SYNYON

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Revision V2.0 | 2026-11-02

Molded Power Inductor

SYE5030 Series

Efficient Series · 5.5×5.3×3.1 mm



RoHS Compliant · Halogen-Free

Features

- **Very low DCR and ultra-low AC loss, suited to 2-5 MHz switching**
- **Excellent current handling with soft saturation**
- **Withstands high current spikes**

Core material:	Composite magnetic powder
Environmental:	RoHS compliant, halogen-free
Terminal plating:	Ni-Sn (SN); SAC/SP optional
Anti-corrosion:	Terminal anti-corrosion plating
Operating temperature:	-40°C to +125°C
Max. part temperature:	+165°C (ambient + rise)
Storage temperature:	-55°C to +165°C (part); -55 to +80°C (reel)
Reflow soldering:	Max. 3 cycles, 260°C / 40 s
MSL level:	Level 1, unlimited floor life
Rated voltage:	80V

Electrical Specifications

(Ta = 25°C)

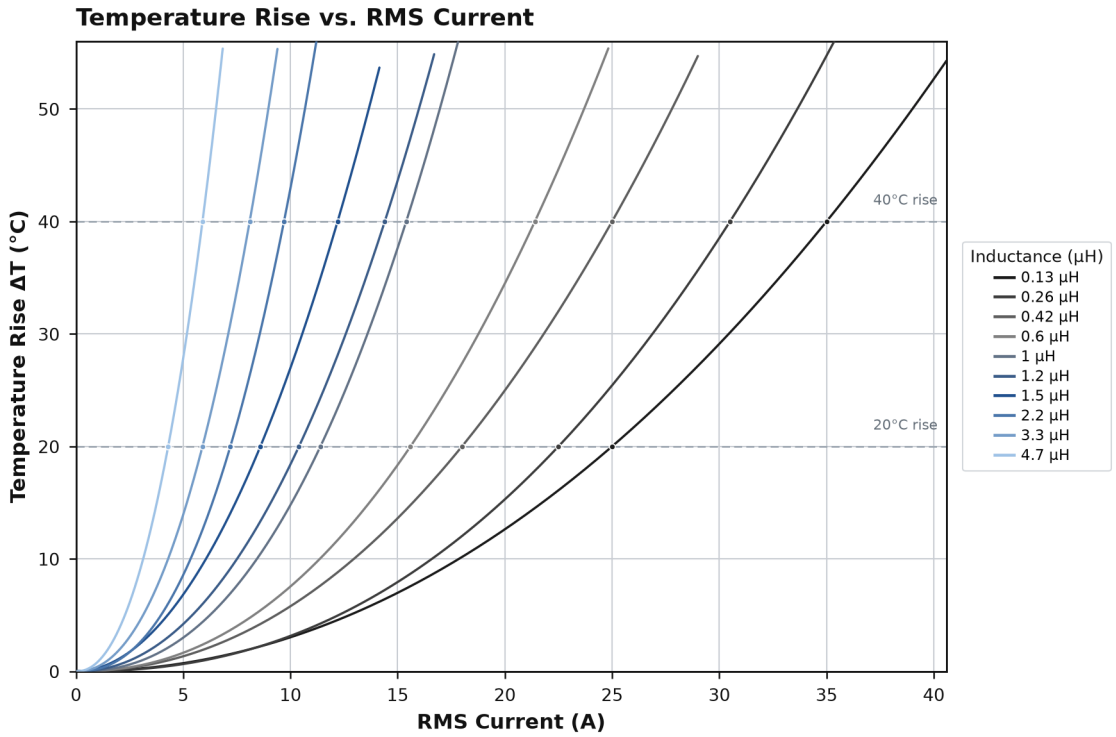
Part Number	Inductance ±20% (μH)	DCR (mΩ) typ/max	SRF typ (MHz)	Isat (A) 30%	Irms (A) 20℃/40℃
SYE5030-131MSN	0.13	1.53 / 1.83	187	44	25 / 35
SYE5030-261MSN	0.26	2.16 / 2.6	117	31	22.5 / 30.5
SYE5030-421MSN	0.42	3 / 3.6	84	23.5	18 / 25
SYE5030-601MSN	0.6	4.44 / 5.33	64	22	15.6 / 21.4
SYE5030-102MSN	1	7 / 8.4	51	16.9	11.4 / 15.4
SYE5030-122MSN	1.2	8.8 / 10.5	49	15.3	10.4 / 14.4
SYE5030-152MSN	1.5	9.9 / 11.9	45	15	8.6 / 12.2
SYE5030-222MSN	2.2	13.2 / 14.5	36	10.5	7.2 / 9.7
SYE5030-332MSN	3.3	21.2 / 23.3	28	8.4	5.9 / 8.1
SYE5030-472MSN	4.7	36 / 40	23	6.7	4.3 / 5.9

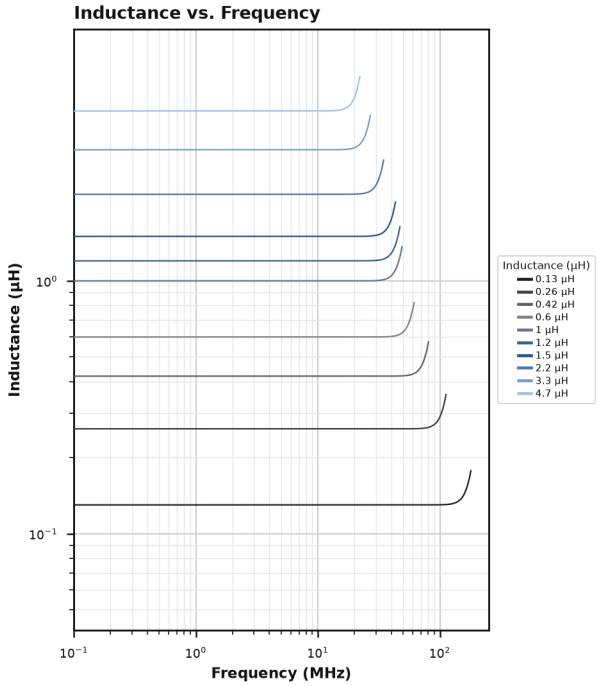
1. Inductance is measured at 1 MHz, 0.1 Vrms, 0 Adc, Ta = 25°C.
2. DCR is measured with a DC milliohm meter.
3. SRF is measured with a high-precision network analyzer.
4. Isat: DC current at which inductance drops by the stated percentage at 25°C; derating is required for high-temperature applications.
5. Irms: DC current causing the stated temperature rise (20°C/40°C). For reference only; verify by measurement in the end application.
6. Termination codes: SN = tin-nickel, SAC = tin-silver-copper; SP = tin-lead (non-RoHS).
7. Packaging: tape and reel, compliant with EIA-481; 7-inch and 13-inch reels available.
8. Electrical data are specified at Ta = 25°C. Specifications are subject to change without notice.

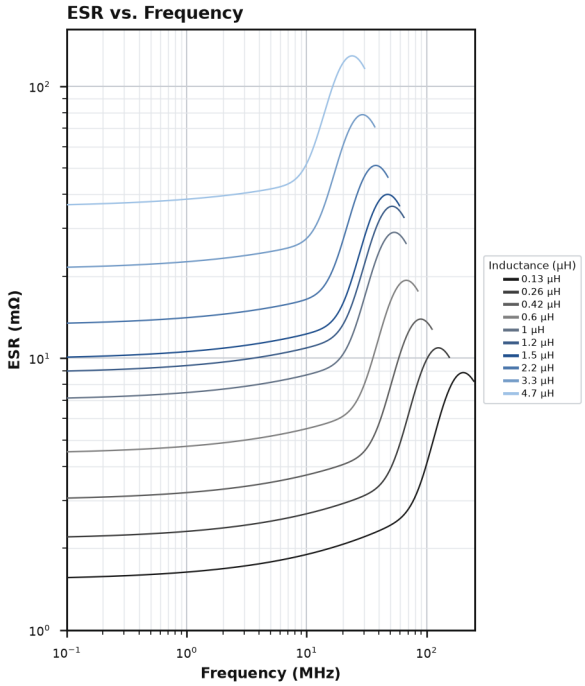
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Specifications subject to change without notice
Please refer to the latest version on our website

Performance Curves

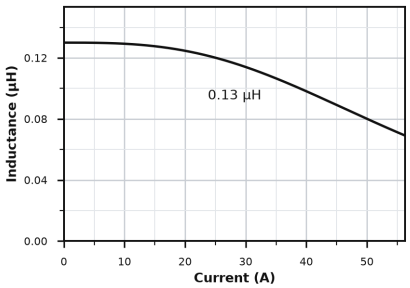


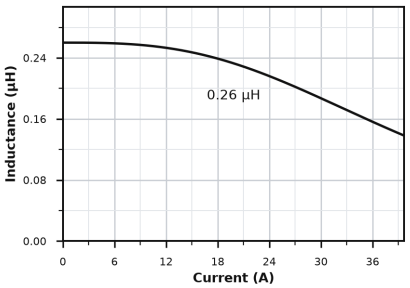


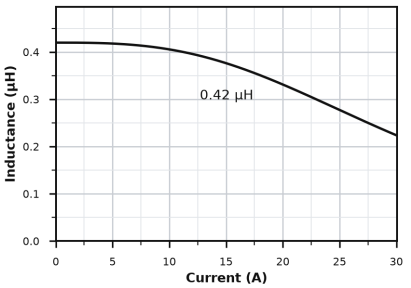


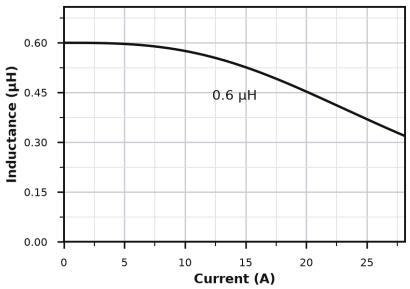
Test Condition: Ta=25℃, JEDEC standard PCB, natural convection. Curves derived from typical specifications for reference only.

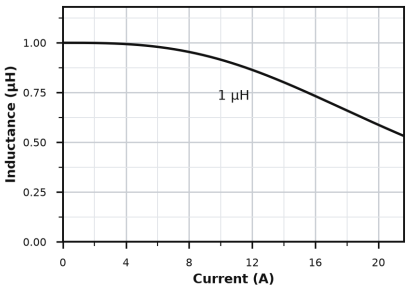
Inductance vs DC Current

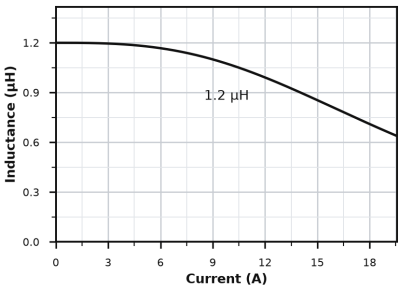


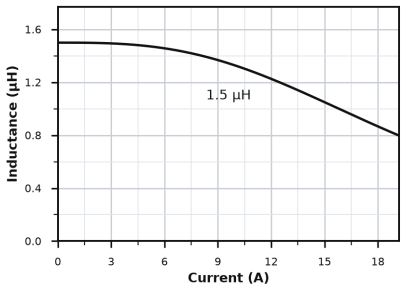


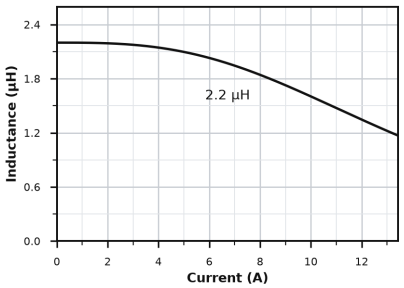


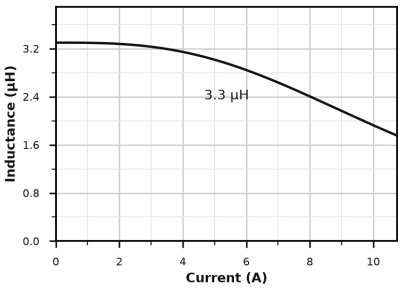


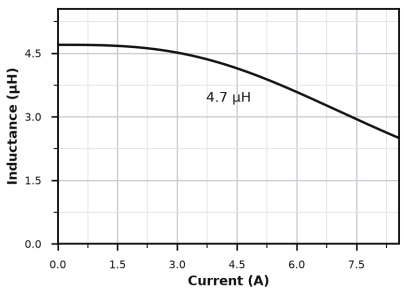






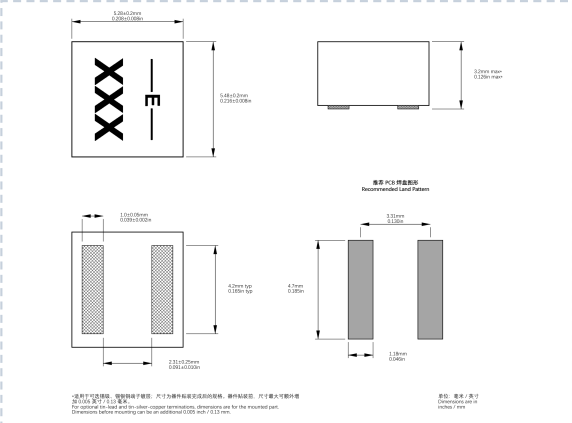






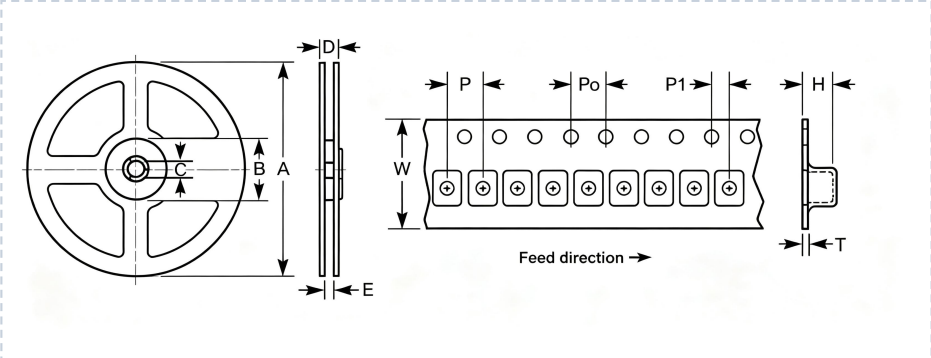
Note: Curves are plotted from Isat test points; actual performance shall be verified on the final product.

Dimensions & Recommended Land Pattern



Symbol	Parameter	Min	Typ	Max
L	Body Length (mm)	5.28	5.48	5.68
W	Body Width (mm)	5.08	5.28	5.48
H	Body Height (mm)	/	/	3.1
Wt	Weight (g)	0.39	0.48	0.58

Packaging



Parts per reel		Reel dimensions (mm)					Tape dimensions (mm)					
7" (178 mm)	13" (330 mm)	A	B	C	D	E	W	P	Po	P1	H	T
400	1500	178/330	60/100	13	14.7	12.4	16	12	4	2	3.18	0.3

Packing method: Tape and reel, compliant with EIA-481

Quantity: 7" reel: 400 pcs; 13" reel: 1500 pcs

Tape spec: Embossed carrier tape; dimensions per actual packing

Features & Applications

Features

· Very low DCR and ultra-low AC loss, suited to 2-5 MHz switching
· Excellent current handling with soft saturation
· Withstands high current spikes

Applications

· Multi-phase VRM supplies in servers and telecom equipment
· High-density DC-DC modules and point-of-load converters
· Notebook PCs, graphics cards and FPGA supplies
· Automotive electronics and industrial control power