

# SMD INDUCTOR

Fixed Inductor for Surface Mounting

SPE8040

SMD Magnetic-resin shielded type

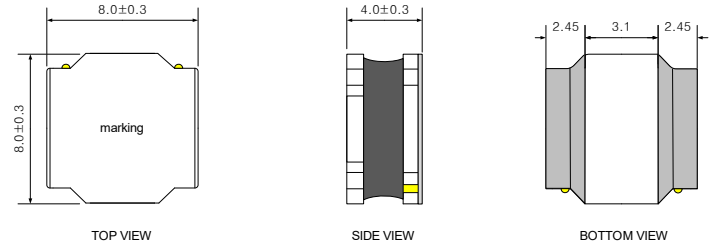
UNIT : mm

TYPE SPE8040  
For Reflow Soldering  
Inductance Range: 0.47 ~ 330uH

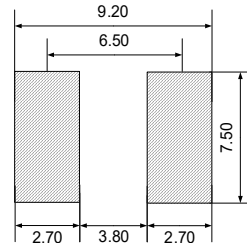
## Features

- \*Low profile (4.0mm high)
- \*Suitable for reflow soldering
- \*Available on tape and reel for automatic insertion
- \*Qualified to AEC-Q200

Dimensions



Recommended PCB Pattern



## Electrical Characteristics

| Ordering code | Inductance range (μH) | DCR(mΩ±30%) | Isat*1<br>(A,MAX) | Irms*2<br>(A,MAX) | Marking |
|---------------|-----------------------|-------------|-------------------|-------------------|---------|
| SPE8040-R47N  | 0.47±30%              | 7           | 12.0              | 10.0              | R47     |
| SPE8040-1R0N  | 1.0±30%               | 8           | 9.85              | 6.30              | 1R0     |
| SPE8040-1R5N  | 1.5±30%               | 10          | 9.0               | 5.60              | 1R5     |
| SPE8040-2R2N  | 2.2±30%               | 12          | 7.1               | 5.20              | 2R2     |
| SPE8040-3R0N  | 3.0±30%               | 14          | 6.1               | 4.70              | 3R0     |
| SPE8040-3R3N  | 3.3±30%               | 16          | 6.0               | 4.50              | 3R3     |
| SPE8040-3R9N  | 3.9±30%               | 17          | 5.7               | 4.30              | 3R9     |
| SPE8040-4R7M  | 4.7±20%               | 19          | 5.4               | 4.10              | 4R7     |
| SPE8040-5R6M  | 5.6±20%               | 23          | 5.0               | 3.80              | 5R6     |
| SPE8040-6R8M  | 6.8±20%               | 25          | 4.5               | 3.60              | 6R8     |
| SPE8040-8R2M  | 8.2±20%               | 27          | 4.2               | 3.40              | 8R2     |
| SPE8040-100M  | 10±20%                | 30          | 3.6               | 3.30              | 100     |
| SPE8040-150M  | 15±20%                | 48          | 2.9               | 2.60              | 150     |
| SPE8040-220M  | 22±20%                | 69          | 2.3               | 2.10              | 220     |
| SPE8040-330M  | 33±20%                | 100         | 1.9               | 1.80              | 330     |
| SPE8040-470M  | 47±20%                | 137         | 1.6               | 1.50              | 470     |
| SPE8040-560M  | 56±20%                | 164         | 1.4               | 1.30              | 560     |
| SPE8040-680M  | 68±20%                | 200         | 1.3               | 1.20              | 680     |
| SPE8040-820M  | 82±20%                | 240         | 1.2               | 1.10              | 820     |
| SPE8040-101M  | 100±20%               | 290         | 1.1               | 1.0               | 101     |
| SPE8040-121M  | 120±20%               | 340         | 1.0               | 0.95              | 121     |
| SPE8040-151M  | 150±20%               | 435         | 0.9               | 0.85              | 151     |
| SPE8040-221M  | 220±20%               | 640         | 0.7               | 0.65              | 221     |
| SPE8040-331M  | 330±20%               | 1,000       | 0.6               | 0.55              | 331     |

### \*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

### ※Test Equipment

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

\*DCR Meter : ABM3245 (20mΩ~2MΩ)

\*Bias Current : Agilent 4284A + Agilent 42841A

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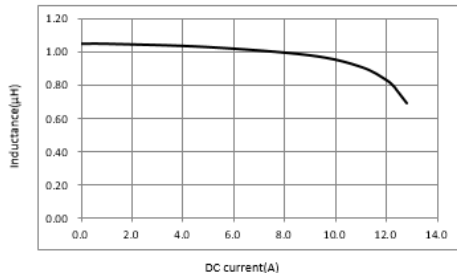
# SMD Power Inductors

## Fixed Inductor for Surface Mounting

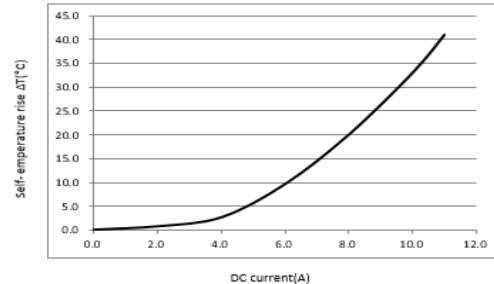
SPE8040

\*SPE8040-R47N

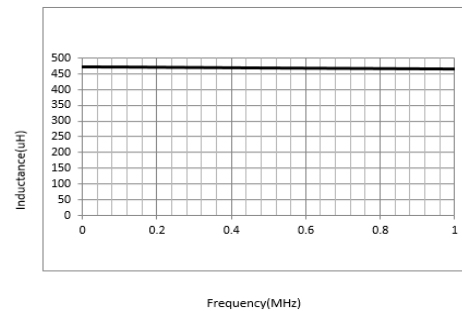
Inductance vs DC current



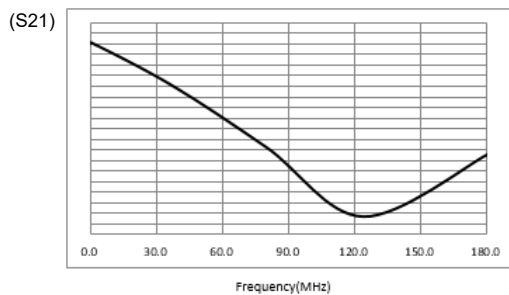
DC current vs Temperature



Inductance vs Frequency

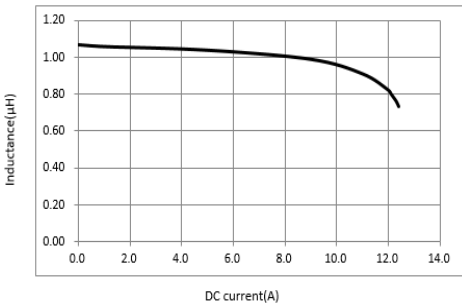


SRF(Self Resonance Frequency)

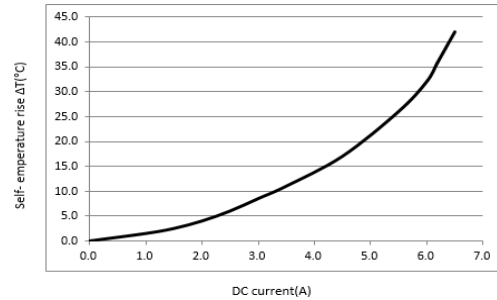


\*SPE8040-1R0N

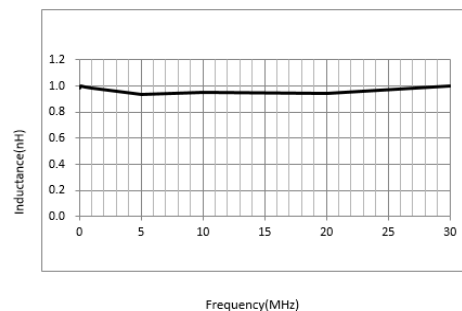
Inductance vs DC current



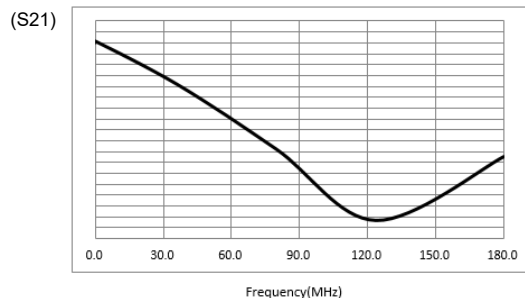
DC current vs Temperature



Inductance vs Frequency



SRF(Self Resonance Frequency)



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Revised 10/18/21

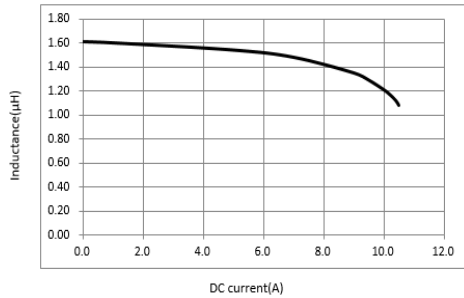
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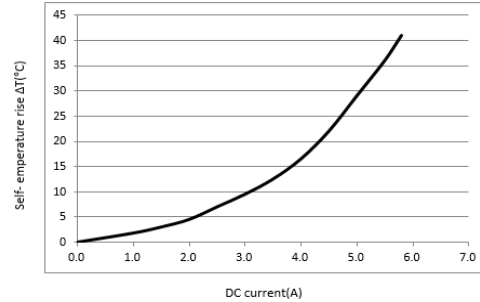
SPE8040

\*SPE8040-1R5N

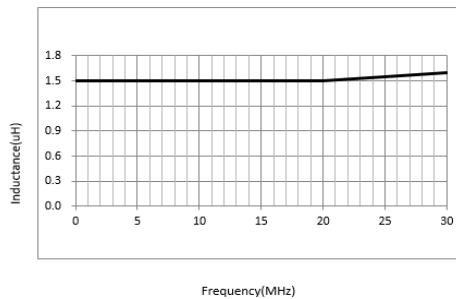
Inductance vs DC current



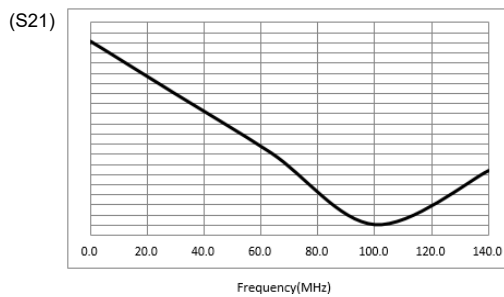
DC current vs Temperature



Inductance vs Frequency

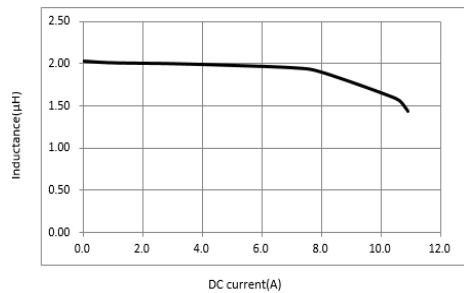


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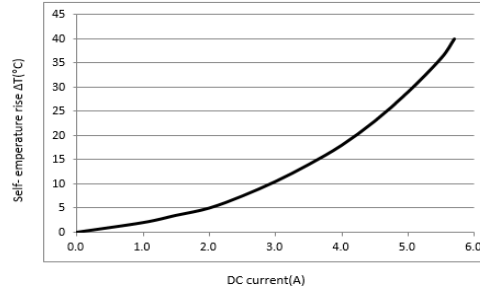


\*SPE8040-2R2N

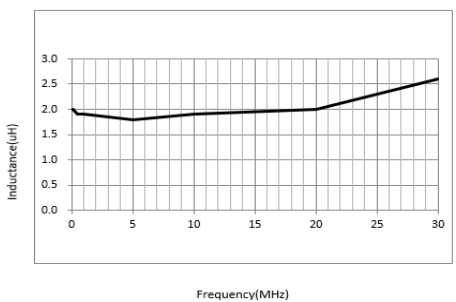
Inductance vs DC current



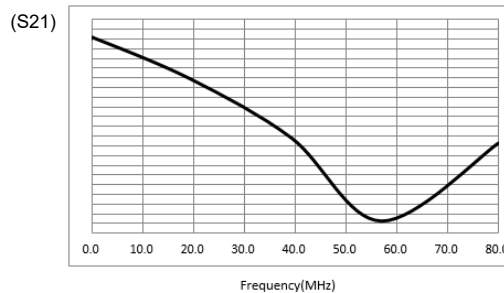
DC current vs Temperature



Inductance vs Frequency



SRF(Self Resonance Frequency)



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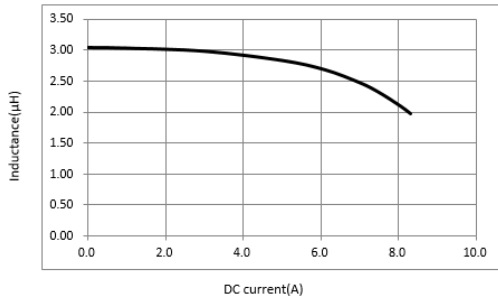
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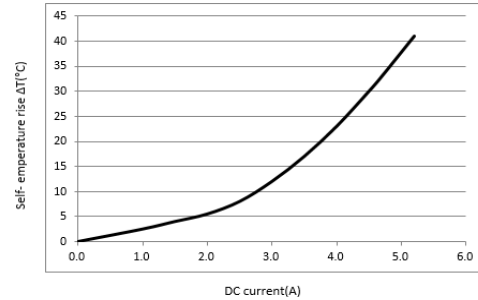
SPE8040

\*SPE8040-3R0N

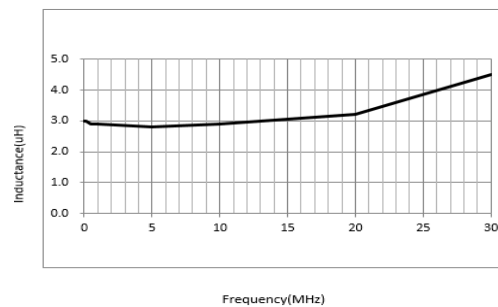
Inductance vs DC current



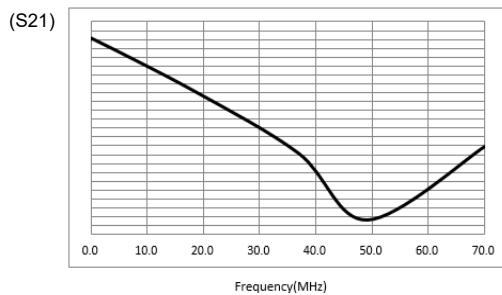
DC current vs Temperature



Inductance vs Frequency

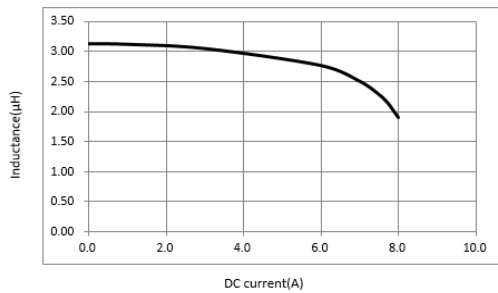


SRF(Self Resonance Frequency)

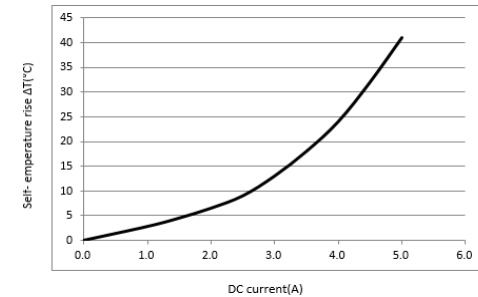


\*SPE8040-3R3N

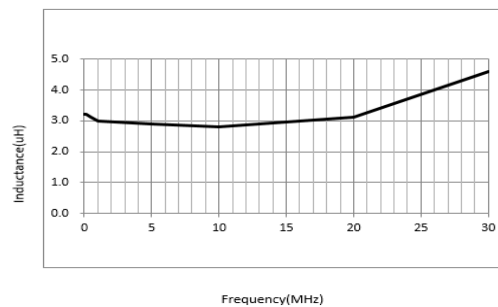
Inductance vs DC current



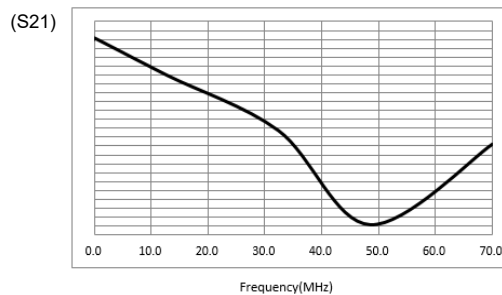
DC current vs Temperature



Inductance vs Frequency



SRF(Self Resonance Frequency)

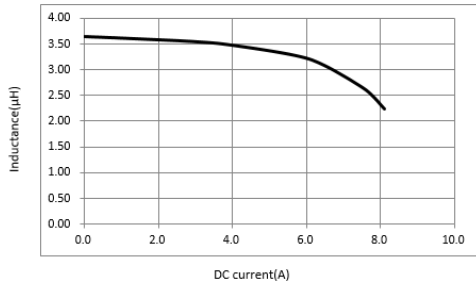
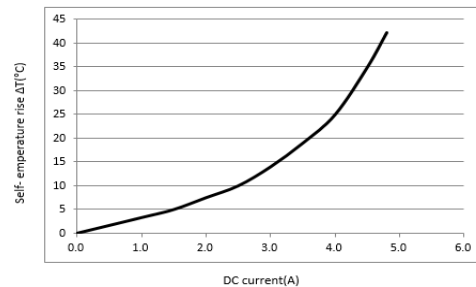
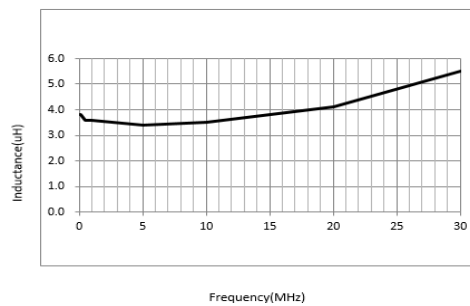


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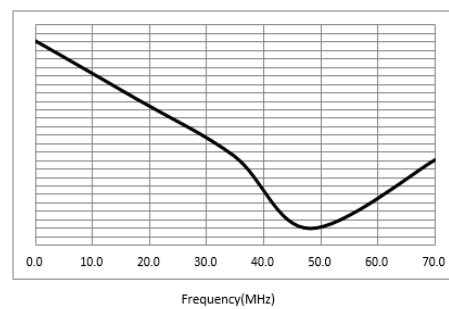
Revised 10/18/21

**SMD Power Inductors****Fixed Inductor for Surface Mounting****SPE8040**

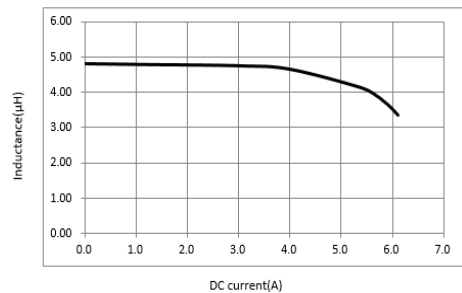
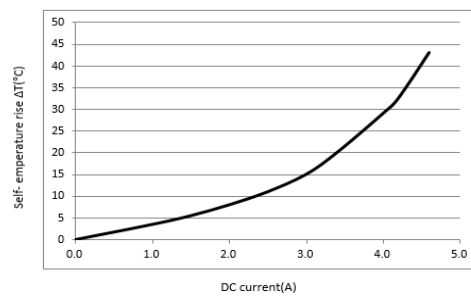
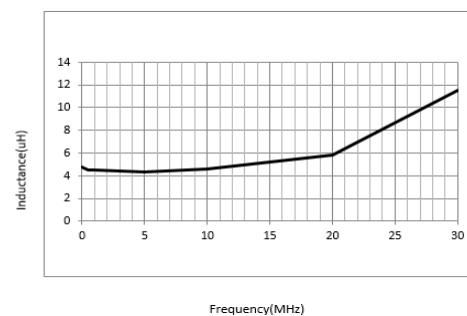
\*SPE8040-3R9N

**Inductance vs DC current****DC current vs Temperature****Inductance vs Frequency****SRF(Self Resonance Frequency)**

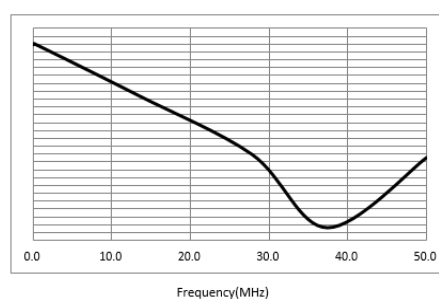
(S21)



\*SPE8040-4R7M

**Inductance vs DC current****DC current vs Temperature****Inductance vs Frequency****SRF(Self Resonance Frequency)**

(S21)



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Revised 10/18/21

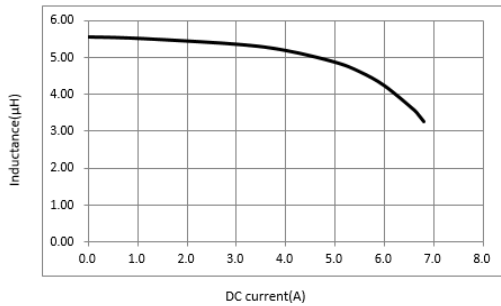
# SMD Power Inductors

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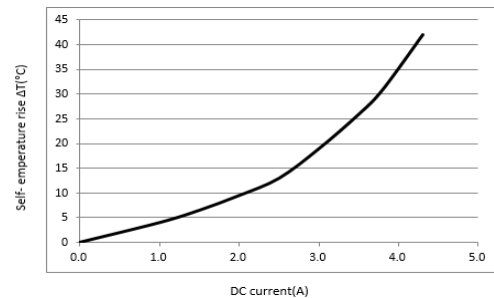
SPE8040

\*SPE8040-5R6M

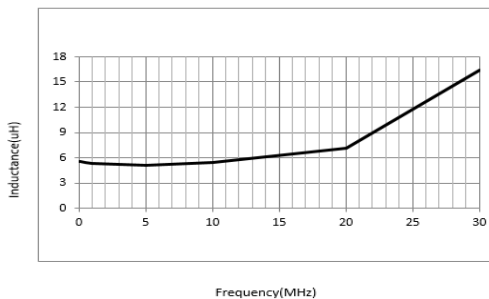
Inductance vs DC current



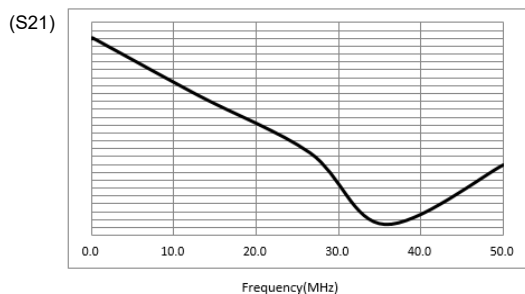
DC current vs Temperature



Inductance vs Frequency

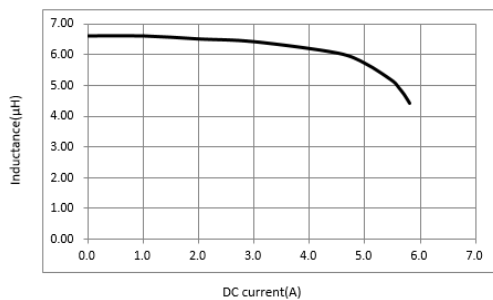


SRF(Self Resonance Frequency)

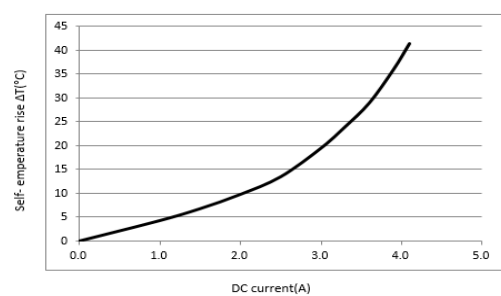


\*SPE8040-6R8M

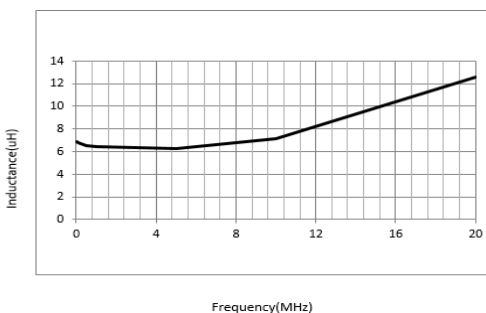
Inductance vs DC current



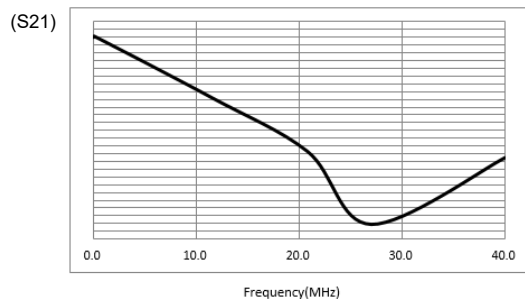
DC current vs Temperature



Inductance vs Frequency



SRF(Self Resonance Frequency)



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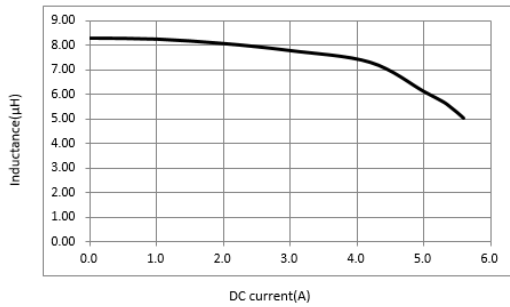
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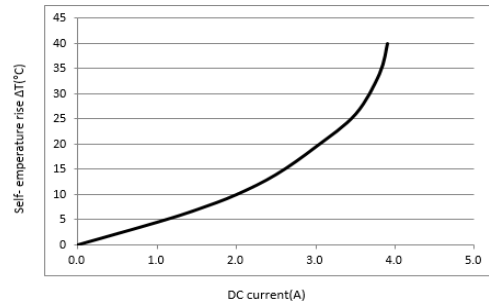
SPE8040

\*SPE8040-8R2M

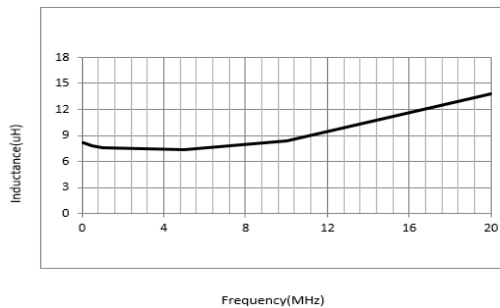
Inductance vs DC current



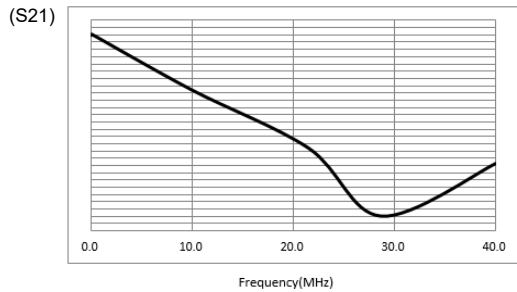
DC current vs Temperature



Inductance vs Frequency

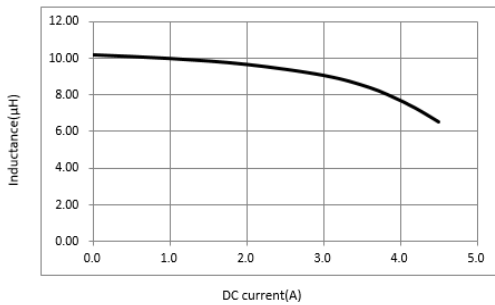


SRF(Self Resonance Frequency)

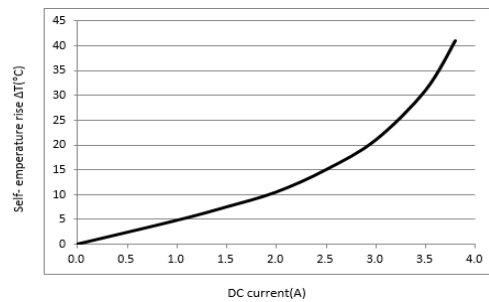


\*SPE8040-100M

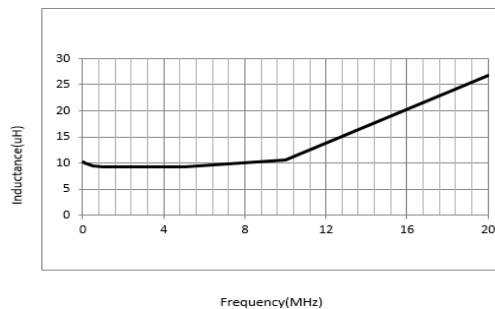
Inductance vs DC current



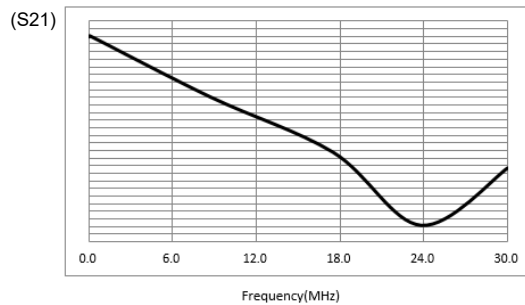
DC current vs Temperature



Inductance vs Frequency



SRF(Self Resonance Frequency)



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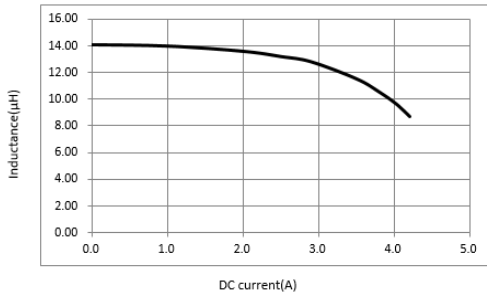
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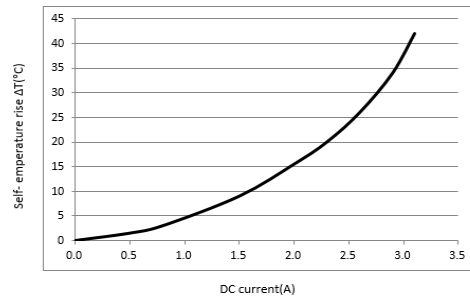
SPE8040

\*SPE8040-150M

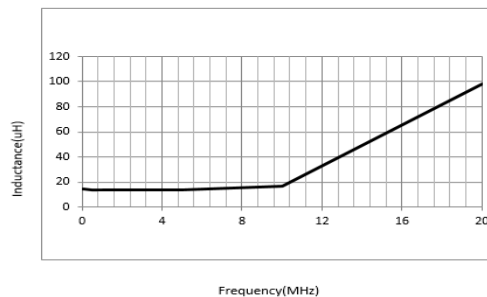
Inductance vs DC current



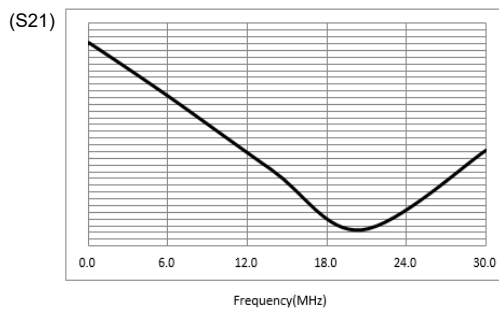
DC current vs Temperature



Inductance vs Frequency

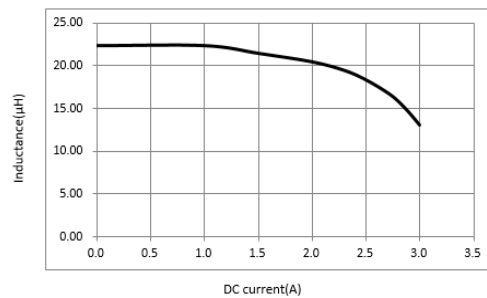


SRF(Self Resonance Frequency)

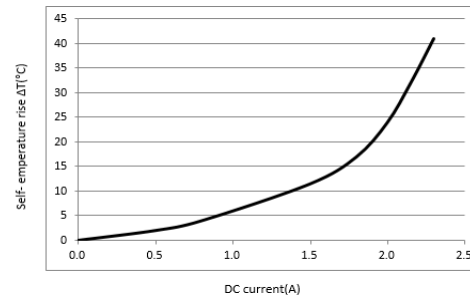


\*SPE8040-220M

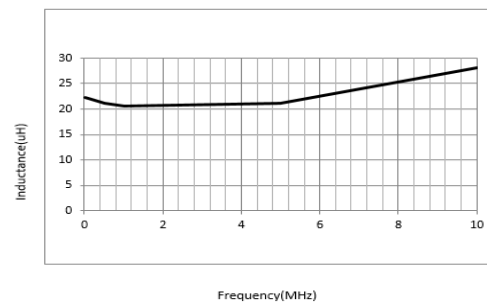
Inductance vs DC current



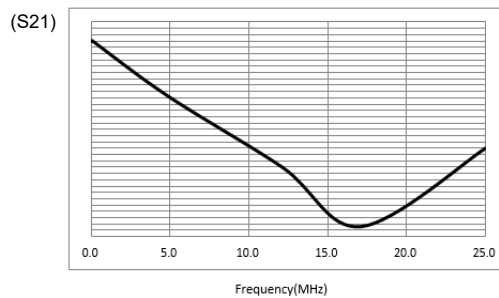
DC current vs Temperature



Inductance vs Frequency



SRF(Self Resonance Frequency)



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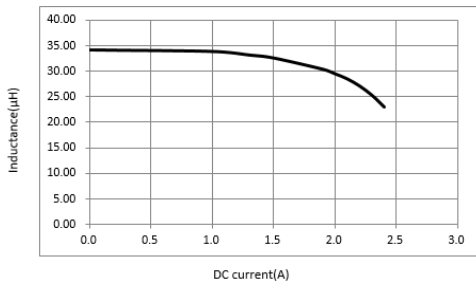
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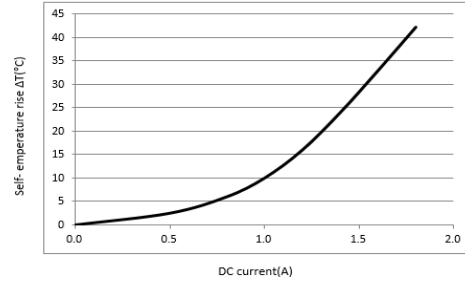
SPE8040

\*SPE8040-330M

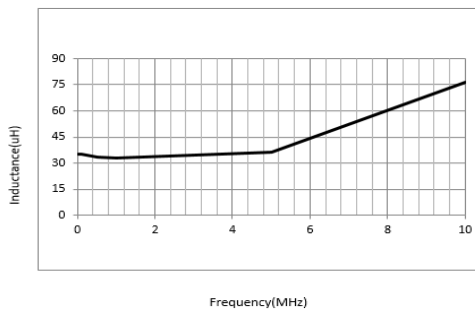
### Inductance vs DC current



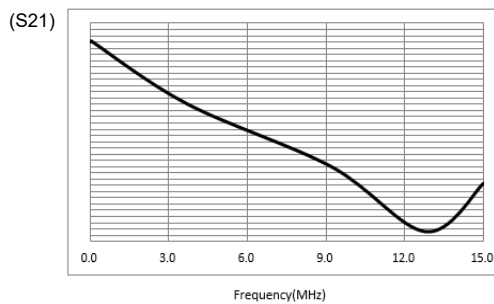
### DC current vs Temperature



### Inductance vs Frequency

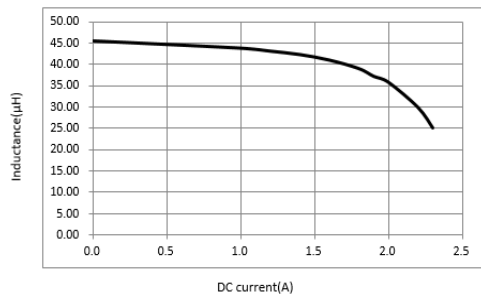


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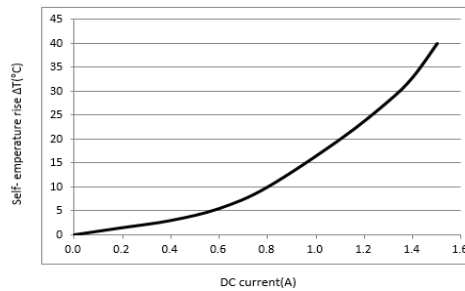


\*SPE8040-470M

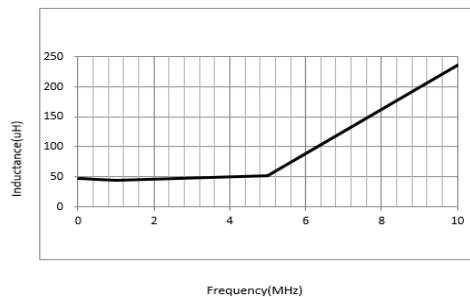
### Inductance vs DC current



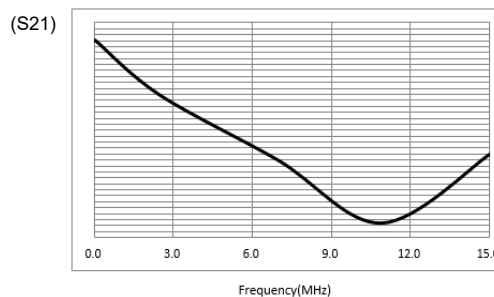
### DC current vs Temperature



### Inductance vs Frequency



### SRF(Self Resonance Frequency)



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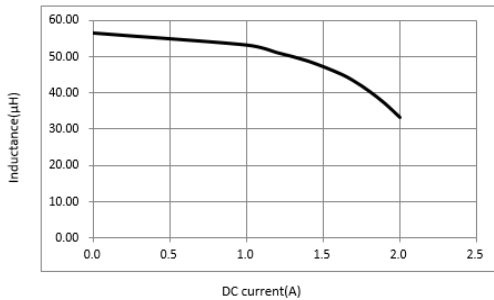
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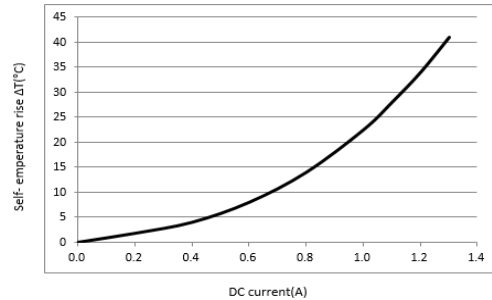
SPE8040

\*SPE8040-560M

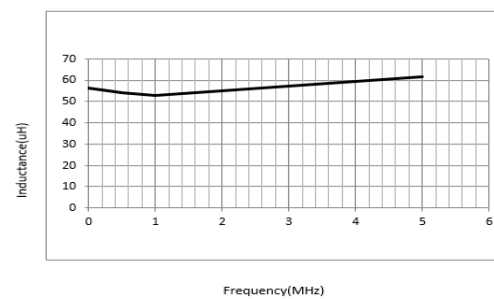
Inductance vs DC current



DC current vs Temperature

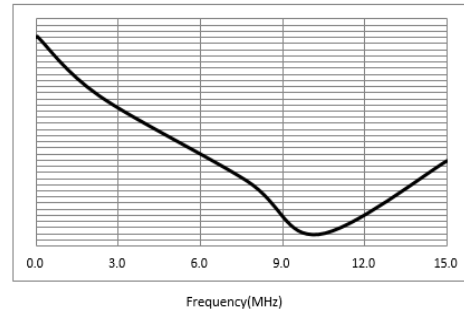


Inductance vs Frequency



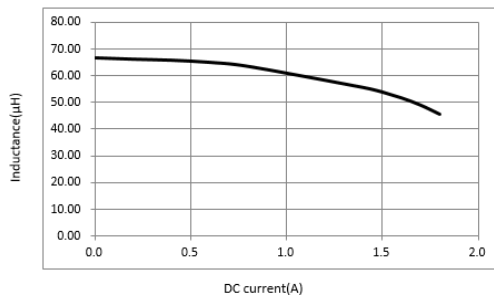
SRF(Self Resonance Frequency)

(S21)

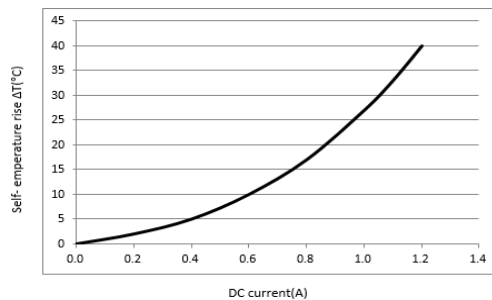


\*SPE8040-680M

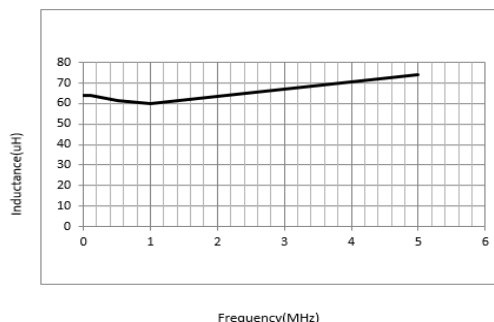
Inductance vs DC current



DC current vs Temperature

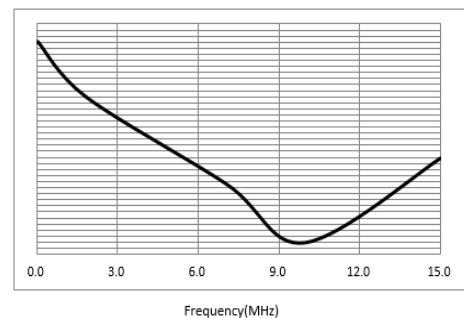


Inductance vs Frequency



SRF(Self Resonance Frequency)

(S21)



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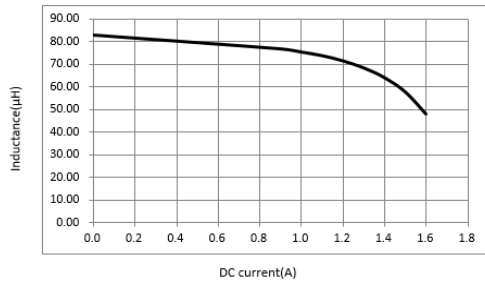
# SMD Power Inductors

## Fixed Inductor for Surface Mounting

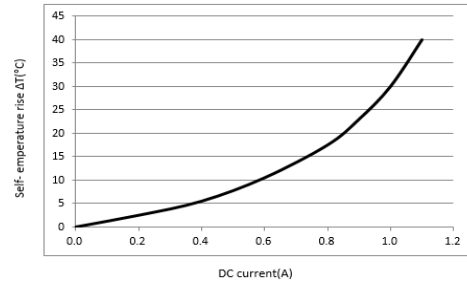
SPE8040

\*SPE8040-820M

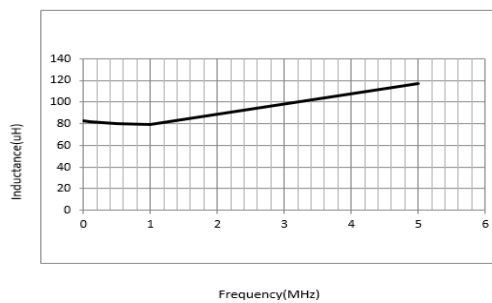
### Inductance vs DC current



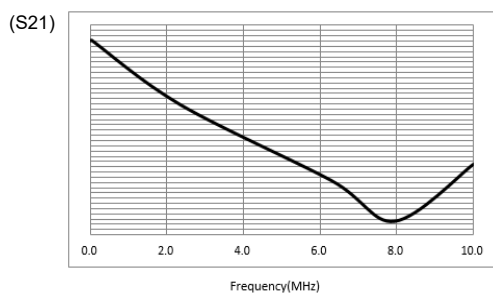
### DC current vs Temperature



### Inductance vs Frequency

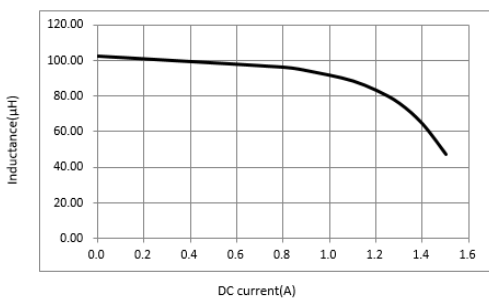


### SRF(Self Resonance Frequency)

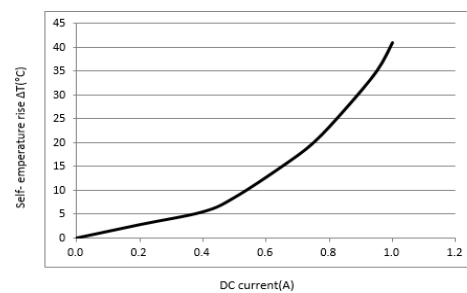


\*SPE8040-101M

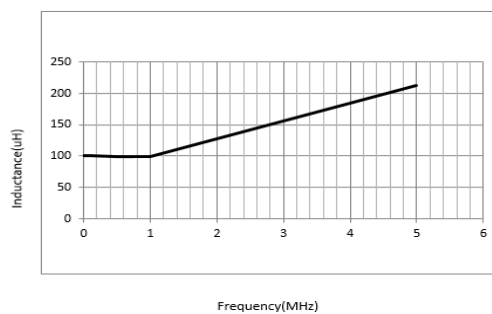
### Inductance vs DC current



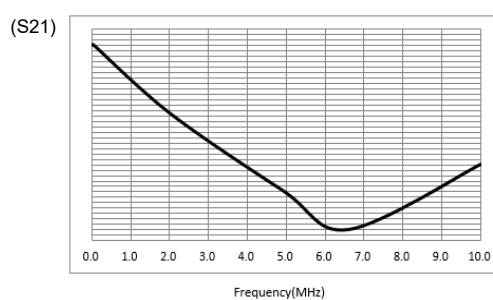
### DC current vs Temperature



### Inductance vs Frequency



### SRF(Self Resonance Frequency)



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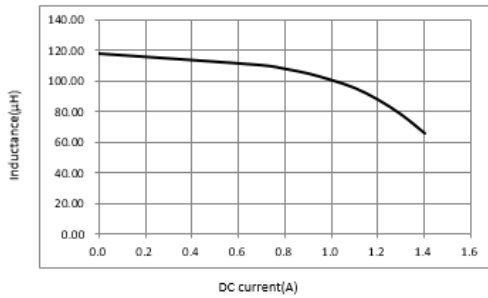
# SMD Power Inductors

## Fixed Inductor for Surface Mounting

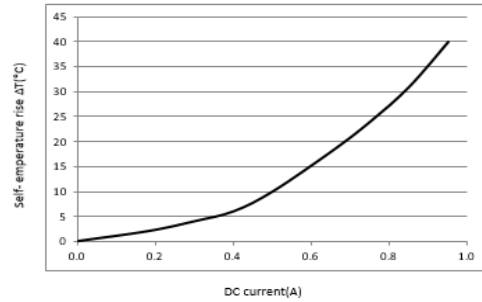
SPE8040

\*SPE8040-121M

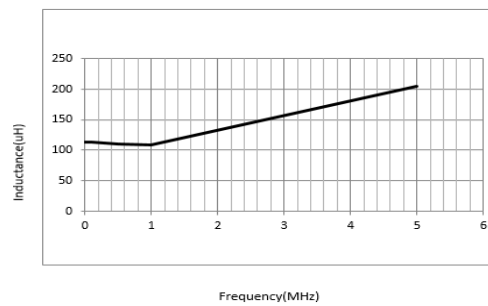
Inductance vs DC current



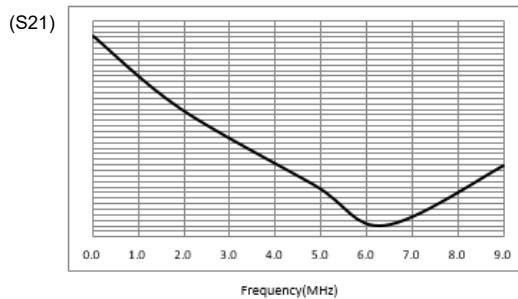
DC current vs Temperature



Inductance vs Frequency

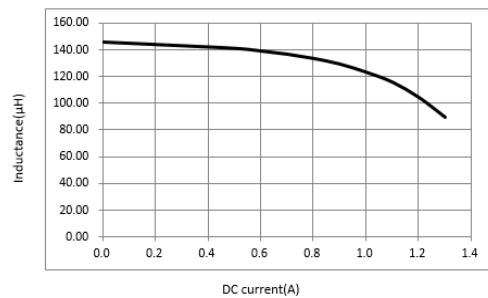


SRF(Self Resonance Frequency)

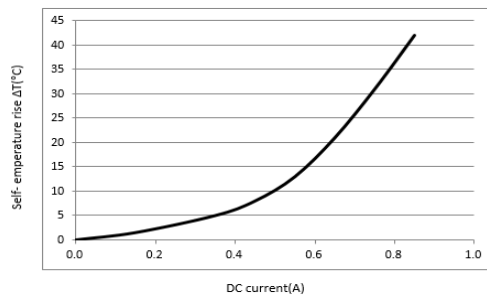


\*SPE8040-151M

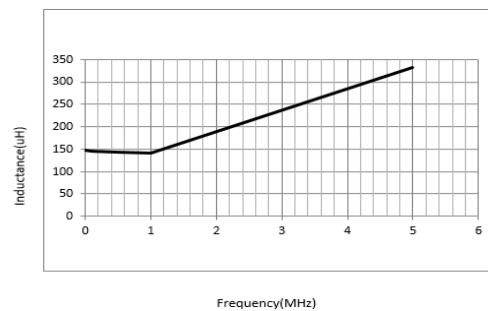
Inductance vs DC current



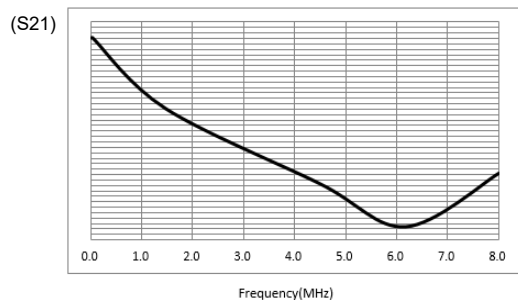
DC current vs Temperature



Inductance vs Frequency



SRF(Self Resonance Frequency)



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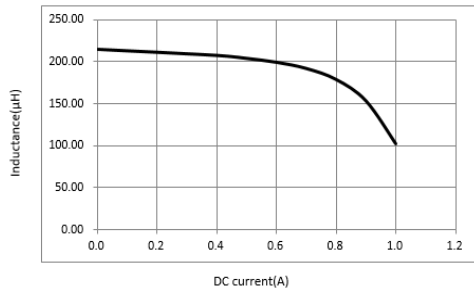
# SMD Power Inductors

## Fixed Inductor for Surface Mounting

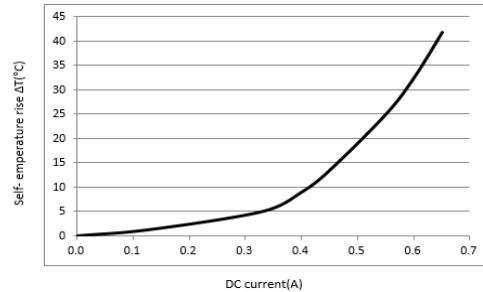
SPE8040

\*SPE8040-221M

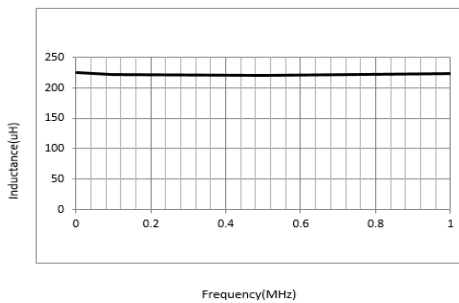
Inductance vs DC current



DC current vs Temperature

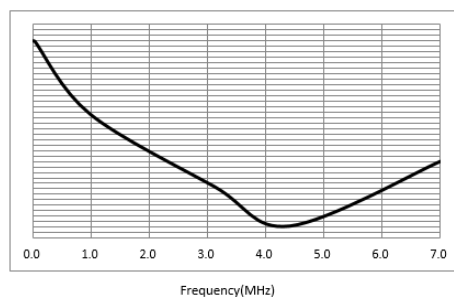


Inductance vs Frequency



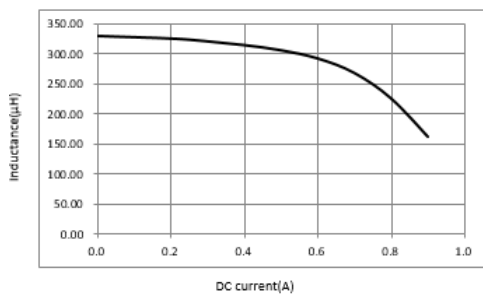
SRF(Self Resonance Frequency)

(S21)

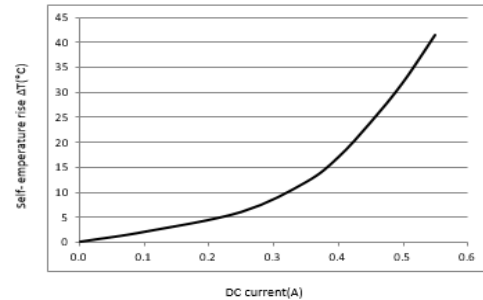


\*SPE8040-331M

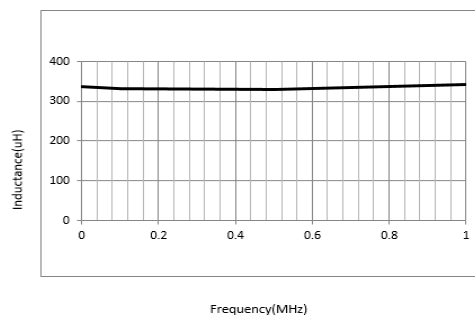
Inductance vs DC current



DC current vs Temperature

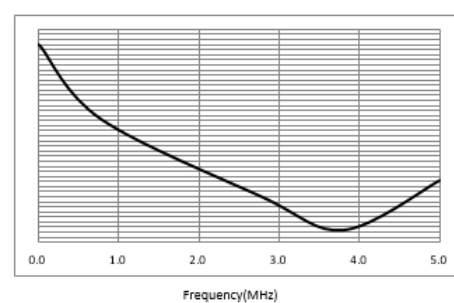


Inductance vs Frequency



SRF(Self Resonance Frequency)

(S21)



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