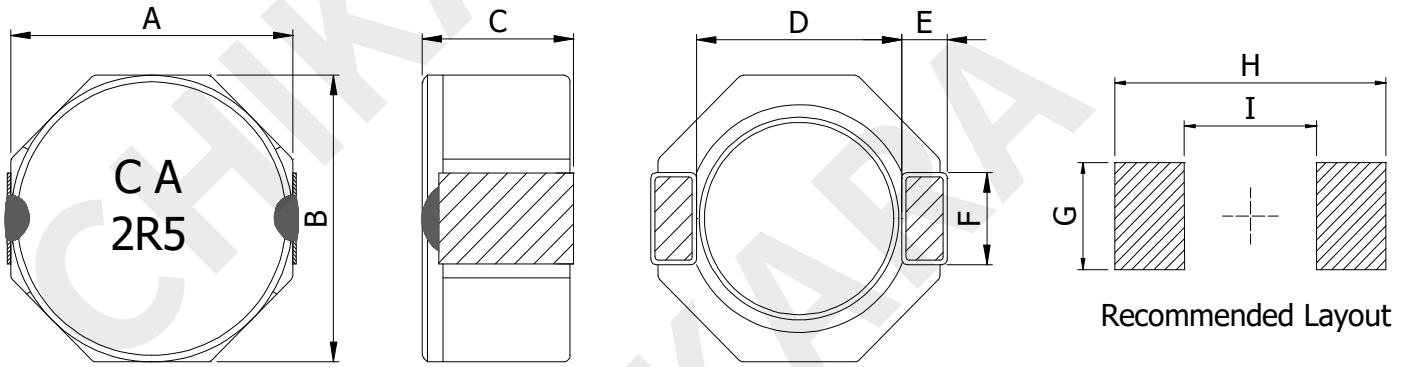
Shielded Power Inductors

SPA02-8038 Type

Features

- Magnetically shielded construction
- Storage temperature range:-55℃ to +150℃
- Operating temperature range:-55℃ to +150℃ (including coil's self-temperature rise)
- Moisture sensitivity level:1
- AEC-Q200 qualified
- Packaging:1200pcs. Per 13-inch reel
- RoHs&Halogen-free compliant

Mechanical Dimension(Unit:mm)



Recommended Layout

A	B	C	D	E	F	G	H	I
8.0±0.3	8.0±0.3	4.0Max.	6.3	1.2	2.5	2.8	10.1	6.1

Part Number Description

SPA02 - 8038 1R8 N

① ② ③ ④

①	Type
②	Dimensions
③	Inductance value
④	Tolerance code

Electrical Schematic

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Version:A2 Revised:12/08/2023

Electrical Characteristic

Part Number	Inductance L0(uH)	DCR (mΩ)Typ.	DCR (mΩ)Max.	Isat (A)Max.	Irms (A)Max.
SPA02-80381R8N	1.8±30%	12.0	15.6	7.00	6.80
SPA02-80382R5N	2.5±30%	14.0	17.5	6.50	6.00
SPA02-80383R5N	3.5±30%	17.0	24.0	5.00	5.20
SPA02-80384R7N	4.7±30%	22.0	29.0	4.60	4.40
SPA02-80386R0N	6.0±30%	24.0	32.0	4.20	4.00
SPA02-8038100M	10±20%	43.0	48.0	3.00	3.20
SPA02-8038150M	15±20%	61.0	67.0	2.75	2.50
SPA02-8038220M	22±20%	86.0	105	2.30	2.00
SPA02-8038330M	33±20%	128	157	1.75	1.60
SPA02-8038470M	47±20%	163	189	1.52	1.42
SPA02-8038680M	68±20%	232	290	1.30	1.08
SPA02-8038101M	100±20%	355	410	1.05	0.88

- Test frequency and voltage:100KHz,0.1Vrms.
- All test data referenced to 25℃ ambient.
- Saturation current(Isat) will cause L0 to drop approximately 35%.
- Heat rated current(Irms) will cause the coil temperature rise approximately Δt of 40℃.

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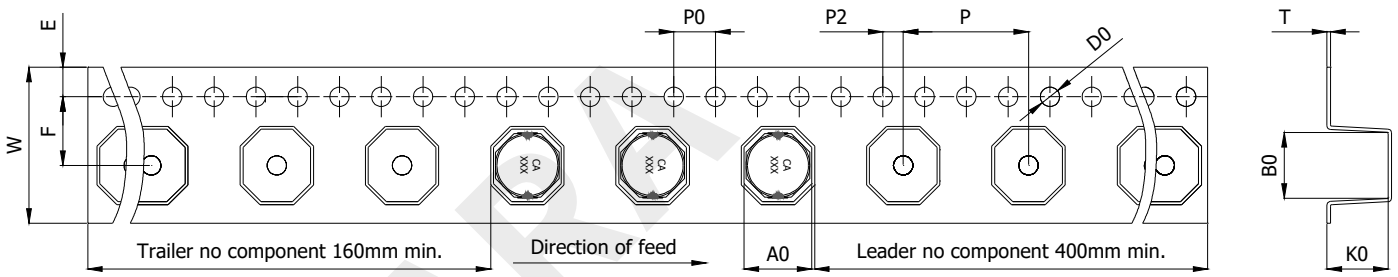
Packaging Specification

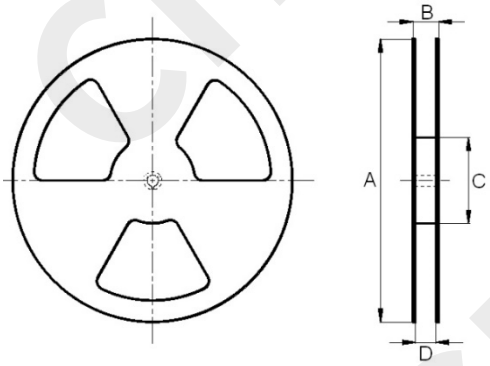
■ Carrier Tape (Unit:mm)



W	P	A0	B0	K0	E	F	P0	P2	D0	T
16.0±0.3	12.0±0.1	8.4±0.1	9.8±0.1	4.2±0.1	1.75±0.1	7.5±0.1	4.0±0.1	2.0±0.1	Φ1.5±0.1	0.35±0.05

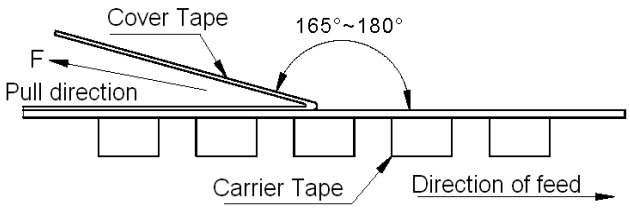
■ Reel (Unit:mm)

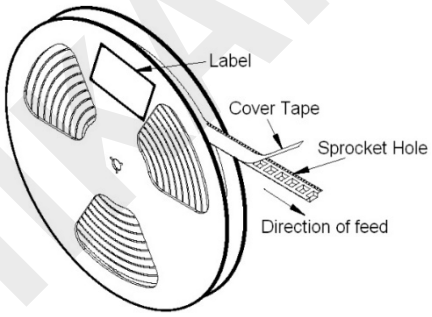
A	B	C	D
Φ330±1.0	22.1Max.	Φ100±1.0	16.5±0.5



■ 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
1200Pcs

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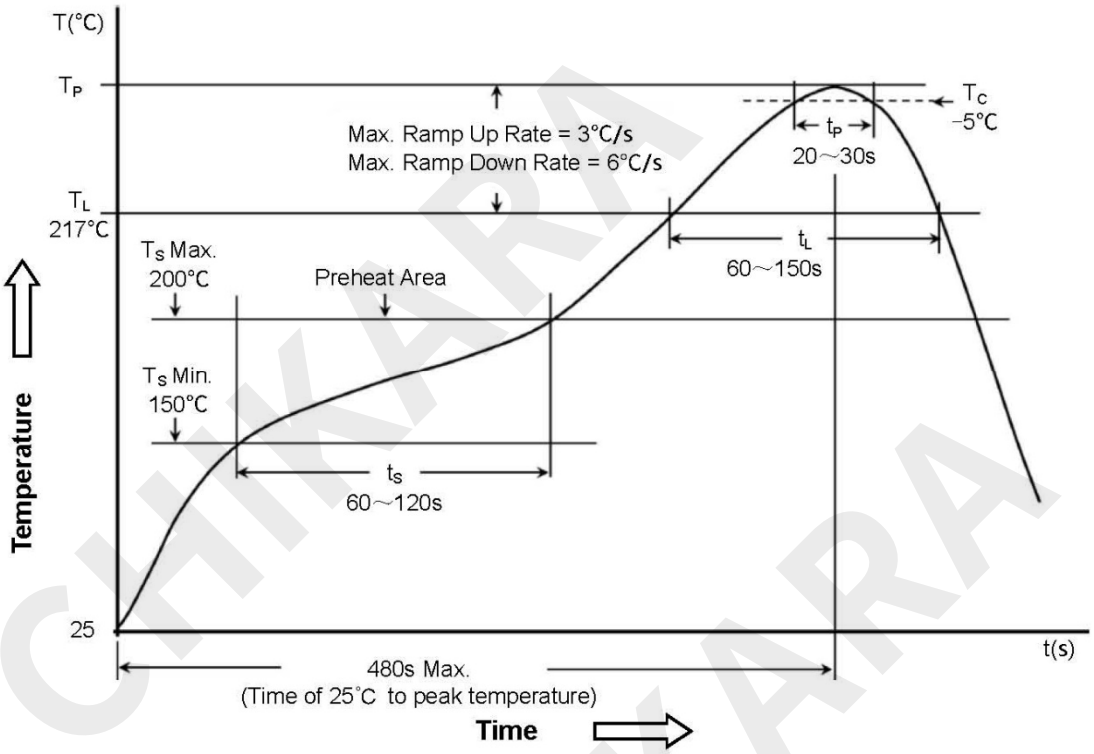
Soldering Specification

■ Reflow profile for SMT components



■ Classification of peakpackage bodytemperature (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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