



SPNR252012A Series



1. Features of SPNR252012A series:

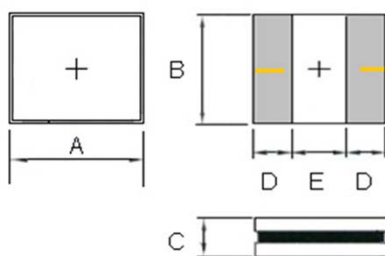
- SMD Inductor for high frequency applications.
- Inductance range from 0.33uH to 10.0uH. Custom values are welcomed.
- High saturation current characteristics by distributed gapped metal dust core.
- Ideal for portable device like Tablets, Notebook, Computers, E-reader, and high density DC to DC Converter board.
- Lower DC resistance for higher current application.
- Small foot print 2.80 x 2.35mm with Max Height of 1.30mm.
- Operating frequency up to 5.0MHz.
- Tape & Reel Quantity: 2000 piece per 7 inches reel.
- Operating temperature range: -40°C to 125°C.
- RoHS and HF compliant.



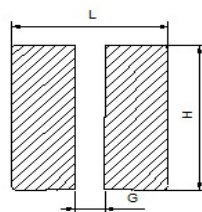
2. Electrical Characteristics of SPNR252012A series:

ITG Part Number	Inductance (uH) ± 20%	DCR (mΩ) Typ.	DCR (mΩ) Max.	Heat Rating Current ¹ Irms (A)	Saturation Current ² Isat (A)
SPNR252012A-R33MHF	0.33	22.0	32.0	4.8	7.0
SPNR252012A-R47MHF	0.47	25.0	35.0	4.0	6.0
SPNR252012A-1R0MHF	1.00	47.0	55.0	3.0	4.5
SPNR252012A-1R5MHF	1.50	65.0	72.0	2.4	4.0
SPNR252012A-2R2MHF	2.20	90.0	108	2.2	3.2
SPNR252012A-3R3MHF	3.30	140	165	2.0	2.5
SPNR252012A-4R7MHF	4.70	200	300	1.6	2.2
SPNR252012A-100MHF	10.00	450	550	1.0	1.4

3. Mechanical Dimensions of SPNR252012A series (unit: mm):



Recommended PC Board Pattern



L(mm)	G(mm)	H(mm)
2.7	0.8	2.2

Type	A	B	C	D	E
SPNR252012A	2.5 ± 0.3	2.0 ± 0.35	1.3MAX	0.85REF	0.80REF

Notes:

1. Irms: DC current that will cause an approximate ΔT of 50°C .
2. Isat: DC current that causes inductance to drop 30% (Typ.) from OCL ($T_a=25^\circ\text{C}$).
3. Test conditions: 1MHz, 0.2V, 25°C ambient temperature . Derating is necessary for AC currents, PCB pad layout, trace thickness and width, air-flow and proximity of other heat generating components will affect the temperature rise. It is recommended the part temperature not exceed 125°C under worst case operating conditions verified in the end application.
4. Inductance vs. DC Current vs. Temperature Curve is on the next page.

● New York 1 914 347 2474 ● Taipei 886 2 2698 8669 ● Kaohsiung 886 7 350 2275
 ● Japan 81 568 85 2830 ● Shenzhen 86 755 8418 6263 ● Shanghai 86 21 5424 5141 ● Hong Kong 852 9688 9767
 ● sales@ITG-Electronics.com ● www.ITG-Electronics.com Revision B.0 : August 09, 2017

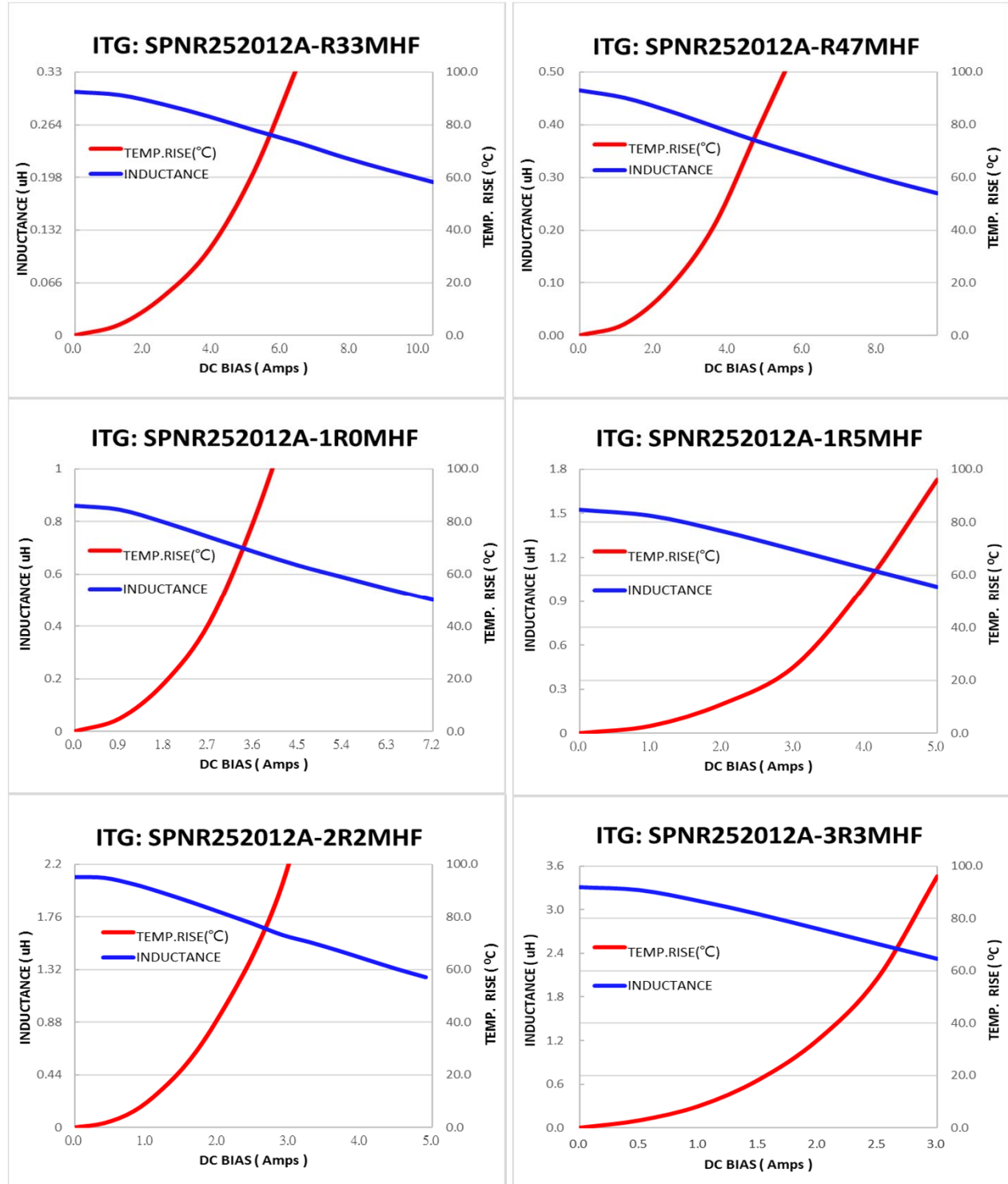
**Due to continuous product improvement, all specifications are subject to change without prior notice. Kindly contact an ITG field application engineer or a sales representative prior to purchase.*



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4. Inductance vs. Current vs. Temperature Rise Characteristics of SPNR252012A Series



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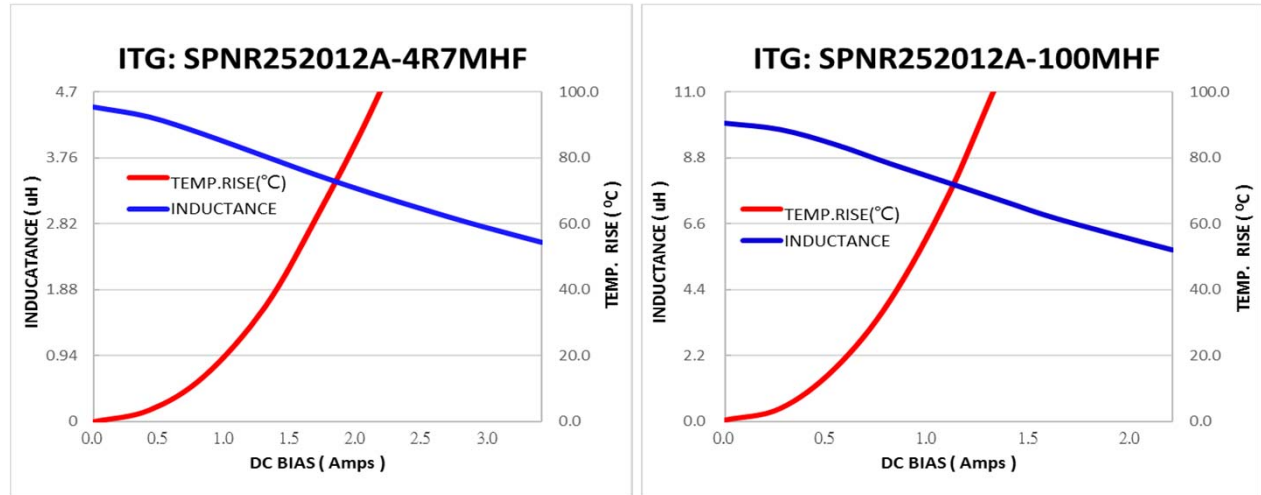
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