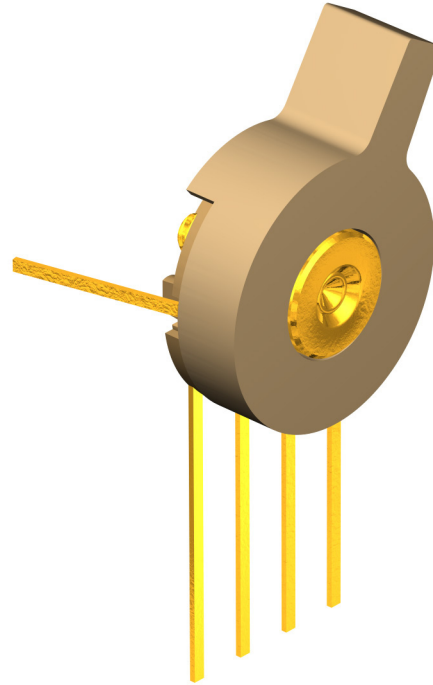


Features

- ⊕ 3 position switch
- ⊕ Separate on/off switch, right or left version available
- ⊕ Different plastic colors available
- ⊕ Make-Before-Break (MTB)



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Sonion reserves the right to make changes at any time to improve reliability, function or design, in order to provide the best product possible.

History Revision

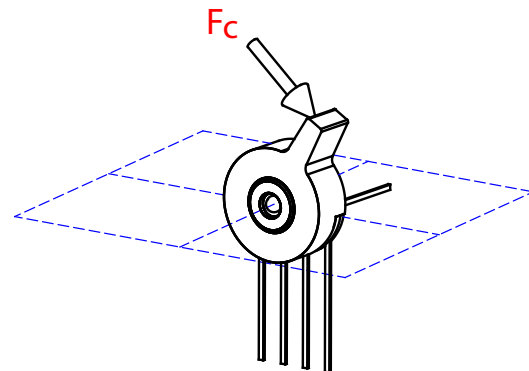
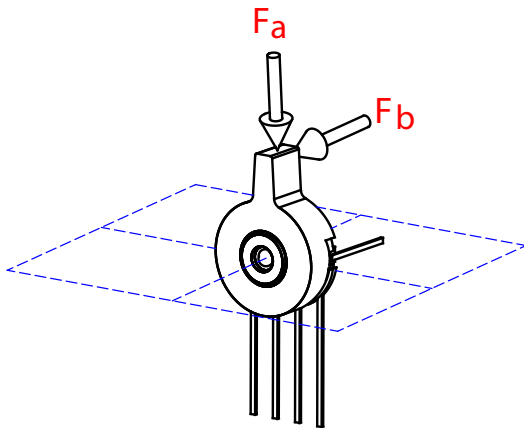
Revision Number/Date	Change from last revision
06 / Jun 07	History Revision added. Change of switch material. Force definition drawing added. Toggle styles added. Storage humidity added. Operational temperature and humidity removed. New lay-out. New data sheet design.
MT1022.A (07/08)	Tolerances on 'Mechanical Dimensions' corrected.
007/JUL-21-2009	No technical updates

Mechanical Specifications

Rotational angle	60°	
Switch operating torque	Min. 40 cNcm, Max. 85 cNcm	
End stop torque	Min. 600 cNcm	
Durability of toggle:		
Fa, static	10 N	
+/- Fb, static	10 N	
Fc, static	10 N	
Lifetime		Min. 50,000 cycles
Bending of terminals	Min. 2 bending cycles 90° with 0.25 N load	

Definition of shear force and toggle retention force:

Fb, Fc: Attack point is 0.75 mm from top of toggle



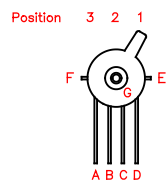
Electrical Specifications

Switch contact resistance.....	Max. 150 mΩ
Switch insulation resistance.....	Min. 1 MΩ
Switching mode.....	Make-Before-Break (MBB) on selector switch
Bounce time.....	Max. 5 ms
Switching current.....	Max. 10 mA
Continuous current.....	Max. 100 mA

Switching Diagram

SA 27A 3 positions

Switch shown in OFF position

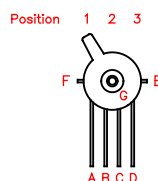


OFF		Position	1	2	3
Terminal	Position				
A			•		
B			•	•	
C				•	•
D			•	•	•
G			•	•	•

OFF		Position	1	2	3
Terminal	Position				
E			•	•	
F			•	•	

SA 27B 3 positions

Switch shown in OFF position



OFF		Position	1	2	3
Terminal	Position				
A					•
B				•	•
C			•	•	•
D			•	•	•
G			•	•	•

OFF		Position	1	2	3
Terminal	Position				
E				•	•
F				•	•

Material Specifications

All materials comply with RoHS directive (2002/95/EC)



Terminals.....	CuNiZn, gold flash plated
Selector and On/Off springs.....	CuBe, gold plated
Detent springs.....	Stainless steel
Toggle:	
-New designs.....	PA 6.6, glass reinforced
-Existing designs.....	POM or PA 6.6, glass reinforced
Base.....	PPS, glass reinforced

Lubricant, glue / seal, and paint specifications are proprietary information.

Environmental Conditions

Storage temperature -40 to + 60°
Storage humidity 10 to 95% RH

Recommended Process Parameters

Mounting:

Fixation nut mounting torque Max. 200 cNcm

Gluing:

Types of glue Cyanoacrylates (non-blooming) , i.e. Loctite 401, 408, 460 and Sicomet 50, 63, 77
Non-blooming types must be used to ensure that residuals from the curing process do not degrade the component.

Soldering:

Soldering temperature and time 300°C [572°F] for 3 s or 350°C [662°F] for 1 s

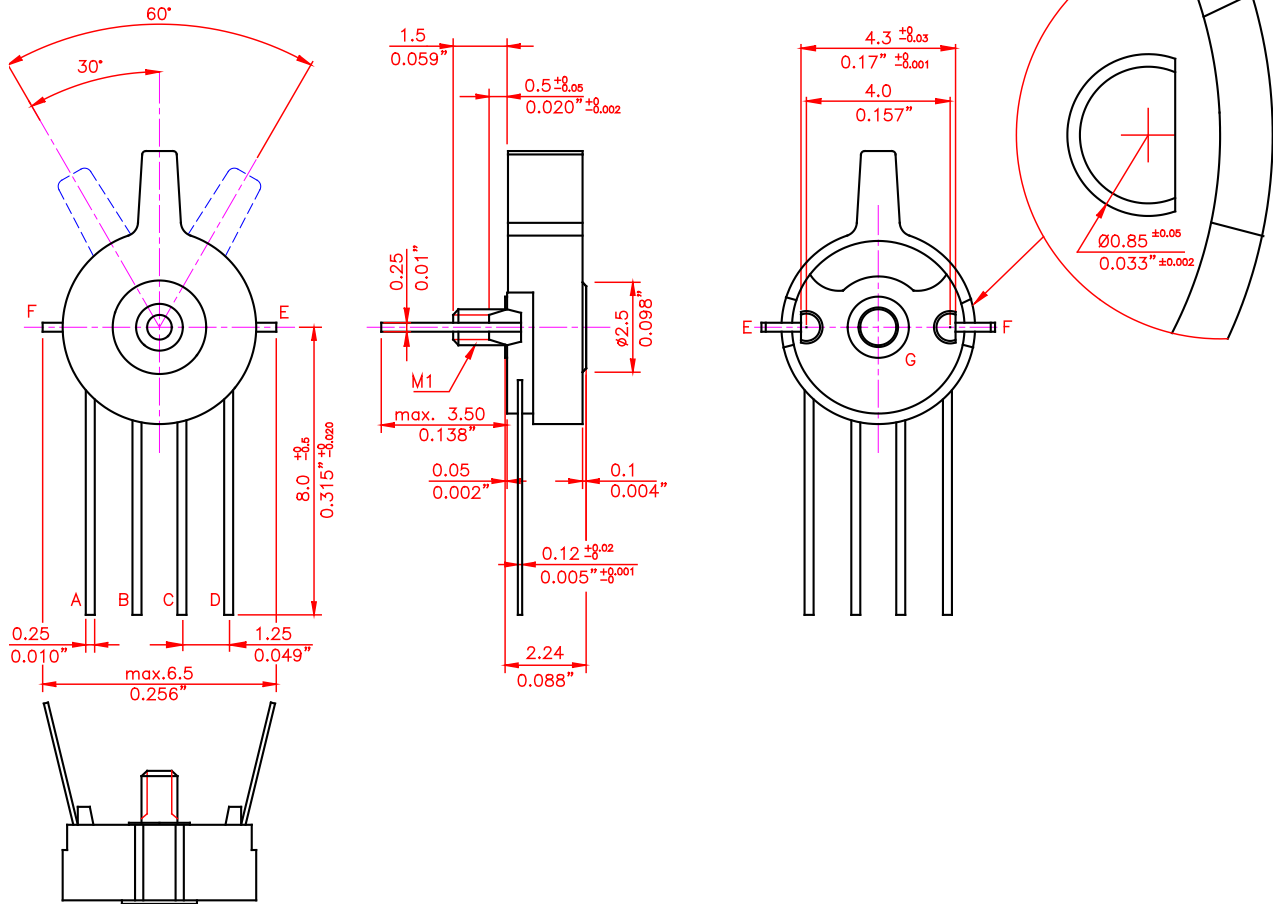
Soldering distance Min. 0.3 mm [0.012"] from housing
To prevent damage of the switch system as a result of the soldering process, the ON/OFF switch must be turned to the ON position.

Exceeding temperature, time and distance recommendations may damage the component. Mechanical stress on soldering terminals must be avoided during soldering.

Cleaning:

Cleaning solvents Aqua wash (Alpha 2110), Benzine
Ultrasonic cleaning must be avoided as it may remove the lubricant inside the component.

Mechanical Dimensions

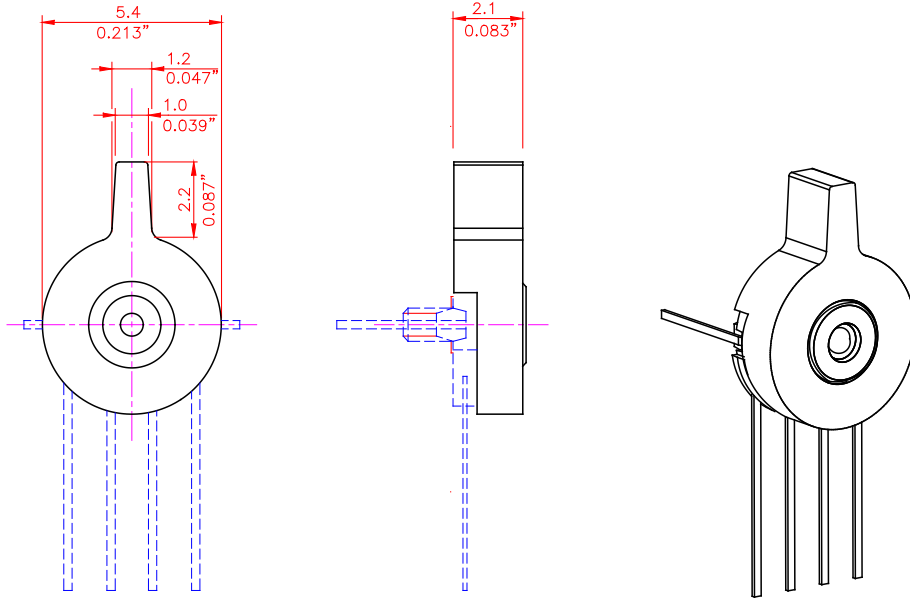


Note:

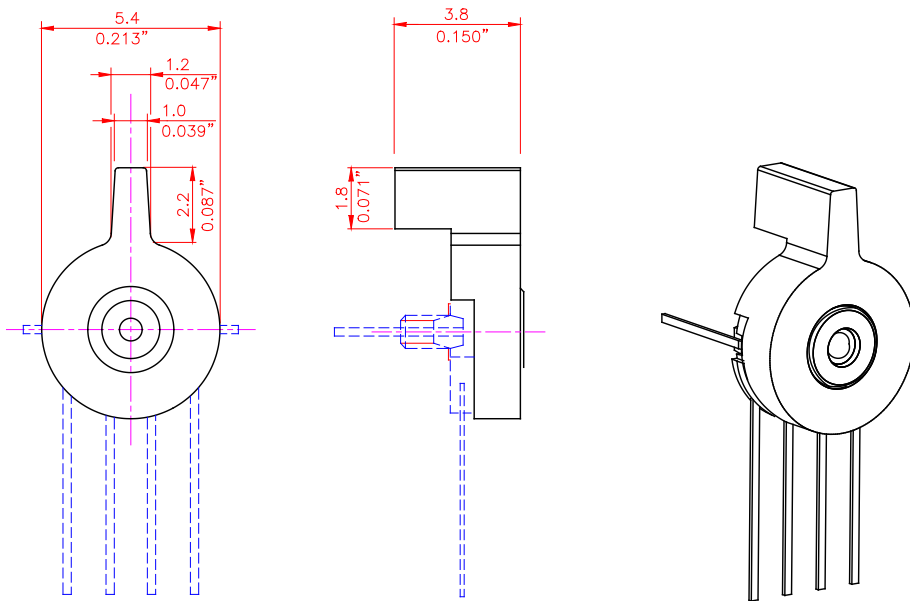
The standard measurement tolerance on the drawings is ± 0.05 mm/[0.002"]. Tolerances which differ from this value will be indicated on the drawings.

Toggle Styles

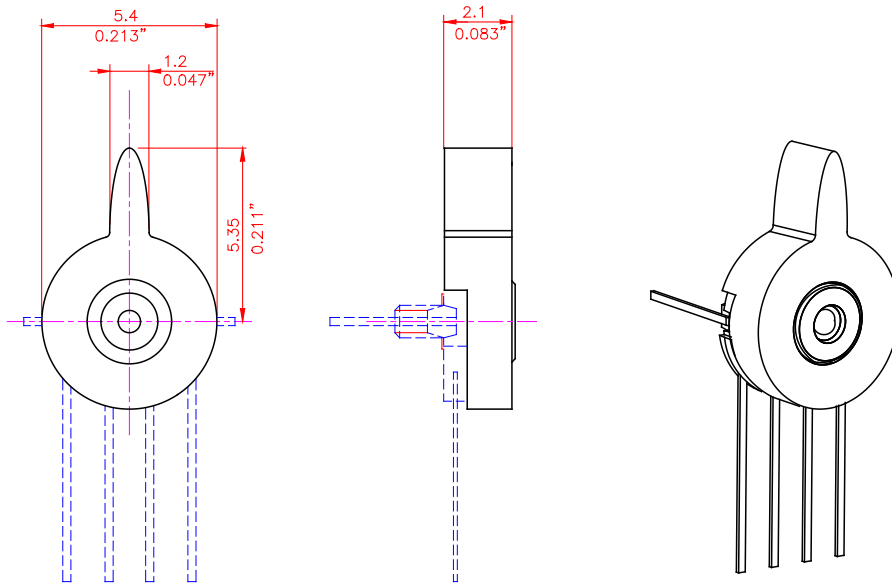
No. 01



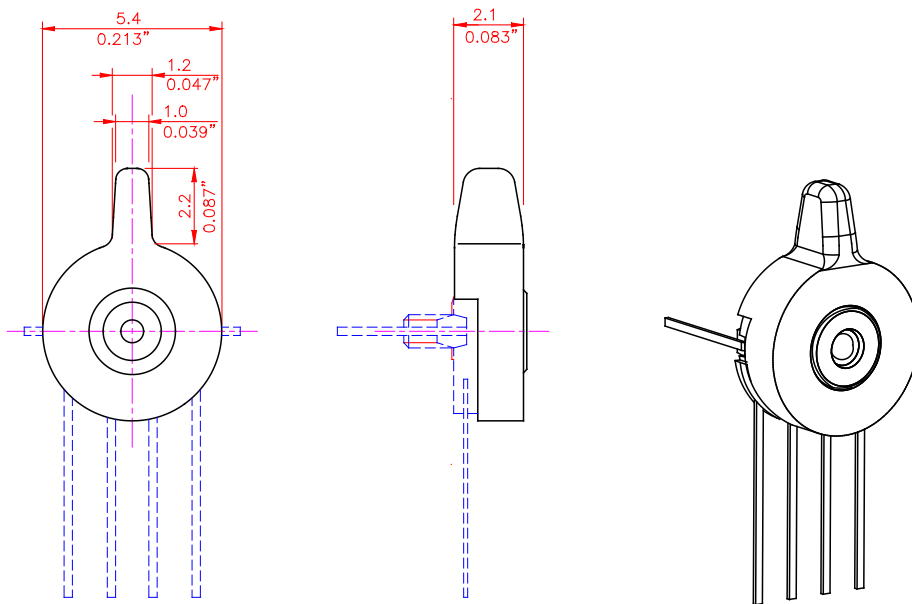
No. 02



No. 03



No. 04



Plastic Colors

POM material: Please refer to the series 500 and 1600 included in the Sonion 'Plastic Color Assortment' binder

PA 6.6 material: Please refer to the series 100 included in the Sonion 'Plastic Color Assortment' binder

Product Specification Form

Name: _____

Company: _____

Customer Part No.: _____

Parameters	Look at Page	Enter your choices	Guidelines
Model	1	SA 27	
Switch Diagram	4 and 6	A	3 positions on/off right side
		B	3 positions on/off left side
Toggle Styles	7-8		Please enter nos. 01, 02, 03 or 04
Plastic Colors	8		POM material: Please refer to the series 500 and 1600 included in the Sonion 'Plastic Color Assortment' binder PA 6.6 material: Please refer to the series 100 included in the Sonion 'Plastic Color Assortment' binder