



磁立方

# SPECIFICATION FOR APPROVAL

**CUSTOMER** : \_\_\_\_\_

**CUSTOMER P/N** : \_\_\_\_\_

**DESCRIPTION** : SMD Inductor

**Supplier P/N** : S2650-6R5M

**REVISION NO.** : V1.0

**DATE** : 2021-Jan-14

**NOTES** : STANDARD

| Supplier DOCUMENTED |          |
|---------------------|----------|
| APPROVED            | David    |
| CHECKED             | Zhao yun |
| PREPARED            | You yuan |

| CUSTOMER APPROVAL |  |
|-------------------|--|
|                   |  |

© Company seals

|             |              |            |         |              |
|-------------|--------------|------------|---------|--------------|
| Version:1.0 | CUSTOMER P/N |            | PRODUCT | SMD Inductor |
|             | ITEM P/N     | S2650-6R5M | DATE    | 2021-Jan-14  |



深圳市磁立方科技有限公司  
ShenZhen Magnetic Cube Technology Co., LTD.

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# MAIN SPECIFICATION

## EXPLANATION OF PART NUMBERS



## CONNECTIONS:

- ⊙ Inductor Contents ONE (1) Set(s) of Coil.
- ⊙ DC/AC Current Shall Be Introduced By Any One of Two Pads.



## PRODUCT DIMENSIONS (mm)



|   | Dimensions |
|---|------------|
| A | 6.9±0.4    |
| B | 7.0±0.4    |
| C | 5.0Max     |
| D | 1.2±0.3    |
| E | 1.8±0.5    |
| G | 2.7        |
| H | 2.2        |
| I | 2.4        |

## ELECTRICAL CHARACTERISTICS

| ITEM P/N   | @25 ± 5 °C Ambient Temperature |  |  | DCR<br>mΩ @ 25°C<br>Typica | DCR<br>mΩ @ 25°C<br>Max |
|------------|--------------------------------|--|--|----------------------------|-------------------------|
|            | INDUCTANCE<br>100KHz, 0.1V     | Typical Heat<br>Rating DC<br>Current (A) (Idc) | Typical<br>Saturation DC<br>Current (A) (Isat) |                            |                         |
|            | Lo (μH)                        |  |  |                            |                         |
| S2650-6R5M | 6.5±20%                        | 6  | 6  | 21.5                       | 23.65                   |

- ⊙ All test Data is referenced to 25°C ambient.
- ⊙ Typical Heat Rating DC Current would cause an approximately Δ T of 50°C .
- ⊙ Typical Saturation DC Current would cause Lo to drop approximately 30%.
- ⊙ The Part temperature (ambient + Δ T) should not exceed 125°C under worst case operating conditions.
- ⊙ Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all effect the part temperature. Part temperature should be verified in the end application.

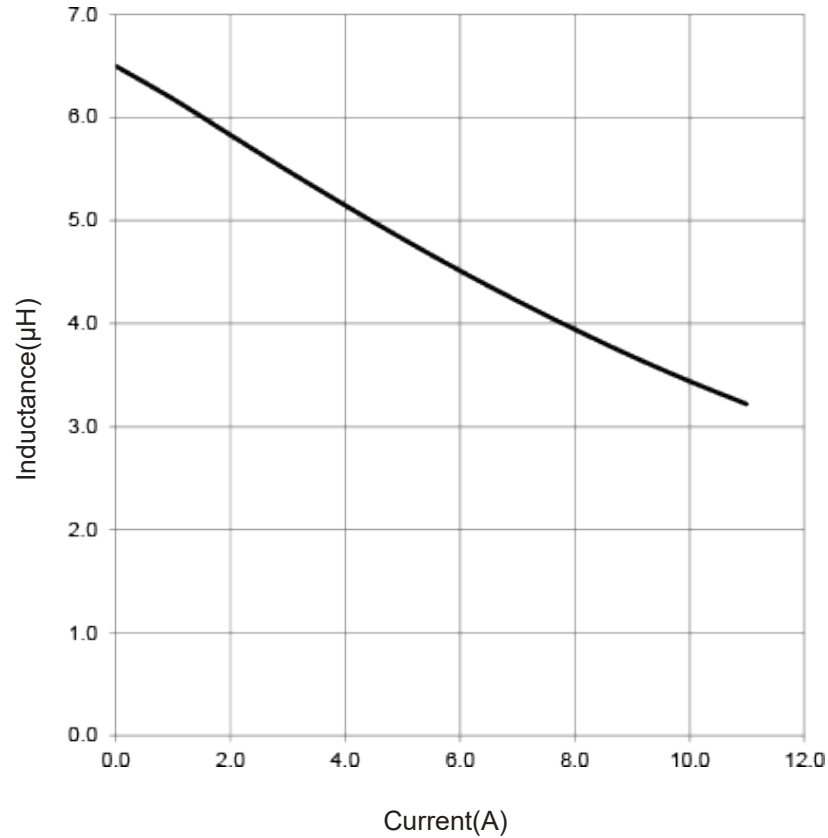
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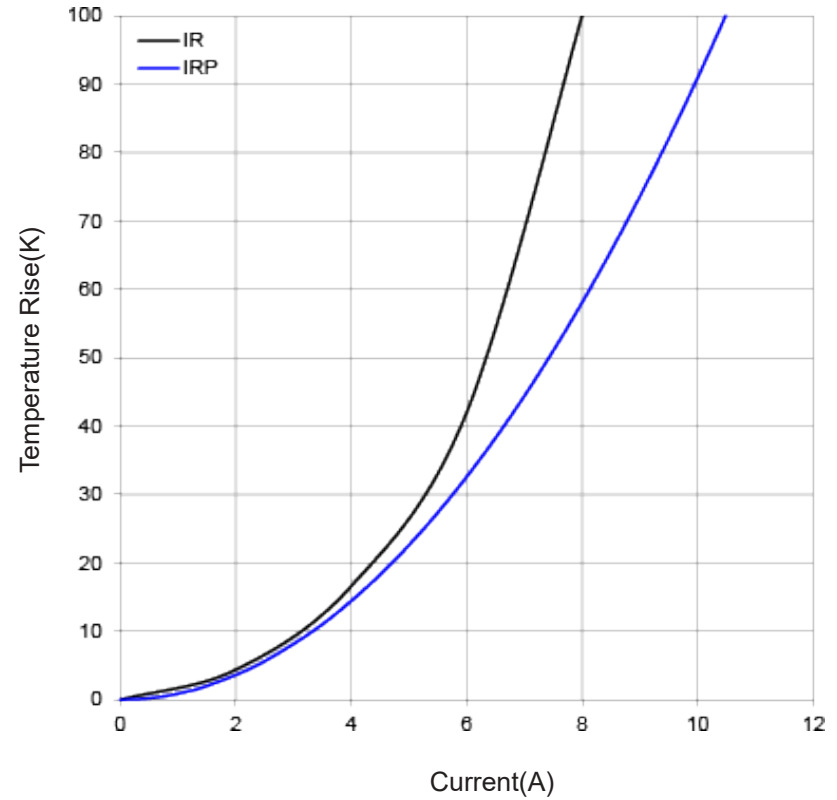


# CHARACTERISTICS

IDC Curve:



Typical Temperature Rise VS Current Curve:



|             |              |            |         |              |
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# CHARACTERISTICS

## RECOMMENDED SOLDERING TEMP. GRAPH



| A     | B     | C       | D     | E         |
|-------|-------|---------|-------|-----------|
| 260°C | 230°C | 8-10Sec | 150°C | 60~240Sec |

## MECHANICAL RELIABILITY

| TEST          | Specification & Requirement  | Method Used  |
|---------------|--|--|
| Solderability | The surface of terminal/pin tested shall be covered with new solder by 95% | Solder heat proof.   |
|               |  | Preheating: 180 ±10°C 90 seconds                                     |
|               |  | Soldering: 255 ±5°C for 3 ±1 sec                                     |
| Shock         | Inductance change within ± 5% Without mechanical damage                    | Drop down with 981m/s <sup>2</sup> (100G) shock                      |
|               |  | Attitude upon a rubber block method shock testing machinem, 3 tests. |
| Vibration     | Inductance change within ± 5% Without mechanical damage                    | Vibration frequency: 10Hz to 55Hz to 10Hz, 60 seconds cycle.         |
|               |  | Vibration time: 2 hours  |

## ENDURANCE RELIABILITY

| TEST                | Specification & Requirement                             | Method Used   |
|---------------------|---|---|
| Thermal Shock       | Inductance change within ± 5% Without mechanical damage | -25°C ,(30 mins) -> room temp. (5 mins) ->125°C , (30 mins) -> room temp. (5 mins) 100 cycles |
| Heat Resistance     | Inductance change within ± 5% Without mechanical damage | Apply IDC current @ 85°C ambient Duration: 1000 hrs   |
| Humidity Resistance | Inductance change within ± 5% Without mechanical damage | Apply IDC current @ 60°C ambient Humidity: 90~95% Duration: 1000 hrs                          |
| Low Temp. Storing   | Inductance change within ± 5% Without mechanical damage | Storing Temp -25 ±2 °C for total 1,000 +4/-0 hours  |
| High Temp. Storing  | Inductance change within ± 5% Without mechanical damage | Storing Temp 125±2 °C for total 1,000 +4/-0 hours   |

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# PACKING INFORMATION

CARRIER TAPEING REEL & CARRIER MATERIALS (PAPER PLASTICS) UNIT : (mm)



| TYPE     | A     | B      | C      | D     | E       | G        | G2       |
|----------|-------|--------|--------|-------|---------|----------|----------|
| 13"*16mm | 330±1 | 20±0.8 | 13±0.5 | 100±1 | 2.0±0.5 | 16.5±0.5 | 20.5±0.5 |

|             |              |            |         |              |
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| QTY (Pcs/Reel) | Ao  | Bo  | Ko  | W  | P  |
|----------------|-----|-----|-----|----|----|
| 1000           | 7.2 | 7.8 | 5.2 | 16 | 12 |

Typical Pulling Force: 10~130grams:



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