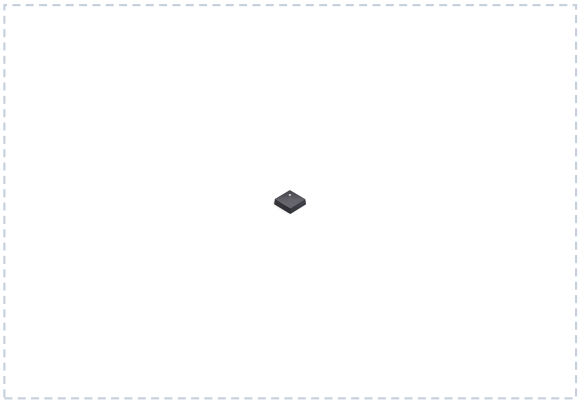
SYNYON

Document No. SYN-DS-SYF2006
Revision V2.0 | 2026-11-02

Molded Power Inductor

SYF2006 Series

Flat Series · 2.1×2.0×0.6 mm



RoHS Compliant · Halogen-Free

Features

Lowest-profile miniature shielded power inductor
Soft saturation, ideal for VRM/VRD supply

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 +85°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:	40V

Electrical Specifications

(Ta = 25°C)

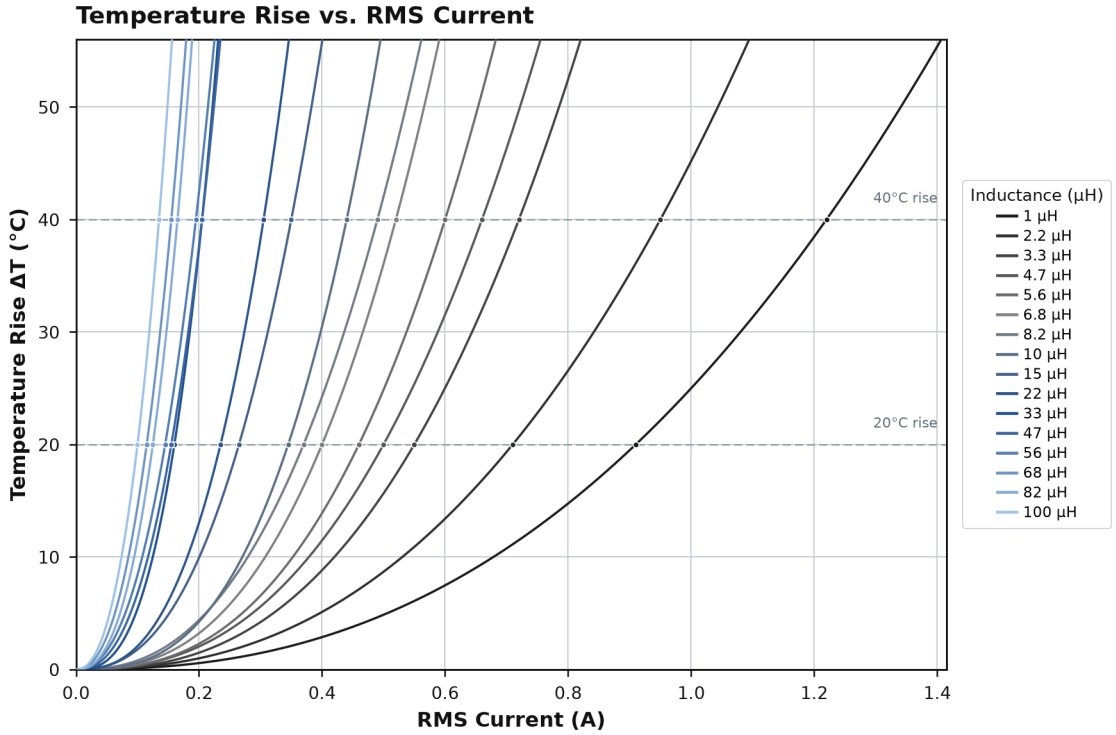
Part Number	Inductance ±20% (μH)	DCR (mΩ) typ/max	SRF typ (MHz)	Isat (A) 10%/20%/30%	Irms (A) 20℃/40℃
SYF2006-102MSN	1	153 / 169	170	0.71 / 1 / 1.2	0.91 / 1.22
SYF2006-222MSN	2.2	278 / 306	110	0.49 / 0.69 / 0.78	0.71 / 0.95
SYF2006-332MSN	3.3	460 / 506	88	0.42 / 0.56 / 0.66	0.55 / 0.72
SYF2006-472MSN	4.7	665 / 732	68	0.31 / 0.44 / 0.52	0.5 / 0.66
SYF2006-562MSN	5.6	750 / 825	61	0.3 / 0.43 / 0.5	0.46 / 0.6
SYF2006-682MSN	6.8	920 / 1020	57	0.26 / 0.35 / 0.41	0.4 / 0.52
SYF2006-822MSN	8.2	1080 / 1190	51	0.24 / 0.33 / 0.39	0.37 / 0.49
SYF2006-103MSN	10	1270 / 1400	45	0.24 / 0.31 / 0.37	0.345 / 0.44
SYF2006-153MSN	15	2020 / 2220	37	0.19 / 0.25 / 0.29	0.265 / 0.35
SYF2006-223MSN	22	2780 / 3060	30.5	0.15 / 0.205 / 0.24	0.235 / 0.305
SYF2006-333MSN	33	4450 / 4900	24	0.11 / 0.15 / 0.18	0.16 / 0.205
SYF2006-473MSN	47	5600 / 6160	19.5	0.09 / 0.13 / 0.155	0.155 / 0.205
SYF2006-563MSN	56	6650 / 7320	16.5	0.085 / 0.12 / 0.145	0.145 / 0.195
SYF2006-683MSN	68	8500 / 9350	16	0.08 / 0.115 / 0.135	0.115 / 0.155
SYF2006-823MSN	82	9250 / 10180	13.5	0.065 / 0.09 / 0.115	0.125 / 0.165
SYF2006-104MSN	100	11100 / 12250	13	0.065 / 0.09 / 0.115	0.1 / 0.135

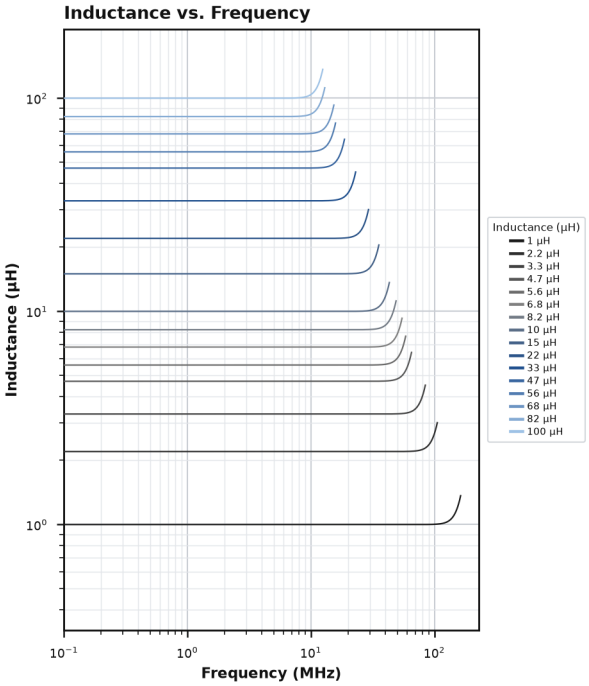
1. Inductance is measured at 1 MHz, 0.1 Vrms, 0 Adc, Ta = 25°C.
2. DCR is measured with a DC milliohm meter.
3. SRF is measured with a high-precision network analyzer.
4. Isat: DC current at which inductance drops by the stated percentage at 25°C; derating is required for high-temperature applications.
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.

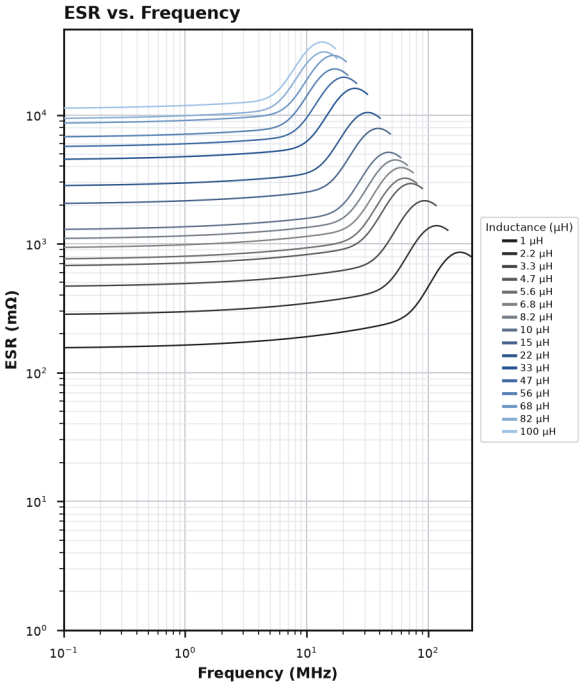
Xinyuan Technology (Shenzhen) Co., Ltd. Longgang Branch
Address: No. 5002-1, Longgang Avenue (Longgang Section), Longgang District, Shenzhen
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Specifications subject to change without notice
Please refer to the latest version on our website

Performance Curves

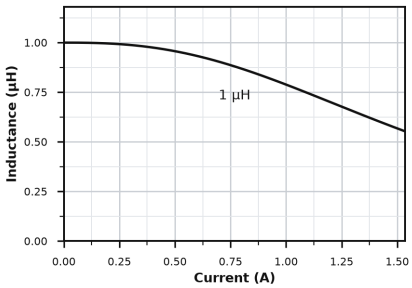


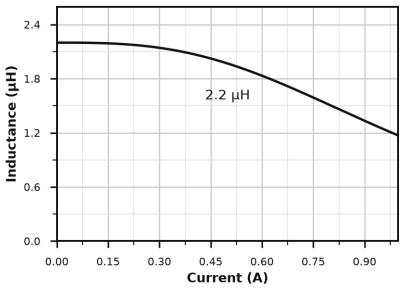


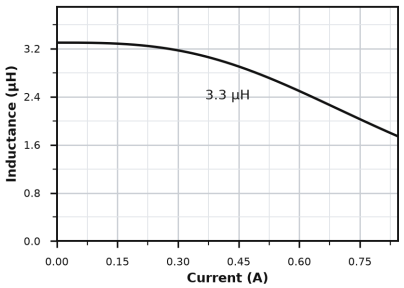


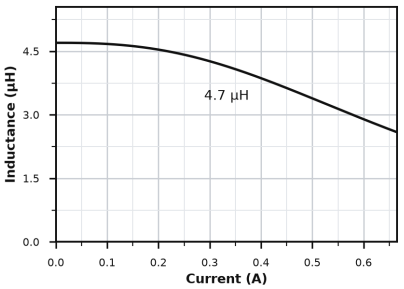
Test Condition: Ta=25℃, JEDEC standard PCB, natural convection. Curves derived from typical specifications for reference only.

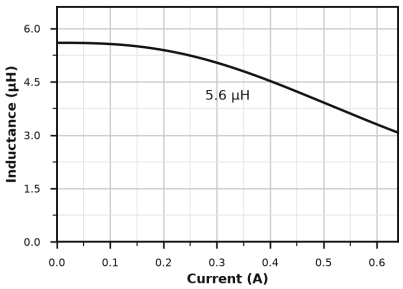
Inductance vs DC Current

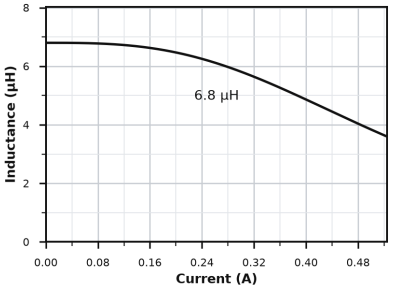


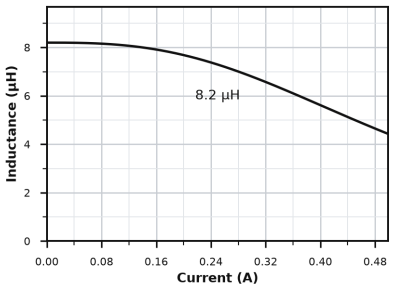


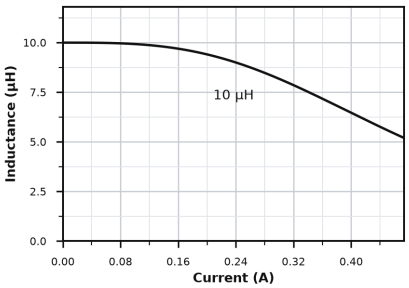


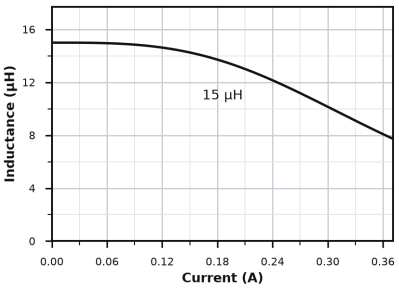


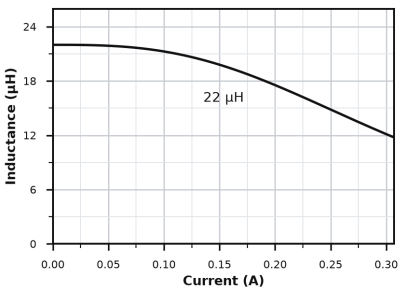


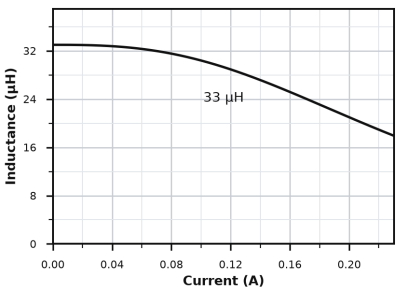


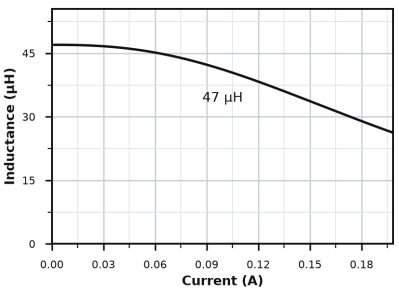


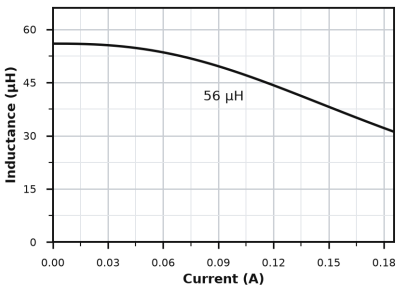


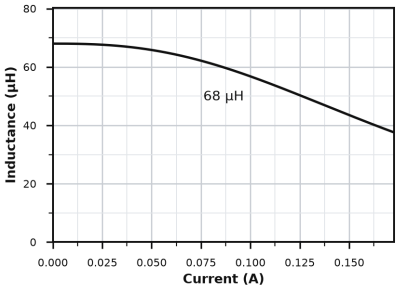


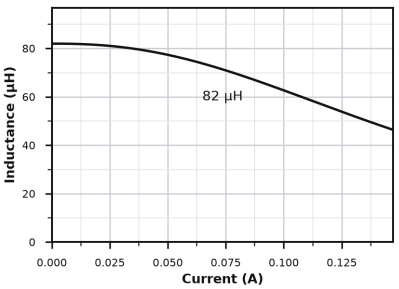






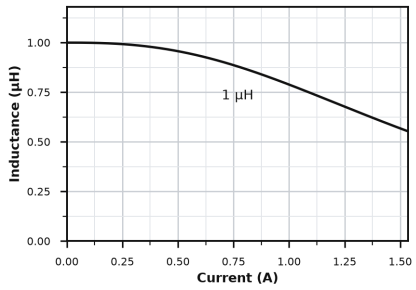






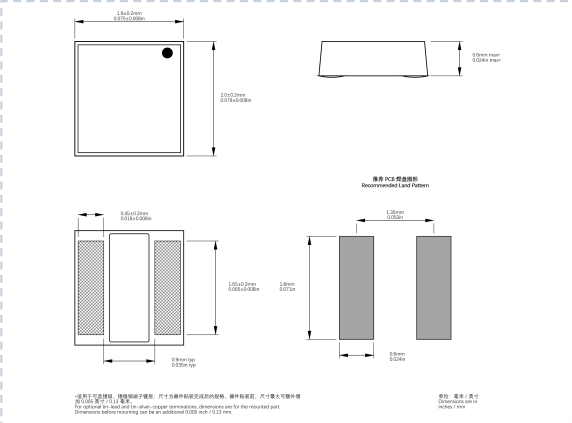
Note: Curves are plotted from Isat test points; actual performance shall be verified on the final product.

Inductance vs DC Current



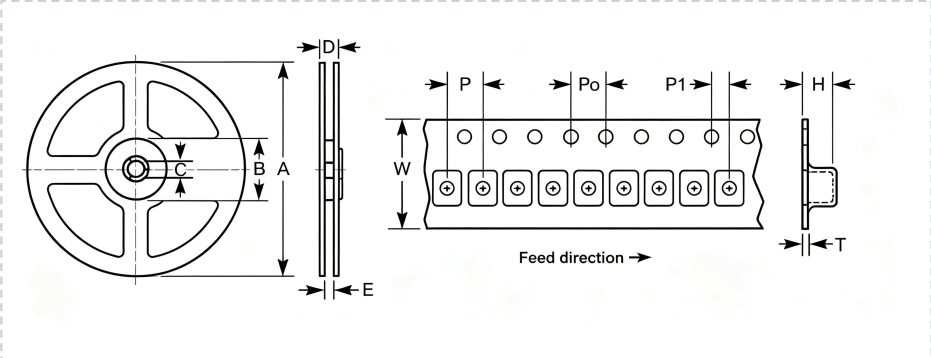
Note: Curves are plotted from Isat test points; actual performance shall be verified on the final product.

Dimensions & Recommended Land Pattern



Symbol	Parameter	Min	Typ	Max
L	Body Length (mm)	2.00	2.10	2.20
W	Body Width (mm)	1.90	2.00	2.10
H	Body Height (mm)	/	/	0.6
Wt	Weight (mg)	10	11.5	13

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
2000	7500	178/330	60/100	13	14.7	12.4	8	4	4	2	0.76	0.28

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

Quantity: 7" reel: 2000 pcs; 13" reel: 7500 pcs

Tape spec: Embossed carrier tape; dimensions per actual packing

Features & Applications

Features

· Lowest-profile miniature shielded power inductor
· Soft saturation, ideal for VRM/VRD supply

Applications

· Slim notebooks, tablets and smartphone mainboard supplies
· Wearable devices and portable electronics
· High-density DC-DC modules and point-of-load converters
· Automotive slim modules and industrial control boards