



## SPECIFICATIONS

**CONTACT RATING:** Dependent upon contact material See Page 77.

**MECHANICAL LIFE:** 50,000 make-and-break cycles.

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

**INSULATION RESISTANCE:** 1,000 MΩ min.

**DIELECTRIC STRENGTH:** 1,000 Vrms min. @sea level.

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

## MATERIALS

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

**ACTUATOR:** Nylon black std, internal O-ring seal standard with all actuators.

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

**CONTACT / TERMINALS:** Copper alloy, with Silver or gold plated.  
(See Page 77)

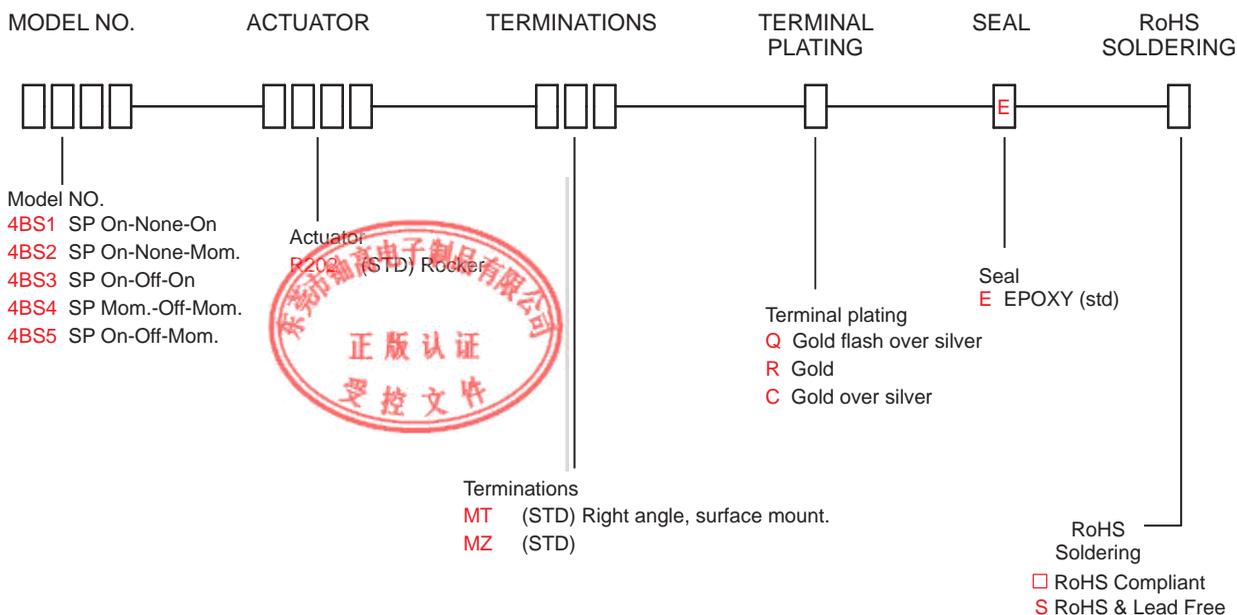
IP 67  
ACCORDING TO  
EN 60529:1991+A1:2001  
IEC 60529:2001

UL US  
E 187490

RoHS  
compliant

Pb  
lead-free

## HOW TO ORDER



# 4B Series

Sealed Sub-Miniature Rocker Switches(SMT)

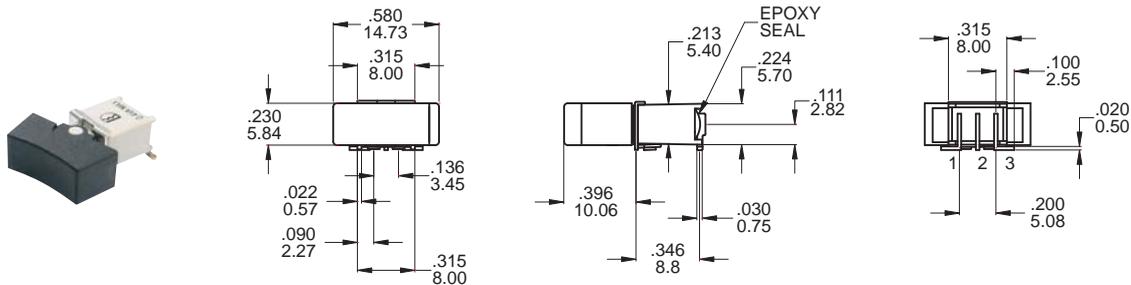
## SWITCH FUNCTION

NO. POLES	UL/CSA MODEL NO.	MODEL NO.	SWITCH FUNCTION			CONNECTED TERMINALS / SCHEMATIC		
			POS.1	POS.2	POS.3	POS.1	POS.2	POS.3
SP	Q24B11	4BS1	ON	NONE	ON	2-3	N/A	2-1
	Q24B12	4BS2	ON	NONE	MOM			
	Q24B13	4BS3	ON	OFF	ON			
	Q24B14	4BS4	MOM	OFF	MOM			
	Q24B15	4BS5	ON	OFF	MOM			OPEN

MOM=MOMENTARY

## POLE OPTIONS

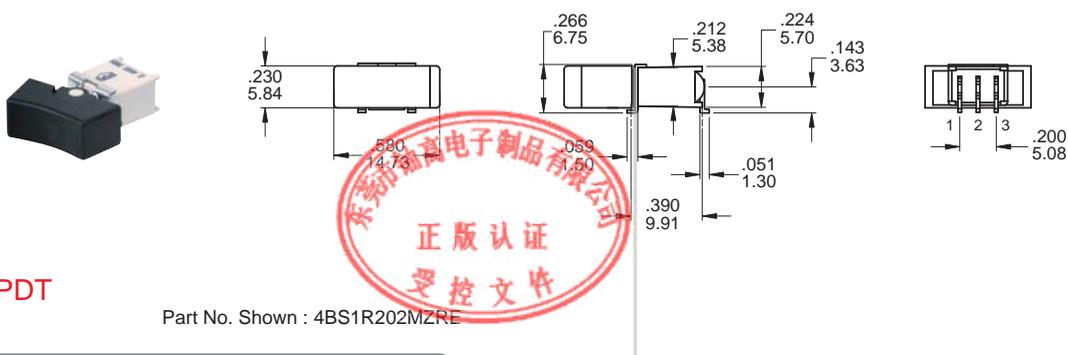
MT



SPDT

Part No. Shown : 4BS1R202MTRE

MZ

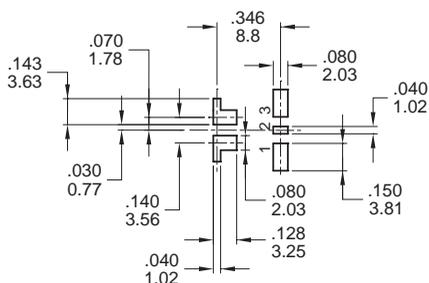


SPDT

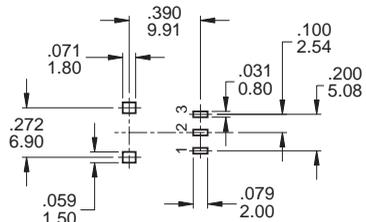
Part No. Shown : 4BS1R202MZRE

## P.C. MOUNTING

MT



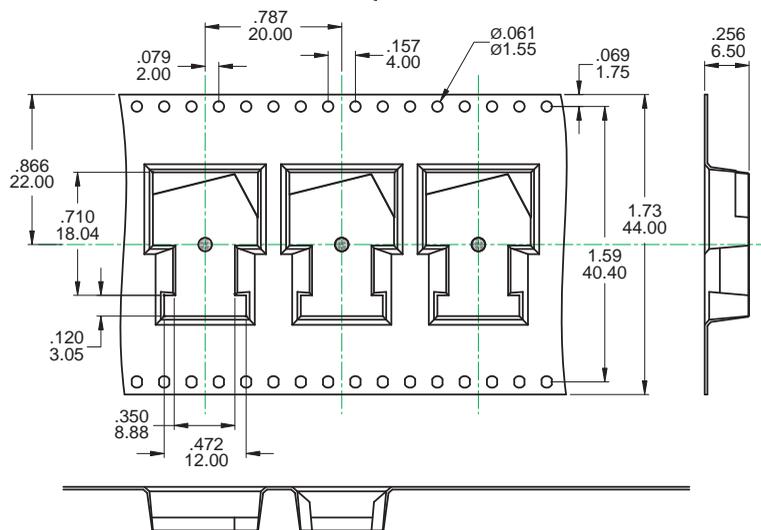
MZ



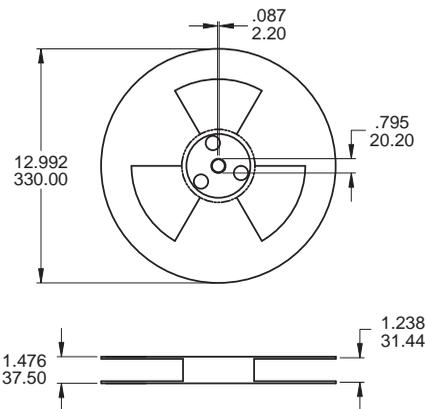
## PACKAGING

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

REEL INFORMATION	
QUANTITY PER REEL	450 / pcs

## CONTACT MATERIAL OPTIONS

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

## SOLDERING PROCESSES

### WAVE SOLDERING:

Recommended Soldering Temperature:  $260 \pm 5^{\circ}\text{C}$

Duration of Solder Immersion: Max 5 sec.

(PCB is 1.6mm in thickness)

**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)	180°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

