

April 20, 2012

Product news

Power inductors with increased saturation current handling capability

The new series of EPCOS SMT inductors features highest reliability. The components offer 30 percent higher saturation current handling capability than types of the standard series. The saturation current is between 1.05 and 38.0 A at inductance values from 0.82 to 1000 μ H. The DC resistance is between 5.0 m Ω and 1.35 Ω .



With a wide range of permissible operating temperatures from -55 to +150 °C, the EPCOS B82477R series of inductors satisfy the rigorous requirements of automotive electronics and are qualified to AEC-Q200. Designed with a baseplate, they offer very high mechanical stability. These inductors have a footprint of 12.5 x 12.5 mm² and a maximum insertion height of 8.5 mm. Thanks to their magnetic shielding, they can be placed in direct proximity to other components on the circuit board. These high-performance inductors are RoHS compatible and suitable for lead-free soldering to JEDEC J-STD020C.

Key technical data and ordering codes

L_R [μ H]	Tolerance	f_L [MHz]	I_R [A]	I_{sat} [A] (min) [A] (typ)		R_{max} [m Ω]	Ordering code
0.82	20% = M	0.1	11.5	27.0	38.0	5.0	B82477R4821M100
1.50		0.1	9.75	20.0	27.0	6.5	B82477R4152M100
2.00		0.1	8.90	18.0	24.0	8.0	B82477R4202M100
3.00		0.1	8.25	15.5	18.0	9.0	B82477R4302M100
3.60		0.1	8.05	13.0	16.0	10.0	B82477R4362M100
4.70		0.1	7.50	12.2	14.25	11.0	B82477R4472M100
5.60		0.1	7.25	11.0	12.75	11.5	B82477R4562M100
6.80		0.1	6.60	10.5	12.0	15.0	B82477R4682M100
10		0.1	5.90	8.75	10.25	18.5	B82477R4103M100
15		0.1	5.00	7.25	8.75	25.0	B82477R4153M100
22		0.1	4.20	6.10	7.25	32.0	B82477R4223M100
33		0.1	3.38	5.20	6.00	50.0	B82477R4333M100
47		0.1	3.20	4.30	4.90	60.0	B82477R4473M100
68		0.1	2.65	3.55	3.90	85.0	B82477R4683M100
100		0.1	2.25	2.90	3.25	120	B82477R4104M100
150		0.1	1,80	2.40	2.80	175	B82477R4154M100

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Inductors

Internal / External

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L_R [μH]	Tolerance	f_L [MHz]	I_R [A]	I_{sat} [A] (min) [A] (typ)		R_{max} [m Ω]	Ordering code
220		0.1	1.35	2.00	2.20	290	B82477R4224M100
330		0.1	1.12	1.70	1.80	425	B82477R4334M100
470		0.1	1.02	1.35	1.50	605	B82477R4474M100
680		0.1	0.80	1.10	1.25	860	B82477R4684M100
1000		0.1	0.65	0.95	1.05	1350	B82477R4105M100

Main applications

- Power supply units in automotive electronics such as for LED lighting systems
- Switched mode power supplies with high requirements on reliability and temperature range

Main features and benefits

- High saturation currents of up to 38.0 A
- Inductance values from 0.82 μH to 1000 μH
- Broad range of operating temperatures from -55 to +150 °C
- Qualified to AEC-Q200
- RoHS compatible and suitable for lead-free soldering to JEDEC J-STD020C

Data sheets may be downloaded online under www.epcos.com/power_inductors

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Customers are asked to address inquiries directly to their sales contacts.