

### Features/Benefits

- Long travel
- Available with LED
- Long life contact design
- Epoxy terminal seal compatabile with bottom wash cleaning
- RoHS compliant models available

Materials

### **Typical Applications**

- Instrumentation
- Computers and peripherals
- Telecommunications and networking equipment

c Sus Models Available

#### Specifications

CONTACT RATING: Q contact material: 6 AMPS @ 120 V AC or 28 V DC; 3 AMPS @ 250 V AC. See page A-59 for additional ratings.

ELECTRICAL LIFE: 50,000 make-and-break cycles at full load.

CONTACT RESISTANCE: Below 20 m $\Omega$  typ. initial @

2-4 V DC, 100 mA, for both silver and gold plated contacts. INSULATION RESISTANCE:  $10^{9}\Omega$  min.

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

OPERATING TEMPERATURE: -30°C to 65°C

SOLDERABILITY: Per MIL-STD-202F method 208D, or EIA RS-186E method 9 (1 hour steam aging).

CAP INSTALLATION FORCE: 10 lbs. maximum permissible.

NOTE: Any models supplied with P, R, S, Q, B or G contact material are RoHS compliant

**NOTE:** Specifications and materials listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

CASE: Glass filled nylon 6/6 or diallyl phthalate (DAP), flame retardant (UL 94V-0).

PLUNGER: S, S1, S2 Options: Glass filled nylon or glass filled polyester (PBT) (UL 94V-0). L, L1 Options: Brass, nickel plated.

CAP & FRAME: Nylon, black standard.

BUSHING: Brass or zinc, nickel plated.

HOUSING: Stainless steel.

SWITCH SUPPORT: Brass or steel, matte-tin plated.

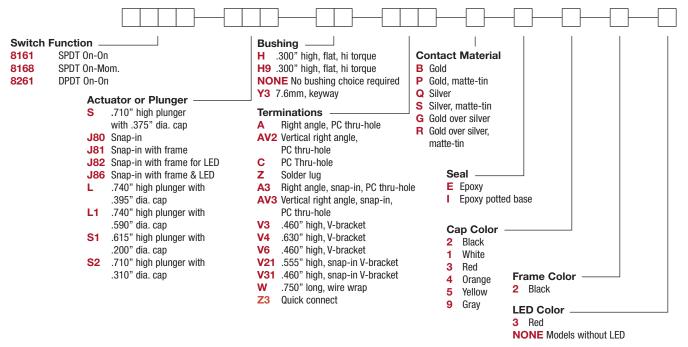
END CONTACTS: Q contact material: Coin silver, silver plated. See page A-59 for additional contact materials.

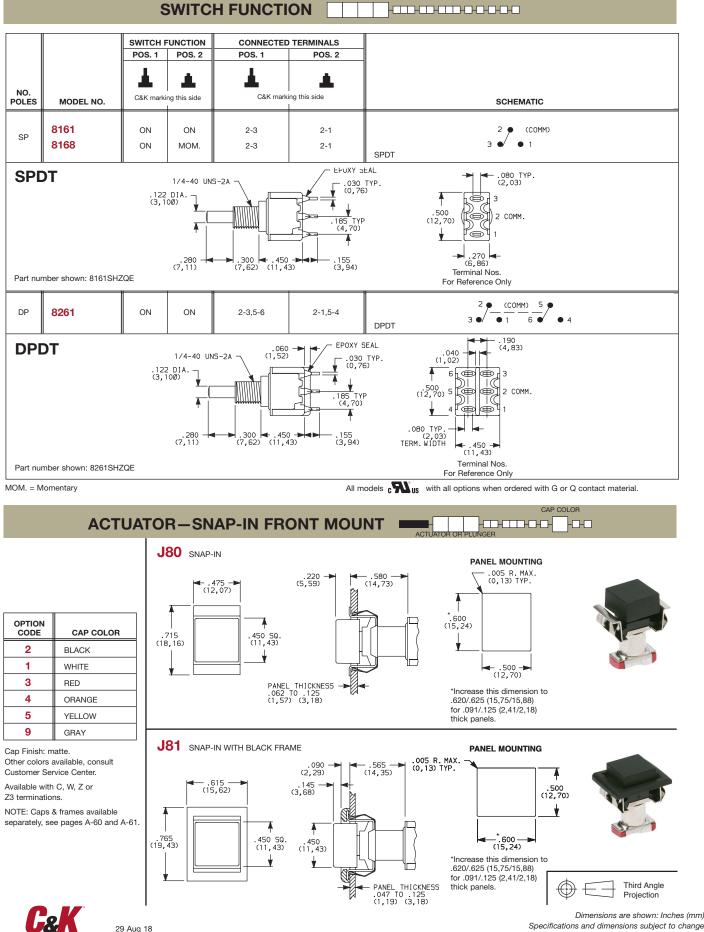
CENTER CONTACT & ALL TERMINALS: Q contact material: Copper alloy, silver plated. See page A-59 for additional contact materials.

- TERMINAL SEAL: Epoxy. Refer to soldering and cleaning in Technical Data Chapter.
- HARDWARE: Nut & Locking Ring: Brass, nickel plated; Lockwasher: Steel, nickel plated.

### **Build-A-Switch**

To order, simply select desired option from each category and place in the appropriate box. Available options are shown and described on pages A-53 thru A-61. For additional options not shown in catalog, consult Customer Service Center. All models have epoxy terminal seal and are compatible with all "bottom-wash" PCB cleaning methods.





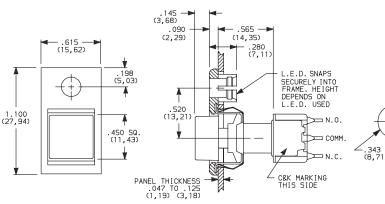
## 29 Aug 18

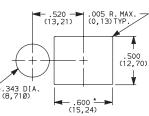
A-53

Specifications and dimensions subject to change

### ACTUATOR-SNAP-IN FRONT MOUNT







PANEL MOUNTING

\* Increase this dimension to .620/.625 (15,75/15,88) for .091/.125 (2,31/3,18) thick panels.

Available with C, W, Z or Z3 terminations.

#### LED not included.

Pushbutton >

For LED information, see page A-61.

NOTE: Caps & frames available separately, see pages A-60 and A-61.

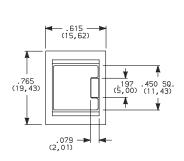
Other colors available, consult Customer Service Center.

OPTION CODE	CAP COLOR			
2	BLACK			
1	WHITE			
3	RED			
4	ORANGE			
5	YELLOW			
9	GRAY			

**ACTUATOR-SNAP-IN FRONT MOUNT** 

#### J86 SNAP-IN WITH BLACK FRAME AND LED





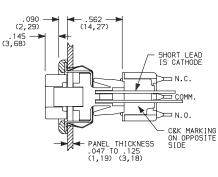
8161J86ZQE223 SPDT

Available with C, W, Z or Z3 terminations and SPDT models only.

NOTE: Caps & frames available separately, see pages A-60 and A-61.

Other colors available, consult Customer Service Center.

OPTION CODE	CAP COLOR			
2	BLACK			
1	WHITE			
3	RED			
4	ORANGE			
5	YELLOW			
9	GRAY			

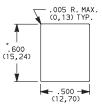


ACTUATOR OR PLUNGER

#### PANEL MOUNTING

LED COLOR

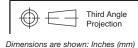
CAP COLOR



\* Increase this dimension to .620/.625 (15,75/15,88) for .091/.125 (2,31/3,18) thick panels.

OPTION CODE	LED COLOR		
3	RED		

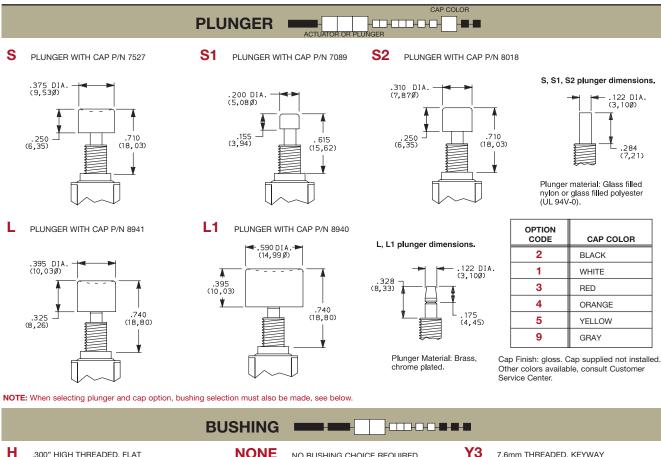
For LED information, see page A-61.

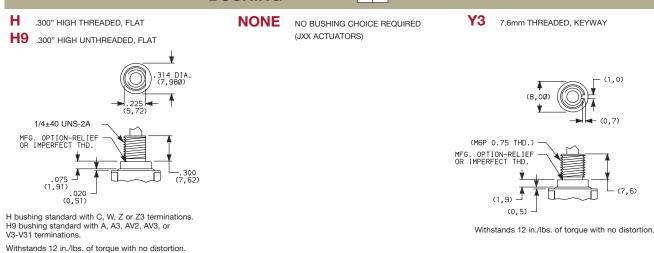


Specifications and dimensions subject to change

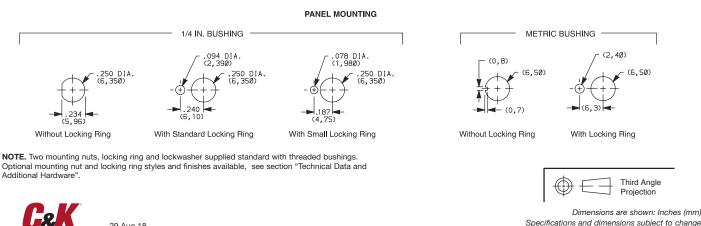


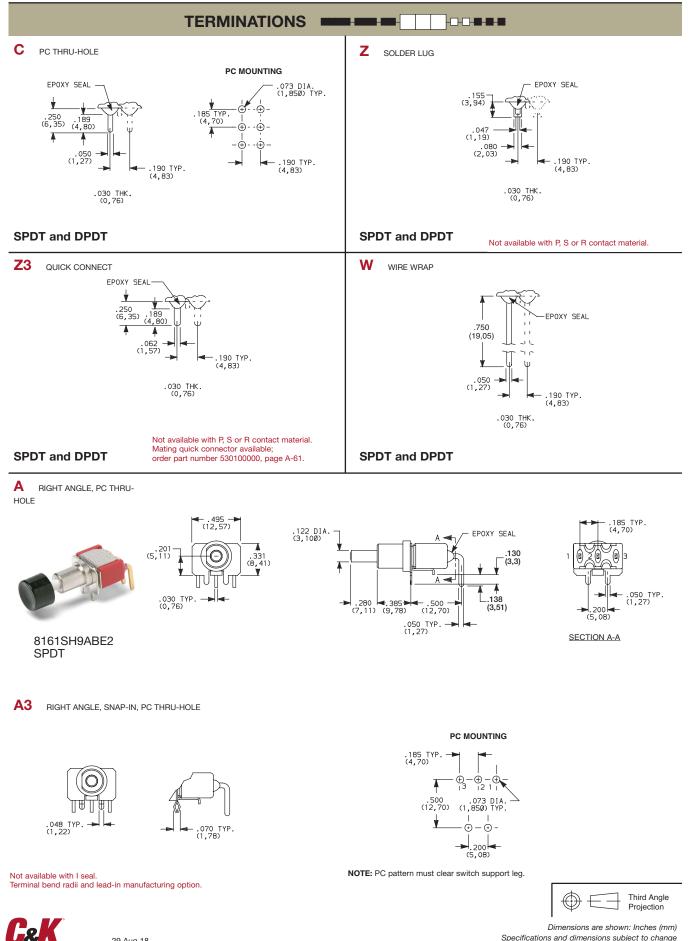
www.ckswitches.com





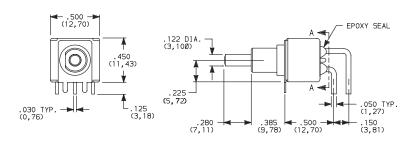
NOTE: When selecting bushing option, plunger selection must also be made, see above. No bushing option choice required when any JXX actuator option is selected.

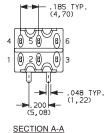




Pushbutton >

A RIGHT ANGLE, PC THRU-HOLE

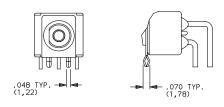


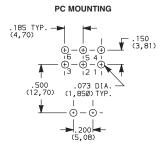




8261SH9ABE2 DPDT

A3 RIGHT ANGLE, SNAP-IN, PC THRU-HOLE

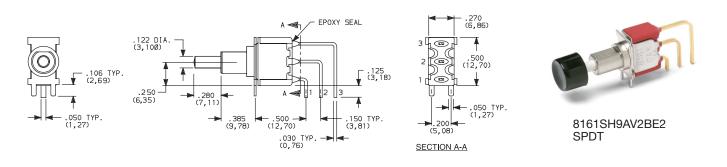




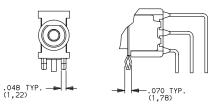
#### Not available with I seal.

Terminal bend radii and lead-in manufacturing option.

AV2 VERTICAL RIGHT ANGLE, PC THRU-HOLE, .150" PITCH



AV3 VERTICAL RIGHT ANGLE, SNAP-IN, PC THRU-HOLE, .150" PITCH



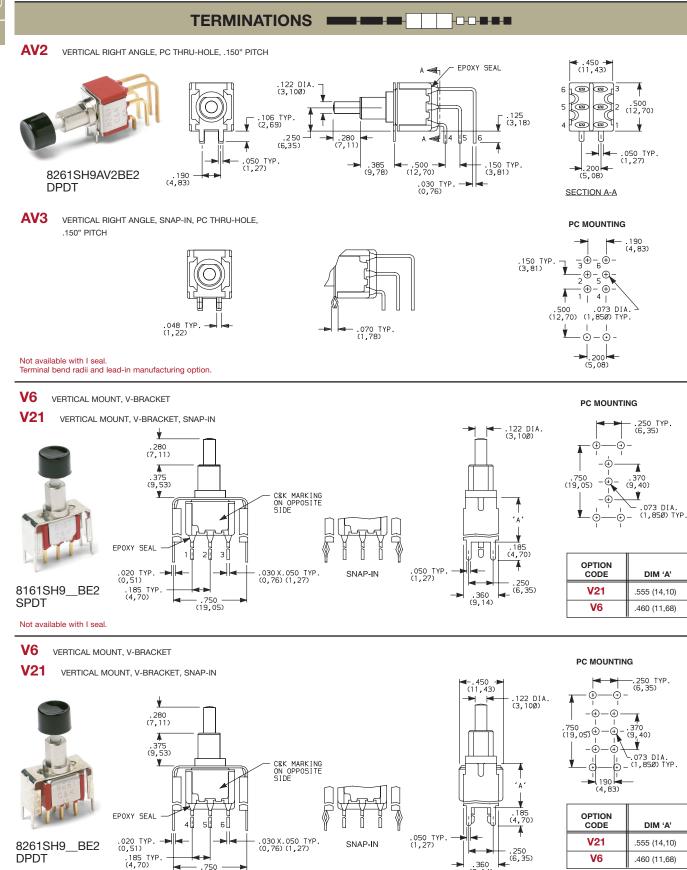
Not available with I seal. Terminal bend radii and lead-in manufacturing option.



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Dimensions are shown: Inches (mm) Specifications and dimensions subject to change



Not available with I seal.



- .750 -(19,05)

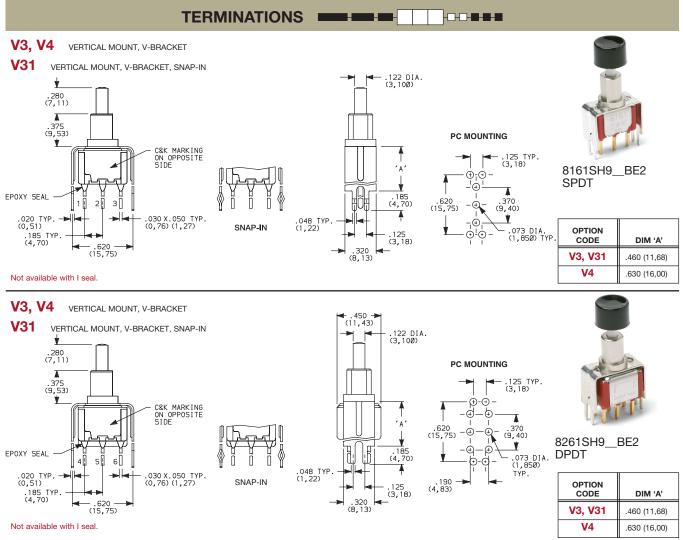
.360 (9,14)

www.ckswitches.com

OPTION CODE	DIM 'A'			
V21	.555 (14,10)			
<b>V</b> 6	.460 (11,68)			

Dimensions are shown: Inches (mm) Specifications and dimensions subject to change

Third Angle Projection



### CONTACT MATERIAL

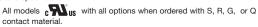
OPTION CODE	CONTACT MATERIAL	TERMINAL PLATING	RATINGS			
В	GOLD 1	GOLD <sup>1</sup>		0.4 VA MAX. @ 20 V AC OR DC MAX.		
Р		MATTE-TIN <sup>6</sup>	LOW LEVEL/DRY CIRCUIT			
Q	SILVER 4,5	SILVER 5		6 AMPS @ 120 V AC OR 28 V DC; 3 AMPS @ 250 V AC.		
S	SILVER 7,0	MATTE-TIN 6	POWER			
G	GOLD OVER	GOLD <sup>3</sup>		0.4 VA MAX @ 20 V AC OR DC MAX. OR		
R	SILVER <sup>2,3</sup>	MATTE-TIN 6	LOW LEVEL/DRY CIRCUIT OR POWER	6 AMPS @ 120 V AC OR 28 V DC; 3 AMPS @ 250 V AC.		

\* Note: See Technical Data section of this catalog for RoHS compliant and compatible definitions and specifications.

- <sup>1</sup> CONTACTS & TERMINALS: Copper alloy, with gold plate over nickel plate.
- <sup>2</sup> END CONTACTS: Coin silver, with gold plate over nickel plate.
- <sup>3</sup> CENTER CONTACTS & ALL TERMINALS: Copper alloy, with gold plate over nickel plate.
- <sup>4</sup> END CONTACTS: Coin silver, silver plated.
- <sup>5</sup> CENTER CONTACT & ALL TERMINALS: Copper alloy, silver plated.
- <sup>6</sup> TERMINALS: Copper alloy, with matte-tin over nickel plate.

**NOTE:** Any models supplied with P, S, R,Q, B or G contact material are RoHS compliant.

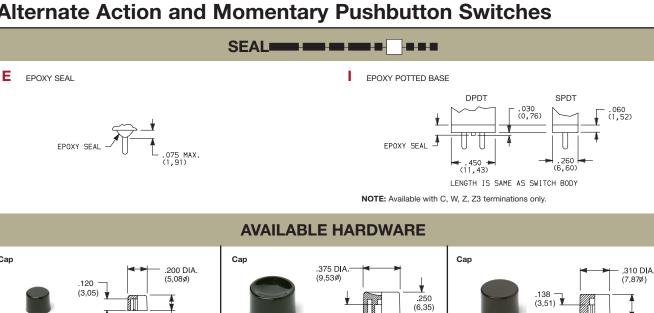




- B contact material standard with all terminations except C, Z & Z3.
- Q contact material standard with C, Z & Z3 terminations.
- P, S & R contact materials not available with Z & Z3 terminations.

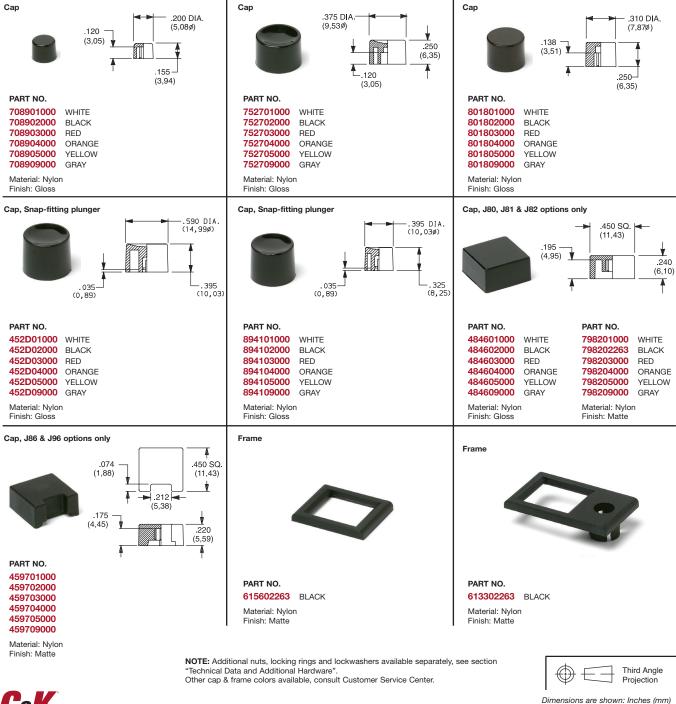


Dimensions are shown: Inches (mm) Specifications and dimensions subject to change



Specifications and dimensions subject to change

29 Aug 18





**AVAILABLE HARDWARE** 

1 Contraction

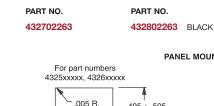
Fits Z3 Termination female connector

PART NO. 530100000 Available in loose pieces.

Frames snap into panel opening and are independent from switch mounting. Accurate positioning of the PC mounted switch relative to the panel opening is necessary to provide proper clearance between actuator and frame. Available in two basic styles and four panel thicknesses .047-.125 in. Material: Nylon. Finish: Matte.







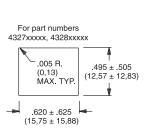
(0.13)

.090" (2,29) PANEL THK.

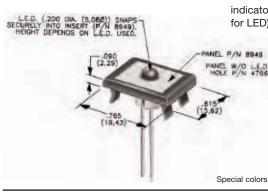
PANEL MOUNTING xx .495 ± .505 (12,57 ± 12,83)

.125" (3,18) PANEL THK.

MAX' TYP-.595 ± .605 (15,11 ± 15,37)



Panel Inserts



Above frames (part nos. 432XXXXX) are also available with insert which accepts LED for indicator light assembly. Order insert separately from frame. Blank insert panel (without hole for LED) also available. **LED not included.** 

PANEL INSERT WITH HOLE FOR LED PART NO. 894902000 BLANK PANEL INSERT WITHOUT HOLE FOR LED PART NO. 476602000 BLACK

Special colors, custom markings available, consult Customer Service Center

#### LED INFORMATION

SWITCHES WITH LED SUPPLIED: J86 OPTION:

Rectangular LEDs are supplied on 8060 Series pushbutton switches with J86 option. These LEDs are factory installed and are not replaceable. The following specifications apply:

			TYP.	TYP.	MAX RAT	NGS AT 25°C AMBIENT T	EMPERATURE	Flat denotes	.025 SQ.
OPTION CODE	COLOR	TYP. INTENSITY	FORWARD VOLTAGE	FORWARD	FORWARD VOLTAGE	CONTINUOUS FORWARD CURRENT	POWER DISSIPATION	cathode200 DIA	TYP. (0,63)
6	Green	1.0 mcd		20 mA		50 mA	125 mW		.030-
3	Red*	0.5 mcd	2.1 V	10 mA	2.5 V	30 mA	75 mW	.230 DIA <del>.      </del> .(5,84˘)	(0,76)
5	Yellow	4.0 mcd		20 mA		50 mA	125 mW		.340 .750 (8,64) .750 (19,05)

**Process Information:** Soldering to LED leads must be completed within 5 seconds at 500°F (260°C) maximum.

Caution: Circuit elements must limit forward current of LED to 50mA max. continuous.

\* Extra-bright red LED available (typ. intensity 4.5 mcd), consult Customer Service Center.

LEDs are not supplied with J82 & J84 options. LED snaps into switch frame surrounding actuator and is wired externally.



Suggested LED for J82 & J84 options. Dimensions for reference only.

> Third Angle Projection

Dimensions are shown: Inches (mm) Specifications and dimensions subject to change

# **Mouser Electronics**

Authorized Distributor

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## **C&K Switches:**

 8168J81ZGE22
 8168SHV4BE2
 8161SH9AQE2
 8168J86ZQE223
 8261J81ZGE22
 8161J81ZGE22
 8168SHQZQE22

 8168SH9AV2BE2
 8161LHZGE2
 8168SH9V4BE1
 8168S1H9ABE1
 8161S2H9A3BE2
 8261J8ZQE22

 8168SH9AV2BE2
 8161LHZGE2
 8168SH9V4BE1
 8168S1H9ABE1
 8161S2H9A3BE2
 8261J8ZQE22

 8168SH4ZQE2
 8168SH9ABE2
 8161SHZQE2
 8261SHZQE2
 8168SHZQE2
 8168LHZQE2

 8261J81ZQE22
 8168SH9ABE2
 8161SHZQE2
 8261SHZQE2
 8168SHZQE2
 8168LHZQE2

 8168LHZQE3
 8168SH9ABE2
 8161SH9ABE2
 8168SHZGE3
 8168SHQE2
 8168SHQE2

 8168LHZQE3
 8168SHZGE2
 8161SH9ABE2
 8168SHZGE3
 8168SHQE2
 8168SHAQE2

 8161J8ZZQE32
 8161LH9ABE9
 8161LH9ASE3
 8161S1H9ZQE2
 8161SHQE2
 8161SHQE2

 8168SH9AV2BE2
 8168SH9ASE2
 8168SHCBE9
 8168LHQE3
 8168LY3W3ME2

 8168SH9AV2BE2
 8168SH9ASE2
 8168SHCBE9
 8168LY3W3ME2
 8161S1HZ3QE2

 8168SH9AV2BE2
 8168SH9ASE2
 8168SHCBE9
 8168LY3W3ME2
 8161S1HZ3QE2
 8161S1HZ3QE2

 8168S1H9AV2BE2
 8168SH9A3BE2