

SMD High Current Inductors

Fixed Inductor for Surface Mounting

SPH13050

Construction

- Metal alloy powder core
- Shielded construction

Features

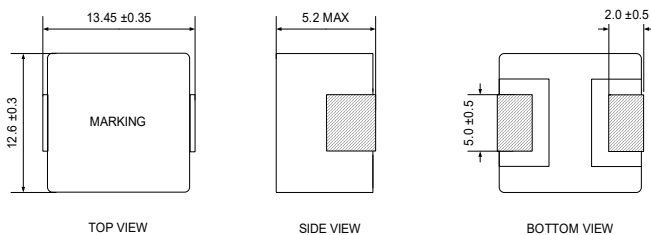
- Operating temperature -40 ~ +125°C
- Qualified to AEC-Q200
- Solder reflow temperature 260°C peak
- Low buzz noise
- High saturation current
- Suitable for lead-free reflow soldering

Applications

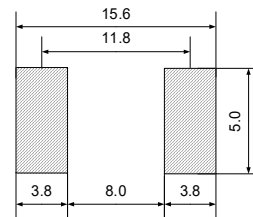
- Automotive / PDA / Notebook systems
- DC/DC converters
- Low profile, high current power supplies



Dimensions(Unit:mm)



Recommended Land Pattern(Unit:mm)



Electrical Characteristics

Ordering code	Inductance range (μH)	DCR(mΩ,MAX)	SRF(TYP,MHz)	Isat*1(A,TYP)	Irms*2(A,TYP)	Marking
SPH13050-R22M	0.22±20%	0.7	132.0	75.0	50.0	R22
SPH13050-R36M	0.36±20%	0.9	82.0	50.0	42.0	R36
SPH13050-R50M	0.50±20%	1.3	64.0	48.0	38.0	R50
SPH13050-R68M	0.68±20%	1.7	52.0	46.0	33.0	R68
SPH13050-R82M	0.82±20%	2.0	50.0	39.0	30.0	R82
SPH13050-1R0M	1.0±20%	2.2	43.0	35.0	26.0	1R0
SPH13050-1R5M	1.5±20%	3.2	39.0	33.0	23.0	1R5
SPH13050-2R2M	2.2±20%	5.0	24.0	24.0	15.0	2R2
SPH13050-3R3M	3.3±20%	7.0	23.0	22.0	14.0	3R3
SPH13050-4R7M	4.7±20%	9.0	15.0	20.0	13.0	4R7
SPH13050-6R8M	6.8±20%	18.0	14.0	16.0	12.0	6R8
SPH13050-8R2M	8.2±20%	20.0	11.0	13.0	9.5	8R2
SPH13050-100M	10±20%	22.0	8.5	12.0	9.0	100
SPH13050-150M	15±20%	30.0	8.0	10.0	8.0	150
SPH13050-220M	22±20%	58.0	6.5	6.5	4.5	220
SPH13050-330M	33±20%	84.0	5.0	6.0	3.5	330
SPH13050-470M	47±20%	130.0	4.0	5.0	3.0	470

※Test Equipment

*Inductance : Agilent 4284A (100kHz, 1.0V)

*DCR Meter : ABM3245 (20mΩ~2MΩ)

*Bias Current : Agilent 4284A + Agilent 42841A

*SRF : Agilent HP8753ES

*Specifications subject to change without notice. Please check our website for latest information.

*Notes

*1.Isat : DC current at which the inductance drops approximate 30%

*2.Irms : DC current that will cause an approximate ΔT of 40 °C

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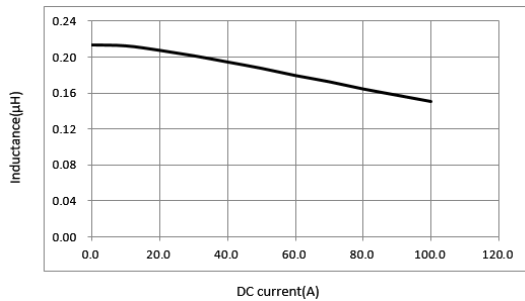
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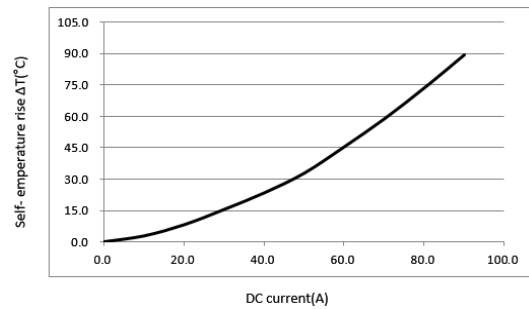
SPH13050

*SPH13050-R22M

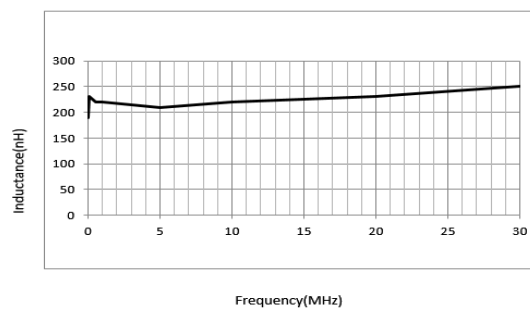
Inductance vs DC current



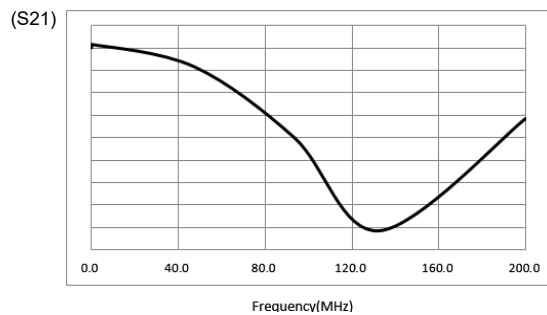
DC current vs Temperature



Inductance vs Frequency

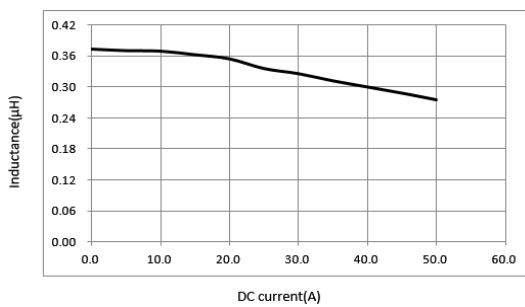


SRF(Self Resonance Frequency)

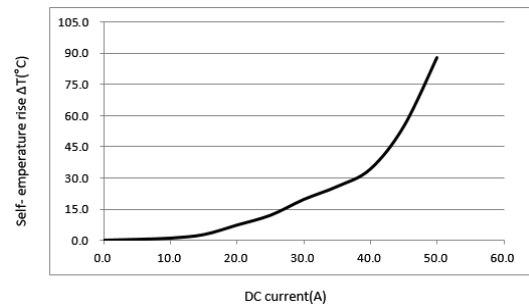


*SPH13050-R36M

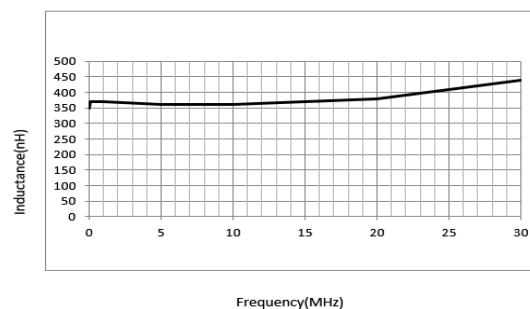
Inductance vs DC current



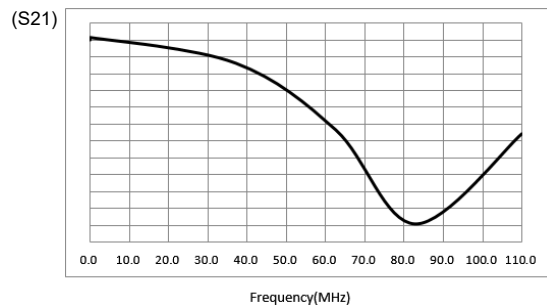
DC current vs Temperature



Inductance vs Frequency



SRF(Self Resonance Frequency)



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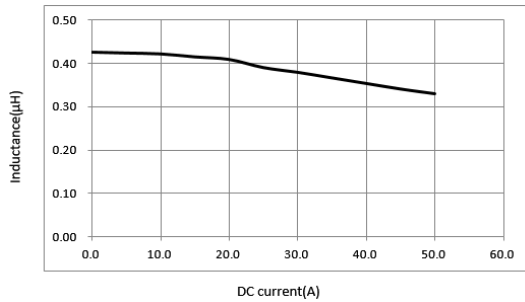
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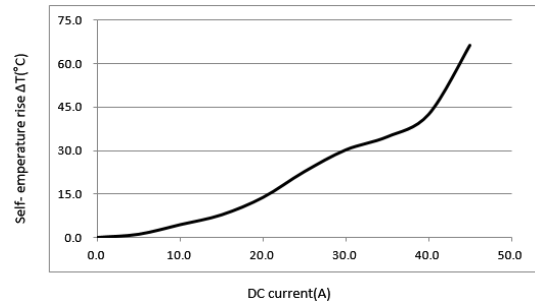
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*SPH13050-R50M

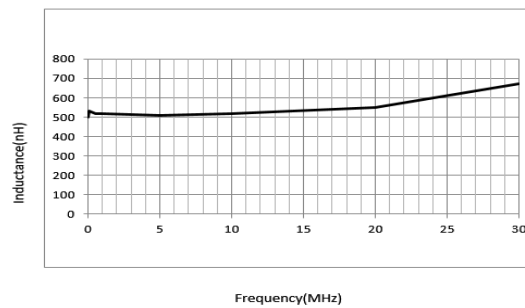
Inductance vs DC current



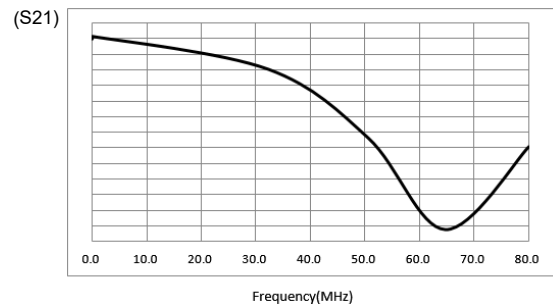
DC current vs Temperature



Inductance vs Frequency

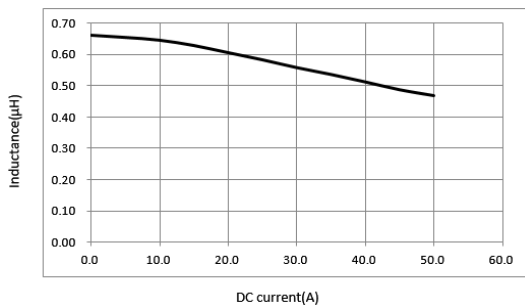


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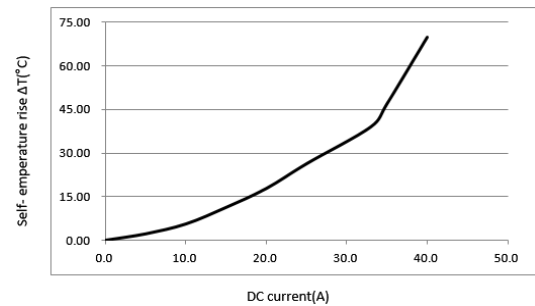


*SPH13050-R68M

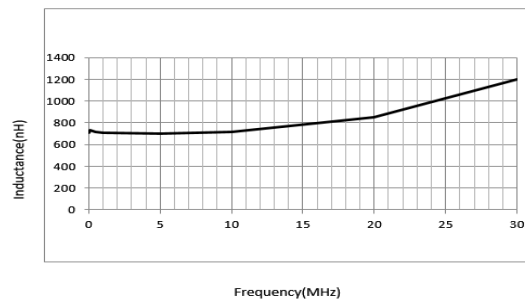
Inductance vs DC current



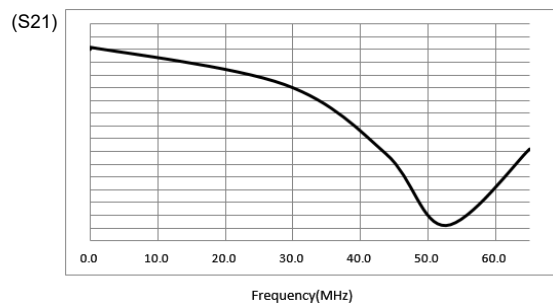
DC current vs Temperature



Inductance vs Frequency



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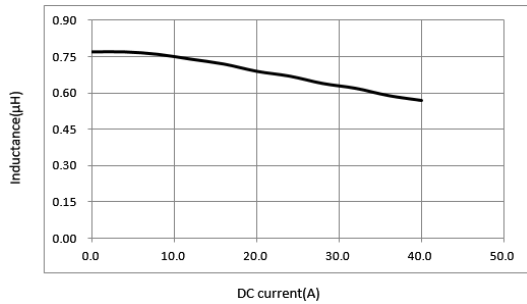
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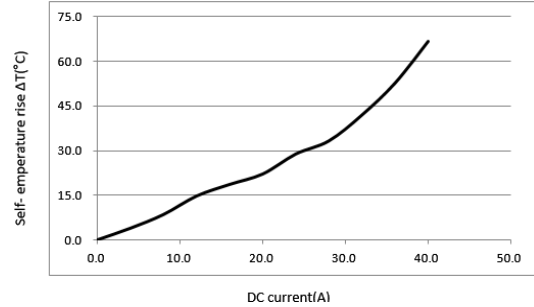
SPH13050

*SPH13050-R82M

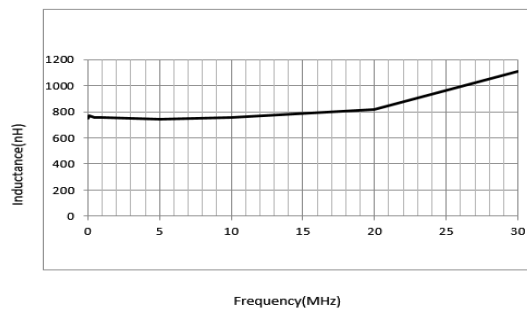
Inductance vs DC current



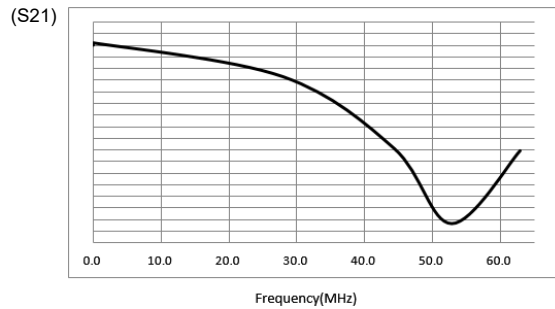
DC current vs Temperature



Inductance vs Frequency

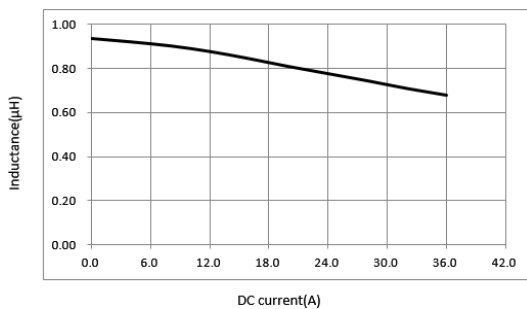


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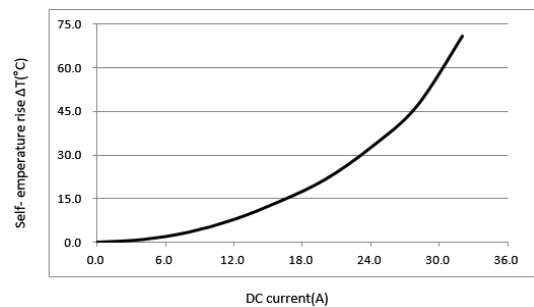


*SPH13050-1R0M

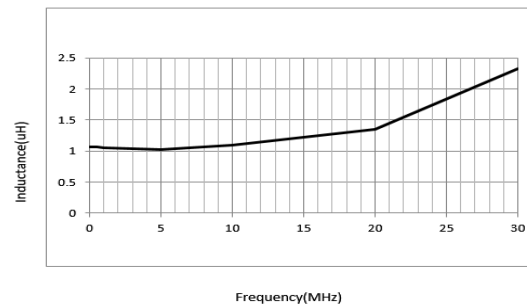
Inductance vs DC current



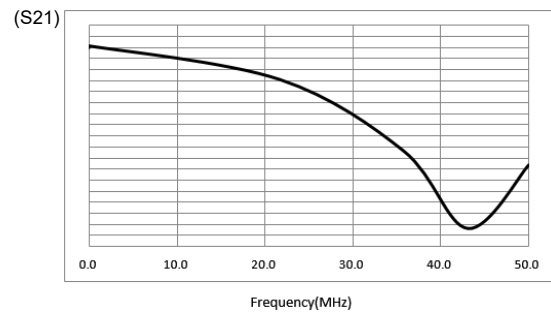
DC current vs Temperature



Inductance vs Frequency



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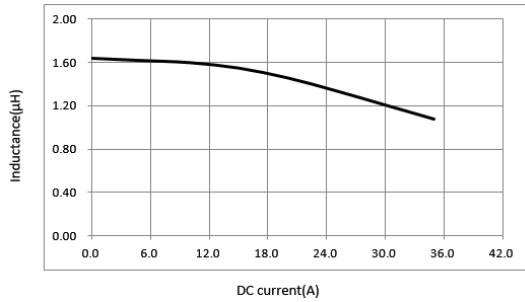
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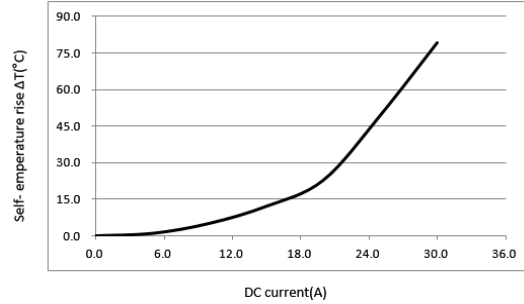
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*SPH13050-1R5M

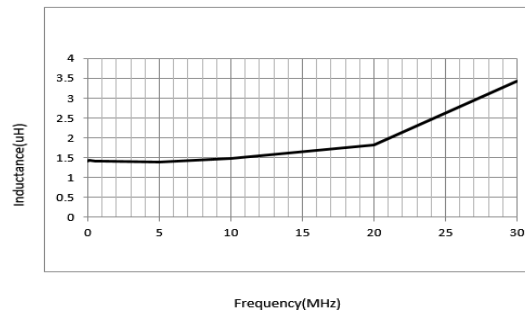
Inductance vs DC current



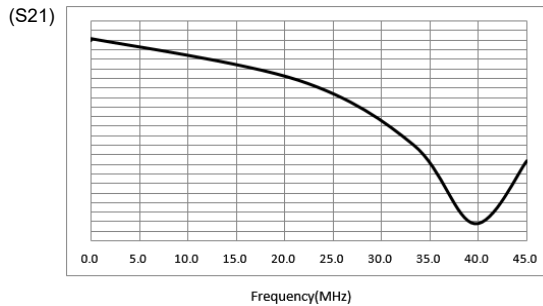
DC current vs Temperature



Inductance vs Frequency

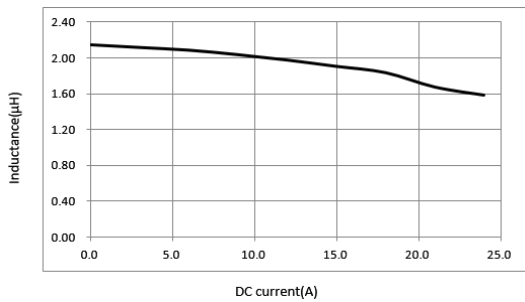


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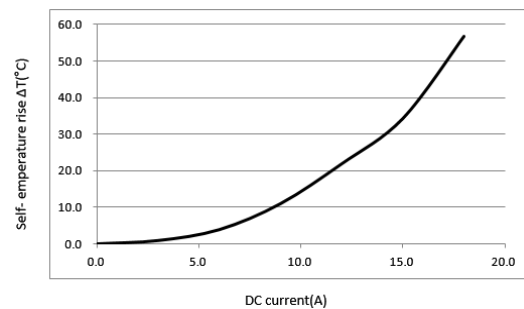


*SPH13050-2R2M

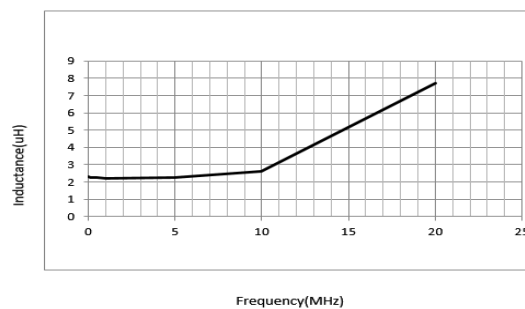
Inductance vs DC current



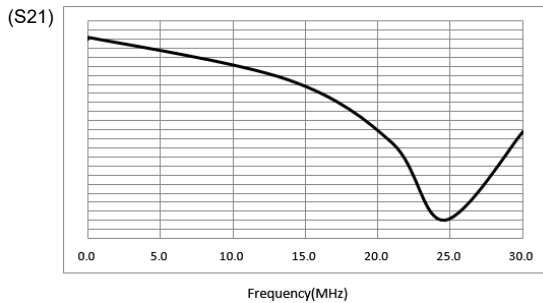
DC current vs Temperature



Inductance vs Frequency



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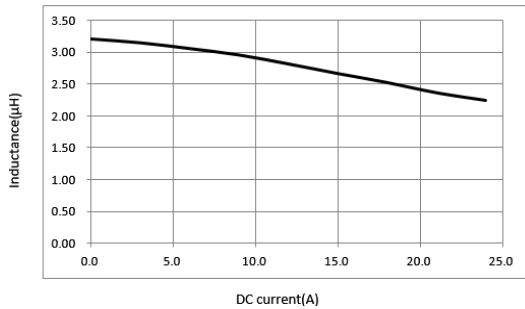
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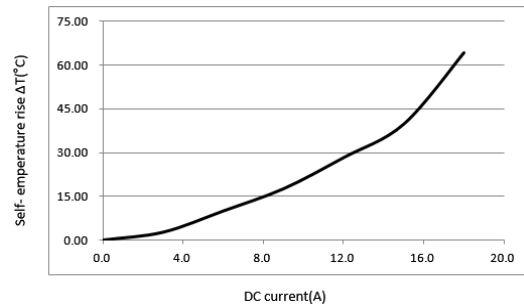
SPH13050

*SPH13050-3R3M

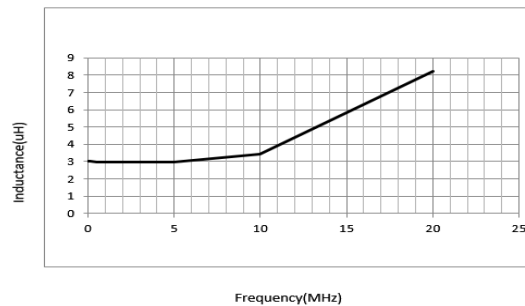
Inductance vs DC current



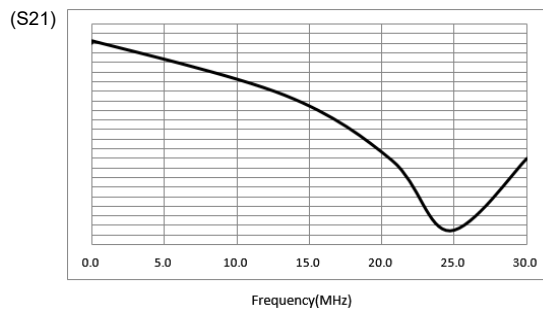
DC current vs Temperature



Inductance vs Frequency

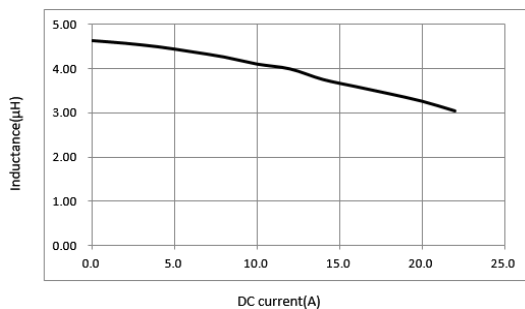


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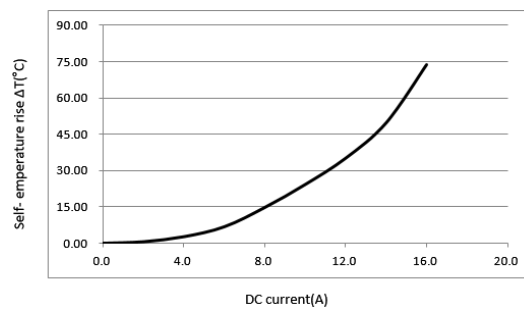


*SPH13050-4R7M

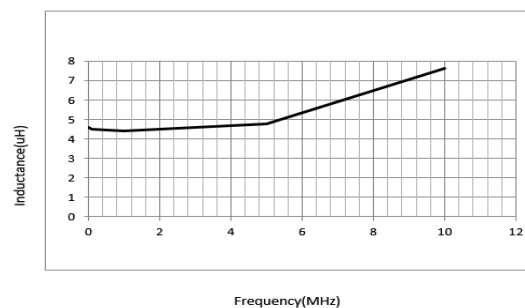
Inductance vs DC current



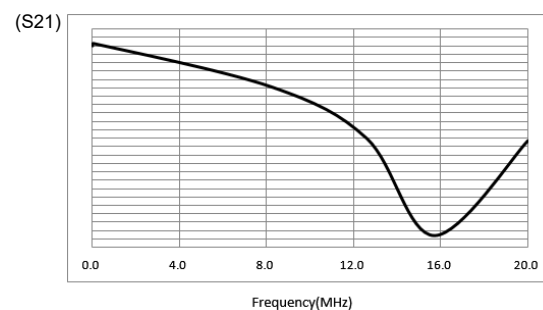
DC current vs Temperature



Inductance vs Frequency



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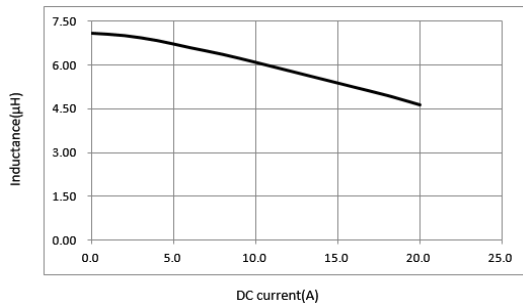
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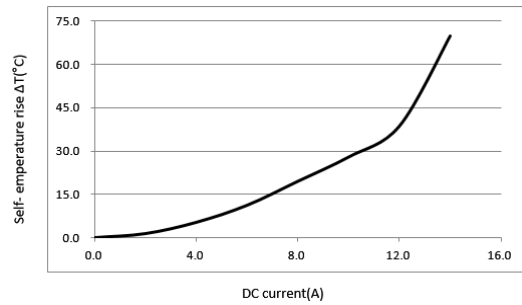
SPH13050

*SPH13050-6R8M

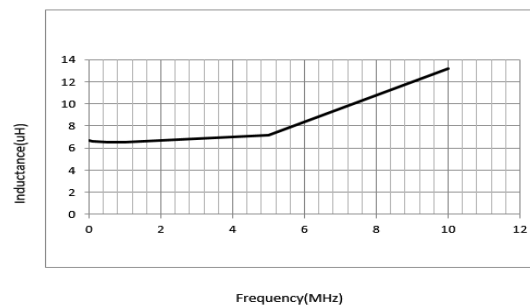
Inductance vs DC current



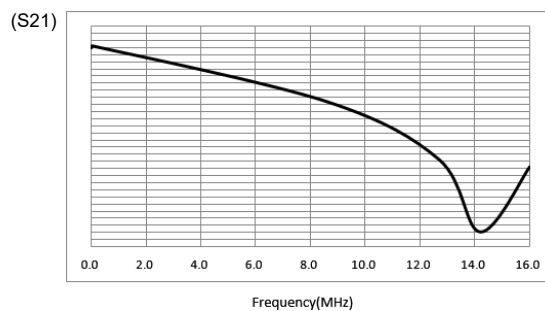
DC current vs Temperature



Inductance vs Frequency

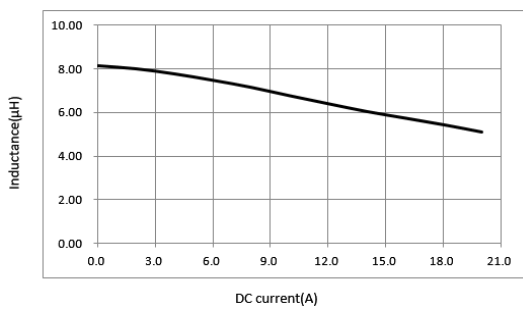


SRF(Self Resonance Frequency)

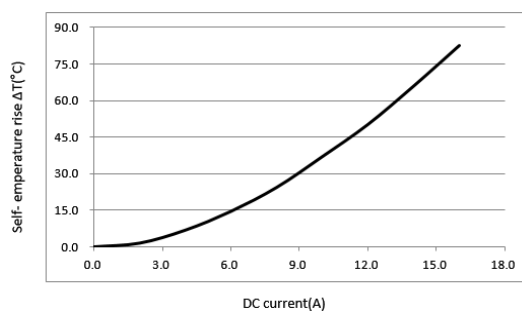


*SPH13050-8R2M

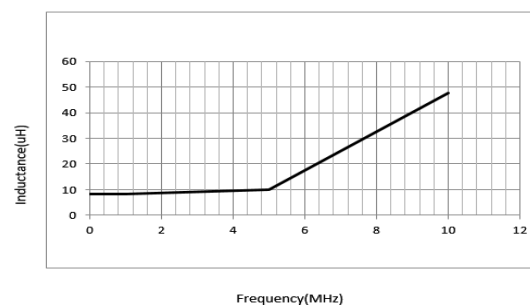
Inductance vs DC current



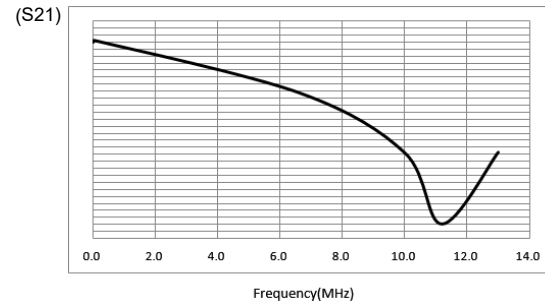
DC current vs Temperature



Inductance vs Frequency



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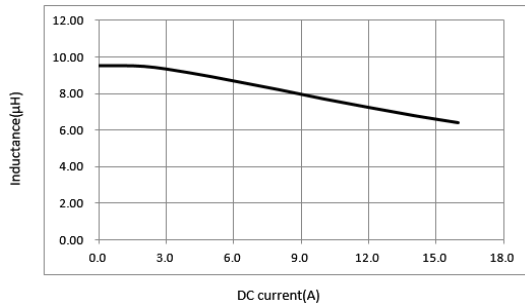
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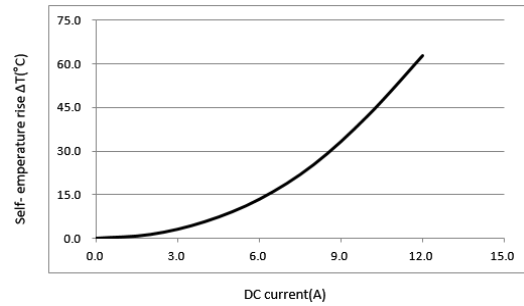
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*SPH13050-100M

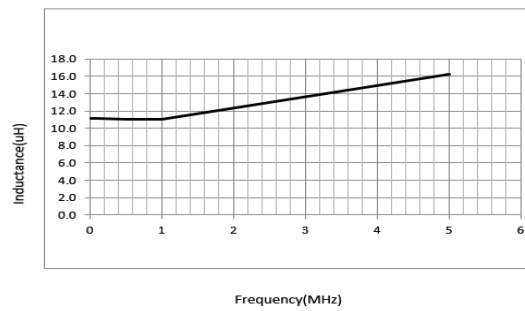
Inductance vs DC current



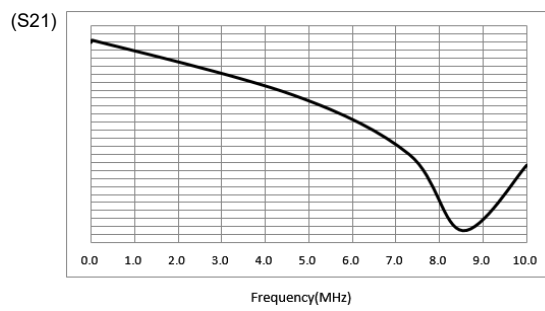
DC current vs Temperature



Inductance vs Frequency

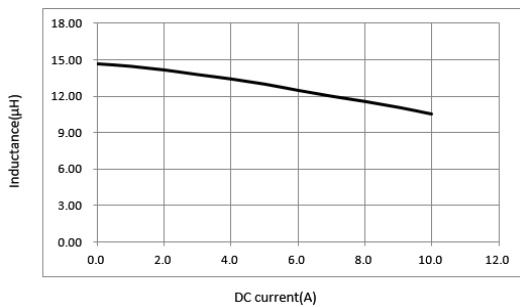


SRF(Self Resonance Frequency)

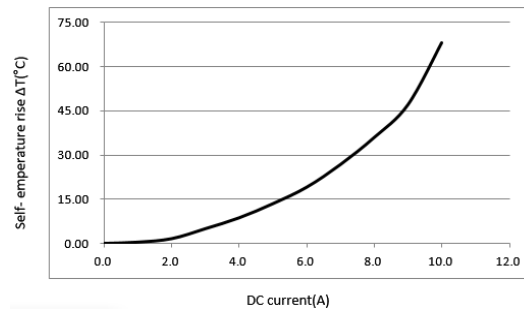


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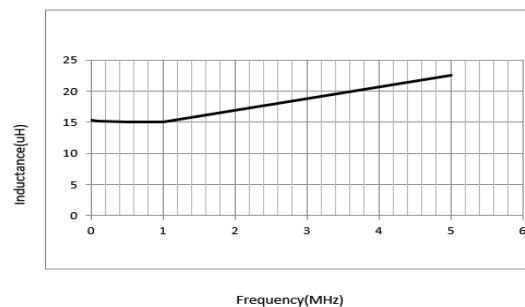
Inductance vs DC current



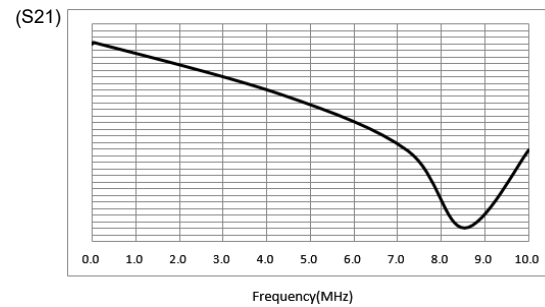
DC current vs Temperature



Inductance vs Frequency



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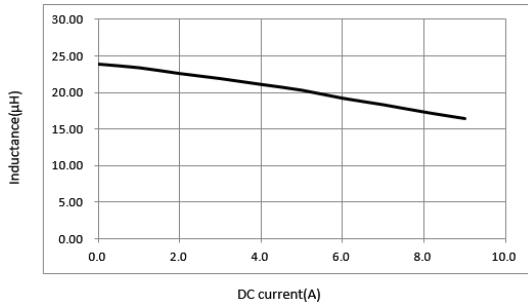
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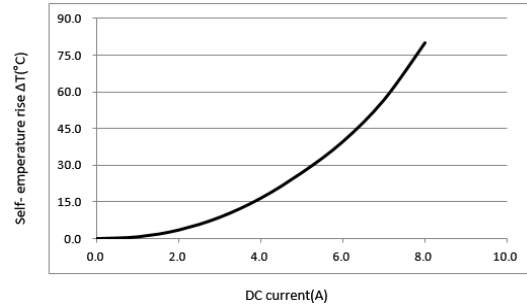
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*SPH13050-220M

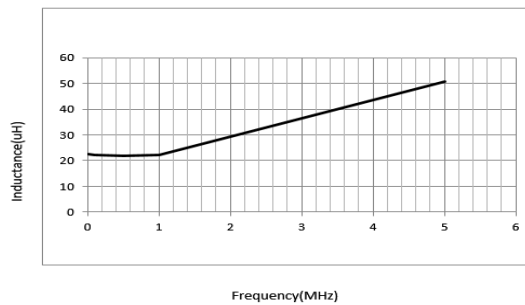
Inductance vs DC current



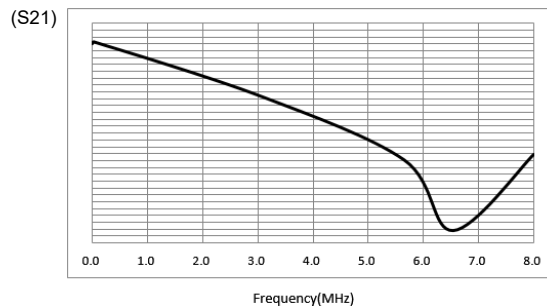
DC current vs Temperature



Inductance vs Frequency

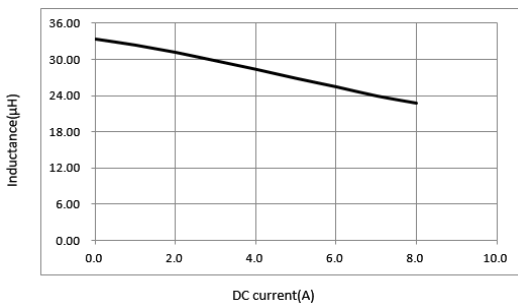


SRF(Self Resonance Frequency)

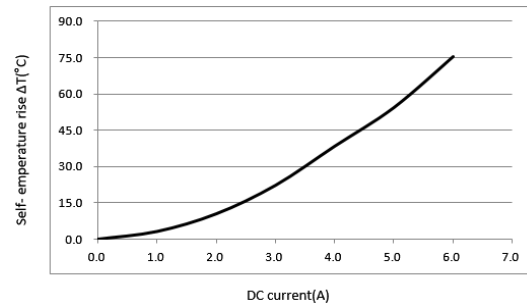


*SPH13050-330M

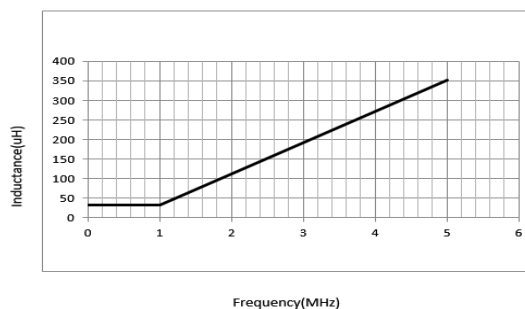
Inductance vs DC current



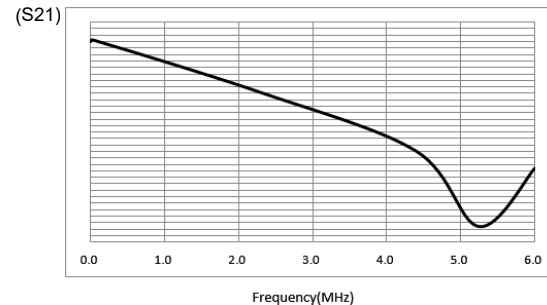
DC current vs Temperature



Inductance vs Frequency



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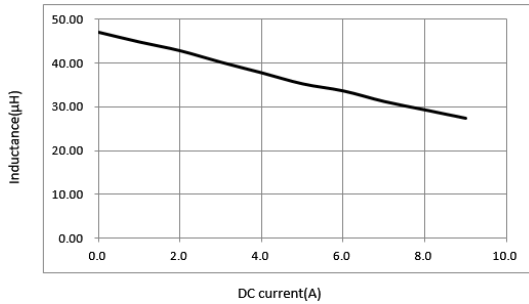
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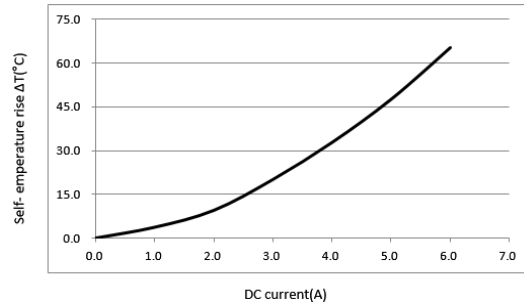
SPH13050

*SPH13050-470M

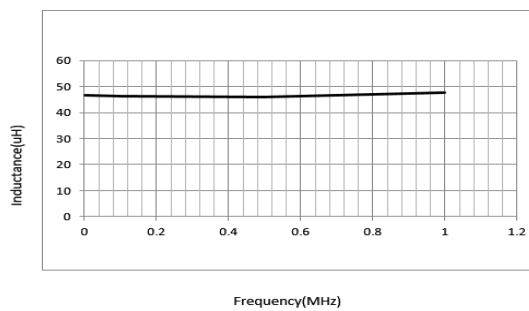
Inductance vs DC current



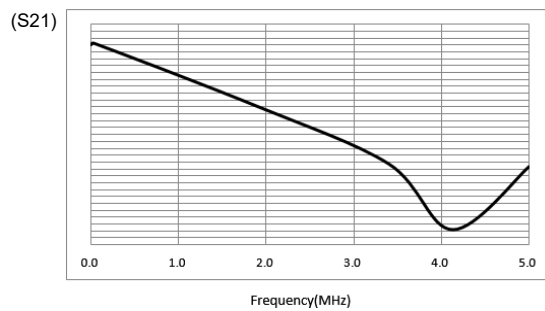
DC current vs Temperature



Inductance vs Frequency



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