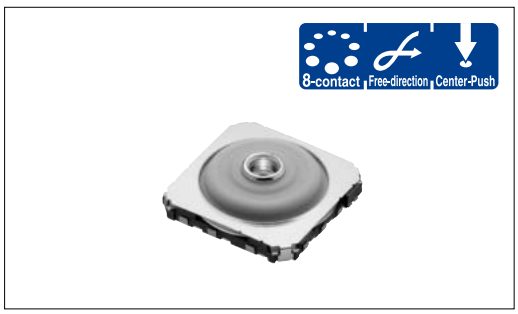
Slide Operation Type Stick Switch with 8-contact and Center-push Function

SSAF Series

RoHS compliant

1.4mm height low-profile type with 8-contact and center push function.



Typical Specifications

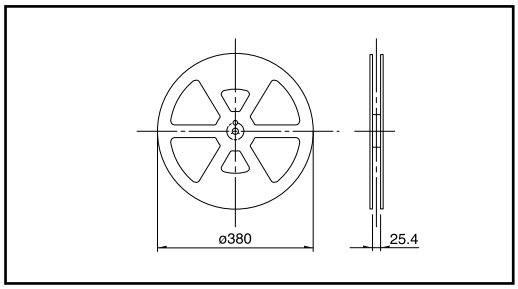
Item	Specifications
Slide operating force	$0.5^{+0.5}_{-0.25}$N
Slide ON travel (mm)	0.65±0.25
Push operating force	$2.5^{+0.7}_{-0.5}$N
Push ON travel (mm)	0.2±0.1
Rating (max.) (Resistive load)	20mA 5V DC
Operating life	500,000cycles

Product Line

Location Lug	Minimun order unit (pcs.)	Product No.	Drawing No.
Without	2,400	SSAF120100	1
With		SSAF220100	2

Taping Specification (Taping Packaging)

Reel Size Unit:mm



Number of packages (pcs.)			Tape width (mm)
1 reel	1 case／Japan	1 case／export packing	
1,200	2,400	2,400	24

Note

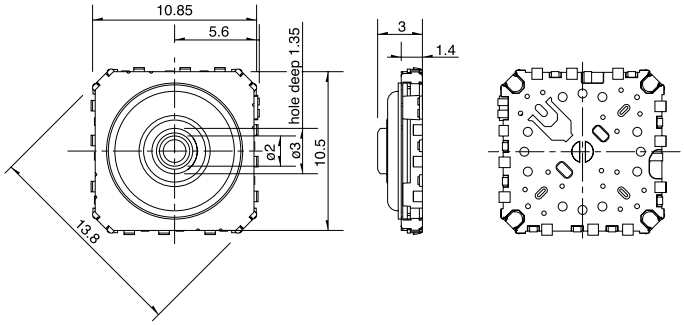
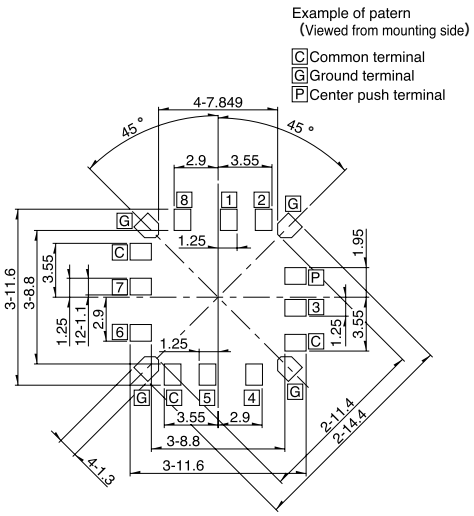
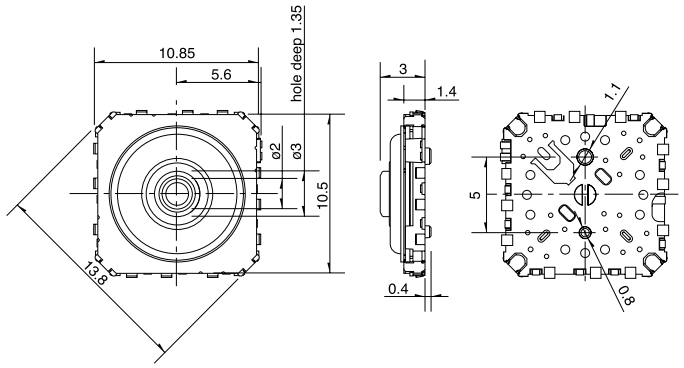
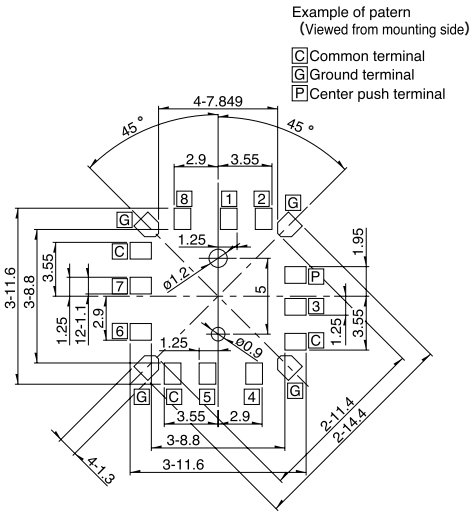
Please place purchase orders per minimum order unit (integer).

Refer to **P.492** for soldering conditions.

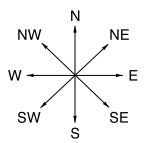
ALPS

Dimensions (With Center-push Type)

Unit:mm

No.	Style	PC board mounting hole dimensions
1		
2		

Operating Direction

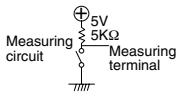


Output Code

Operating direction

Out put	N	NE	E	SE	S	SW	W	NW	Push
1	○								
2		○							
3			○						
4				○					
5					○				
6						○			
7							○		
8								○	
P									○

List of Varieties

Items \ Series		Switch type						
		SKQU			SSAF	SRBE	SLLB	SLLB5 Small type
		SKQUAA/SKQUBA	SKQUCA	SKQUDB				
Photo								
Function								
Dimensions (typical value) (mm)	W	10			10.85	12	11.8	9.5
	D					11	11.4	8.8
	H	7.1	10	8.6	3	3.8	3	2.2
Outlined specifications	Number of operating shafts	Single-shaft						
	Shaft material	Resin						
	Directional resolution	4-direction			8-direction	—	2-direction	
	Directional operating feeling	With			Without	With	Without	
	Lever return mechanism	With				Without	With	
	Center-push switch	With/Without			With		With/ Without	With
	Encoder	Without				With	Without	
Operating temperature range		–30°C to +85°C			–10°C to +60°C			
Rating (max.) (Resistive load)		50mA 12V DC			20mA 5V DC	1mA 5V DC	10mA 5V DC	
Electrical performance	Output voltage	———			1V max. at 1mA 5V DC (Resistive load) 			
	Directional resolution	4-direction			8-direction	—	2-direction	
	Insulation resistance	100MΩ min. 100V DC			10MΩ min. 100V DC	50MΩ min. 50V DC	100MΩ min. 100V DC	
	Voltage proof	250V AC for 1min.			100V AC for 1min.	50V AC for 1min.	100V AC for 1min.	
	Directional operating force	$1.57^{+0.49}_{-0.59}$ N	$1.57^{+0.39}_{-0.69}$ N		$0.5\text{N}^{+0.5}_{-0.35}$ N	——	0.65±0.3N	
Mechanical performance	Push operating force	———	3.14±0.59N		$2.5^{+0.7}_{-0.5}$ N	3.5±1.5N	2±1N	2.5±1N
	Encoder detent torque	———				3±2mN•m	———	
	Terminal strength	———					3N for 1min.	
	Actuator strength: Pushing direction	———			50N			
	Actuator strength: Operating direction	———			50N	——	10N	
Endurance	Vibration	10 to 55 to 10Hz/min., the amplitude is 1.5mm for all the frequencies, in the 3 direction of X, Y and Z for 2 hours respectively						
	Operating life without load	———					100,000cycles	
	Operating life with load (at rated load)							
Environmental performance	Cold	–30±2°C for 96h			–40±2°C for 96h		–20±2°Cfor 96h	
	Dry heat	80±2°C for 96h			85±2°C for 96h			
	Damp heat	60±2°C, 90 to 95%RH for 96h			40±2°C, 90 to 95%RH for 96h			
Soldering	Manual soldering	350°C max. 3s max.			$350\pm10°\text{C}\ 4^{+1}_{0}$s	350±5°C 3s max.		
	Dip soldering	260°C max. 5s max. (SKQUAA,CA)						
	Reflow soldering	Please see P.492 (SKQUBA,DB)			Please see P.492			
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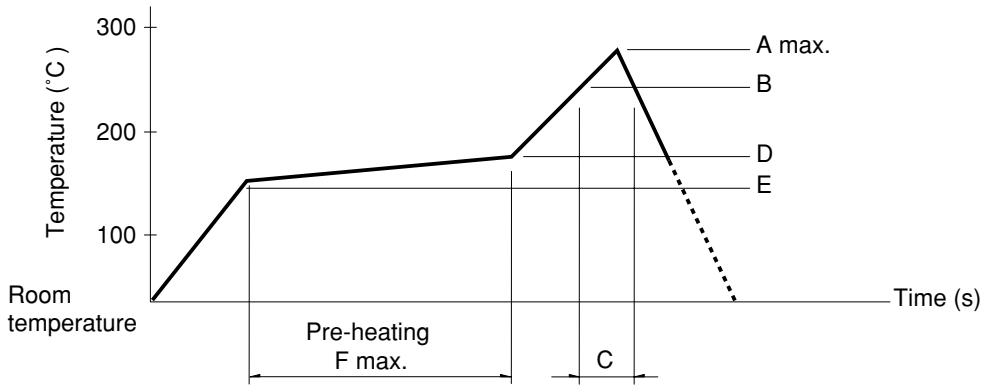
● Switch Type Multi Control Devices Cautions ·····493

Soldering Conditions

Example of Reflow Soldering Condition

1. Heating method: Double heating method with infrared heater.
2. Temperature measurement: Thermocouple 0.1 to 0.2φ CA (K) or CC (T) at solder joints copper foil surface). A heat resistive tape should be used to fix thermocouple.
3. Temperature profile



Series(Reflow type)	A (°C) 3s max.	B (°C)	C (s)	D (°C)	E (°C)	F(s)
RKJXS	260	230	40	150	150	120
SLLB, SLLB5	240		20			
SKRV/SKRH/SKQUBA,DB/SSAF/SRBE	260		40	180		

Notes

1. The above temperature shall be measured on the mounting surface of a PC board. There are cases where the PC board's temperature greatly differs from that of the switch, depending on the material, size thickness of PC boards and others. The above-stated conditions shall also apply to switch surface temperatures.
2. Soldering conditions differ depending on reflow soldering machines. Prior verification of soldering condition is highly recommended.