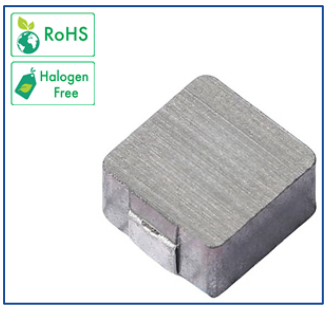
Shielded Power Inductors

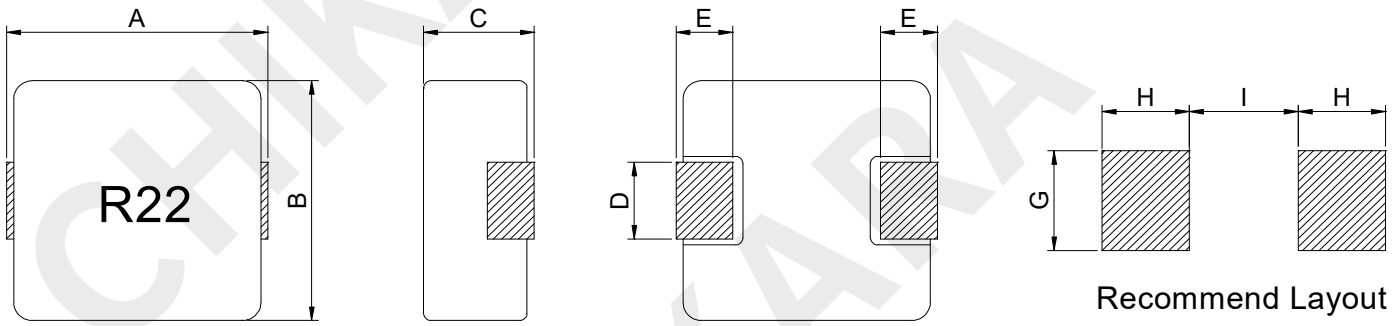
SP14-070030 Type

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:1000pcs. Per 13-inch reel
- RoHs&Halogen-free compliant



Mechanical Dimension(Unit:mm)



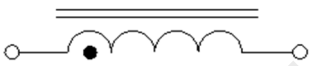
A	B	C	D	E	G	H	I
7.0±0.35	6.6±0.3	3.0Max.	3.0±0.3	1.6±0.5	3.5	2.35	3.7

Part Number Description

SP14 - 070030 R22 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

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Electrical Characteristic

Part Number	Inductance L0(uH)	DCR (mΩ)Typ.	DCR (mΩ)Max.	SRF (MHz)Typ.	Isat (A)Typ.	Irms (A)Typ.
SP14-070030R22M	0.22±20%	2.5	3.0	130	34.0	24.0
SP14-070030R24M	0.24±20%	2.6	3.1	120	28.0	23.0
SP14-070030R33M	0.33±20%	3.0	3.5	108	25.0	21.0
SP14-070030R47M	0.47±20%	3.5	4.1	90	20.0	18.0
SP14-070030R56M	0.56±20%	3.9	4.5	80	18.0	16.5
SP14-070030R68M	0.68±20%	4.8	5.3	69	17.0	16.0
SP14-070030R82M	0.82±20%	5.4	6.0	61	16.0	14.0
SP14-0700301R0M	1.0±20%	6.7	7.4	55	15.0	12.0
SP14-0700301R5M	1.5±20%	10.6	12.1	43	14.0	10.5
SP14-0700302R2M	2.2±20%	13.5	15.0	38	10.0	9.5
SP14-0700303R3M	3.3±20%	18.0	22.0	32	9.0	8.5
SP14-0700304R7M	4.7±20%	28.0	33.0	26	8.5	6.0
SP14-0700306R8M	6.8±20%	42.5	48.0	20	6.0	5.0
SP14-0700308R2M	8.2±20%	54.0	60.0	19	5.5	5.0
SP14-070030100M	10±20%	62.0	67.0	17	5.5	4.5
SP14-070030150M	15±20%	104.0	115.0	15	4.5	3.0
SP14-070030220M	22±20%	180.0	200.0	13	3.0	2.3
SP14-070030330M	33±20%	280.0	310.0	9.6	2.5	2.0

- 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.

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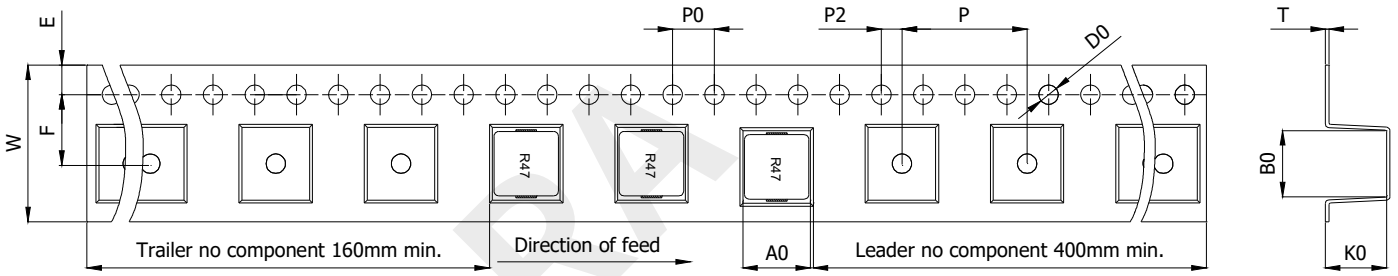
Packaging Specification

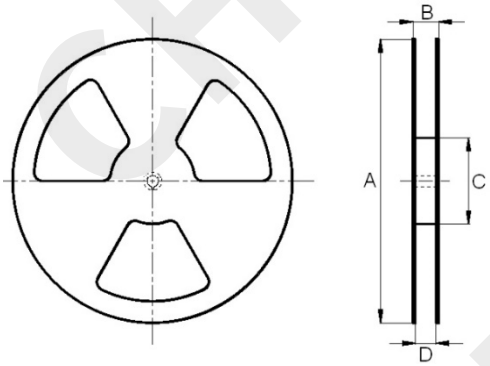
■ Carrier Tape (Unit:mm)



W	P	A0	B0	K0	E	F	P0	P2	D0	T
16.0±0.3	12.0±0.1	7.0±0.1	7.7±0.1	3.3±0.1	1.75±0.1	7.5±0.1	4.0±0.1	2.0±0.1	Φ1.5±0.1	0.40±0.05

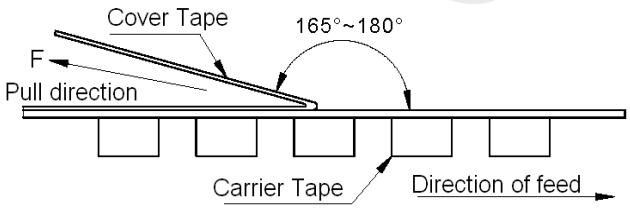
■ Reel (Unit:mm)

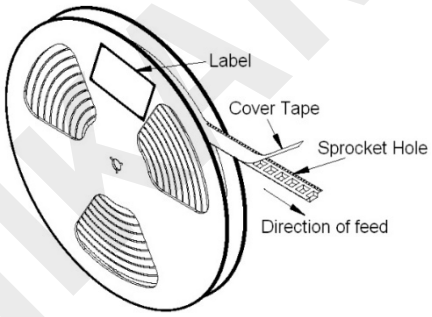
A	B	C	D
Φ330±1.0	22.1Max.	Φ100±1.0	16.5±0.5



■ 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
1000Pcs

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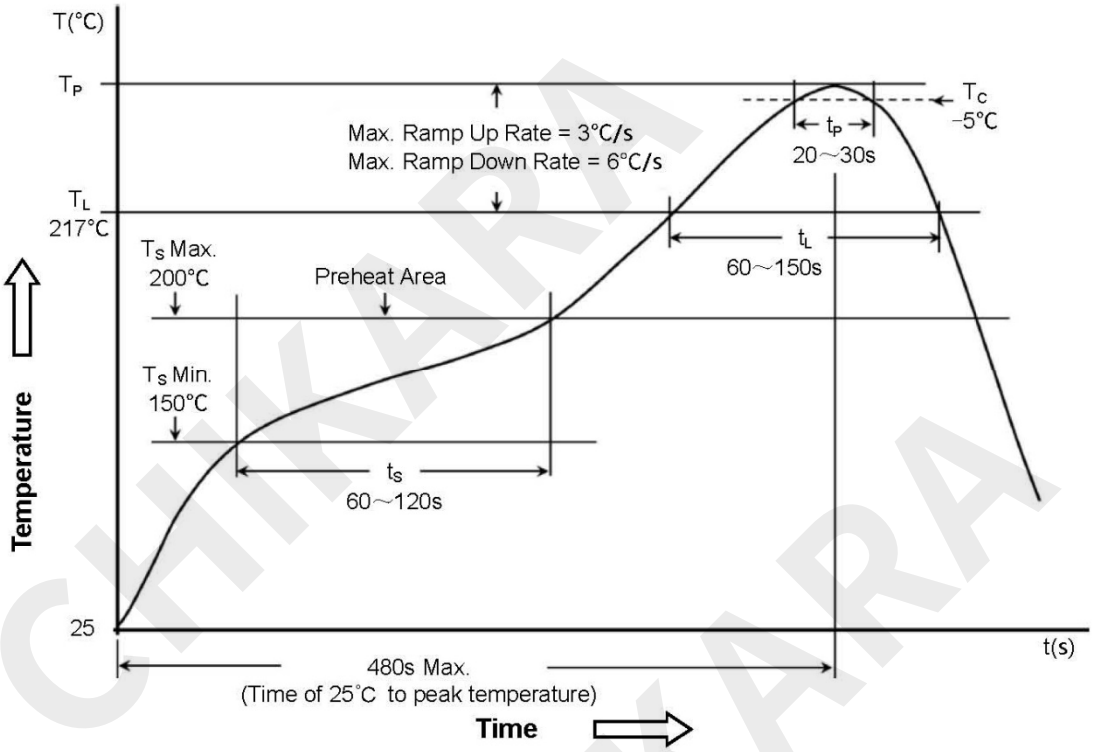
Soldering Specification

■ 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.

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