

MODEL	SPECIFICATION	SP-001	Page
R9 Seris SMD type			1/5
RoHS Compliant - Rotary Coded Switch			

Ordering Information:

R9 W 3 08 R 0 S R

Package:
None=Tube(Standard)
R=Tape & Reel(Flat Rotor only)

Teriminal Type:
S=SMD

Rotor Style:
0=Flat Arrow
1=0.5mm(Mius Slot)
3=3mm(Mius Slot)
7=7mm(Mius Slot)

Code:
R=BCD(Real)
C=BCD(Complementary)

No. of positions:
08:8 Position
10:10 Position
16:16 Position

Number of pins:
2=3+2
3=3+3
4=4+1

Special Code:
None=Standard
K=Black(Thru-Hole)

R9=10*10mm(9.9*9.9mm)
Contact area with Gold-plated
Terminal with Tin-plated

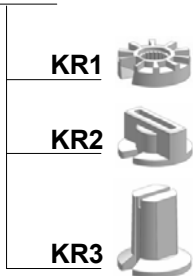
Specifications

Rating	.....5VDC 100mA Max./ 20mVDC 1μA Min.
Contact	.....100mΩ Max.
Insulation Resistance	.....1,000MΩ Min. at 100 VDC
Dielectric Strength	..... 250VAC / 1 minute
Operating Force	.....250gf/cm
Mechanical Life	.....20,000 Steps
Operating Temperature	.....-25 ~ +125
Waterproof	.....Meet IP67

■ **Knob Order Information**

KR1

08



Knob Color

- 00 : Blue
- 02 : Green
- 03 : Light Grey
- 04 : Yellow
- 05 : Dark Grey
- 08 : Red

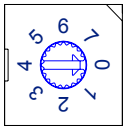
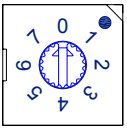
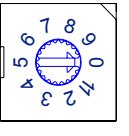
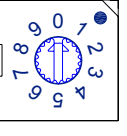
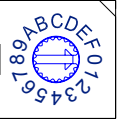
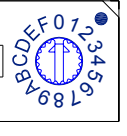
Materials:

Cover & Base	R9.....Thermoplastic UL94-HB,(Black)
	R9W.....Thermoplastic UL94-HB, (White)
Rotor	R93/R92.....Thermoplastic UL94-HB, (White/Orange)
	R94.....Thermoplastic UL94-HB, (Blue/Yellow)
Knob	.....PC
"O" Ring	.....Silicone Rubber
Step	.....Stainless Steel
Spacer	.....Stainless Steel
Movable Contact	.....Cooper alloy with Gold Plated over nickel plate
Terminal Contact	.....Copper alloy with Gold Plated over nickel plate
Terminal	.....Cooper alloy with (Pure) Tin-Plated over nickel plate

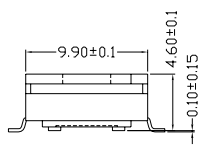
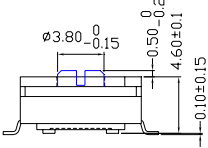
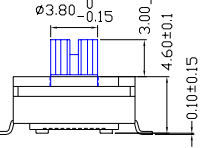
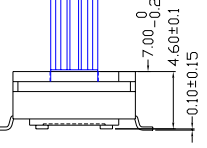
Code Format:

No. of Positions		16 Positions																
		10 Positions																
		08 Postions																
Position		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	
Code	Real Code	8									●	●	●	●	●	●	●	
		4				●	●	●	●					●	●	●	●	
		2			●	●			●	●			●	●			●	●
		1		●		●			●		●			●			●	●
	Complementary Code	8	●	●	●	●	●	●	●	●								
		4	●	●	●	●					●	●	●	●				
		2	●	●			●	●			●	●			●	●		
		1	●		●		●		●		●		●		●		●	

Position





8 Position		10 Position		16 Position	
R92/93	R94	R92/93	R94	R92/93	R94
					

Rotor

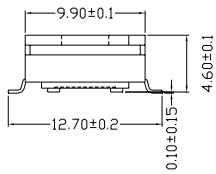
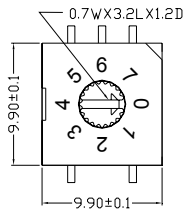
Flat Type	0.5mm	3mm	7mm
			

MODEL	SPECIFICATION	SP-003	Page
R9 Series SMD type			3/5
RoHs Compliant - Rotary Coded Switch			

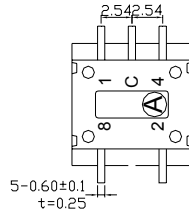
Rotor color:

Real Code		Complement Code	
R93/R92(White)	R94(Blue)	R93/R92(Orange)	R94(Yellow)
			

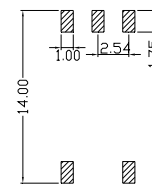
R92



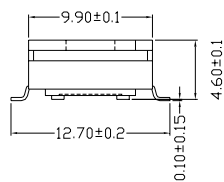
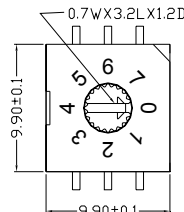
TERMINATION IDENTIFICATION
VIEWED FROM BOTTOM OF SWITCH



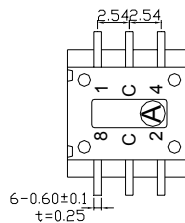
PC LAYOUT (TOP VIEW)



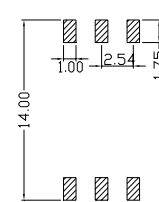
R93



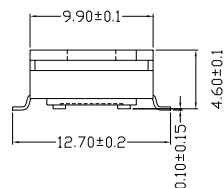
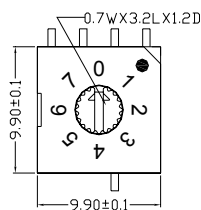
TERMINATION IDENTIFICATION
VIEWED FROM BOTTOM OF SWITCH



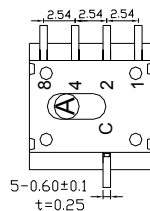
PC LAYOUT (TOP VIEW)



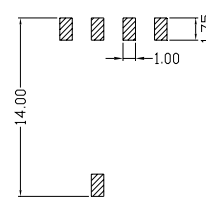
R94



TERMINATION IDENTIFICATION
VIEWED FROM BOTTOM OF SWITCH



PC LAYOUT (TOP VIEW)



Soldering Information

Hand Soldering

Soldering iron 30W or under at 350 for 3 sec max or at 270 for 5 sec max.

Reflow Soldering

Classification Reflow Profiles

Profile Feature	Pb-Free Assembly
Preheat / Soak	
Temperature Min (T_{smin})	150
Temperature Max (T_{smax})	200
Time(ts) from (T_{smin} to T_{smax})	60 ~120 seconds
Ramp-up Rate (T_L to T_p)	3 /second max
Liquidous temperature (T_L)	217
Time (t_L) maintained above to T_L	60 ~ 150 seconds
Peak package body temperature (T_p)	For users T_p must not exceed the Classification temp:260 (Package Thickness:1.6~2.5mm) For suppliers T_p must equal or exceed the Classification temp:260 (Package Thickness:1.6~2.5mm)
Time (t_p) within 5 of specified classification Temperature (T_c)	30 seconds
Ramp-Down Rate (T_p to T_L)	6 /second max
Time 25 to Peak Temperature	8 minutes max
* Tolerance for peak profile temperature(T_p) is defined as a supplier minimum and a user maximum	

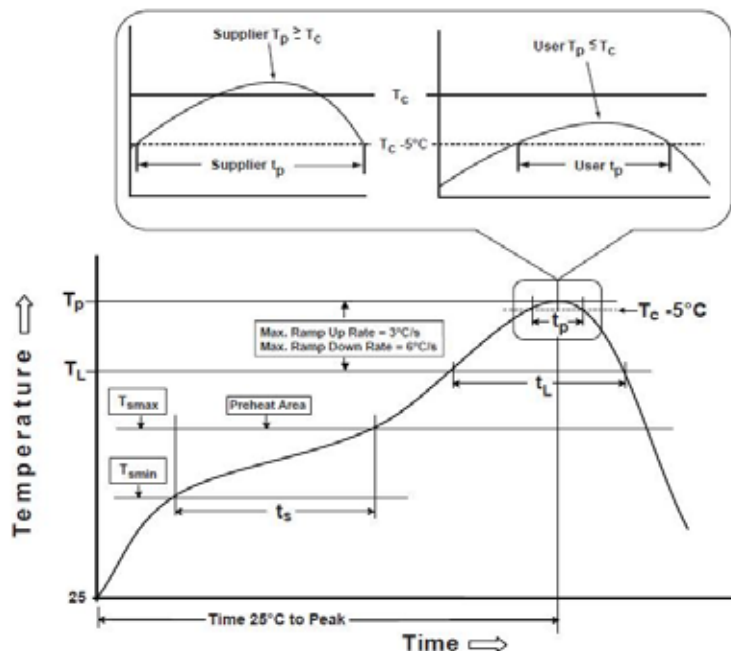
Note 1: All temperatures refer to topside of the package, measured on the package body surface.

Note 2: Time within 5 °C of actual peak temperature (t_p) specified for the reflow profiles is

a “supplier” minimum and “user” maximum.

The table copy from IPC/JEDEC J-STD-020 D.1

Reflow Soldering Standard Conditions



MODEL	SPECIFICATION	SP-005	Page
R9 Series SMD type			5/5
RoHs Compliant - Rotary Coded Switch			

Part Number Table:

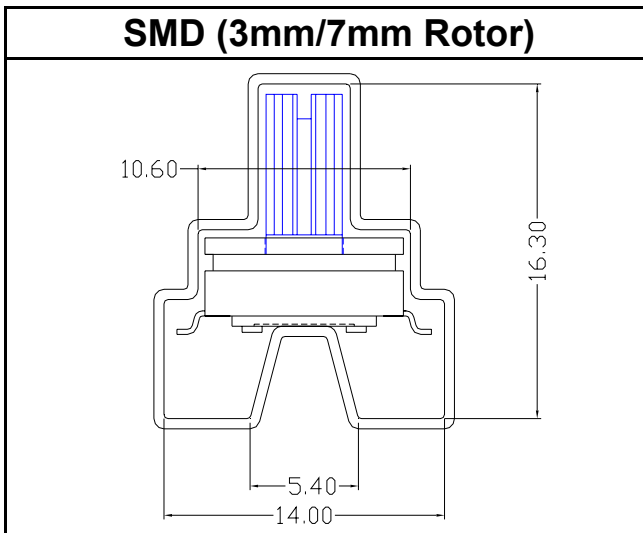
Pin Out	No. Pos.	Real Code			Complementary Code		
		S Type 0.5mm Rotor Tube Package	S Type 7mm Rotor Tube Package	S Type Flat Rotor Taping Reel	S Type 3mm Rotor Tube Package	S Type 7mm Rotor Tube Package	S Type Flat Rotor Taping Reel
3+2	08	R9208R1S	R9208R7S	R9208R0S-R	R9208C3S	R9208C7S	R9208R0S-R
	10	R9210R1S	R9210R7S	R9210R0S-R	R9210C3S	R9210C7S	R9210R0S-R
	16	R9216R1S	R9216R7S	R9216R0S-R	R9216C3S	R9216C7S	R9216R0S-R
3+3	08	R9308R1S	R9308R7S	R9308R0S-R	R9308C3S	R9308C7S	R9308R0S-R
	10	R9310R1S	R9310R7S	R9310R0S-R	R9310C3S	R9310C7S	R9310R0S-R
	16	R9316R1S	R9316R7S	R9316R0S-R	R9316C3S	R9316C7S	R9316R0S-R
4+1	08	R9408R1S	R9408R7S	R9408R0S-R	R9408C3S	R9408C7S	R9408R0S-R
	10	R9410R1S	R9410R7S	R9410R0S-R	R9410C3S	R9410C7S	R9410R0S-R
	16	R9416R1S	R9416R7S	R9416R0S-R	R9416C3S	R9416C7S	R9416R0S-R

Tube Package:

ROTOR	Flat 0.5mm / 3mm / 7mm
Per TUBE (pcs)	50
BOX (pcs)	2500
CTN 1 (pcs)	5000
CTN 2 (pcs)	10000

Reel Package:

ROTOR	Flat 0.5mm
Per REEL (pcs)	800
BOX (pcs)	3200
CTN 1 (pcs)	6400



Carton:

Tube	CTN1 / 2 Boxes.....	58.5cm x 26.5cm x 16cm
	CTN2 / 4 Boxes.....	58.5cm x 26.5cm x 24cm
Reel	CTN1 / 2 Boxes.....	36.0cm x 27.5cm x 37cm