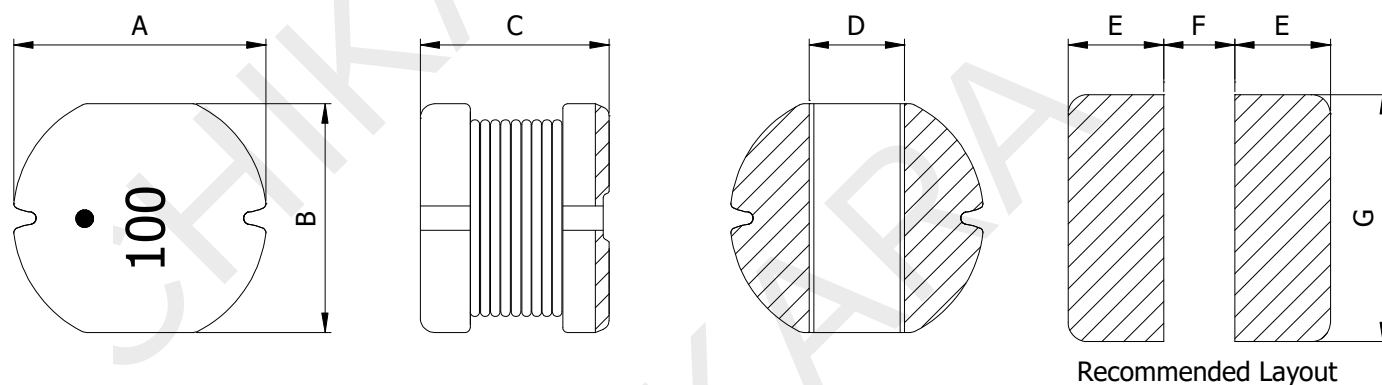


Features

- High energy storage and very low resistance
- Storage temperature range:-40°C to + 125°C
- Operating temperature range:-40°C to + 125°C
(including coil's self-temperature rise)
- Moisture sensitivity level:1
- Packaging:2000pcs. Per 13-inch reel
- RoHs&Halogen-free compliant



Mechanical Dimension(Unit:mm)



A	B	C	D	E	F	G
Ø5.0±0.3	4.5±0.3	3.0±0.3	2.0Typ.	1.8	1.9	5.0

Part Number Description

SP03 - 0503 100 M

①	②	③	④
①	Type		
②	Dimensions		
③	Inductance value		
④	Tolerance code		

Electrical Schematic

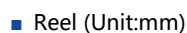


Electrical Characteristic

Part Number	Inductance L0(uH)	Q Typ.	Q Freq.(MHz)	SRF (MHz)Typ.	DCR (Ω)Max.	Isat (A)Typ.	Irms (A)Max.
SP03-0503100M	10±20%	10	2.52	30.0	0.13	1.600	1.300
SP03-0503120M	12±20%	20	2.52	29.0	0.16	1.450	1.200
SP03-0503150M	15±20%	20	2.52	27.0	0.19	1.260	1.050
SP03-0503180M	18±20%	20	2.52	24.0	0.21	1.300	0.950
SP03-0503220M	22±20%	20	2.52	22.0	0.28	1.060	0.900
SP03-0503330K	33±10%	15	2.52	18.0	0.38	0.850	0.700
SP03-050390K	39±10%	15	2.52	17.0	0.42	0.800	0.650
SP03-0503470K	47±10%	20	2.52	14.0	0.60	0.750	0.600
SP03-0503560K	56±10%	20	2.52	13.0	0.71	0.700	0.500
SP03-0503680K	68±10%	20	2.52	12.0	0.76	0.600	0.450
SP03-0503820K	82±10%	15	2.52	10.0	0.88	0.520	0.420
SP03-0503101K	100±10%	40	0.796	9.0	1.60	0.480	0.400
SP03-0503121K	120±10%	40	0.796	8.0	1.70	0.450	0.370
SP03-0503151K	150±10%	40	0.796	7.0	2.00	0.400	0.330
SP03-0503181K	180±10%	40	0.796	7.0	2.30	0.350	0.300
SP03-0503221K	220±10%	35	0.796	6.0	2.50	0.340	0.250
SP03-0503271K	270±10%	35	0.796	6.0	2.90	0.280	0.230
SP03-0503331K	330±10%	30	0.796	5.0	3.30	0.280	0.210
SP03-0503391K	390±10%	30	0.796	5.0	3.70	0.240	0.190
SP03-0503471K	470±10%	30	0.796	5.0	4.90	0.220	0.180
SP03-0503561K	560±10%	30	0.796	4.0	5.70	0.190	0.160
SP03-0503681K	680±10%	30	0.796	4.0	7.50	0.160	0.140
SP03-0503821K	820±10%	40	0.796	3.0	10.0	0.155	0.120
SP03-0503102K	1000±10%	40	0.252	3.0	11.5	0.135	0.110
SP03-0503122J	1200±5%	40	0.252	3.0	12.0	0.090	0.063
SP03-0503152J	1500±5%	40	0.252	2.0	13.0	0.072	0.059
SP03-0503182J	1800±5%	40	0.252	2.0	15.0	0.070	0.055
SP03-0503222J	2200±5%	40	0.252	2.0	22.0	0.070	0.053
SP03-0503272J	2700±5%	40	0.252	2.0	26.0	0.070	0.050
SP03-0503332J	3300±5%	40	0.252	2.0	38.0	0.062	0.045
SP03-0503392J	3900±5%	40	0.252	2.0	40.0	0.060	0.042
SP03-0503472J	4700±5%	40	0.252	1.0	48.0	0.050	0.040
SP03-0503502J	5000±5%	40	0.252	1.0	60.0	0.050	0.039
SP03-0503562J	5600±5%	40	0.252	1.0	72.0	0.050	0.038
SP03-0503682J	6800±5%	40	0.252	1.0	80.0	0.045	0.034
SP03-0503822J	8200±5%	40	0.252	1.0	92.0	0.045	0.030
SP03-0503103J	10000±5%	30	0.252	1.0	110.0	0.040	0.027
SP03-0503123J	12000±5%	30	0.252	1.0	148.0	0.038	0.025
SP03-0503153J	15000±5%	30	0.252	1.0	168.0	0.032	0.020

- Test frequency and voltage:1KHz,1Vrms.
- All test data referenced to 25°C ambient.
- Saturation current(Isat) will cause L0 to drop approximately 10%.
- Heat rated current(Irms) will cause the coil temperature rise approximately Δt of 40°C.

- Carrier Tape (Unit:mm)

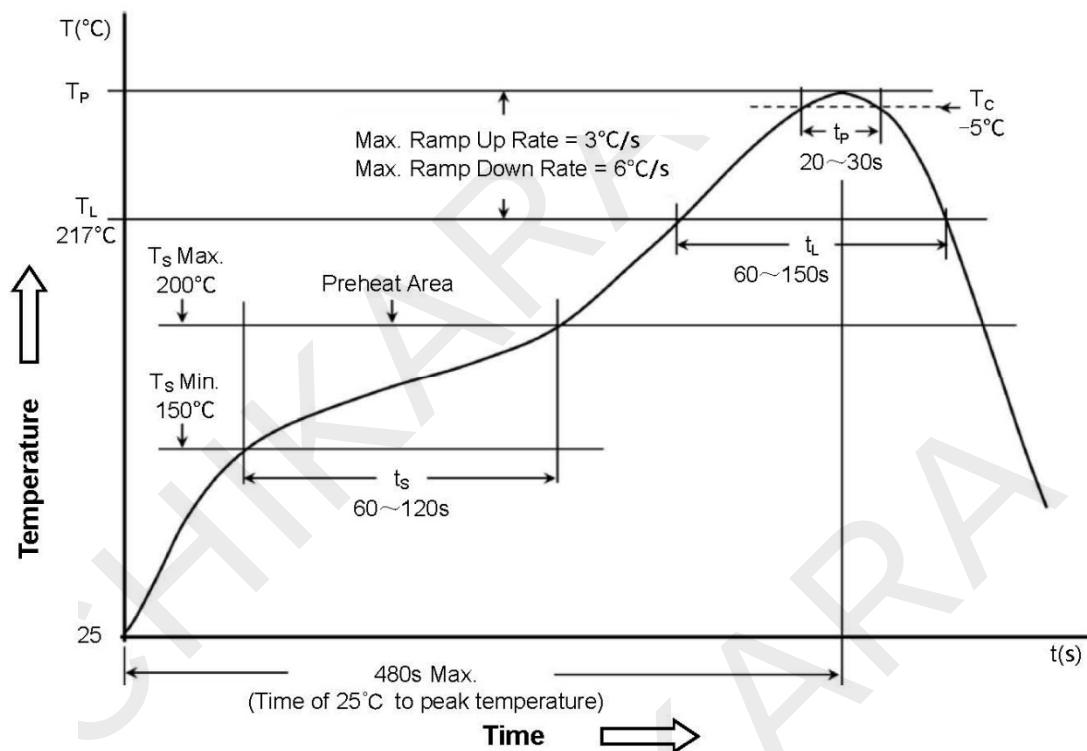


A diagram of a vertical beam with four dimensions labeled: A is the total height, B is the top flange width, C is the web thickness, and D is the bottom flange width.

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Version:A2 Revised:11/24/2022

Soldering Specification

- Reflow profile for SMT components



- Classification of peak package body temperature (Tp)

	Package Thickness	Package Volume		
		<350mm ³	350~2000mm ³	>2000mm ³
PB-Free Assembly	<1.6mm	260°C	260°C	260°C
	1.6~2.5mm	260°C	250°C	245°C
	≥2.5mm	250°C	245°C	245°C

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