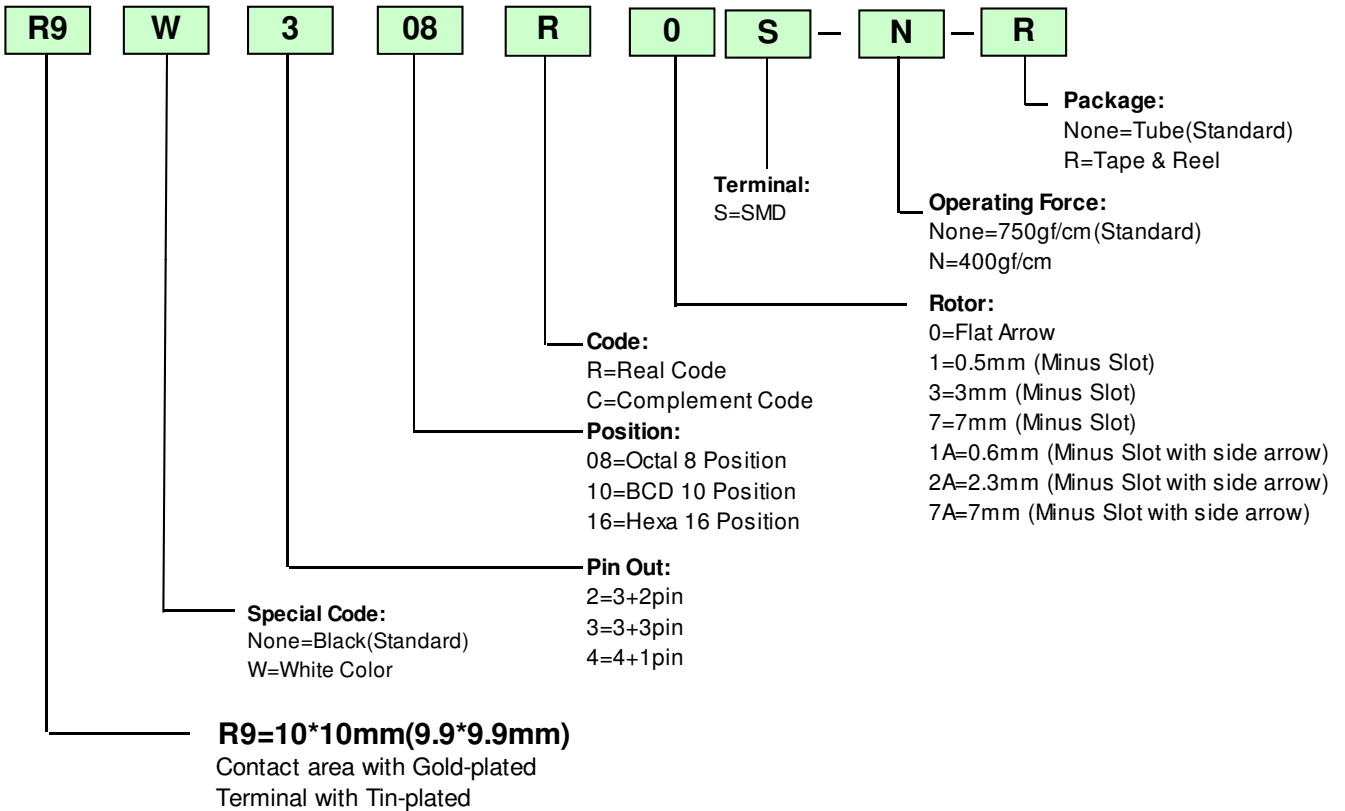


MODEL	SPECIFICATION Rotary Coded SWITCH RoHS&REACH Compliant / Halogen Free	SP-001	Page
R9 series SMD Type			1/5

Order Information



Specifications

◆ Rating	.....	5VDC 100mA Max./ 20mVDC 1µA Min.
◆ Contact Resistance	.....	100mΩ Max
◆ Insulation Resistance	.....	1,000MΩ/Min. at 100 VDC
◆ Dielectric Strength	.....	250VAC / 1 mintue
◆ Operating Force	.....	750gf/cm (Standard)
	.....	400gf/cm Max. (N type)
◆ Mechanical Life	.....	20,000 Steps
◆ Operating Temperature	.....	-40°C ~ +125°C
◆ Storage Temperature	.....	-40°C ~ +85°C
◆ Waterproof	.....	Meet IP67

Materials

◆ Cover & Base	Halogen Free.....	Thermoplastic UL 94 rate, Black/ White
◆ Rotor	Halogen Free.....	Thermoplastic UL 94 rate, White/ Orange/ Blue/ Yellow
◆ Knob	.....	Thermoplastic UL 94 rate
◆ "O" Ring	.....	Silicone Rubber
◆ Step	.....	Stainless Steel
◆ Spacer	.....	Stainless Steel
◆ Movable Contact	.....	Gold-Plated
◆ Terminal Contact	.....	Gold-Plated
◆ Terminal	.....	Tin-Plated

MODEL	SPECIFICATION		Page
R9 series SMD Type	Rotary Coded SWITCH RoHS&REACH Compliant / Halogen Free	SP-002	2/5

Soldering Information

◆ Hand Soldering

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

◆ Reflow Soldering

260°C +/-5°C within 30sec for reflow, In-line or Batch system.

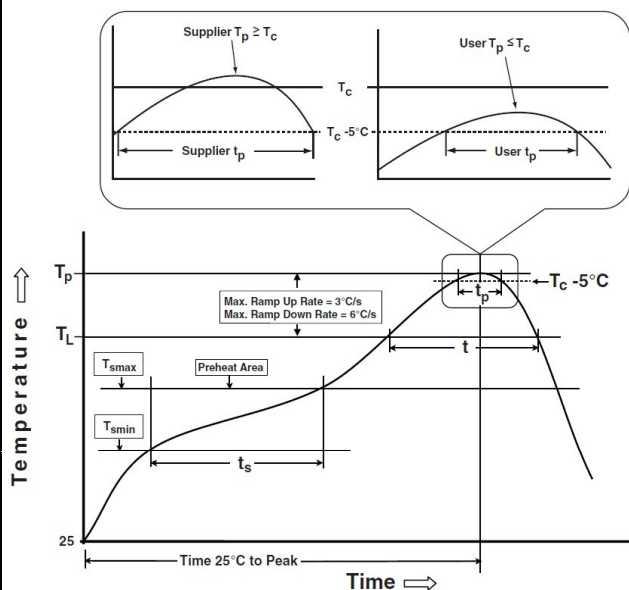
The table copy from IPC/JEDEC J-STD-020 D.1

Profile Feature	Pb-Free Assembly
Preheat / Soak	
Temperature Min (T_{smin})	150°C
Temperature Max (T_{smax})	200°C
Time(t_s) from (T_{smin} to T_{smax})	60 ~120 seconds
Ramp-up Rate (T_L to T_p)	3°C/second max
Liquidous temperature (T_L)	217°C
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:250°C (Package Thickness>2.5mm) For suppliers T_p must equal or exceed the Classification temp:250°C (Package Thickness>2.5mm)
Time (t_p) within 5°C of specified classification temperature (T_c)	30 seconds
Ramp-Down Rate (T_p to T_L)	6°C/second max
Time 25°C 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.

Classification Reflow Soldering Profiles



MODEL	SPECIFICATION Rotary Coded SWITCH RoHS&REACH Compliant / Halogen Free	SP-003	Page
R9 series SMD Type			3/5

Position

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

Rotor Style

Standard Rotor	0 (Flat Type)	1 (0.5mm)	3 (3mm)	7 (7mm)
A type Rotor	1A (0.6mm)	2A (2.3mm)	7A (7mm)	

Rotor Color

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

Knob Order information

KR1

08

KR1



Knob Color

00 : Blue

KR2 / KR2A



02 : Green

KR3 / KR3A



03 : Light Grey

04 : Yellow

05 : Dark Grey

06 : White

08 : Red

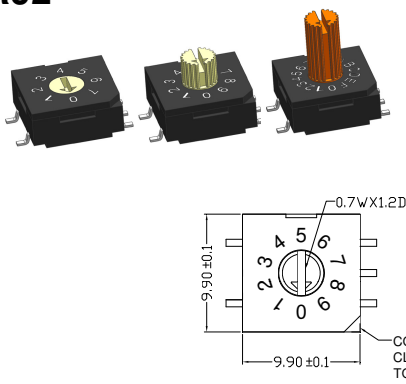
09 : Black

Note:

- All caps are not allowed to pass through soldering process.
- All caps should be assembled after all soldering process finished.

MODEL	SPECIFICATION	Page
R9 series SMD Type	Rotary Coded SWITCH RoHS&REACH Compliant / Halogen Free	SP-004 4/5

R92



0.7Wx1.2D

9.90 ±0.1

12.70 ±0.2

4.60 ±0.1

0.10 ±0.15

14.00

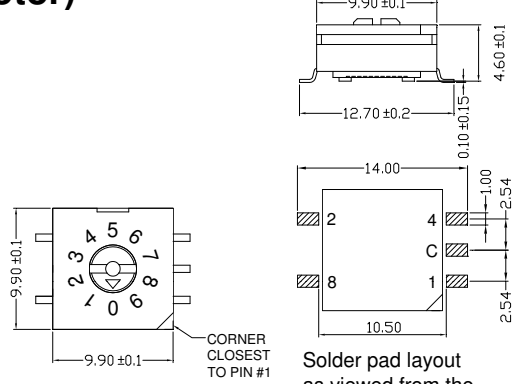
10.50

1.00

2.54

Solder pad layout as viewed from the top of the switch

R92(A Rotor)



9.90 ±0.1

12.70 ±0.2

4.60 ±0.1

0.10 ±0.15

14.00

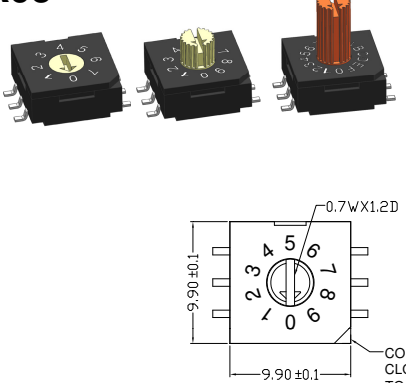
10.50

1.00

2.54

Solder pad layout as viewed from the top of the switch

R93



0.7Wx1.2D

9.90 ±0.1

12.70 ±0.2

4.60 ±0.1

0.10 ±0.15

14.00

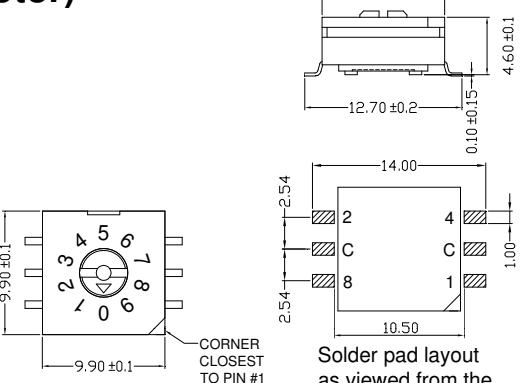
10.50

1.00

2.54

Solder pad layout as viewed from the top of the switch

R93(A Rotor)



9.90 ±0.1

12.70 ±0.2

4.60 ±0.1

0.10 ±0.15

14.00

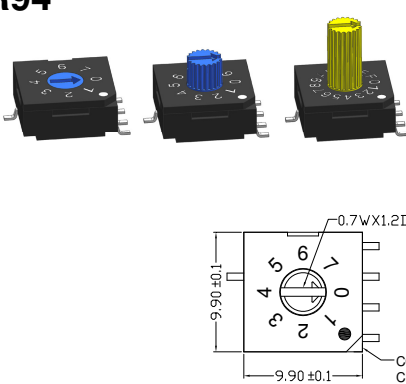
10.50

1.00

2.54

Solder pad layout as viewed from the top of the switch

R94



0.7Wx1.2D

9.90 ±0.1

12.70 ±0.2

4.60 ±0.1

0.10 ±0.15

14.00

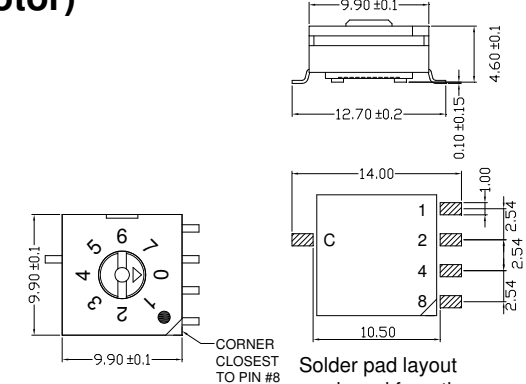
10.50

1.00

2.54

Solder pad layout as viewed from the top of the switch

R94(A Rotor)



9.90 ±0.1

12.70 ±0.2

4.60 ±0.1

0.10 ±0.15

14.00

10.50

1.00

2.54

Solder pad layout as viewed from the top of the switch

Code Format

No. of Positions		16 Positions														
		08 Postions								10 Positions						
		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	•		•		•		•	•		•	•		•		•

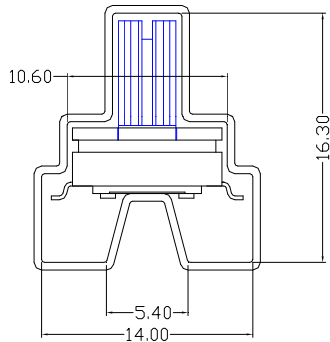
MODEL	SPECIFICATION	SP-005	Page
R9 series SMD Type	Rotary Coded SWITCH RoHS&REACH Compliant / Halogen Free		5/5

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 0.6mm Rotor Taping Reel
3+2	08	R9208R1S	R9208R7S	R9208R0S-R	R9208C3S	R9208C7S	R9208C1AS-R
	10	R9210R1S	R9210R7S	R9210R0S-R	R9210C3S	R9210C7S	R9210C1AS-R
	16	R9216R1S	R9216R7S	R9216R0S-R	R9216C3S	R9216C7S	R9216C1AS-R
3+3	08	R9308R1S	R9308R7S	R9308R0S-R	R9308C3S	R9308C7S	R9308C1AS-R
	10	R9310R1S	R9310R7S	R9310R0S-R	R9310C3S	R9310C7S	R9310C1AS-R
	16	R9316R1S	R9316R7S	R9316R0S-R	R9316C3S	R9316C7S	R9316C1AS-R
4+1	08	R9408R1S	R9408R7S	R9408R0S-R	R9408C3S	R9408C7S	R9408C1AS-R
	10	R9410R1S	R9410R7S	R9410R0S-R	R9410C3S	R9410C7S	R9410C1AS-R
	16	R9416R1S	R9416R7S	R9416R0S-R	R9416C3S	R9416C7S	R9416C1AS-R

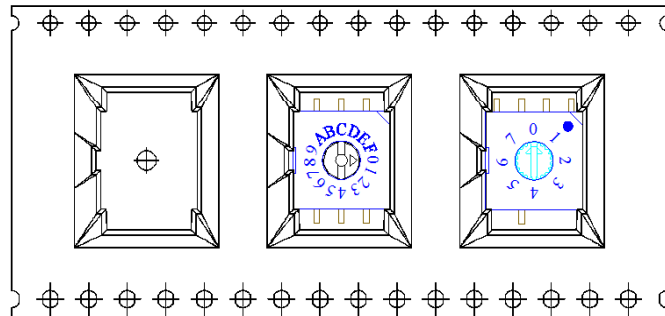
Tube Package

ROTOR	0mm ~7mm
Per TUBE (pcs)	50
BOX (pcs)	2000
CTN 1 (pcs)	4000
CTN 2 (pcs)	8000



Tape & Reel Package

ROTOR	0 ~ 1mm	2 ~ 3mm	7mm
Per REEL (pcs)	600	350	200
BOX (pcs)	1800	1050	600
CTN 1 (pcs)	3600	2100	1200



Box Dimension

- ◆ Tube 57.0cm x 13.0cm x 12.5cm
- ◆ Tape & Reel 34.5cm x 34.5cm x 15.0cm

Carton Dimension

- ◆ Tube
 - 2 Boxes..... 58.5cm x 29.0cm x 15.0cm
 - 4 Boxes..... 58.5cm x 28.0cm x 27.0cm
- ◆ Tape & Reel
 - 1 Box..... 34.5cm x 34.5cm x 15.0cm
 - 2 Boxes..... 36.0cm x 27.5cm x 37.0cm

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[08H1](#) [TDR-04](#) [EDR-08S](#) [ESR-16H](#) [QDR-10](#) [EDR-10S](#) [QSR-06S](#) [ESR-08S](#) [EC11E156040N](#) [EC11B15243DC](#) [EC35AH220501](#)
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