



# KSD-2B Series

Sealed Sub-Miniature Toggle Switches(SMT)



KSD-2B  
Toggle Switches

# KSD

SWITCH CONNECTOR



### SPECIFICATIONS

**CONTACT RATING:** Dependent upon contact material, see page 40.

**MECHANICAL LIFE:** 30,000 make-and-break cycles.

**CONTACT RESISTANCE:** 20 mΩ max. (initial value) @ 2-4VDC  
100mA for both silver and gold plated contacts.

**INSULATION RESISTANCE:** 1,000 MΩ min./1000VDC

**DIELECTRIC STRENGTH:** 1,000 Vrms min.@sea level.(initial value)

**OPERATING TEMPERATURE:** -30°C to 85°C.

**INGRESS PROTECTION:** IP67(In house test)

### MATERIALS

**CASE & BUSHING:** Glass filled nylon 6/6, flame retardant,  
heat stabilized (UL94v-0).

**ACTUATOR:** Brass with chrome plated, internal o-ring sealed.

**SWITCH SUPPORT:** Brass, tin plated.

**CONTACT / TERMINALS:** Copper with silver or gold plated.

(See page 40)

## HOW TO ORDER

MODEL NO.	ACTUATOR	BUSHING	TERMINAL TYPE	TERMINAL PLATING	SEAL	RoHS SOLDERING
SP	T1 10.16 high	A1 4.35 high (Std)		Q Gold flash over silver		S RoHS & Lead Free
2BS1 ON-NONE-ON	T2 6.10 high			R Gold		
2BS2 ON-NONE-(ON)	T4 13.97 high			C Gold over silver		
2BS3 ON-OFF-ON	Plastic (Black)				E EPOXY (std)	
2BS4 (ON)-OFF-(ON)	TA 10.16 high		MT (STD) Right angle, surface mount.			
2BS5 ON-OFF-(ON)	TB 6.10 high		MZ (STD)			

EXAMPLE: KSD-2BS1T1A1MTQES



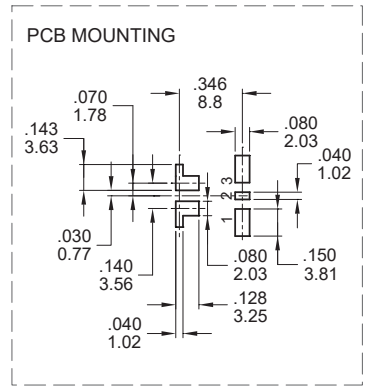
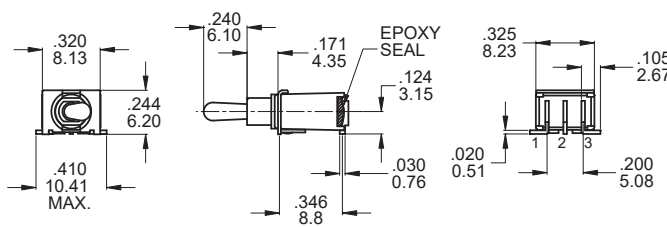
## ▼ SWITCH FUNCTION

NO. POLES	MODEL NO.	SWITCH FUNCTION			CONNECTED TERMINALS / SCHEMATIC		
		POS.1	POS.2	POS.3	POS.1	POS.2	POS.3
SP	2BS1	ON	NONE	ON	2-3	N/A	2-1
	2BS2	ON	NONE	(ON)			
	2BS3	ON	OFF	ON		OPEN	
	2BS4	(ON)	OFF	(ON)			
	2BS5	ON	OFF	(ON)			

( )=MOMENTARY

## ▼ POLE OPTIONS

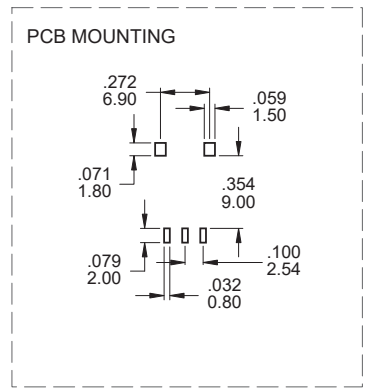
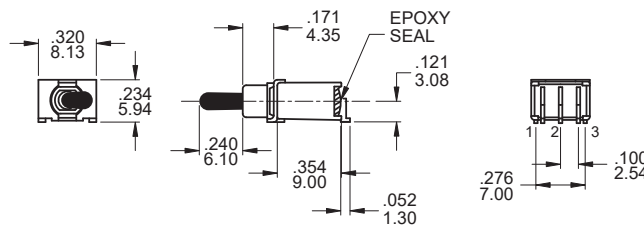
### MT



### SPDT

Model name. KSD-2BS1T2A1MTRES

### MZ

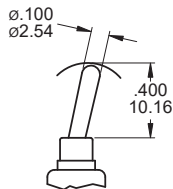


### SPDT

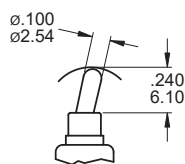
Model name. KSD-2BS1TBA1MZRES

## ▼ ACTUATOR OPTIONS

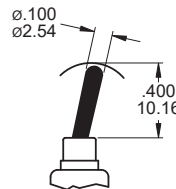
### T1



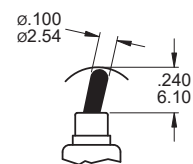
### T2



### TA



### TB



PLASTIC ACTUATOR



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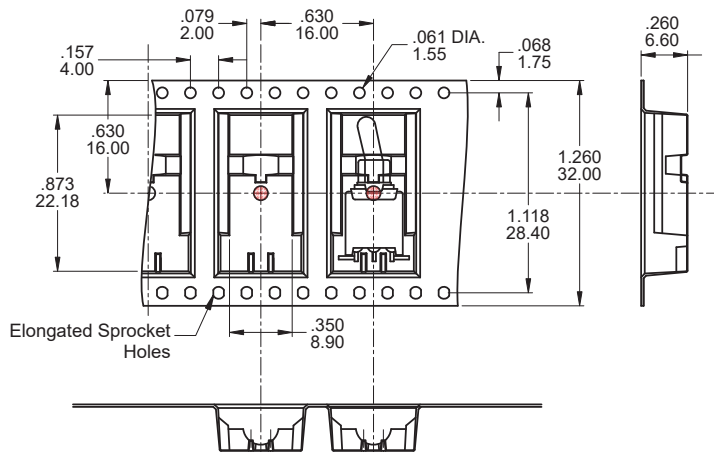


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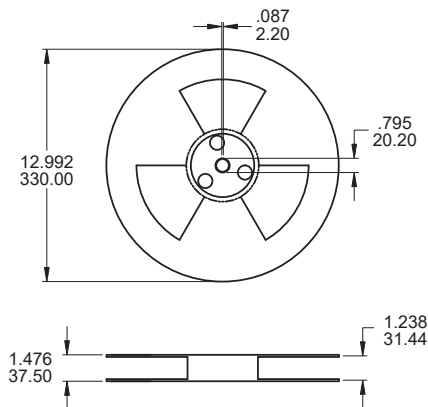
## ▼ PACKAGING

Switches available on embossed antistatic tape and reels.

Tape and cover strip are conductive for use near statically sensitive components.



SCALE: 1 : 1



SCALE: 10 : 1

## ▼ CONTACT & TERMINAL PLATING OPTIONS

	CONTACT PLATING	TERMINAL PLATING	RATINGS
Q	Silver	Gold flash over silver	3 Amps with resistant load @ 120VAC or 28VDC 1 Amps with resistant load @ 250VAC
C	Gold over Silver	Gold over silver	
R	Gold	Gold	0.4 Volt - Amps ( VA ) max. @ 20V max. ( AC or DC )

## ▼ SOLDERING PROCESS

### REFLOW SOLDERING:

Recommend soldering temperature:  $260 \pm 5^\circ\text{C}$

Duration of solder immersion: Max. 5 sec.

(PCB thickness is 1.6mm)

**SOLDERING:** Vapor phase & IR-reflow soldering can be applied.

### Temperature Profile

Zone	Room Temperature	Time (Sec)
Pre-heat (A)	150°C	Min 120s
Soak (B)	150°C ~ 200°C	Min 150s
Peak (C)	200°C ~ 235°C	Min 30s
Peak (D)	235°C ~ 260°C	Min 40s
Peak (E)	260°C	Max 5s

