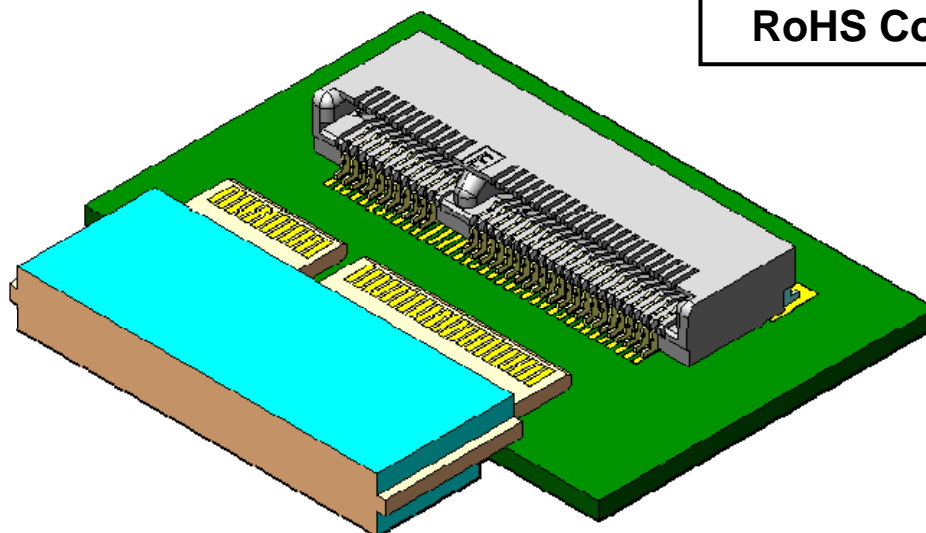




SM3 Series

RoHS Compliant

The “SM3 Series” is a PCI-SIG PCI Express® M.2 Specification compatible, card edge connector into which multiple modules equipped on notebook PCs and tablet PCs such as Wi-Fi®, Bluetooth®, SSD, and others can be inserted.

PCI Express® is a registered trademark of PCI-SIG.

Wi-Fi® is a registered trademark of Wi-Fi Alliance.

Bluetooth® is a registered trademark of Bluetooth SIG.

Features

- Compliant with PCI Express M.2 Specification and enables transmission of PCIe Gen3, USB3.0, DisplayPort, SATA standard, and others. (Note 1)
- 0.5mm pitch (2 row), 67 positions, compact card edge connector.
- Available in five types: three on-board types and two sunk-into-the-board types.
Products with 4.1mm product height can mount 1mm height parts on the bottom side of the module.
- Board fixing method for sunk-into-the-board products are SMT type and through-hole type and either can be selected according to the board layout.
- Card edge connector into which multiple modules can be inserted and available in 4 types of polarizing keys by changing the mold.

(Note 1) Polarizing keys are assigned according to application. For more information, please refer to PCI Express M.2 Specification.

Applicable Markets

Notebook PC, tablet PC, portable game devices, STB, and others (SSD, wireless module use)

General Specifications

- No. of Contacts: 67 positions
- Contact Resistance: 55m Ω max.
- Dielectric Withstanding Voltage:
AC300Vr.m.s for 1 minute
- Operating Temperature:
-40 Deg. C ~ +80 Deg. C
- Rated Current: 0.5A per pin
- Insulation Resistance: 500M Ω min. (initial)
- Mating Cycles: 60 times

Materials and Finishes

- Card Edge Connector

Component	Material / Finish
Hold-down	Copper alloy / Sn plating over Ni
Upper Contact	Contact area: Copper alloy / Au plating over Ni Terminal area: Copper alloy / Au flash plating over Ni
Lower Contact	Contact area: Copper alloy / Au plating over Ni Terminal area: Copper alloy / Au flash plating over Ni
Insulator	Heat resistant plastic

Ordering Information

- Card Edge Connector

SM3 Z S 067 U 310 * * * R****

Series

Reeled Quantity

Z: Low Insertion
Force Type

Modification Code

S: Standard Mounting Type

Polarizing Key: A / B / E / M

No. of Contacts

Contact Area Finish
A: Au 0.13 μ m min.
B: Au 0.25 μ m min.

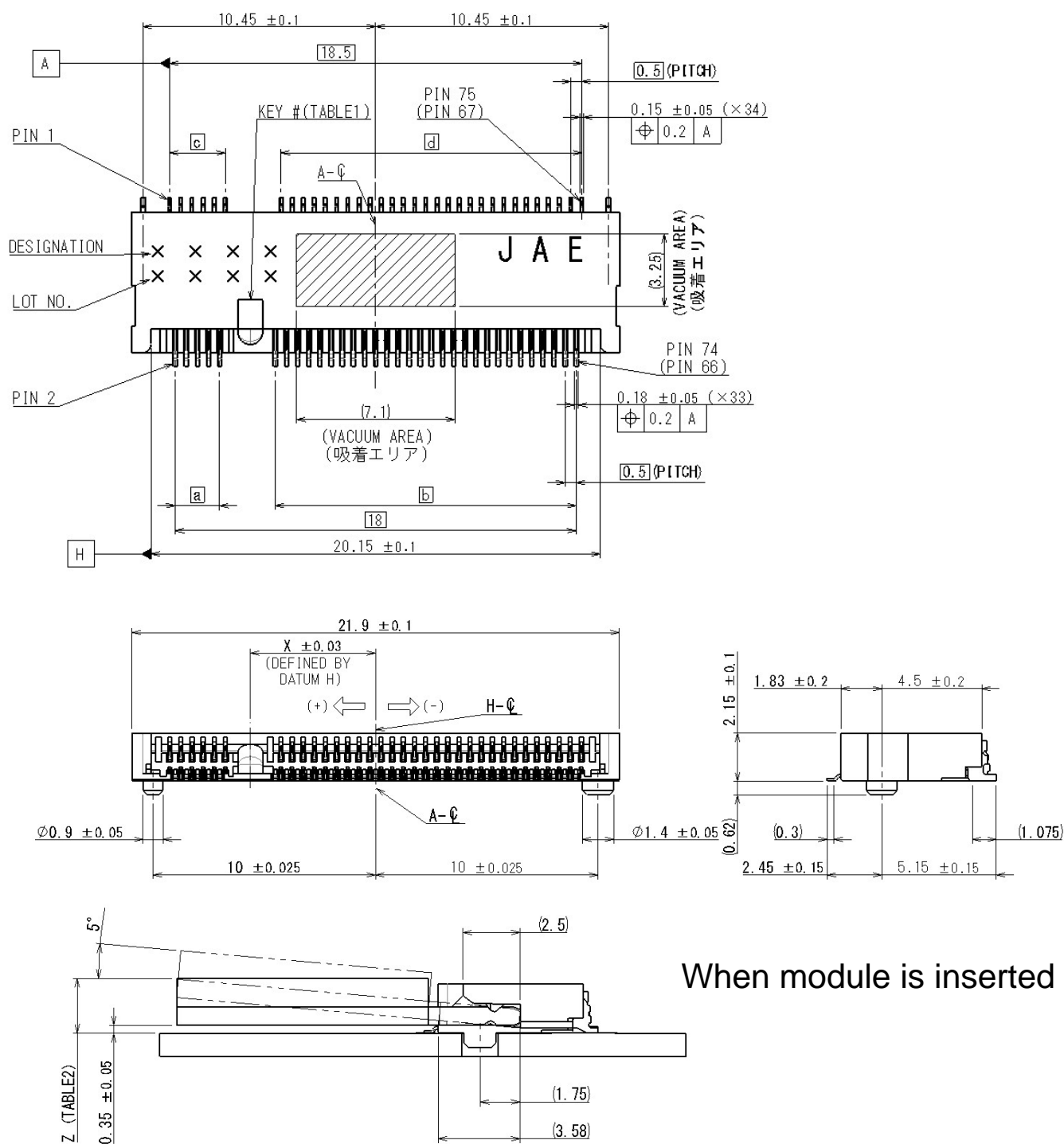
U: On-board Mounting Type
B: Sunk-into-the-board Type

Product Height
120: 1.20mm
215: 2.15mm
310: 3.10mm
410: 4.10mm

Product Drawing

Part Number: SM3ZS067U215**

(Product Height: 2.15mm)



When module is inserted

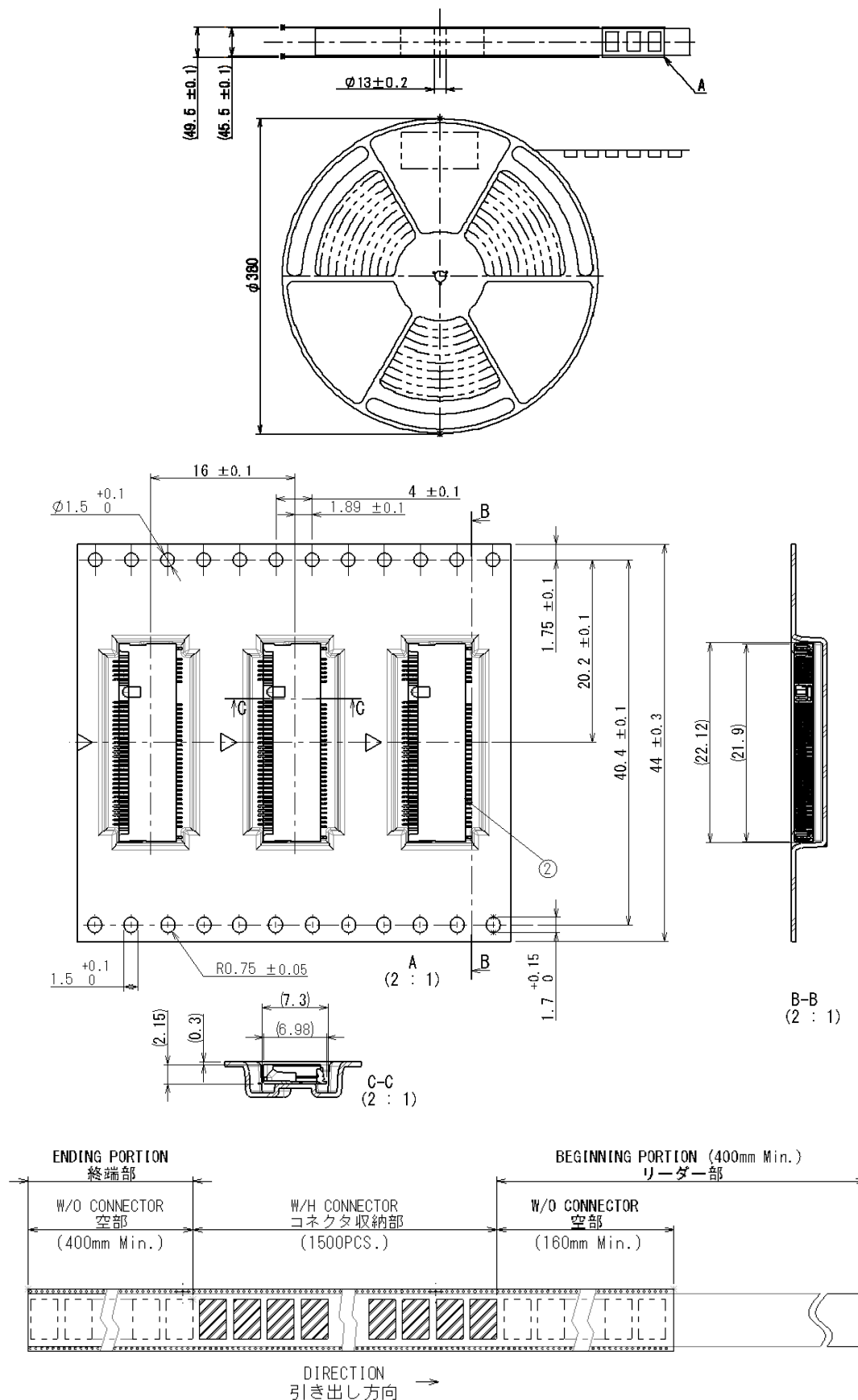
KEY#	X	a	b	c	d
B	+5.625	2	13.5	2.5	13.5
E	+2.625	5	10.5	5.5	10.5

Module Height	Z
MAX 1.2mm	MAX 3.55mm
MAX 1.35mm	MAX 3.70mm
MAX 1.5mm	MAX 3.85mm

* Please refer to product drawing when considering the use of this product.

Product Drawing

Part Number: SM3ZS067U215**R1500
(Product Height: 2.15mm)

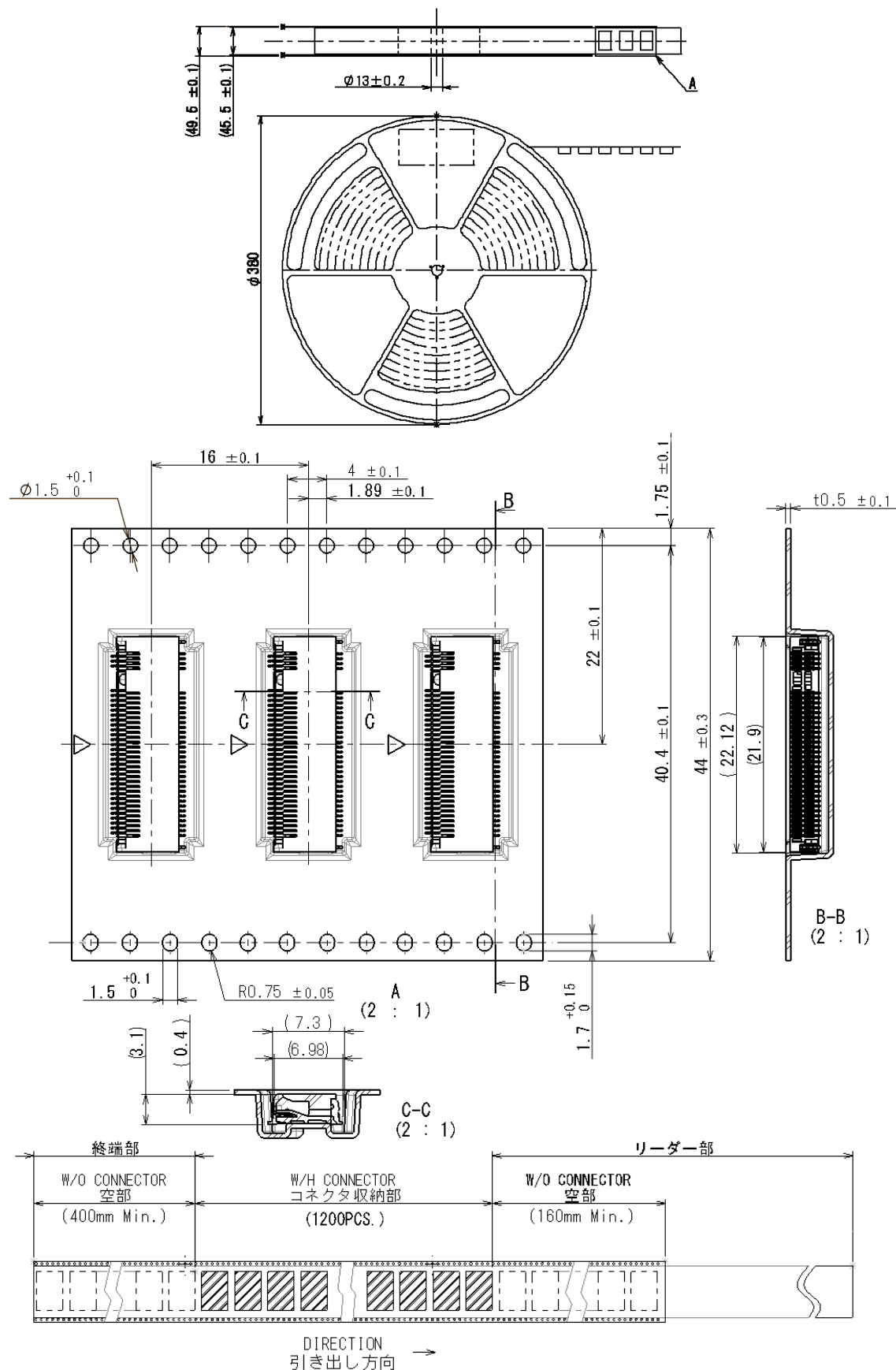


* Please refer to product drawing when considering the use of this product.

Product Drawing

Part Number: SM3ZS067U310**R1200

(Product Height 3.1mm)

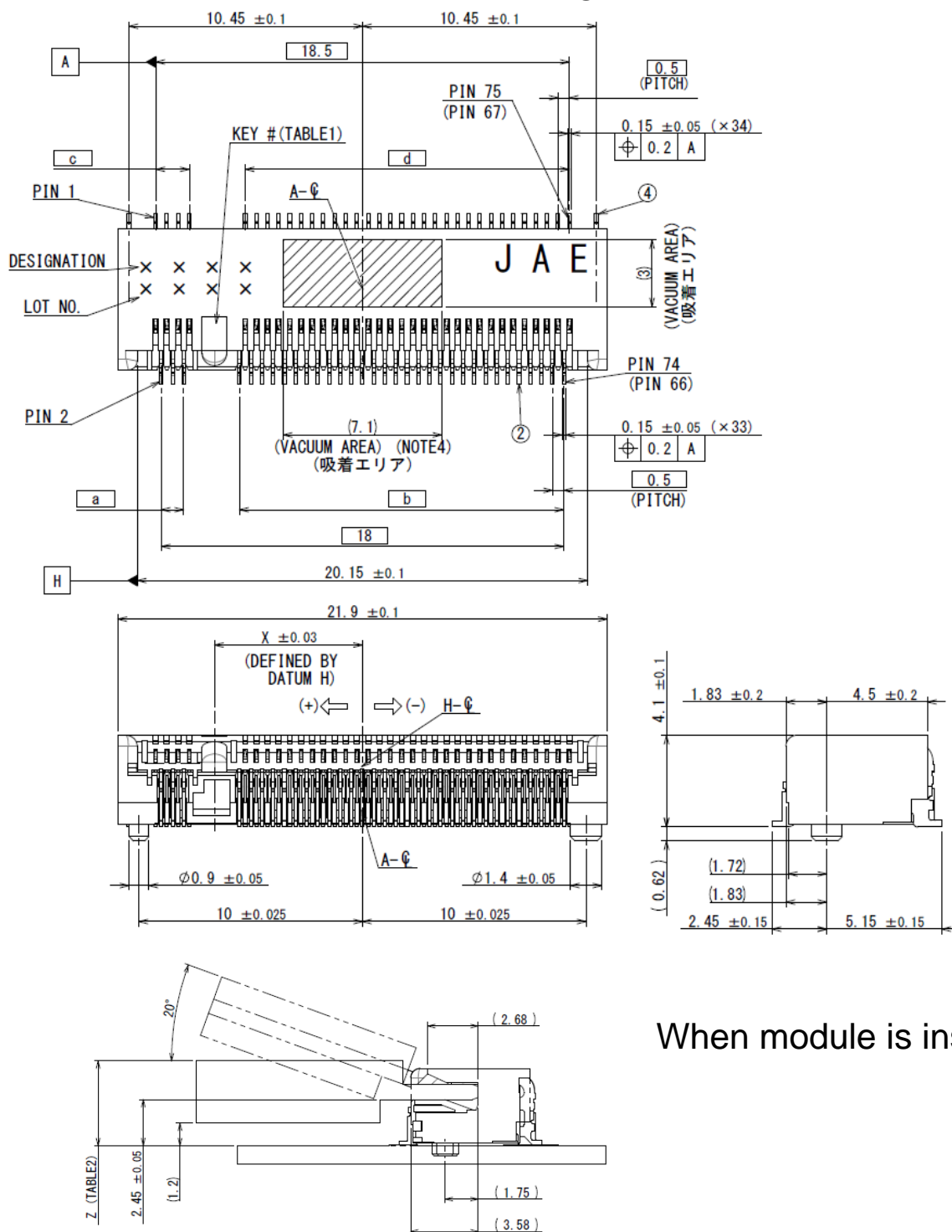


* Please refer to product drawing when considering the use of this product.

Product Drawing

Part Number: SM3ZS067U410**

(Product Height 4.1mm)



When module is inserted

KEY#	X	a	b	c	d
A	+6.625	1	14.5	1.5	14.5
B	+5.625	2	13.5	2.5	13.5
E	+2.625	5	10.5	5.5	10.5
M	-6.625	14	1.5	14	2

Module Height	Z
MAX 1.2mm	MAX 3.55mm
MAX 1.35mm	MAX 3.70mm
MAX 1.5mm	MAX 3.85mm

* Please refer to product drawing when considering the use of this product.

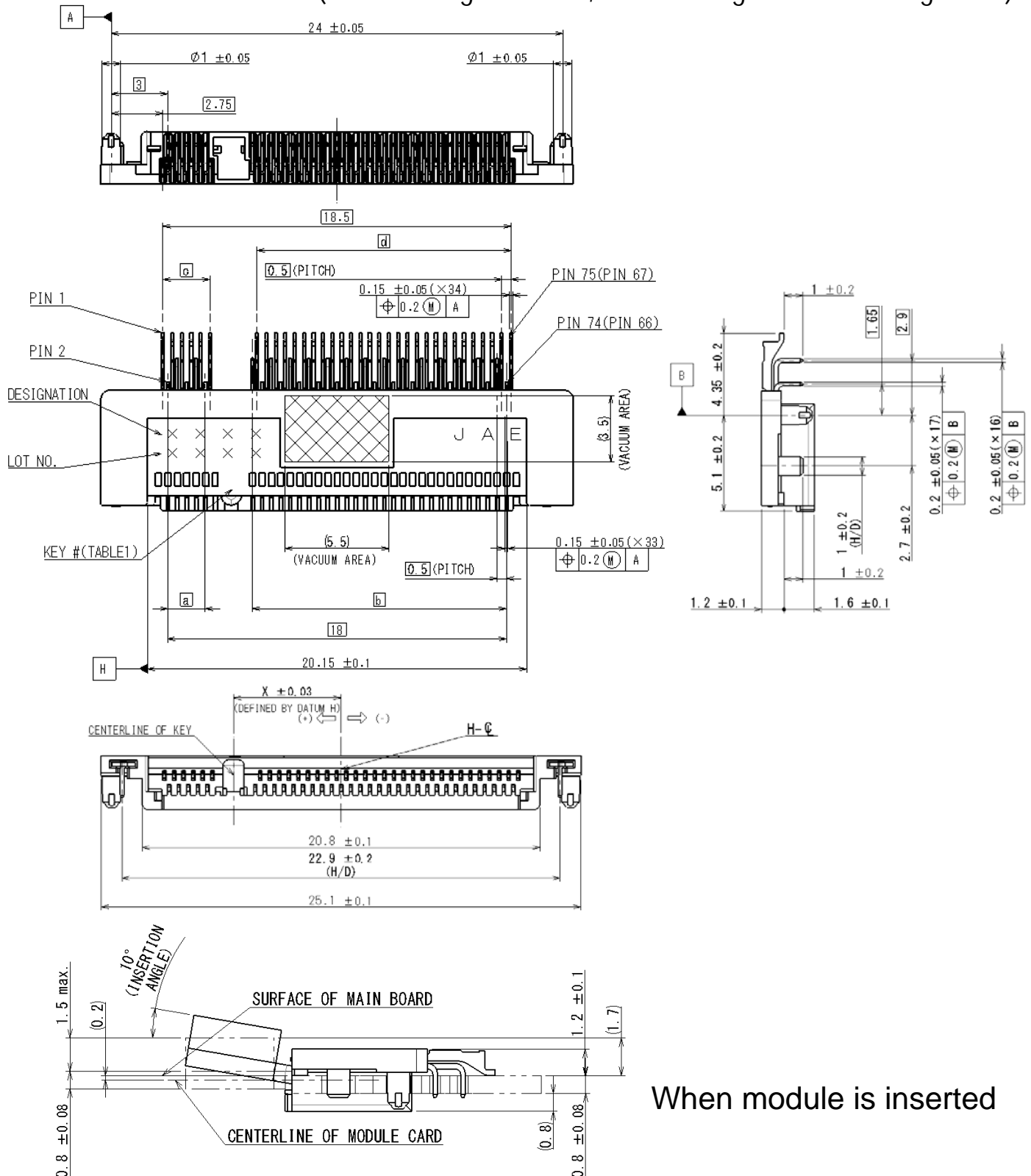
Part Number: SM3ZS067U410**R1000
(Product Height 4.1mm)



Product Drawing

Part Number: SM3ZS067B120**1

(Product Height: 1.2mm, Board Fixing Method: Through-hole)

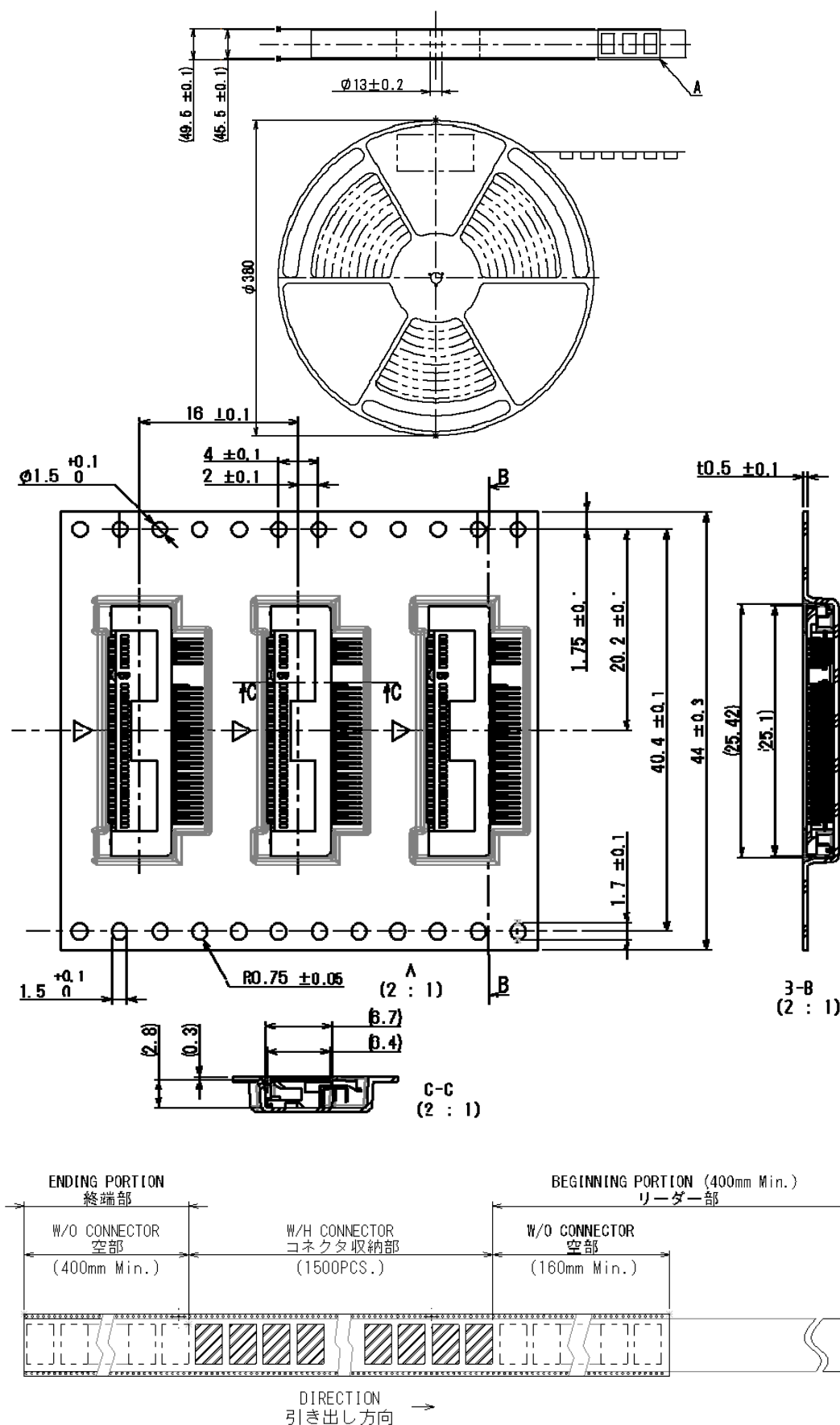


When module is inserted

KEY#	X	a	b	c	d
B	+5.625	2	13.5	2.5	13.5
E	+2.625	5	10.5	5.5	10.5

* Please refer to product drawing when considering the use of this product.

Part Number: SM3ZS067B1201R1500**
(Product Height: 1.2mm, Board Fixing Method: Through-hole)

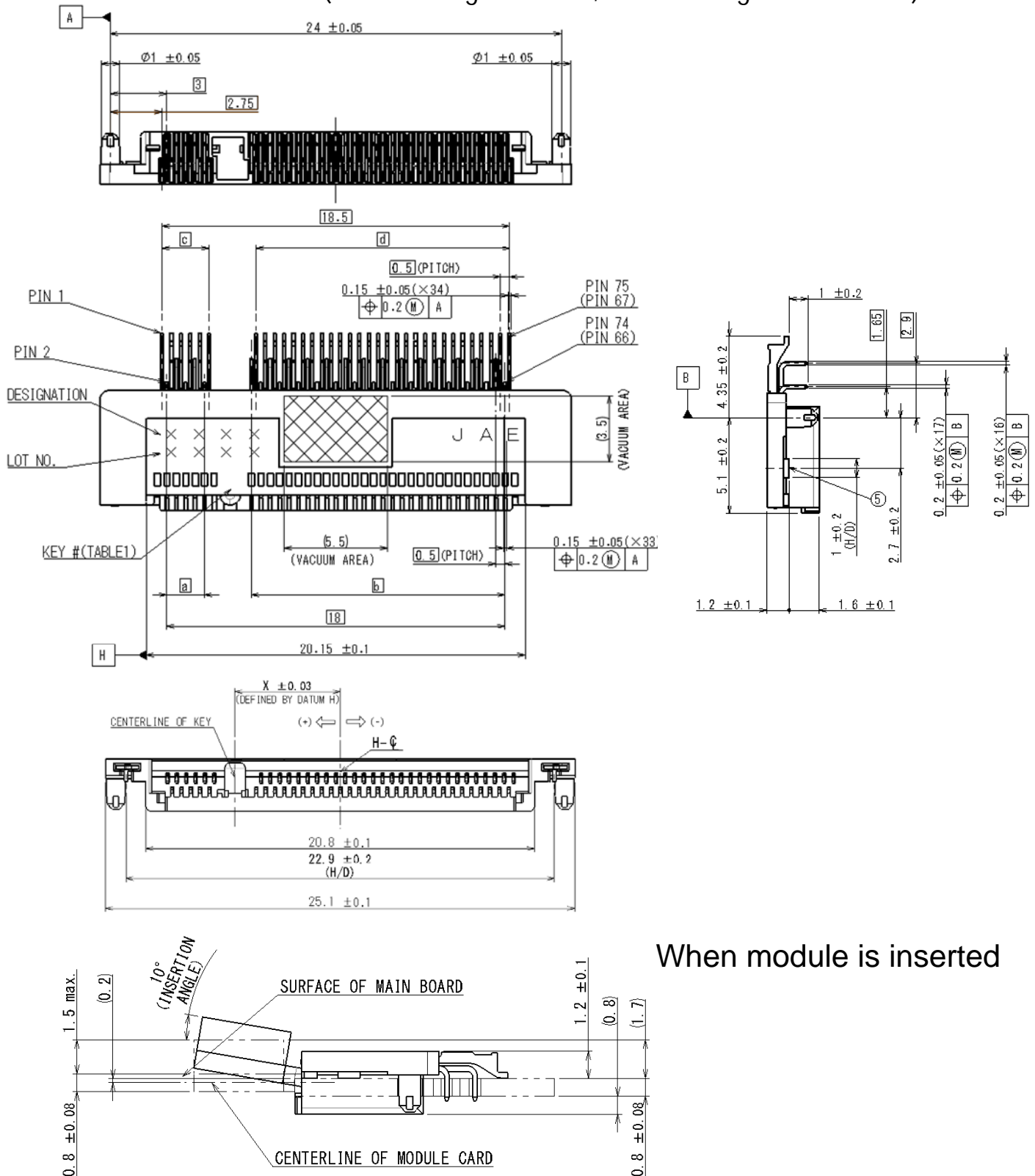


* Please refer to product drawing when considering the use of this product.

Product Drawing

Part Number: SM3ZS067B120**2

(Product Height: 1.2mm, Board Fixing Method: SMT)



When module is inserted

KEY#	X	a	b	c	d
B	+5.625	2	13.5	2.5	13.5
E	+2.625	5	10.5	5.5	10.5

* Please refer to product drawing when considering the use of this product.

Technical drawing of a circular connector assembly, showing multiple views and dimensions.

Top View: Shows a circular component with a diameter of $\phi 380$. A central hole has a diameter of $\phi 13 \pm 0.2$. A section line A-A is indicated.

Front View (Main): Shows the connector body with a total width of 16 ± 0.1 . The distance between the centers of the three main components is 4 ± 0.1 , and the distance from the center to the edge is 2 ± 0.1 . The diameter of the circular features is $\phi 1.5$ with a tolerance of $+0.1/0$. The height of the main body is 1.75 ± 0.1 , and the total height is 20.2 ± 0.1 . The distance between the centers of the three main components is 40.4 ± 0.1 , and the total width is 44 ± 0.3 . The distance from the center to the edge is 25.42 and 25.1 . The distance from the center to the edge is 1.7 ± 0.1 . The distance from the center to the edge is 0.5 ± 0.1 .

Section A-A: Shows a cross-section of the connector body with a diameter of $\phi 1.5$ and a tolerance of $+0.1/0$. The distance from the center to the edge is 1.7 ± 0.1 .

Section B-B: Shows a cross-section of the connector body with a diameter of $\phi 1.5$ and a tolerance of $+0.1/0$. The distance from the center to the edge is 1.7 ± 0.1 .

Section C-C: Shows a cross-section of the connector body with a diameter of $\phi 1.5$ and a tolerance of $+0.1/0$. The distance from the center to the edge is 1.7 ± 0.1 .

Bottom View: Shows the connector body with a total width of 16 ± 0.1 . The distance between the centers of the three main components is 4 ± 0.1 , and the distance from the center to the edge is 2 ± 0.1 . The diameter of the circular features is $\phi 1.5$ with a tolerance of $+0.1/0$. The height of the main body is 1.75 ± 0.1 , and the total height is 20.2 ± 0.1 . The distance between the centers of the three main components is 40.4 ± 0.1 , and the total width is 44 ± 0.3 . The distance from the center to the edge is 25.42 and 25.1 . The distance from the center to the edge is 1.7 ± 0.1 . The distance from the center to the edge is 0.5 ± 0.1 .

Dimensions:

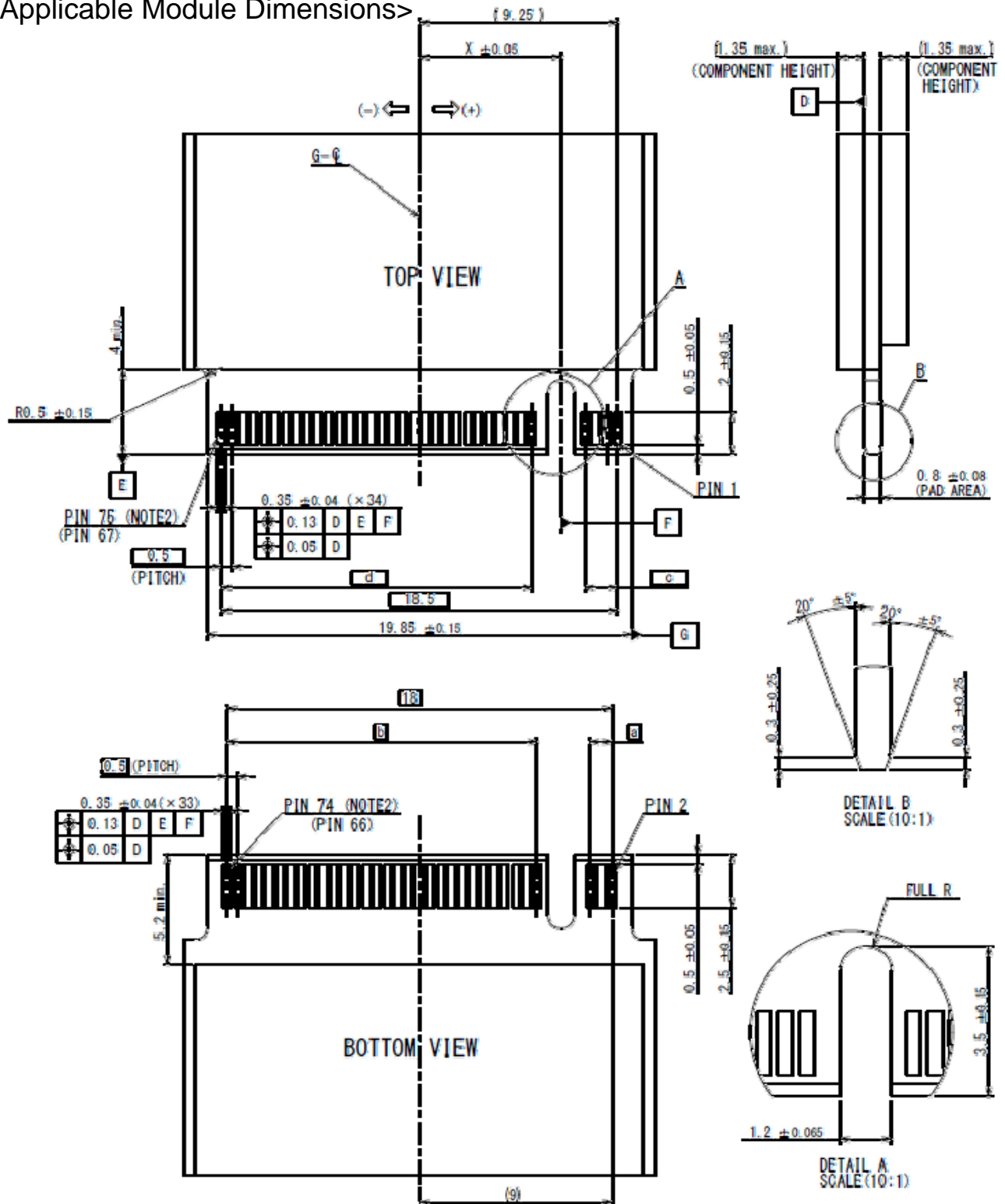
- Top View: $\phi 380$, $\phi 13 \pm 0.2$
- Front View: 16 ± 0.1 , 4 ± 0.1 , 2 ± 0.1 , $\phi 1.5$, 1.75 ± 0.1 , 20.2 ± 0.1 , 40.4 ± 0.1 , 44 ± 0.3 , 25.42 , 25.1 , 1.7 ± 0.1 , 0.5 ± 0.1
- Section A-A: $\phi 1.5$, 1.7 ± 0.1
- Section B-B: $\phi 1.5$, 1.7 ± 0.1
- Section C-C: $\phi 1.5$, 1.7 ± 0.1
- Bottom View: 16 ± 0.1 , 4 ± 0.1 , 2 ± 0.1 , $\phi 1.5$, 1.75 ± 0.1 , 20.2 ± 0.1 , 40.4 ± 0.1 , 44 ± 0.3 , 25.42 , 25.1 , 1.7 ± 0.1 , 0.5 ± 0.1

Labels:

- ENDING PORTION 終端部
- W/O CONNECTOR 空部 (400mm Min.)
- W/H CONNECTOR コネクタ収納部 (1500PCS.)
- W/O CONNECTOR 空部 (160mm Min.)
- BEGINNING PORTION (400mm Min.) リーダー部
- DIRECTION 引き出し方向

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<Applicable Module Dimensions>



KEY#	X	a	b	c	d
A	+6.625	1	14.5	1.5	14.5
B	+5.625	2	13.5	2.5	13.5
E	+2.625	5	10.5	5.5	10.5
M	-6.625	14	1.5	14	2

* Please refer to product drawing when considering the use of this product.

Product Drawing and Specification Numbers

Part Number		SM3ZS067 U215** (R1500)	SM3ZS067 U410** (R1000)	SM3ZS067 U310** (R1500)	SM3ZS067 B120**2 (R1500)	SM3ZS067 B120**1 (R1500)
Mounting Type		On-board			Sunk-into-the-board	
Depth [mm]		(7.6)	(7.6)	(7.6)	(9.45)	
Height [mm]		2.15 +/-0.1	3.1 +/-0.1	4.1 +/-0.1	1.2 +/-0.1 (Product height when mounted)	
Width [mm]		21.9	21.9	21.9	25.1	
Polarizing Key	Developed	B/E	A/B/E/M	A/B/E/M	B/E	
	Development under consideration	A/M			A/M	
Contact Area Au Plating thickness	0.1μm	P	P	P	P	
	0.25μm		P	P		
Board Fixing Method		SMT				Through-hole
Evaluation Test		SR-C-1317	SR-C-1225	SR-C-1249	SR-C-1322	
Specifications		JACS-10937	JACS-10941	JACS-10941	JACS-11000	
Drawing No.	Individual Product	SJ113567	SJ113505	SJ113503	SJ114364	SJ114362
	Package	SJ113568	SJ113506	SJ113504	SJ114365	SJ114363

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 - We may separately give you our support with a quality assurance program that you specify, when you think of a use such as :
Aviation or space equipment, submarine repeaters, nuclear power control systems, medical equipment for life support, etc.
 - Recommended applications include:
Computers, office appliances, telecommunications devices (terminals, mobile units), measuring equipment, audiovisual equipment, home electric appliances, factory automation equipment, etc

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