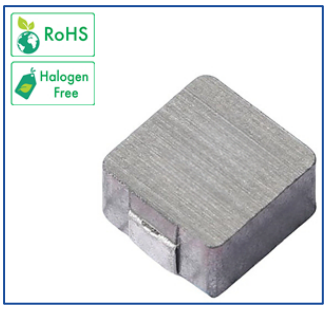
Shielded Power Inductors

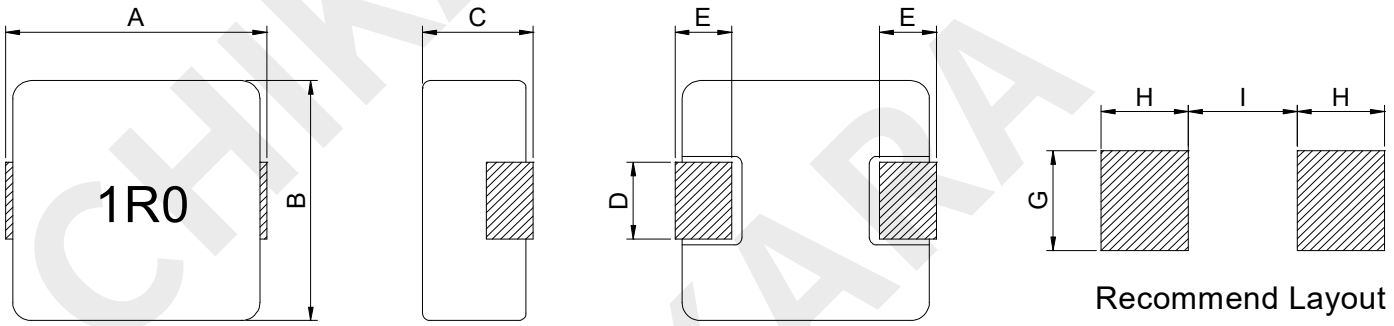
SP14-138065 Type

Features

- High energy storage and very low resistance
- Storage temperature range:-55℃ to +125℃
- Operating temperature range:-55℃ to +125℃ (including coil's self-temperature rise)
- Moisture sensitivity level:1
- Packaging:400pcs. Per 13-inch reel
- RoHs&Halogen-free compliant



Mechanical Dimension(Unit:mm)



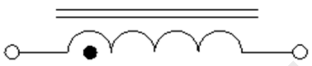
A	B	C	D	E	G	H	I
13.3±0.5	12.6±0.4	6.5Max.	See table	2.5±0.5	6.0	3.25	8.0

Part Number Description

SP14 - 138065 1R0 M
① ② ③ ④

①	Type
②	Dimensions
③	Inductance value
④	Tolerance code

Electrical Schematic



Tel:+86(769)-82553009 Fax:+86(769)-82553010
E-mail: sales@chikaracoil.com Web:www.chikaracoil.com

Version:A1 Revised:11/10/2022

Electrical Characteristic

Part Number	Inductance L0(uH)	DCR (mΩ)Typ.	DCR (mΩ)Max.	SRF (MHz)Typ.	Isat (A)Typ.	Irms (A)Typ.	D (mm)±0.5
SP14-1380651R0M	1.0±20%	1.5	2.1	55.0	45.0	31.0	3.3
SP14-1380651R5M	1.5±20%	2.0	3.0	40.0	40.0	26.0	3.3
SP14-1380652R2M	2.2±20%	3.8	4.5	34.0	37.0	23.0	3.3
SP14-1380653R3M	3.3±20%	6.0	6.8	27.0	26.0	18.0	3.3
SP14-1380654R7M	4.7±20%	7.5	8.7	18.0	24.0	16.0	4.7
SP14-1380655R6M	5.6±20%	8.0	10.5	17.0	22.5	14.0	4.7
SP14-1380656R8M	6.8±20%	9.5	12.0	15.0	19.0	13.0	4.7
SP14-1380658R2M	8.2±20%	12.0	15.0	14.0	16.0	12.0	4.7
SP14-138065100M	10±20%	13.3	16.5	10.5	15.0	11.0	4.7
SP14-138065150M	15±20%	21.0	26.0	8.6	11.0	9.5	4.7
SP14-138065220M	22±20%	30.0	36.0	8.1	9.0	8.0	4.7
SP14-138065330M	33±20%	60.0	69.0	7.5	8.0	6.5	4.7
SP14-138065470M	47±20%	67.0	75.0	5.6	6.8	5.5	4.7
SP14-138065680M	68±20%	103	120	4.5	5.2	4.8	4.7
SP14-138065820M	82±20%	115	135	3.4	4.5	4.0	4.7
SP14-138065101M	100±20%	142	170	2.7	4.0	3.5	4.7

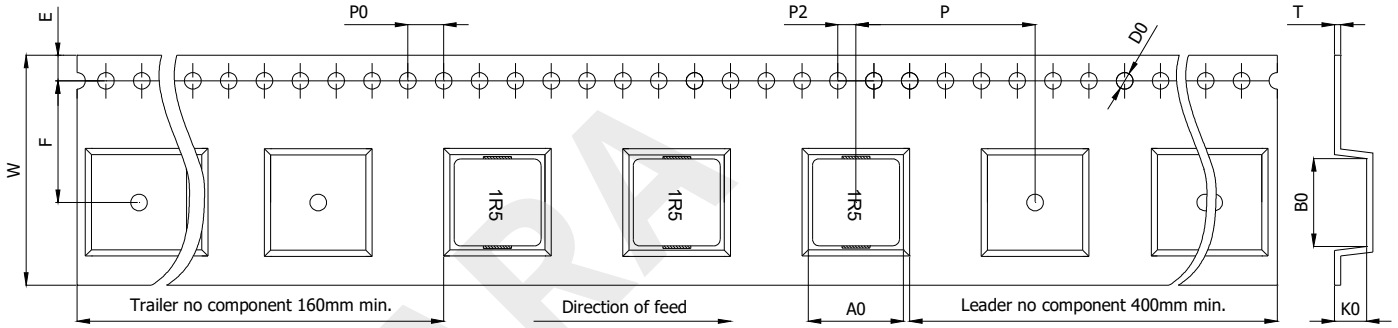
- Test frequency and voltage:100KHz,1Vrms.
- All test data referenced to 25℃ ambient.
- Absolute maximum voltage: 50Vdc.
- Saturation current(Isat) will cause L0 to drop approximately 30%.
- Heat rated current(Irms) will cause the coil temperature rise approximately Δt of 40℃.
- Heat rated current (Irms) is tested on a typical PCB and apply a constant current in still air. The temperature rise is dependent on the application system condition including PCB PAD pattern, trace width and thickness and adjacent components etc. It' s suggested to verify the temperature rise of the component under the real operation application conditions.

Tel:+86(769)-82553009 Fax:+86(769)-82553010
E-mail: sales@chikaracoil.com Web:www.chikaracoil.com

Version:A1 Revised:11/10/2022

Packaging Specification

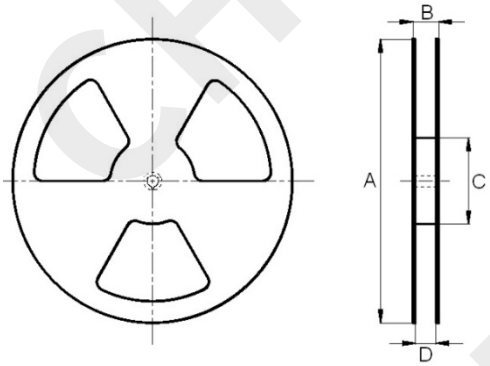
■ Carrier Tape (Unit:mm)



W	P	A0	B0	K0	E	F	P0	P2	D0	T
24.0±0.3	20.0±0.1	12.9±0.1	14.1±0.1	6.8±0.1	1.75±0.1	11.5±0.1	4.0±0.1	2.0±0.1	Φ1.5±0.1	0.5±0.05

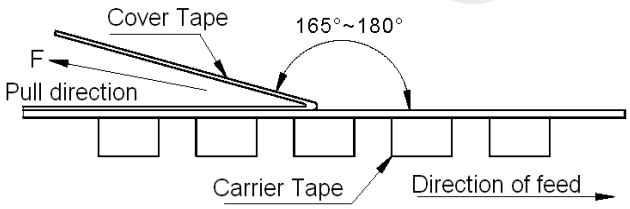
■ Reel (Unit:mm)

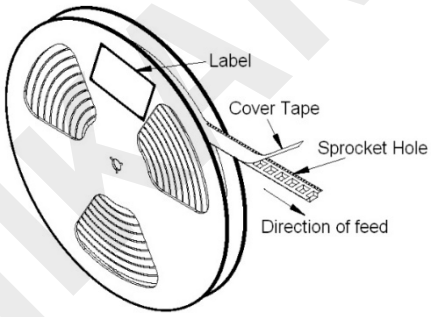
A	B	C	D
Φ330±1.0	28.9Max.	Φ100±1.0	24.5±0.5



■ Taping Method

Peel-off strength	Peel-off angle	Peel-off speed
F=0.1N~1.3N	165°~180°	300mm/min.





※ Packing is referred to the international standard IEC 60286-3.

■ Package Quantity

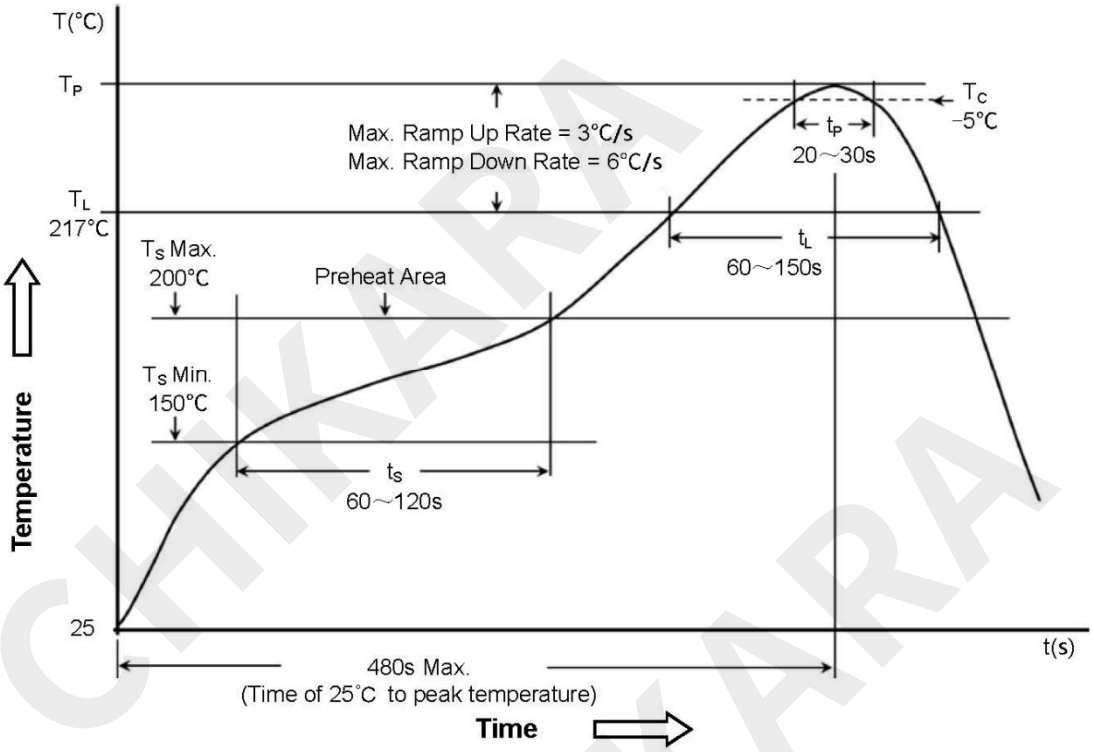
Parts per reel
400Pcs

Tel:+86(769)-82553009 Fax:+86(769)-82553010
E-mail: sales@chikaracoil.com Web:www.chikaracoil.com

Version:A1 Revised:11/10/2022

Soldering Specification

■ Reflow profile for SMT components



■ Classification of peak package body temperature (T_P)

	Package Thickness	Package Volume		
		<350mm³	350~2000mm³	>2000mm³
PB-Free Assembly	<1.6mm	260℃	260℃	260℃
	1.6~2.5mm	260℃	250℃	245℃
	≥2.5mm	250℃	245℃	245℃

※ Reflow is referred to standard IPC/JEDEC J-STD-020D.

Tel:+86(769)-82553009 Fax:+86(769)-82553010
E-mail: sales@chikaracoil.com Web:www.chikaracoil.com

Version:A1 Revised:11/10/2022