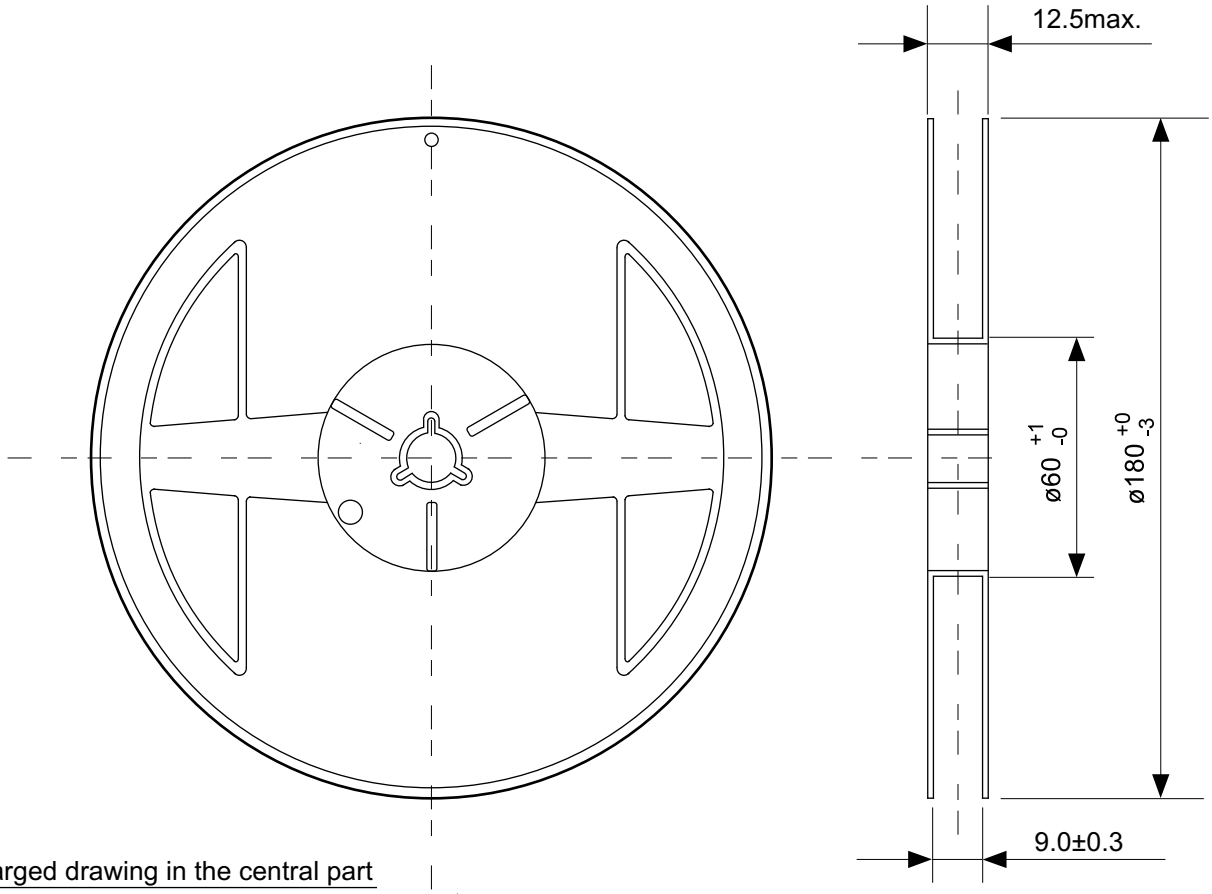
No. PH008-A-P-SD-2.1

TITLE	SNT-8A-A-PKG Dimensions
No.	PH008-A-P-SD-2.1
ANGLE	
UNIT	mm
ABLIC Inc.	

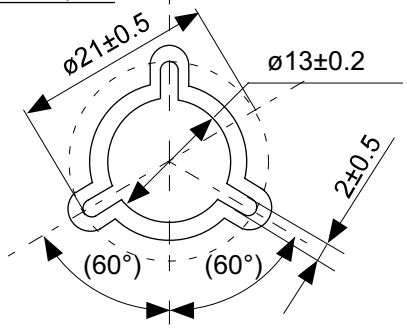


No. PH008-A-C-SD-2.0

TITLE	SNT-8A-A-Carrier Tape
No.	PH008-A-C-SD-2.0
ANGLE	
UNIT	mm
ABLIC Inc.	

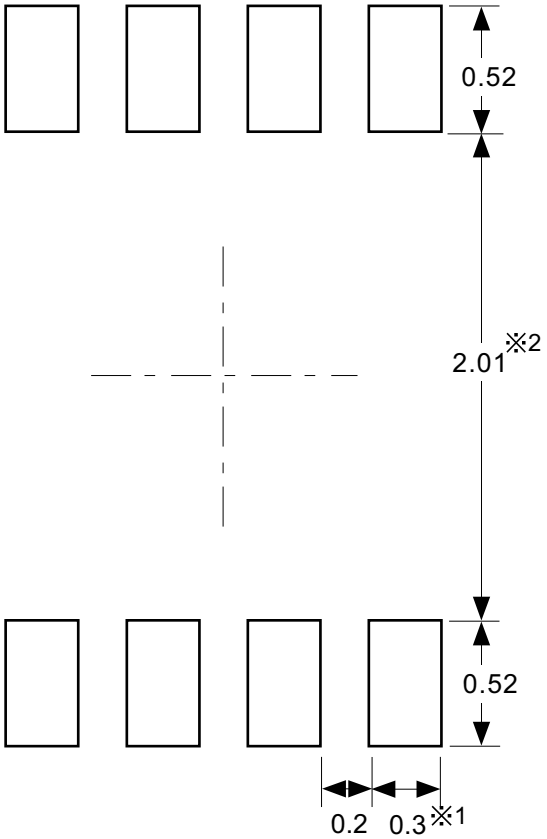


Enlarged drawing in the central part



No. PH008-A-R-SD-1.0

TITLE	SNT-8A-A-Reel		
No.	PH008-A-R-SD-1.0		
ANGLE		QTY.	5,000
UNIT	mm		
ABLIC Inc.			



※1. ランドパターンの幅に注意してください (0.25 mm min. / 0.30 mm typ.)。
※2. パッケージ中央にランドパターンを広げないでください (1.96 mm ~ 2.06 mm)。

注意 1. パッケージのモールド樹脂下にシルク印刷やハンダ印刷などしないでください。
2. パッケージ下の配線上のソルダーレジストなどの厚みをランドパターン表面から0.03 mm 以下にしてください。
3. マスク開口サイズと開口位置はランドパターンと合わせてください。
4. 詳細は〝SNTパッケージ活用の手引き〟を参照してください。

※1. Pay attention to the land pattern width (0.25 mm min. / 0.30 mm typ.).
※2. Do not widen the land pattern to the center of the package (1.96 mm to 2.06mm).

Caution 1. Do not do silkscreen printing and solder printing under the mold resin of the package.
2. The thickness of the solder resist on the wire pattern under the package should be 0.03 mm or less from the land pattern surface.
3. Match the mask aperture size and aperture position with the land pattern.
4. Refer to "SNT Package User's Guide" for details.

※1. 请注意焊盘模式的宽度 (0.25 mm min. / 0.30 mm typ.)。
※2. 请勿向封装中间扩展焊盘模式 (1.96 mm ~ 2.06 mm)。

注意 1. 请勿在树脂型封装的下面印刷丝网、焊锡。
2. 在封装下、布线上的阻焊膜厚度 (从焊盘模式表面起) 请控制在 0.03 mm 以下。
3. 钢网的开口尺寸和开口位置请与焊盘模式对齐。
4. 详细内容请参阅 "SNT 封装的应用指南"。

No. PH008-A-L-SD-4.1

TITLE	SNT-8A-A -Land Recommendation
No.	PH008-A-L-SD-4.1
ANGLE	
UNIT	mm
ABLIC Inc.	

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2.4-2019.07