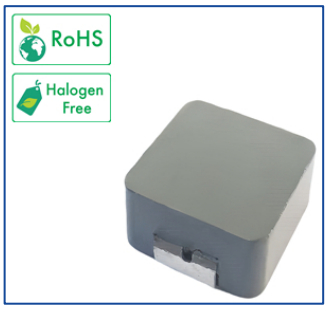
Shielded Power Inductors

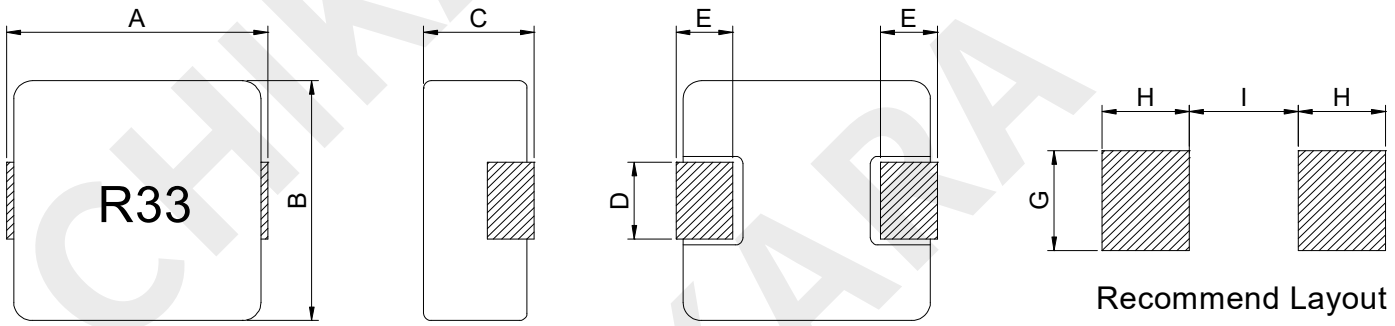
SP15-138065 Type

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)



Recommend Layout

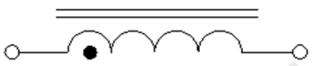
A	B	C	D	E	G	H	I
13.5±0.5	12.6±0.4	6.5Max.	See table	2.5±0.5	6.0	3.25	8.0

Part Number Description

SP15 - 138065 R33 M
① ② ③ ④

①	Type
②	Dimensions
③	Inductance value
④	Tolerance code

Electrical Schematic



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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.	D (mm)±0.5
SP15-138065R33M	0.33±20%	0.65	0.90	78	68.0	46.0	3.3
SP15-138065R47M	0.47±20%	0.90	1.20	60	63.0	41.0	3.3
SP15-138065R56M	0.56±20%	1.05	1.30	53	58.0	37.0	3.3
SP15-138065R68M	0.68±20%	1.25	1.60	51	55.0	35.0	3.3
SP15-138065R82M	0.82±20%	1.50	1.90	48	50.0	33.0	3.3
SP15-1380651R0M	1.0±20%	1.70	2.30	45	48.0	30.0	3.3
SP15-1380651R5M	1.5±20%	2.50	3.00	31	45.0	27.0	3.3
SP15-1380652R2M	2.2±20%	3.80	4.30	23	37.0	22.0	4.7
SP15-1380653R3M	3.3±20%	5.70	6.80	21	30.0	18.0	4.7
SP15-1380654R7M	4.7±20%	7.00	8.40	16	28.0	13.5	4.7
SP15-1380655R6M	5.6±20%	8.50	10.0	15	23.0	12.5	4.7
SP15-1380656R8M	6.8±20%	9.50	11.5	13	18.0	11.5	4.7
SP15-1380658R2M	8.2±20%	12.0	15.5	11	16.0	10.5	4.7
SP15-138065100M	10±20%	13.2	16.5	10	15.5	10.0	4.7
SP15-138065150M	15±20%	23.2	28.0	8	13.0	9.5	4.7
SP15-138065220M	22±20%	32.5	37.0	7	12.0	9.0	4.7
SP15-138065330M	33±20%	48.0	58.0	5	11.0	8.0	4.7
SP15-138065470M	47±20%	76.0	90.0	4	9.5	6.5	4.7
SP15-138065680M	68±20%	110	130	4	7.8	4.8	4.7
SP15-138065101M	100±20%	145	165	3	5.5	4.2	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.

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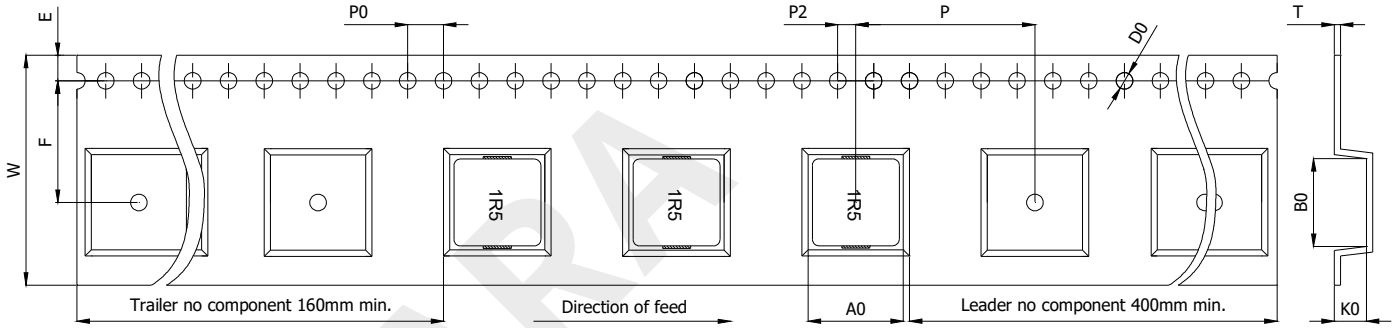
Packaging Specification

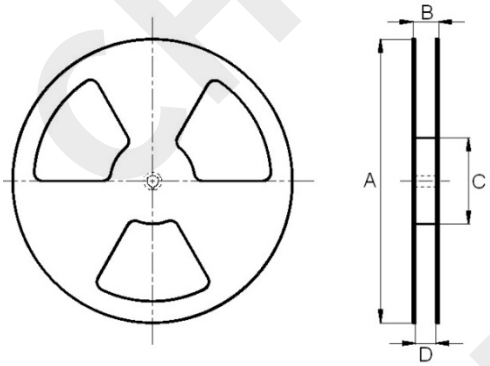
■ Carrier Tape (Unit:mm)



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

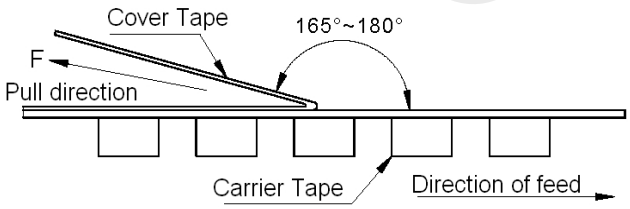
■ Reel (Unit:mm)

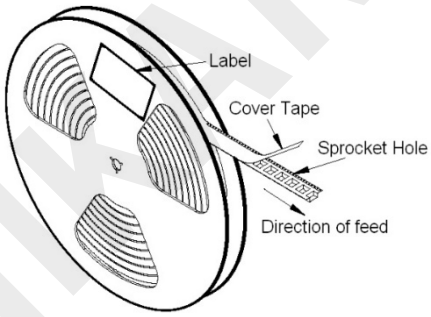
A	B	C	D
Φ330±1.0	28.9Max.	Φ100±1.0	24.5±0.5



■ 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

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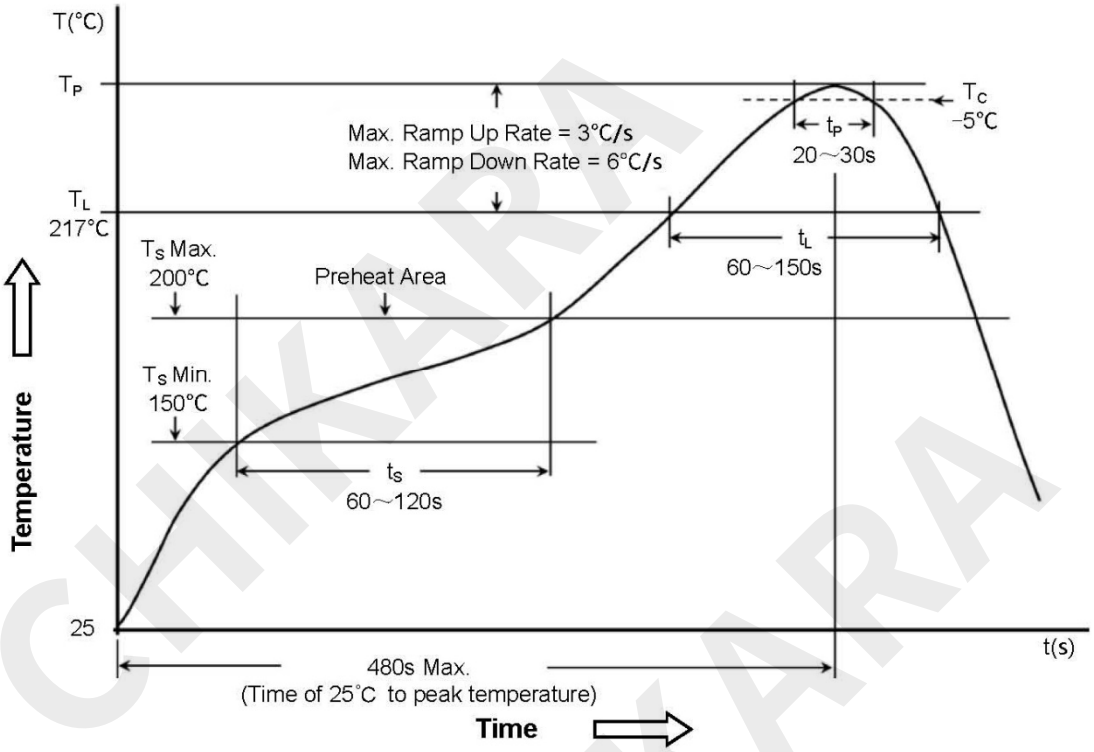
Soldering Specification

■ 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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