

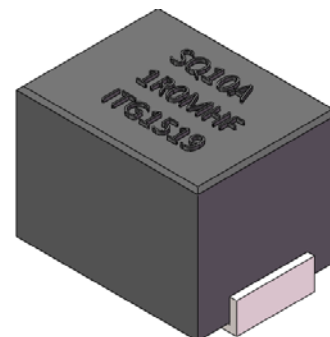


SQ10 Series



1. Features of SQ10 Series:

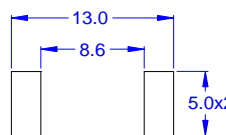
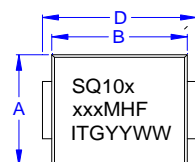
- Ferrite based SMD inductor with lower core loss.
- High current output chokes, up to 50.0 Amp with approx. 20% roll off.
- Low profile 8.50/10.50mm max height.
- Foot Print 12.80 x 8.60/8.30mm max footprint.
- Perfect for high density designs with limited board space.
- Operating frequency of up to 1.0MHz.
- Operating temperature range of -55°C to + 130°C.
- RoHS & HF compliant.
- T & R Qty's: 400/350pcs, 13" Reel.



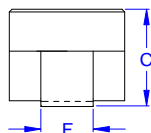
2. Electrical Characteristics of SQ10 Series:

ITG Part Number	OCL ¹ (uH) ±20%	L @ Isat1 ² (uH) Min.	DCR ³ (mΩ) ±10%	Isat1 ⁴ (A) @25°C	Isat2 ⁴ (A) @45°C	Isat3 ⁴ (A) @100°C	Irms ⁵ (A) @25°C	Dim. A (mm) Max.	Dim. C (mm) Max.
SQ10A-R33MHF	0.33	0.24	1.30	50.00	48.00	41.00	33.00	8.60	8.50
SQ10A-R40MHF	0.40	0.29	1.30	43.00	40.00	34.00	33.00	8.60	8.50
SQ10A-R47MHF	0.47	0.34	2.30	40.00	38.00	35.00	25.00	8.30	8.50
SQ10A-R60MHF	0.60	0.43	2.30	32.00	30.00	25.50	25.00	8.30	8.50
SQ10A-1R0MHF	1.00	0.72	2.30	25.00	23.00	19.00	25.00	8.30	8.50
SQ10B-1R0MHF	1.00	0.72	4.05	33.00	32.00	25.00	22.00	8.30	10.50
SQ10A-2R2MHF	2.20	1.60	6.35	17.00	16.00	13.00	15.00	8.30	8.50
SQ10A-3R3MHF	3.30	2.40	8.00	13.00	12.00	9.50	13.00	8.30	8.50
SQ10B-3R3MHF	3.30	2.40	10.20	16.00	15.00	13.00	12.00	8.30	8.50
SQ10A-4R7MHF	4.70	3.38	10.20	11.80	11.00	8.50	12.00	8.30	8.50
SQ10B-4R7MHF	4.70	3.38	12.35	13.00	12.00	10.00	10.00	8.30	8.50

3. Mechanical Dimension of SQ10 Series:



Suggested Pad Layout



Part Marking:
 SQ10x: SQ10 is part size, x:special code.
 xxx: inductance value in uH(R:decimal point),
 M = tolerance, HF=halogen free.
 ITGYYWW: ITG logo ,YYWW : date code.

Type	SQ10 Series
A	See table above
B	12.00 Max.
C	See table above
D	12.50 ± 0.30
E	8.70 ± 0.10
F	4.50 ± 0.50
G	1.95 ± 0.30

Notes:

1. Open Circuit Inductance (OCL) test condition: 100KHz, 0.25Vrms, 0A DC at 25°C.
2. L @ Isat and L @ Irms Test condition: 100KHz, 0.25Vrm (Ta=25°C).
3. The nominal DCR is measured from point "a" to point "b" as shown above in the mechanical drawing (Ta=25°C).
4. Isat1, Isat2 & Isat3: DC current that will cause inductance to drop approximately by 20%.
5. Irms: DC current for an approximate temperature rise of 40°C without core loss.
6. Derating is necessary for AC currents.
7. Verify and check PCB pad layout, trace thickness, width, air-flow and proximity of other heat generating components as it will have an effect on the temperature rise.
8. It is recommended that the part temperature should not exceed 130°C under worst operating conditions.

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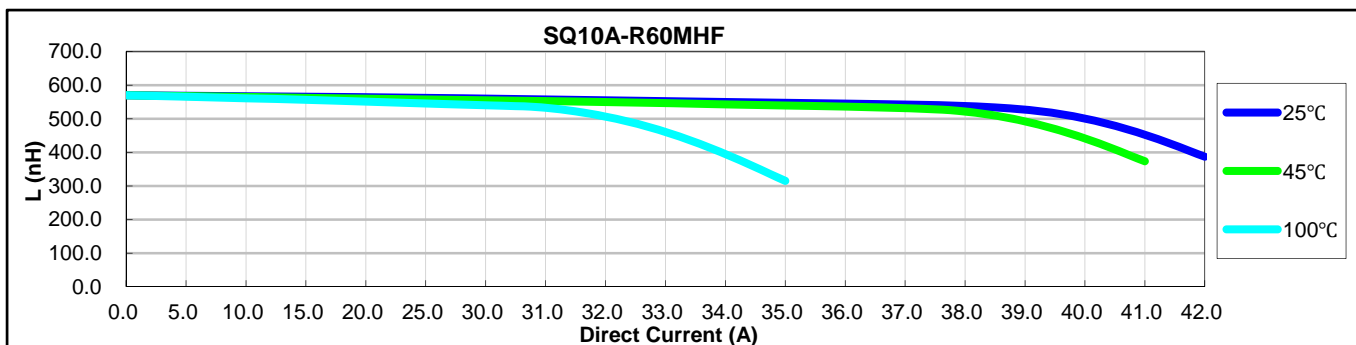
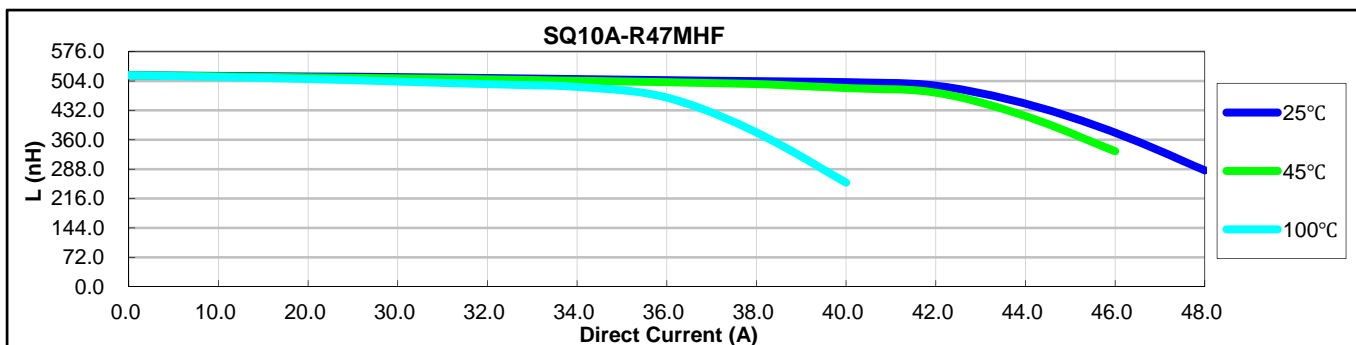
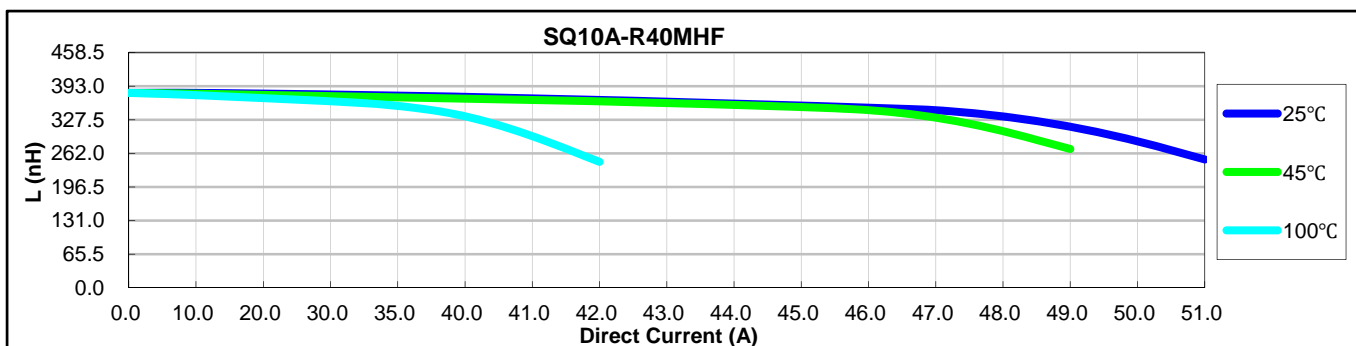
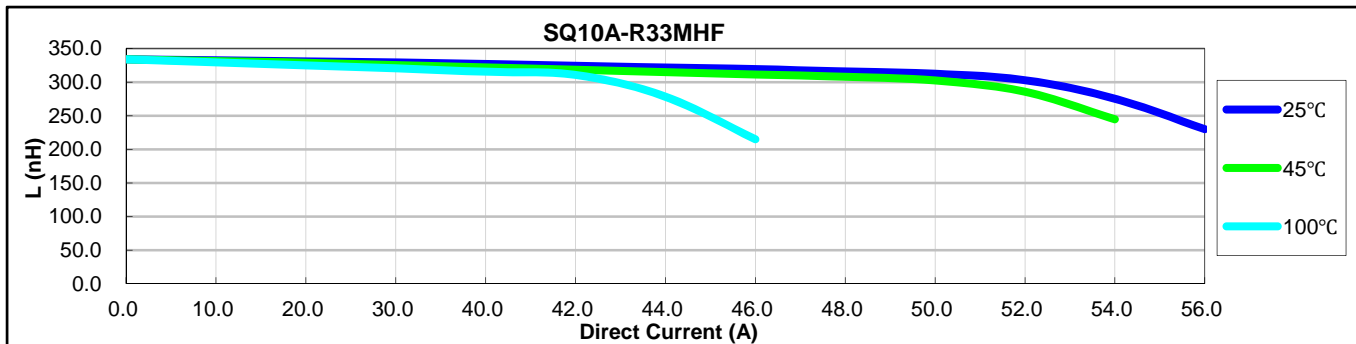
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SQ10 Series



4. Inductance Characteristics of SQ10 Series (Inductance vs Current):



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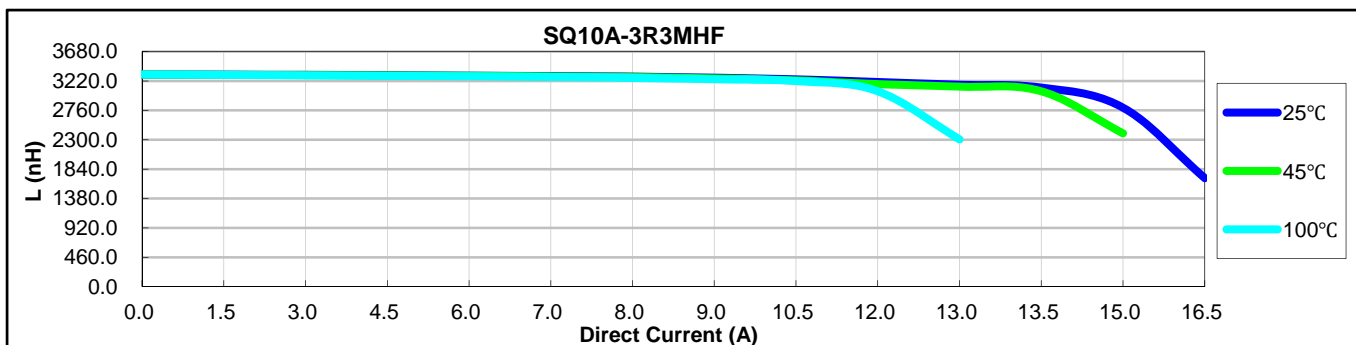
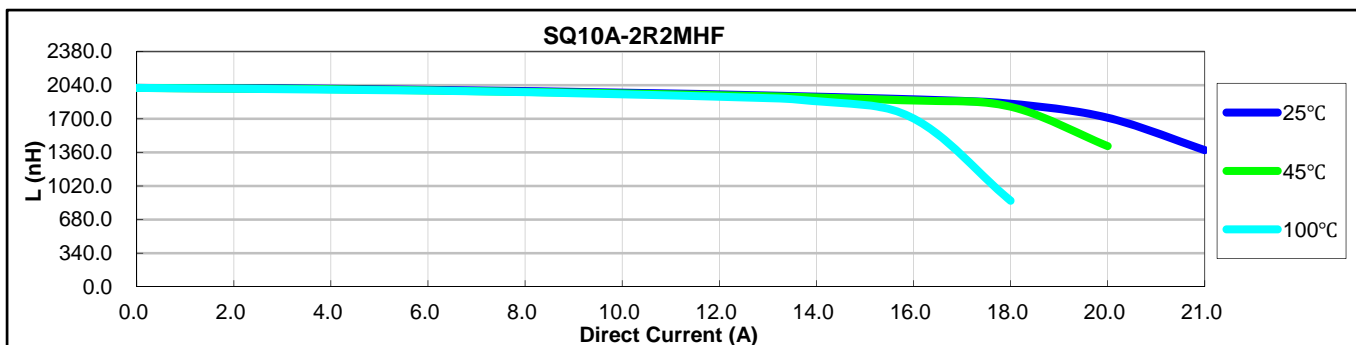
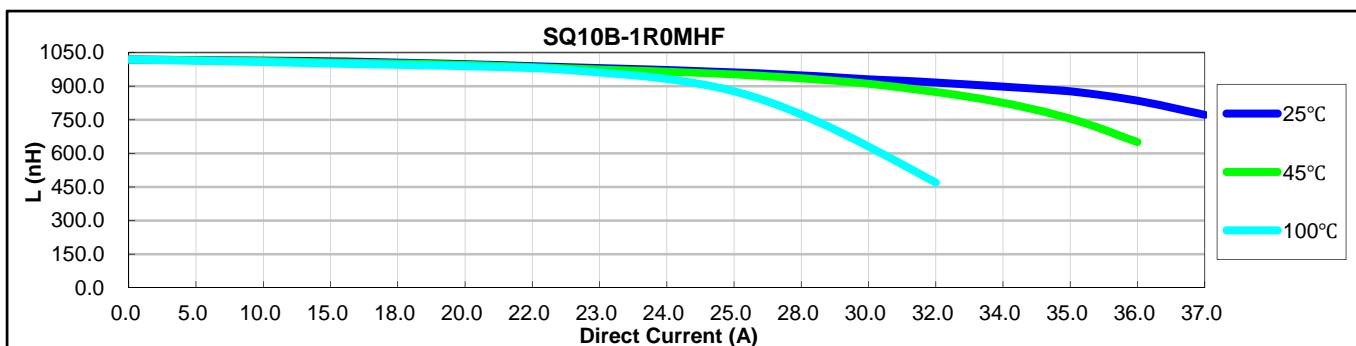
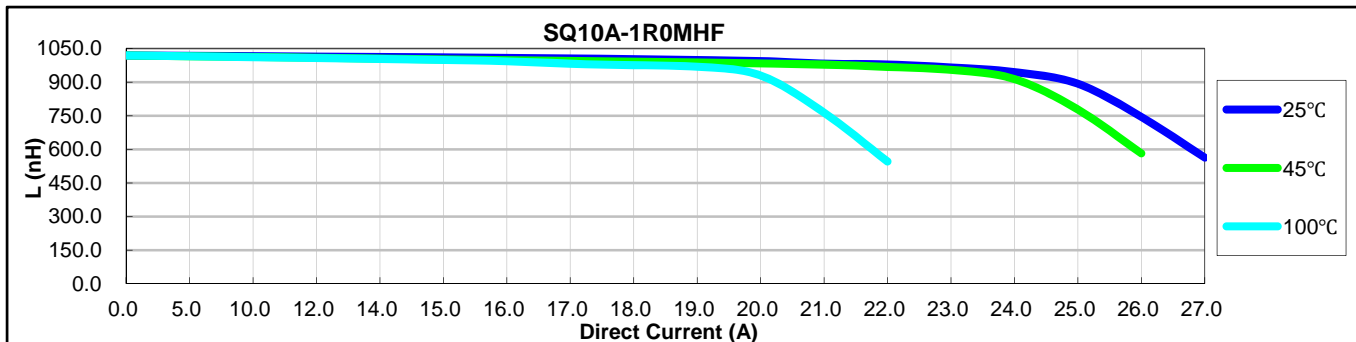
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AQ10 Series



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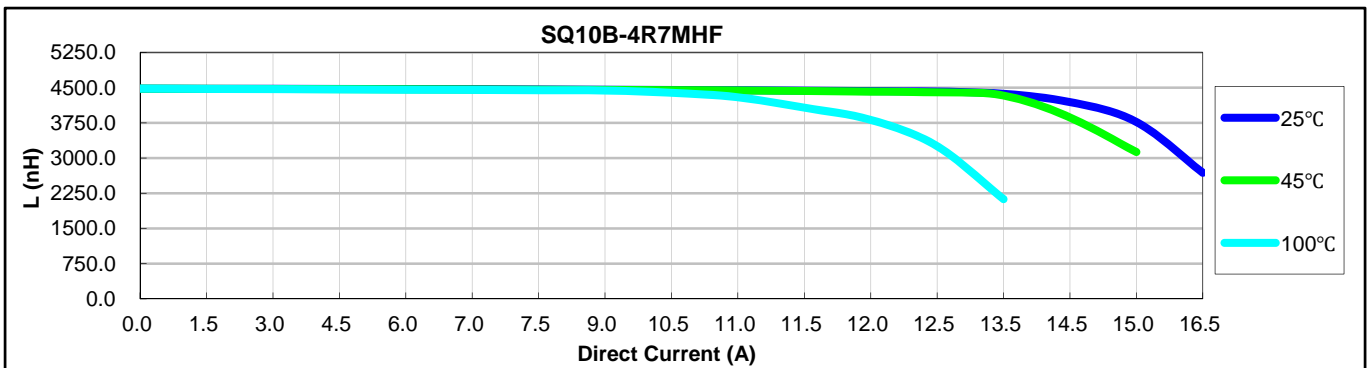
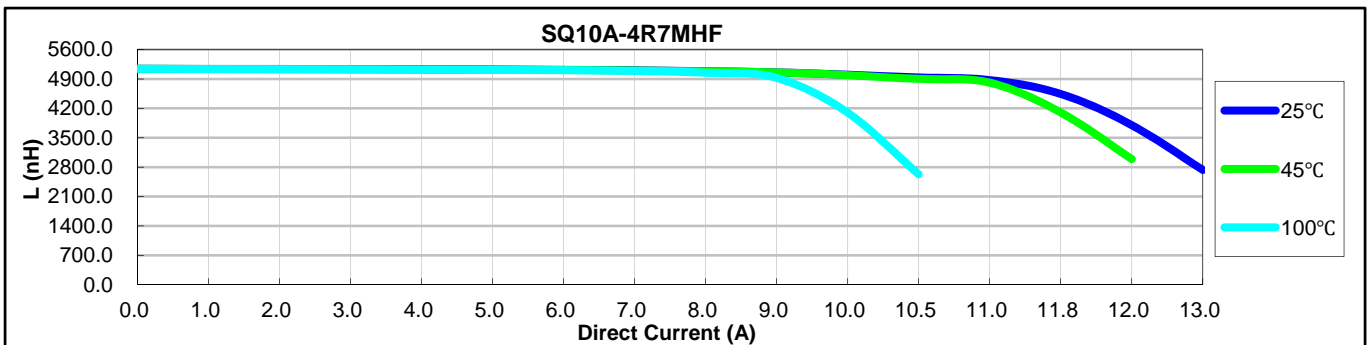
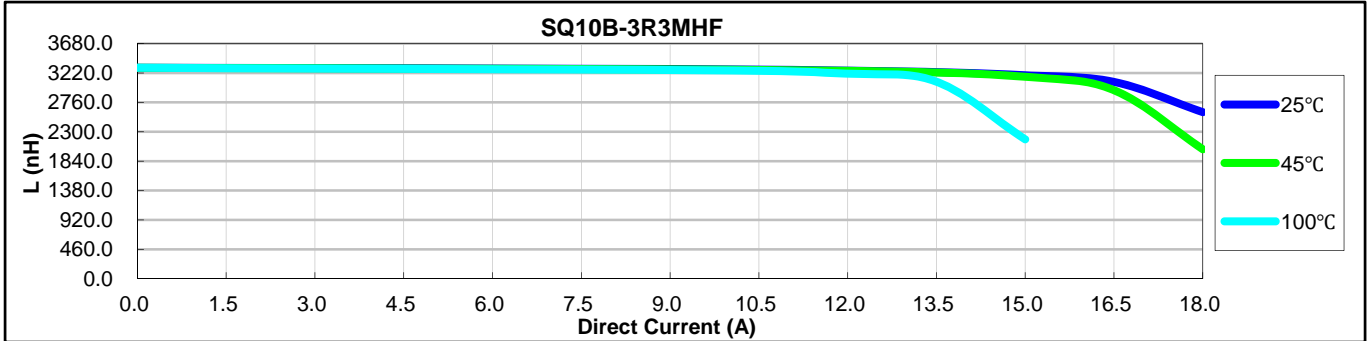
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