S-5716 Series

LOW CURRENT CONSUMPTION BOTH POLES / UNIPOLAR DETECTION TYPE HALL IC

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Rev.1.1_00

The S-5716 Series, developed by CMOS technology, is a high-accuracy Hall IC that operates with low current consumption. The output voltage changes when the S-5716 Series detects the intensity level of flux density. Using the S-5716 Series with a magnet makes it possible to detect the open / close in various devices.
High-density mounting is possible by using the small SOT-23-3 package or the super small SNT-4A package.
Due to its high-accuracy magnetic characteristics, the S-5716 Series can make operation's dispersion in the system combined with magnet smaller.

Caution **This product is intended to use in general electronic devices such as consumer electronics, office equipment, and communications devices. Before using the product in medical equipment or automobile equipment including car audio, keyless entry and engine control unit, contact to SII is indispensable.**

■ Features

- Pole detection[*1]: Detection of both poles, south pole or north pole
- Detection logic for magnetism[*1]: Active "L", active "H"
- Output form[*1]: Nch open drain output, CMOS output
- Magnetic sensitivity: B_{OP} = 1.8 mT typ., 3.0 mT typ., 4.5 mT typ.
- Operating cycle (current consumption): Product with both poles detection
  50.50 ms (4 μA) typ.
  Product with south pole or north pole detection
  50.85 ms (2.6 μA) typ.
- Power supply voltage range: 2.7 V to 5.5 V
- Operation temperature range: Ta = –40°C to +85°C
- Lead-free (Sn 100%), halogen-free[*2]

***1**. The Option can be selected.
***2**. Refer to "■ **Product Name Structure**" for details.

■ Applications

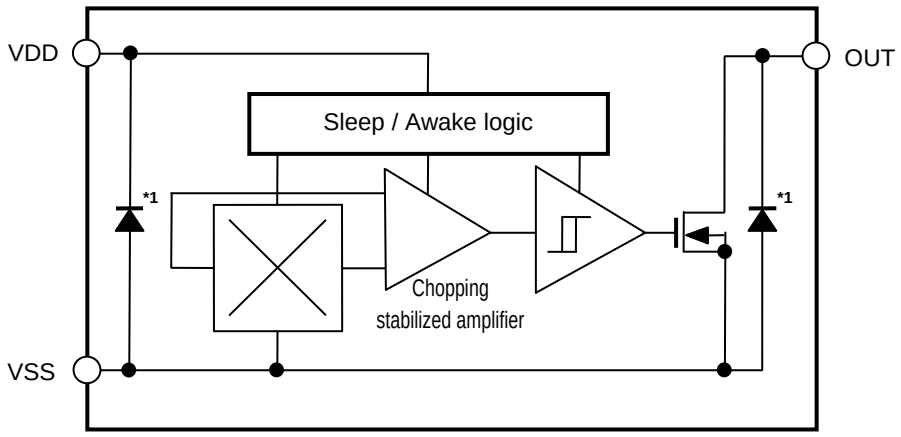
- Plaything, portable game
- Home appliance
- Housing equipment
- Industrial equipment

■ Packages

- SOT-23-3
- SNT-4A

■ Block Diagrams

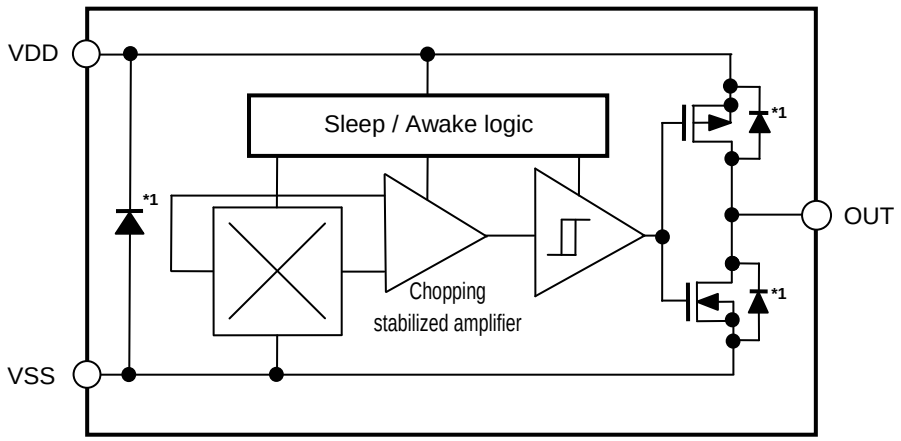
1. Nch open drain output product



***1.** Parasitic diode

Figure 1

2. CMOS output product



***1.** Parasitic diode

Figure 2

■ Product Name Structure

1. Product name

S-5716 A x x x x – xxxx U

Environmental code
- U : Lead-free (Sn 100%), halogen-free

Package name (abbreviation) and packing specifications*1
- M3T1 : SOT-23-3, Tape
- I4T1 : SNT-4A, Tape

Magnetic sensitivity
- 0 : B_{OP} = 1.8 mT typ.
- 1 : B_{OP} = 3.0 mT typ.
- 2 : B_{OP} = 4.5 mT typ.

Detection logic for magnetism
- L : Active "L"
- H : Active "H"

Pole detection
- D : Detection of both poles
- S : Detection of south pole
- N : Detection of north pole

Output form
- N : Nch open drain output
- C : CMOS output

Operating cycle
- A : t_{CYCLE} = 50.50 ms typ.
  (product with both poles detection)
  t_{CYCLE} = 50.85 ms typ.
  (product with south pole or north pole detection)

***1.** Refer to the tape specifications.

2. Packages

Table 1 Package Drawing Code

Package name	Dimension	Tape	Reel	Land
SOT-23-3	MP003-C-P-SD	MP003-C-C-SD	MP003-Z-R-SD	–
SNT-4A	PF004-A-P-SD	PF004-A-C-SD	PF004-A-R-SD	PF004-A-L-SD

3. Product name list

3. 1 SOT-23-3

3. 1. 1 Nch open drain output product

Table 2

Product Name	Operating Cycle (t_{CYCLE})	Output Form	Pole Detection	Detection Logic for Magnetism	Magnetic Sensitivity (B_{OP})
S-5716ANDL0-M3T1U	50.50 ms	Nch open drain output	Both poles	Active "L"	1.8 mT typ.
S-5716ANDL1-M3T1U	50.50 ms	Nch open drain output	Both poles	Active "L"	3.0 mT typ.
S-5716ANDL2-M3T1U	50.50 ms	Nch open drain output	Both poles	Active "L"	4.5 mT typ.
S-5716ANSL1-M3T1U	50.85 ms	Nch open drain output	South pole	Active "L"	3.0 mT typ.
S-5716ANSL2-M3T1U	50.85 ms	Nch open drain output	South pole	Active "L"	4.5 mT typ.

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

3. 1. 2 CMOS output product

Table 3

Product Name	Operating Cycle (t_{CYCLE})	Output Form	Pole Detection	Detection Logic for Magnetism	Magnetic Sensitivity (B_{OP})
S-5716ACDL0-M3T1U	50.50 ms	CMOS output	Both poles	Active "L"	1.8 mT typ.
S-5716ACDL1-M3T1U	50.50 ms	CMOS output	Both poles	Active "L"	3.0 mT typ.
S-5716ACDL2-M3T1U	50.50 ms	CMOS output	Both poles	Active "L"	4.5 mT typ.
S-5716ACDH0-M3T1U	50.50 ms	CMOS output	Both poles	Active "H"	1.8 mT typ.
S-5716ACDH1-M3T1U	50.50 ms	CMOS output	Both poles	Active "H"	3.0 mT typ.
S-5716ACDH2-M3T1U	50.50 ms	CMOS output	Both poles	Active "H"	4.5 mT typ.
S-5716ACSL1-M3T1U	50.85 ms	CMOS output	South pole	Active "L"	3.0 mT typ.
S-5716ACSL2-M3T1U	50.85 ms	CMOS output	South pole	Active "L"	4.5 mT typ.

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

3. 2 SNT-4A

3. 2. 1 Nch open drain output product

Table 4

Product Name	Operating Cycle (t_{CYCLE})	Output Form	Pole Detection	Detection Logic for Magnetism	Magnetic Sensitivity (B_{OP})
S-5716ANDL0-I4T1U	50.50 ms	Nch open drain output	Both poles	Active "L"	1.8 mT typ.
S-5716ANDL1-I4T1U	50.50 ms	Nch open drain output	Both poles	Active "L"	3.0 mT typ.
S-5716ANDL2-I4T1U	50.50 ms	Nch open drain output	Both poles	Active "L"	4.5 mT typ.
S-5716ANSL1-I4T1U	50.85 ms	Nch open drain output	South pole	Active "L"	3.0 mT typ.
S-5716ANSL2-I4T1U	50.85 ms	Nch open drain output	South pole	Active "L"	4.5 mT typ.

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

3. 2. 2 CMOS output product

Table 5

Product Name	Operating Cycle (t_{CYCLE})	Output Form	Pole Detection	Detection Logic for Magnetism	Magnetic Sensitivity (B_{OP})
S-5716ACDL0-I4T1U	50.50 ms	CMOS output	Both poles	Active "L"	1.8 mT typ.
S-5716ACDL1-I4T1U	50.50 ms	CMOS output	Both poles	Active "L"	3.0 mT typ.
S-5716ACDL2-I4T1U	50.50 ms	CMOS output	Both poles	Active "L"	4.5 mT typ.
S-5716ACDH0-I4T1U	50.50 ms	CMOS output	Both poles	Active "H"	1.8 mT typ.
S-5716ACDH1-I4T1U	50.50 ms	CMOS output	Both poles	Active "H"	3.0 mT typ.
S-5716ACDH2-I4T1U	50.50 ms	CMOS output	Both poles	Active "H"	4.5 mT typ.
S-5716ACSL1-I4T1U	50.85 ms	CMOS output	South pole	Active "L"	3.0 mT typ.
S-5716ACSL2-I4T1U	50.85 ms	CMOS output	South pole	Active "L"	4.5 mT typ.

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

■ Pin Configurations

1. SOT-23-3

SOT-23-3
Top view

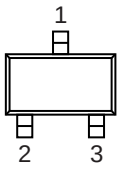


Figure 3

Table 6

Pin No.	Symbol	Description
1	VSS	GND pin
2	VDD	Power supply pin
3	OUT	Output pin

2. SNT-4A

SNT-4A
Top view

Figure 4

Table 7

Pin No.	Symbol	Description
1	VDD	Power supply pin
2	VSS	GND pin
3	NC*1	No connection
4	OUT	Output pin

***1.** The NC pin is electrically open.
The NC pin can be connected to VDD or VSS.

■ Absolute Maximum Ratings

Table 8

(Ta = +25°C unless otherwise specified)

Item		Symbol	Absolute Maximum Rating	Unit
Power supply voltage		V_{DD}	V_{SS} − 0.3 to V_{SS} + 7.0	V
Output current		I_{OUT}	±2.0	mA
Output voltage	Nch open drain output product	V_{OUT}	V_{SS} − 0.3 to V_{SS} + 7.0	V
	CMOS output product		V_{SS} − 0.3 to V_{DD} + 0.3	V
Power dissipation	SOT-23-3	P_D	430[*1]	mW
	SNT-4A		300[*1]	mW
Operating 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) 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.

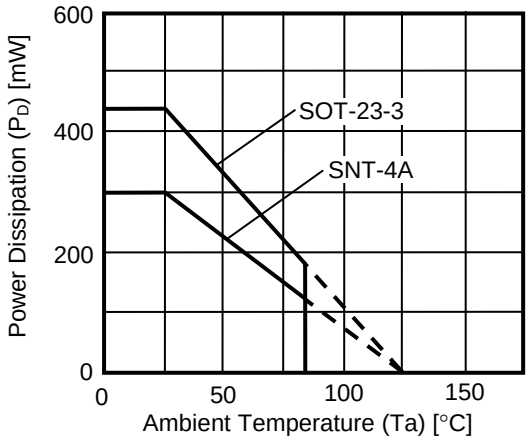


Figure 5 Power Dissipation of Package (When Mounted on Board)

■ Electrical Characteristics

1. Product with both poles detection

1. 1 S-5716AxDxx

Table 9

($Ta = +25°C$, $V_{DD} = 5.0$ V, $V_{SS} = 0$ V unless otherwise specified)

Item	Symbol	Condition		Min.	Typ.	Max.	Unit	Test Circuit
Power supply voltage	V_{DD}	–		2.7	5.0	5.5	V	–
Current consumption	I_{DD}	Average value		–	4.0	8.0	µA	1
Output voltage	V_{OUT}	Nch open drain output product	Output transistor Nch, I_{OUT} = 2 mA	–	–	0.4	V	2
		CMOS output product	Output transistor Nch, I_{OUT} = 2 mA	–	–	0.4	V	2
			Output transistor Pch, I_{OUT} = −2 mA	V_{DD} − 0.4	–	–	V	3
Leakage current	I_{LEAK}	Nch open drain output product Output transistor Nch, V_{OUT} = 5.5 V		–	–	1	µA	4
Awake mode time	t_{AW}	–		–	0.10	–	ms	–
Sleep mode time	t_{SL}	–		–	50.40	–	ms	–
Operating cycle	t_{CYCLE}	t_{AW} + t_{SL}		–	50.50	100.00	ms	–

2. Product with south pole or north pole detection

2. 1 S-5716AxSxx, S-5716AxNxx

Table 10

($Ta = +25°C$, $V_{DD} = 5.0$ V, $V_{SS} = 0$ V unless otherwise specified)

Item	Symbol	Condition		Min.	Typ.	Max.	Unit	Test Circuit
Power supply voltage	V_{DD}	–		2.7	5.0	5.5	V	–
Current consumption	I_{DD}	Average value		–	2.6	5.0	µA	1
Output voltage	V_{OUT}	Nch open drain output product	Output transistor Nch, I_{OUT} = 2 mA	–	–	0.4	V	2
		CMOS output product	Output transistor Nch, I_{OUT} = 2 mA	–	–	0.4	V	2
			Output transistor Pch, I_{OUT} = −2 mA	V_{DD} − 0.4	–	–	V	3
Leakage current	I_{LEAK}	Nch open drain output product Output transistor Nch, V_{OUT} = 5.5 V		–	–	1	µA	4
Awake mode time	t_{AW}	–		–	0.05	–	ms	–
Sleep mode time	t_{SL}	–		–	50.80	–	ms	–
Operating cycle	t_{CYCLE}	t_{AW} + t_{SL}		–	50.85	100.00	ms	–

■ Magnetic Characteristics

1. Product with both poles detection

1. 1 B_{OP} = 1.8 mT typ.

Table 11

(Ta = +25°C, V_{DD} = 5.0 V, V_{SS} = 0 V unless otherwise specified)

Item		Symbol	Condition	Min.	Typ.	Max.	Unit	Test Circuit
Operating point*1	South pole	B_{OPS}	–	0.9	1.8	2.7	mT	5
	North pole	B_{OPN}	–	–2.7	–1.8	–0.9	mT	5
Release point*2	South pole	B_{RPS}	–	0.3	1.2	2.2	mT	5
	North pole	B_{RPN}	–	–2.2	–1.2	–0.3	mT	5
Hysteresis width*3	South pole	B_{HYSS}	$B_{HYSS} = B_{OPS} - B_{RPS}$	—	0.6	—	mT	5
	North pole	B_{HYSN}	$B_{HYSN} = \|B_{OPN} - B_{RPN}\|$	—	0.6	—	mT	5

1. 2 B_{OP} = 3.0 mT typ.

Table 12

(Ta = +25°C, V_{DD} = 5.0 V, V_{SS} = 0 V unless otherwise specified)

Item		Symbol	Condition	Min.	Typ.	Max.	Unit	Test Circuit
Operating point*1	South pole	B_{OPS}	–	1.4	3.0	4.0	mT	5
	North pole	B_{OPN}	–	–4.0	–3.0	–1.4	mT	5
Release point*2	South pole	B_{RPS}	–	1.1	2.2	3.7	mT	5
	North pole	B_{RPN}	–	–3.7	–2.2	–1.1	mT	5
Hysteresis width*3	South pole	B_{HYSS}	$B_{HYSS} = B_{OPS} - B_{RPS}$	—	0.8	—	mT	5
	North pole	B_{HYSN}	$B_{HYSN} = \|B_{OPN} - B_{RPN}\|$	—	0.8	—	mT	5

1. 3 B_{OP} = 4.5 mT typ.

Table 13

(Ta = +25°C, V_{DD} = 5.0 V, V_{SS} = 0 V unless otherwise specified)

Item		Symbol	Condition	Min.	Typ.	Max.	Unit	Test Circuit
Operating point*1	South pole	B_{OPS}	–	2.5	4.5	6.0	mT	5
	North pole	B_{OPN}	–	–6.0	–4.5	–2.5	mT	5
Release point*2	South pole	B_{RPS}	–	2.0	3.5	5.5	mT	5
	North pole	B_{RPN}	–	–5.5	–3.5	–2.0	mT	5
Hysteresis width*3	South pole	B_{HYSS}	$B_{HYSS} = B_{OPS} - B_{RPS}$	—	1.0	—	mT	5
	North pole	B_{HYSN}	$B_{HYSN} = \|B_{OPN} - B_{RPN}\|$	—	1.0	—	mT	5

2. Product with south pole detection

2. 1 B_{OP} = 1.8 mT typ.

Table 14

($Ta = +25°C$, $V_{DD} = 5.0$ V, $V_{SS} = 0$ V unless otherwise specified)

Item		Symbol	Condition	Min.	Typ.	Max.	Unit	Test Circuit
Operating point*1	South pole	B_{OPS}	–	0.9	1.8	2.7	mT	5
Release point*2	South pole	B_{RPS}	–	0.3	1.2	2.2	mT	5
Hysteresis width*3	South pole	B_{HYSS}	$B_{HYSS} = B_{OPS} - B_{RPS}$	—	0.6	—	mT	5

2. 2 B_{OP} = 3.0 mT typ.

Table 15

($Ta = +25°C$, $V_{DD} = 5.0$ V, $V_{SS} = 0$ V unless otherwise specified)

Item		Symbol	Condition	Min.	Typ.	Max.	Unit	Test Circuit
Operating point*1	South pole	B_{OPS}	–	1.4	3.0	4.0	mT	5
Release point*2	South pole	B_{RPS}	–	1.1	2.2	3.7	mT	5
Hysteresis width*3	South pole	B_{HYSS}	$B_{HYSS} = B_{OPS} - B_{RPS}$	—	0.8	—	mT	5

2. 3 B_{OP} = 4.5 mT typ.

Table 16

($Ta = +25°C$, $V_{DD} = 5.0$ V, $V_{SS} = 0$ V unless otherwise specified)

Item		Symbol	Condition	Min.	Typ.	Max.	Unit	Test Circuit
Operating point*1	South pole	B_{OPS}	–	2.5	4.5	6.0	mT	5
Release point*2	South pole	B_{RPS}	–	2.0	3.5	5.5	mT	5
Hysteresis width*3	South pole	B_{HYSS}	$B_{HYSS} = B_{OPS} - B_{RPS}$	—	1.0	—	mT	5

3. Product with north pole detection

3. 1 B_{OP} = 1.8 mT typ.

Table 17

($Ta = +25°C$, $V_{DD} = 5.0$ V, $V_{SS} = 0$ V unless otherwise specified)

Item		Symbol	Condition	Min.	Typ.	Max.	Unit	Test Circuit
Operating point*1	North pole	B_{OPN}	–	–2.7	–1.8	–0.9	mT	5
Release point*2	North pole	B_{RPN}	–	–2.2	–1.2	–0.3	mT	5
Hysteresis width*3	North pole	B_{HYSN}	$B_{HYSN} = \|B_{OPN} - B_{RPN}\|$	—	0.6	—	mT	5

3. 2 B_{OP} = 3.0 mT typ.

Table 18

($Ta = +25°C$, $V_{DD} = 5.0$ V, $V_{SS} = 0$ V unless otherwise specified)

Item		Symbol	Condition	Min.	Typ.	Max.	Unit	Test Circuit
Operating point*1	North pole	B_{OPN}	–	–4.0	–3.0	–1.4	mT	5
Release point*2	North pole	B_{RPN}	–	–3.7	–2.2	–1.1	mT	5
Hysteresis width*3	North pole	B_{HYSN}	$B_{HYSN} = \|B_{OPN} - B_{RPN}\|$	—	0.8	—	mT	5

3. 3 B_{OP} = 4.5 mT typ.

Table 19

($Ta = +25°C$, $V_{DD} = 5.0$ V, $V_{SS} = 0$ V unless otherwise specified)

Item		Symbol	Condition	Min.	Typ.	Max.	Unit	Test Circuit
Operating point*1	North pole	B_{OPN}	–	–6.0	–4.5	–2.5	mT	5
Release point*2	North pole	B_{RPN}	–	–5.5	–3.5	–2.0	mT	5
Hysteresis width*3	North pole	B_{HYSN}	$B_{HYSN} = \|B_{OPN} - B_{RPN}\|$	—	1.0	—	mT	5

***1.** B_{OPN}, B_{OPS}: Operating points
The operating points are the values of magnetic flux density when the output voltage (V_{OUT}) is inverted after the magnetic flux density applied to the S-5716 Series by the magnet (north or south pole) is increased (the magnet is moved closer).
Even when the magnetic flux density exceeds B_{OPN} or B_{OPS}, V_{OUT} retains the status.

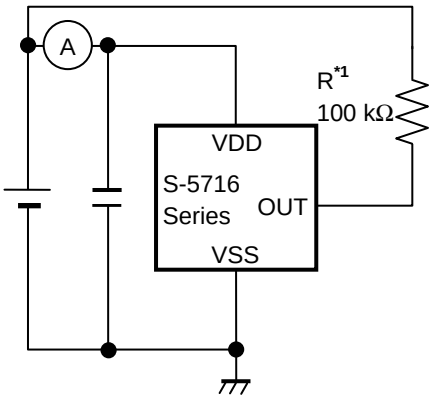
***2.** B_{RPN}, B_{RPS}: Release points
The release points are the values of magnetic flux density when the output voltage (V_{OUT}) is inverted after the magnetic flux density applied to the S-5716 Series by the magnet (north or south pole) is decreased (the magnet is moved further away).
Even when the magnetic flux density falls below B_{RPN} or B_{RPS}, V_{OUT} retains the status.

***3.** B_{HYSN}, B_{HYSS}: Hysteresis widths
B_{HYSN} and B_{HYSS} are the difference between B_{OPN} and B_{RPN}, and B_{OPS} and B_{RPS}, respectively.

Remark The unit of magnetic density mT can be converted by using the formula 1 mT = 10 Gauss.

■ Test Circuits

1.



1. Resistor (R) is unnecessary for the CMOS output product.

Figure 6

2.

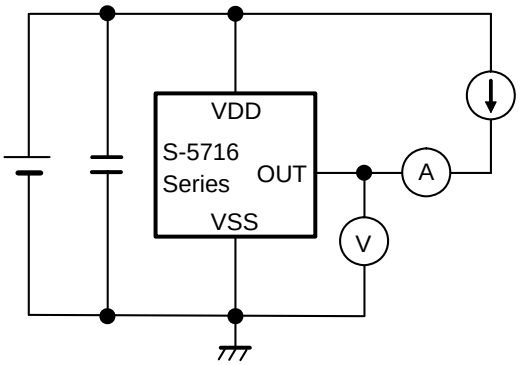


Figure 7

3.

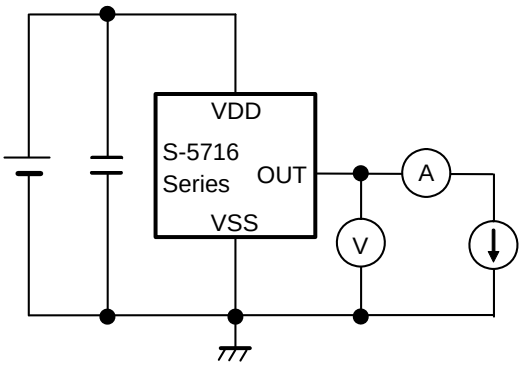


Figure 8

4.

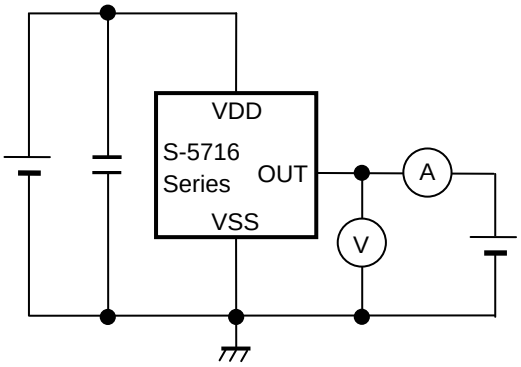
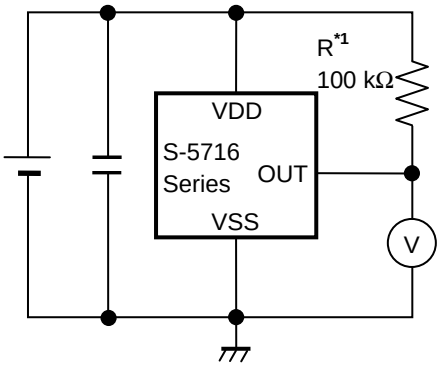


Figure 9

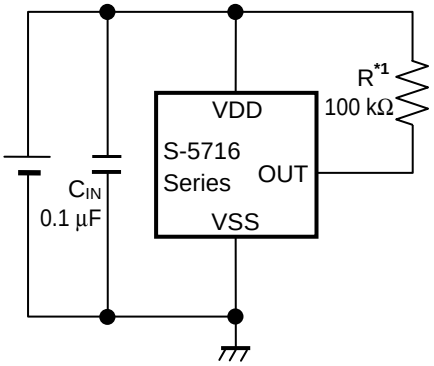
5.



1. Resistor (R) is unnecessary for the CMOS output product.

Figure 10

■ Standard Circuit



***1.** Resistor (R) is unnecessary for the CMOS output product.

Figure 11

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

■ Operation

1. Direction of applied magnetic flux

The S-5716 Series detects the flux density which is vertical to the marking surface.
In products with both poles detection, the output voltage (V_{OUT}) is inverted when the south or north pole is moved closer to the marking surface.
In products with south pole detection, the output voltage (V_{OUT}) is inverted when the south pole is moved closer to the marking surface.
In products with north pole detection, the output voltage (V_{OUT}) is inverted when the north pole is moved closer to the marking surface.
Figure 12, 13 show the direction in which magnetic flux is being applied.

1. 1 SOT-23-3

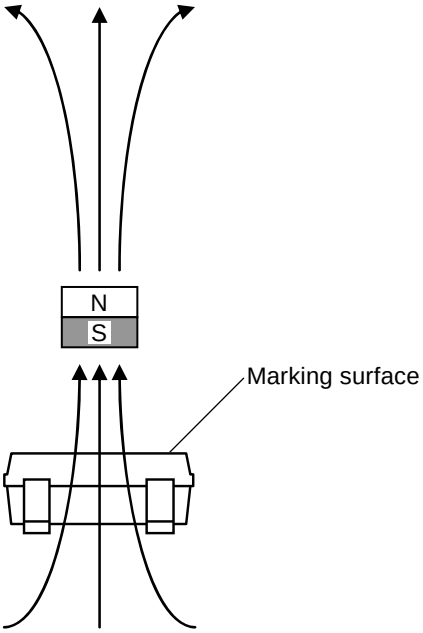


Figure 12

1. 2 SNT-4A

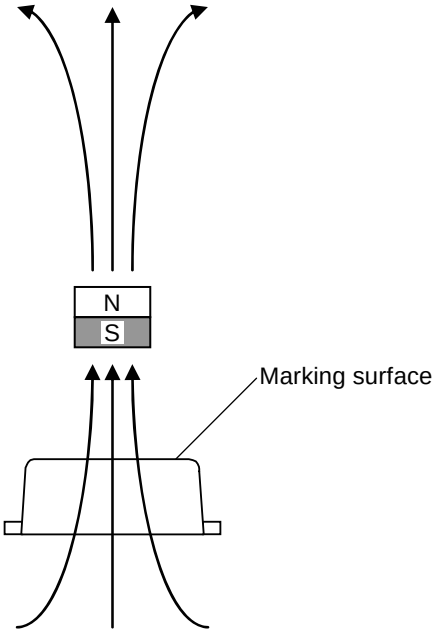


Figure 13

2. Position of Hall sensor

Figure 14, 15 show the position of Hall sensor.
The center of this Hall sensor is located in the area indicated by a circle, which is in the center of a package as described below.
The following also shows the distance (typ. value) between the marking surface and the chip surface of a package.

2. 1 SOT-23-3

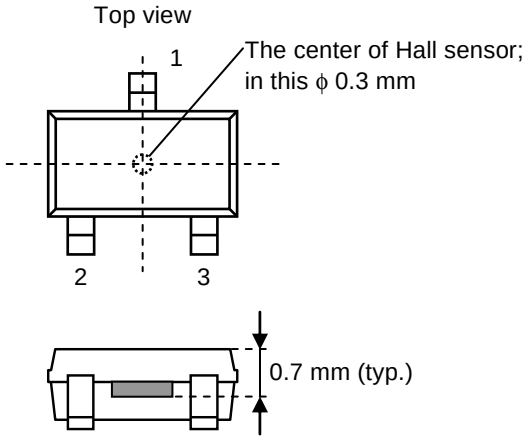


Figure 14

2. 2 SNT-4A

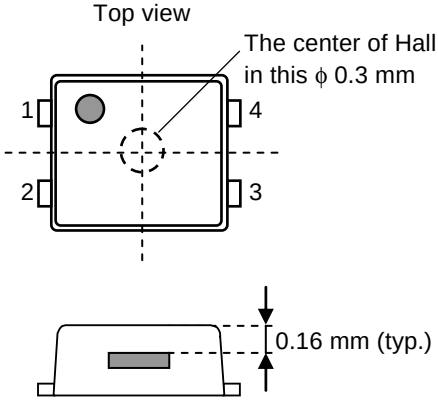


Figure 15

3. Basic operation

The S-5716 Series changes the output voltage level (V_{OUT}) according to the level of the magnetic flux density (north or south pole) applied by a magnet.
The following explains the operation when the magnetism detection logic is active "L".

3. 1 Products with detection of both poles

When the magnetic flux density vertical to the marking surface exceeds B_{OPN} or B_{OPS} after the south or north pole of a magnet is moved closer to the marking surface of the S-5716 Series, V_{OUT} changes from "H" to "L". When the south or north pole of a magnet is moved further away from the marking surface of the S-5716 Series and the magnetic flux density is lower than B_{RPN} or B_{RPS}, V_{OUT} changes from "L" to "H".
Figure 16 shows the relationship between the magnetic flux density and V_{OUT}.

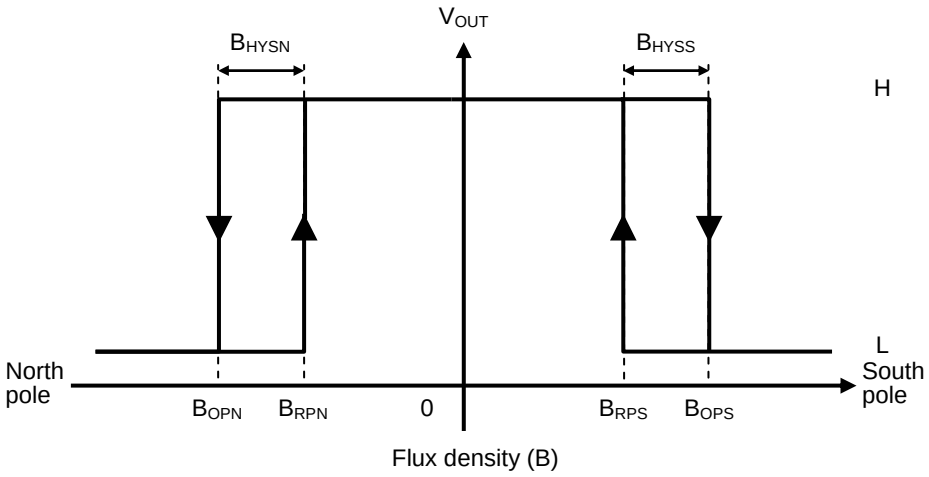


Figure 16

3. 2 Products with detection of south pole

When the magnetic flux density vertical to the marking surface exceeds B_{OPS} after the south pole of a magnet is moved closer to the marking surface of the S-5716 Series, V_{OUT} changes from "H" to "L". When the south pole of a magnet is moved further away from the marking surface of the S-5716 Series and the magnetic flux density is lower than B_{RPS}, V_{OUT} changes from "L" to "H".
Figure 17 shows the relationship between the magnetic flux density and V_{OUT}.

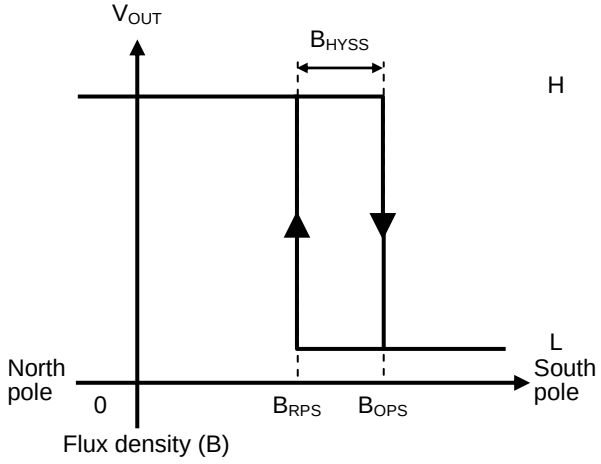


Figure 17

3. 3 Products with detection of north pole

When the magnetic flux density vertical to the marking surface exceeds B_{OPN} after the north pole of a magnet is moved closer to the marking surface of the S-5716 Series, V_{OUT} changes from "H" to "L". When the north pole of a magnet is moved further away from the marking surface of the S-5716 Series and the magnetic flux density is lower than B_{RPN}, V_{OUT} changes from "L" to "H".
Figure 18 shows the relationship between the magnetic flux density and V_{OUT}.

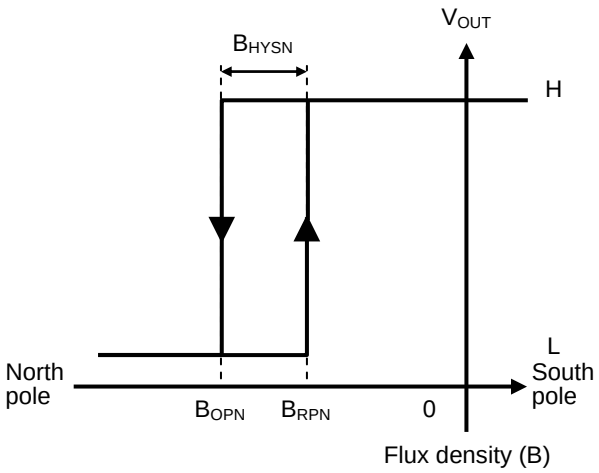


Figure 18

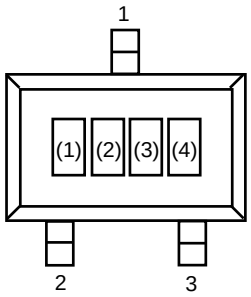
■ Precautions

- If the impedance of the power supply is high, the IC may malfunction due to a supply voltage drop caused by through-type current. Take care with the pattern wiring to ensure that the impedance of the power supply is low.
- Note that the IC may malfunction if the power supply voltage rapidly changes.
- Do not apply an electrostatic discharge to this IC that exceeds the performance ratings of the built-in electrostatic protection circuit.
- Large stress on this IC may affect on the magnetic characteristics. Avoid large stress which is caused by bend and distortion during mounting the IC on a board or handle after mounting.
- SII claims no responsibility for any disputes arising out of or in connection with any infringement by products including this IC of patents owned by a third party.

■ Marking Specifications

1. SOT-23-3

SOT-23-3
Top view



(1) to (3) : Product code (Refer to **Product name vs. Product code**.)
(4) : Lot number

Product name vs. Product code

1. 1 Nch open drain output product

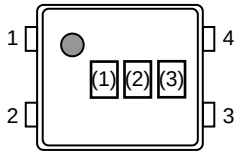
Product Name	Product Code		
	(1)	(2)	(3)
S-5716ANDL0-M3T1U	X	3	C
S-5716ANDL1-M3T1U	X	2	D
S-5716ANDL2-M3T1U	X	3	E
S-5716ANSL1-M3T1U	X	2	E
S-5716ANSL2-M3T1U	X	3	G

1. 2 CMOS output product

Product Name	Product Code		
	(1)	(2)	(3)
S-5716ACDL0-M3T1U	X	3	B
S-5716ACDL1-M3T1U	X	2	F
S-5716ACDL2-M3T1U	X	3	D
S-5716ACDH0-M3T1U	X	3	H
S-5716ACDH1-M3T1U	X	3	A
S-5716ACDH2-M3T1U	X	3	I
S-5716ACSL1-M3T1U	X	2	G
S-5716ACSL2-M3T1U	X	3	F

2. SNT-4A

SNT-4A
Top view



(1) to (3) : Product code (Refer to **Product name vs. Product code**.)

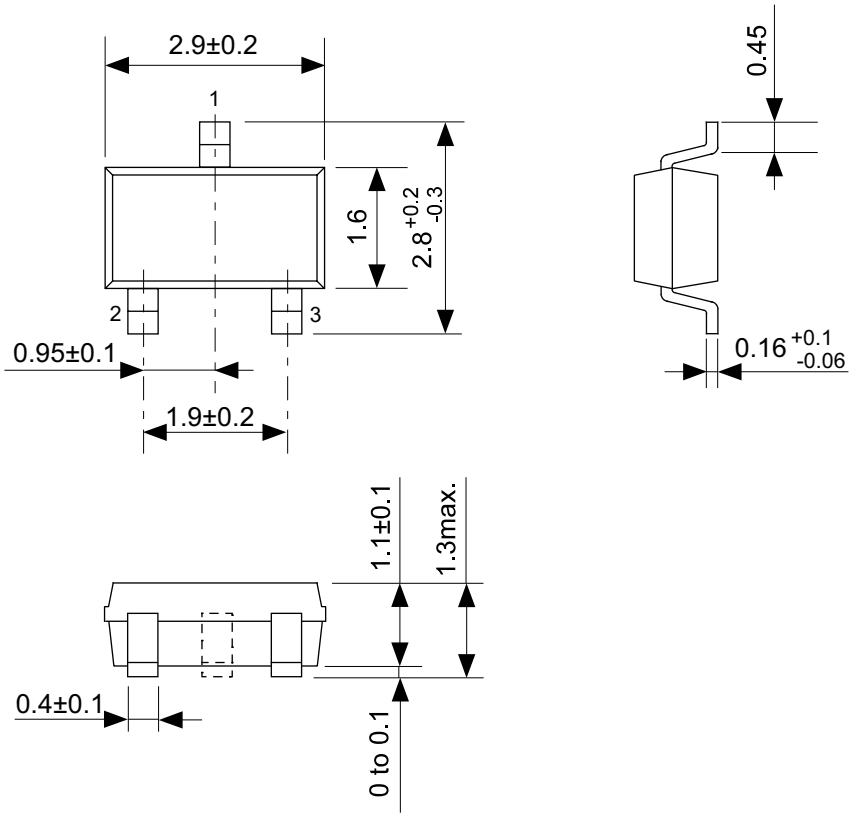
Product name vs. Product code

2. 1 Nch open drain output product

Product Name	Product Code		
	(1)	(2)	(3)
S-5716ANDL0-I4T1U	X	3	C
S-5716ANDL1-I4T1U	X	2	D
S-5716ANDL2-I4T1U	X	3	E
S-5716ANSL1-I4T1U	X	2	E
S-5716ANSL2-I4T1U	X	3	G

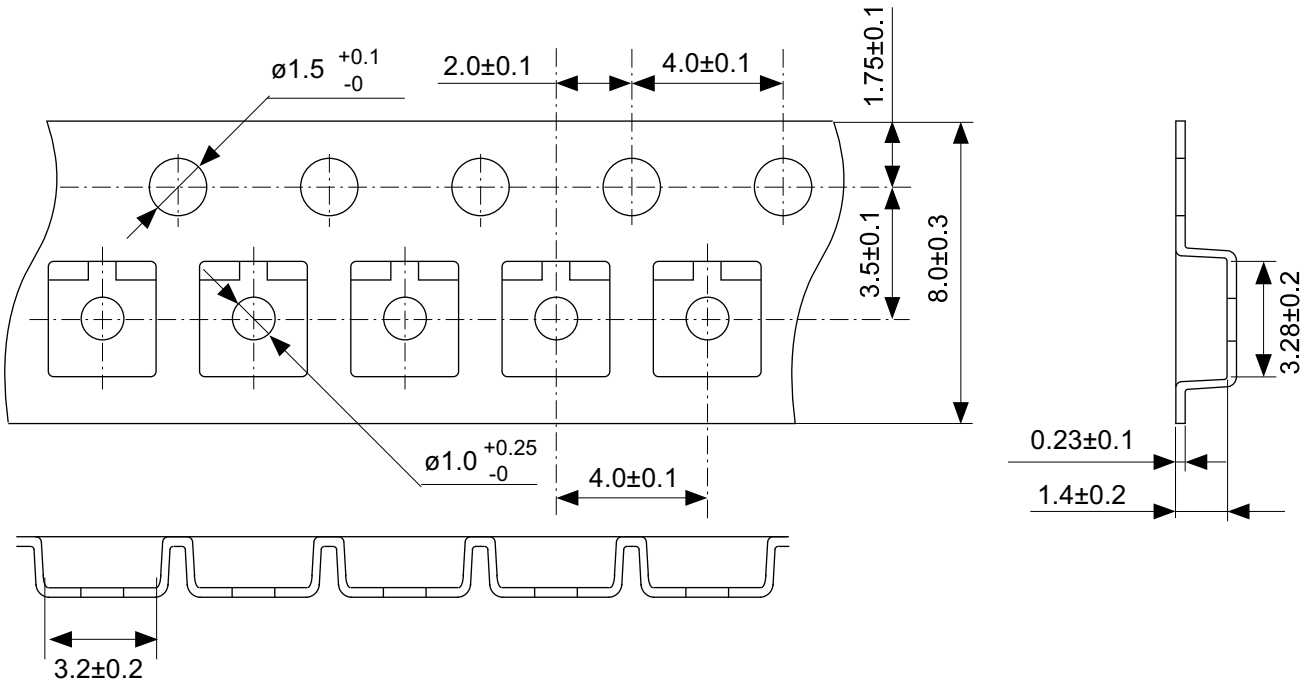
2. 2 CMOS output product

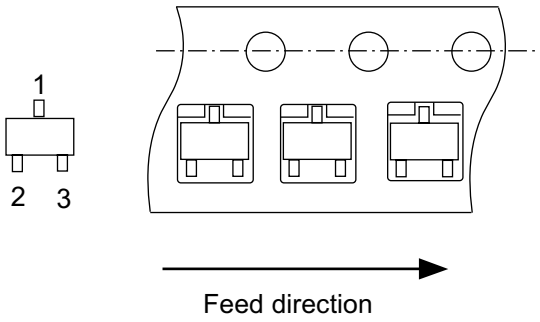
Product Name	Product Code		
	(1)	(2)	(3)
S-5716ACDL0-I4T1U	X	3	B
S-5716ACDL1-I4T1U	X	2	F
S-5716ACDL2-I4T1U	X	3	D
S-5716ACDH0-I4T1U	X	3	H
S-5716ACDH1-I4T1U	X	3	A
S-5716ACDH2-I4T1U	X	3	I
S-5716ACSL1-I4T1U	X	2	G
S-5716ACSL2-I4T1U	X	3	F



No. MP003-C-P-SD-1.0

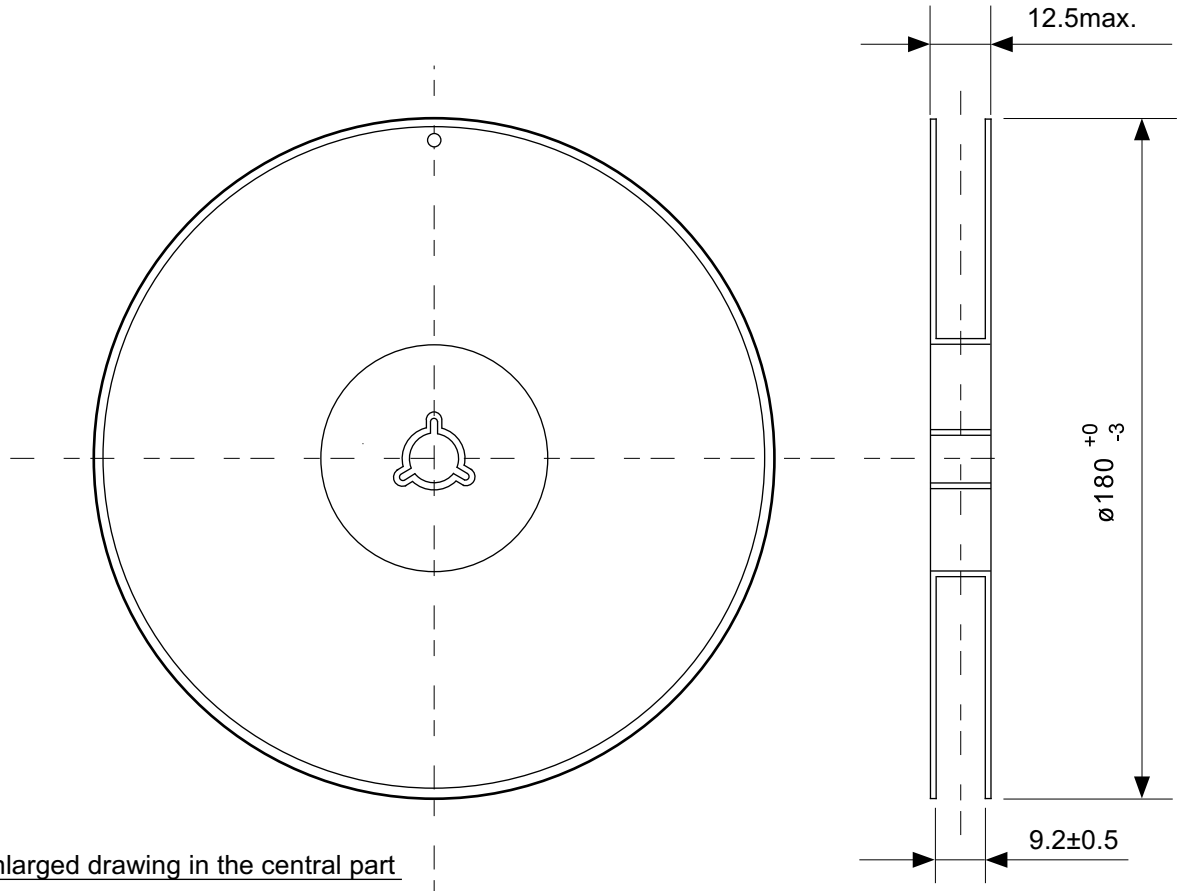
TITLE	SOT233-C-PKG Dimensions
No.	MP003-C-P-SD-1.0
SCALE	
UNIT	mm
Seiko Instruments Inc.	



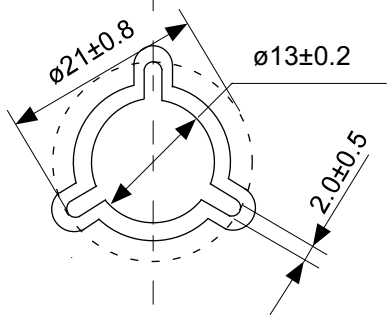


No. MP003-C-C-SD-2.0

TITLE	SOT233-C-Carrier Tape
No.	MP003-C-C-SD-2.0
SCALE	
UNIT	mm
Seiko Instruments Inc.	

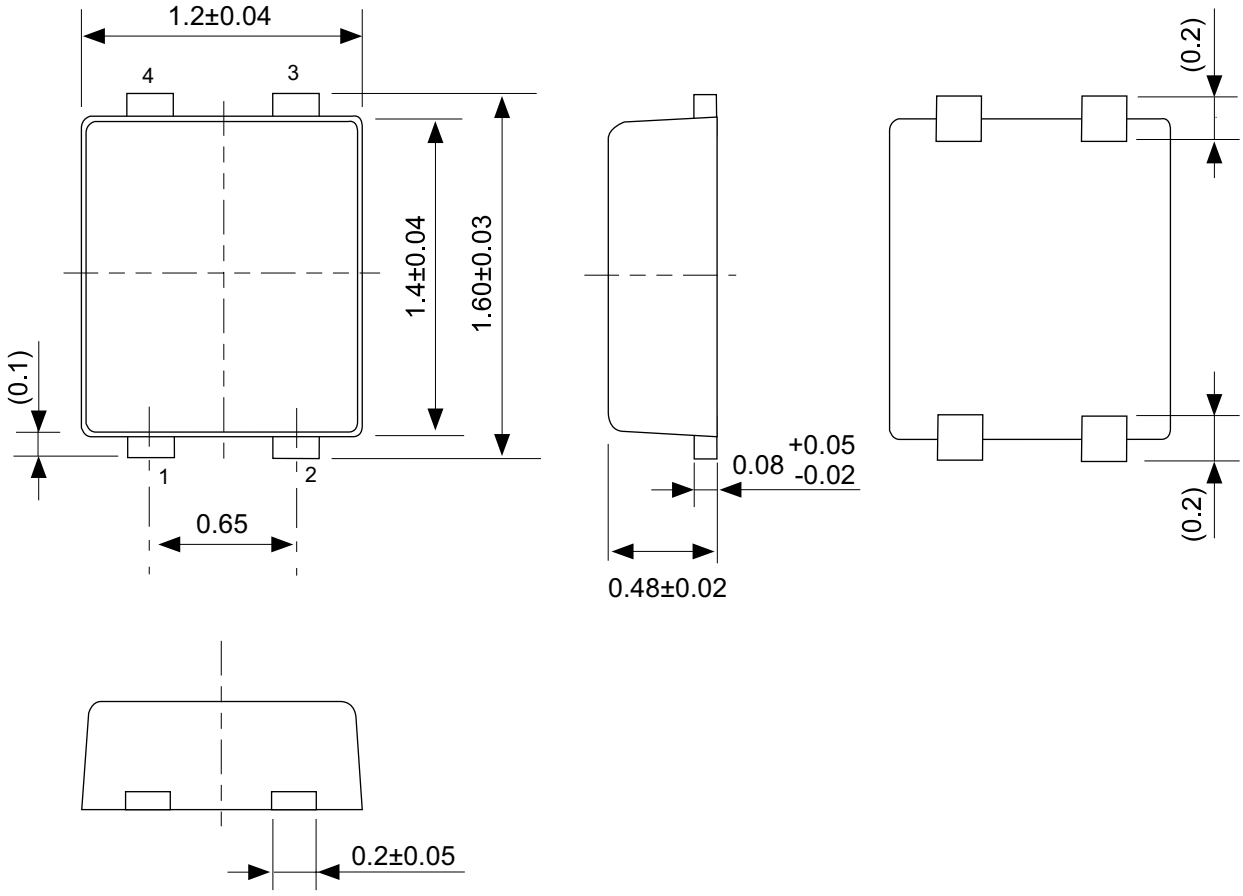


Enlarged drawing in the central part



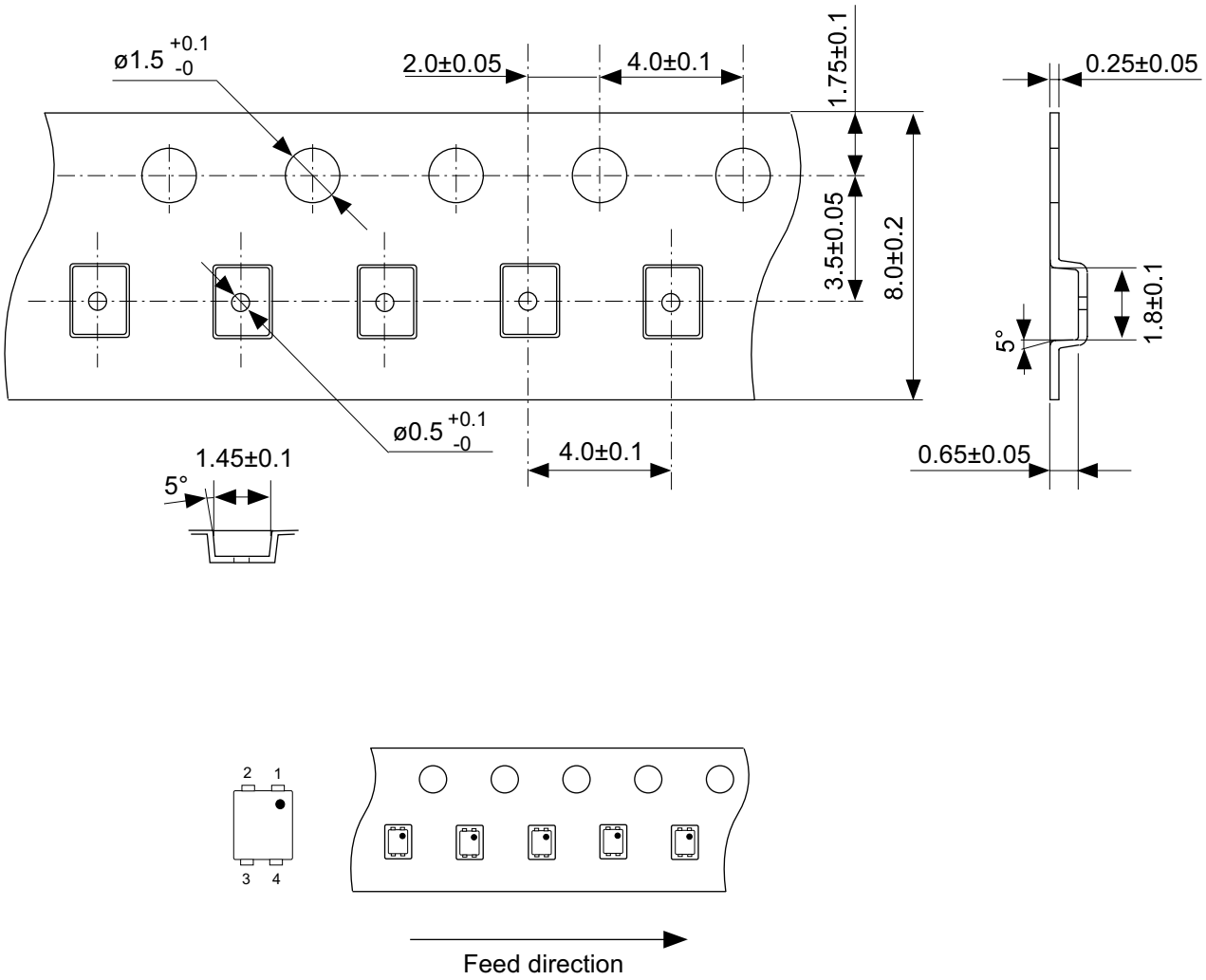
No. MP003-Z-R-SD-1.0

TITLE	SOT233-C-Reel		
No.	MP003-Z-R-SD-1.0		
SCALE		QTY.	3,000
UNIT	mm		
Seiko Instruments Inc.			



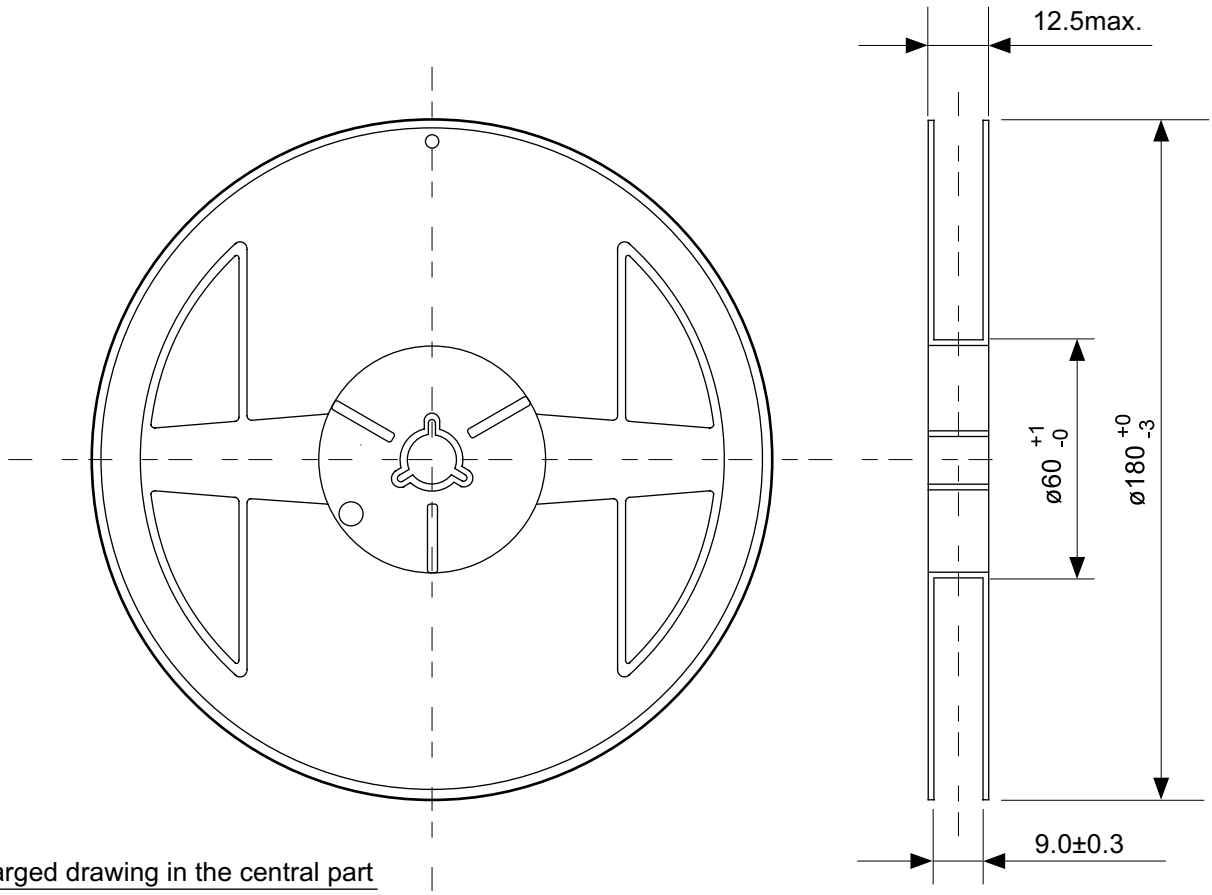
No. PF004-A-P-SD-4.0

TITLE	SNT-4A-A-PKG Dimensions
No.	PF004-A-P-SD-4.0
SCALE	
UNIT	mm
Seiko Instruments Inc.	

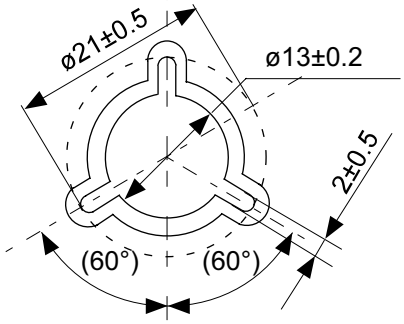


No. PF004-A-C-SD-1.0

TITLE	SNT-4A-A-Carrier Tape
No.	PF004-A-C-SD-1.0
SCALE	
UNIT	mm
Seiko Instruments Inc.	

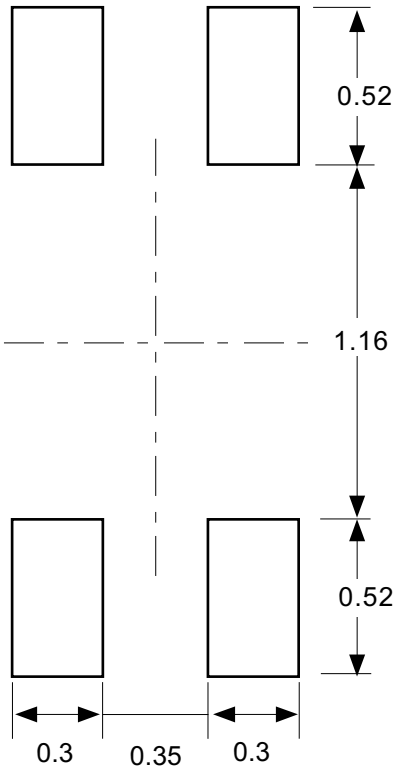


Enlarged drawing in the central part



No. PF004-A-R-SD-1.0

TITLE	SNT-4A-A-Reel		
No.	PF004-A-R-SD-1.0		
SCALE		QTY.	5,000
UNIT	mm		
Seiko Instruments Inc.			



Caution Making the wire pattern under the package is possible. However, note that the package may be upraised due to the thickness made by the silk screen printing and of a solder resist on the pattern because this package does not have the standoff.

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No. PF004-A-L-SD-3.0

TITLE	SNT-4A-A-Land Recommendation
No.	PF004-A-L-SD-3.0
SCALE	
UNIT	mm
Seiko Instruments Inc.	

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