



磁立方 SPECIFICATION FOR APPROVAL

CUSTOMER : _____

CUSTOMER P/N : _____

DESCRIPTION : SMD Inductor

Supplier P/N : ACLS1210MN-R47M

REVISION NO. : V1.0

DATE : 2022-Jun-17


NOTES : STANDARD

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

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

© Company seals

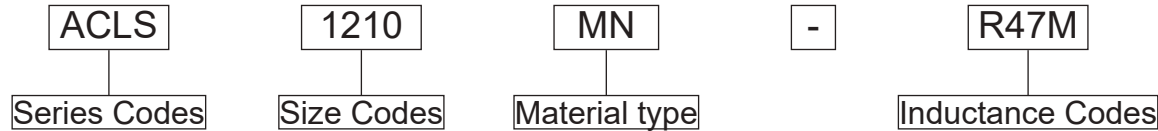
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|-------------|--------------|-----------------|---------|--------------|
| Version:1.0 | CUSTOMER P/N | | PRODUCT | SMD Inductor |
| | ITEM P/N | ACLS1210MN-R47M | DATE | 2022-Jun-17 |

 **深圳市磁立方科技有限公司** TEL:0755-23018051 E-FAI:0755-22140304 E-MAIL:Sales@mct8.com HTTP:www.mct8.com
 ShenZhen Magnetic Cube Technology Co., LTD. ADD:F2, Building C, Furong Road No.8 , Tantou, Songgang, Baoan District, Shenzhen



MAIN SPECIFICATION

EXPLANATION OF PART NUMBERS



PRODUCT DIMENSIONS (mm)



| | Dimensions |
|---|------------|
| A | 11.4±0.4 |
| B | 12.1±0.4 |
| C | 9.5±0.5 |
| D | 3.5±0.2 |
| E | 2.0±0.2 |

ELECTRICAL CHARACTERISTICS

| ITEM P/N | @ 25 ± 5°C Ambient Temperature | | | DCR mΩ @ 25°C Typica | DCR mΩ @ 25°C Max |
|-----------------|--------------------------------|--|--|----------------------------|-------------------------|
| | INDUCTANCE 100KHz, 0.1V | Typical Heat Rating DC Current (A) (Idc) | Typical Saturation DC Current (A) (Isat) | | |
| | Lo (μH) | | | | |
| ACLS1210MN-R47M | 0.47±20% | 26.0 | 48.0 | 1.35 | 1.85 |

- ⊙ All test Data is referenced to 25°C ambient.
- ⊙ Typical Heat Rating DC Current would cause an approximately Δ T of 40°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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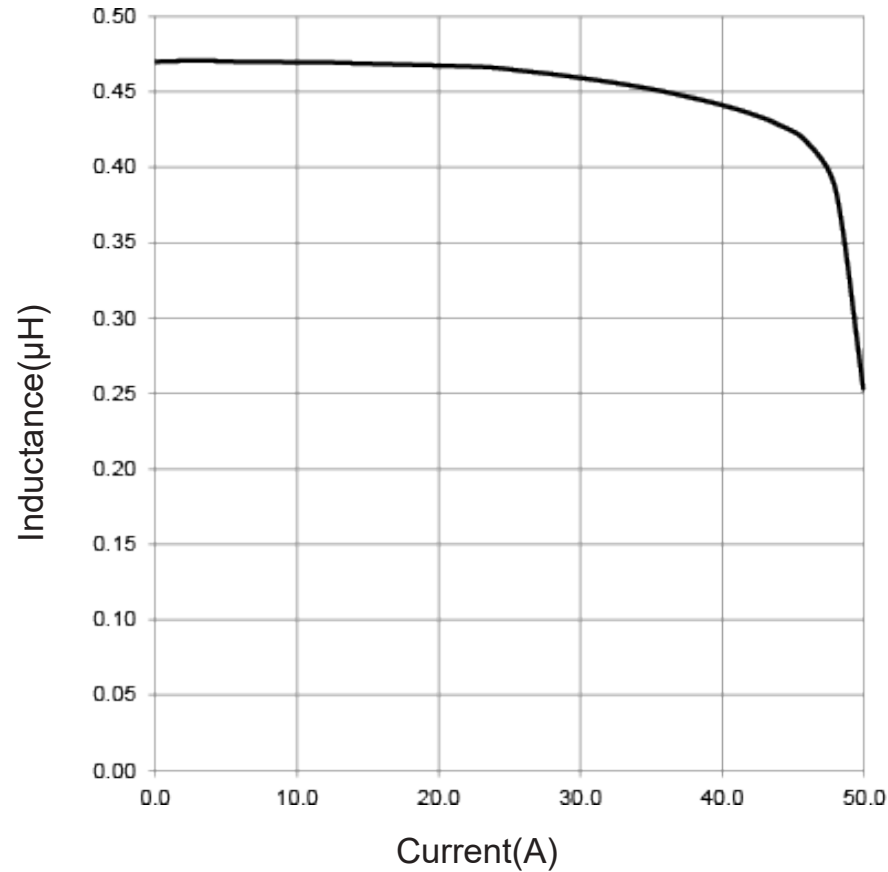
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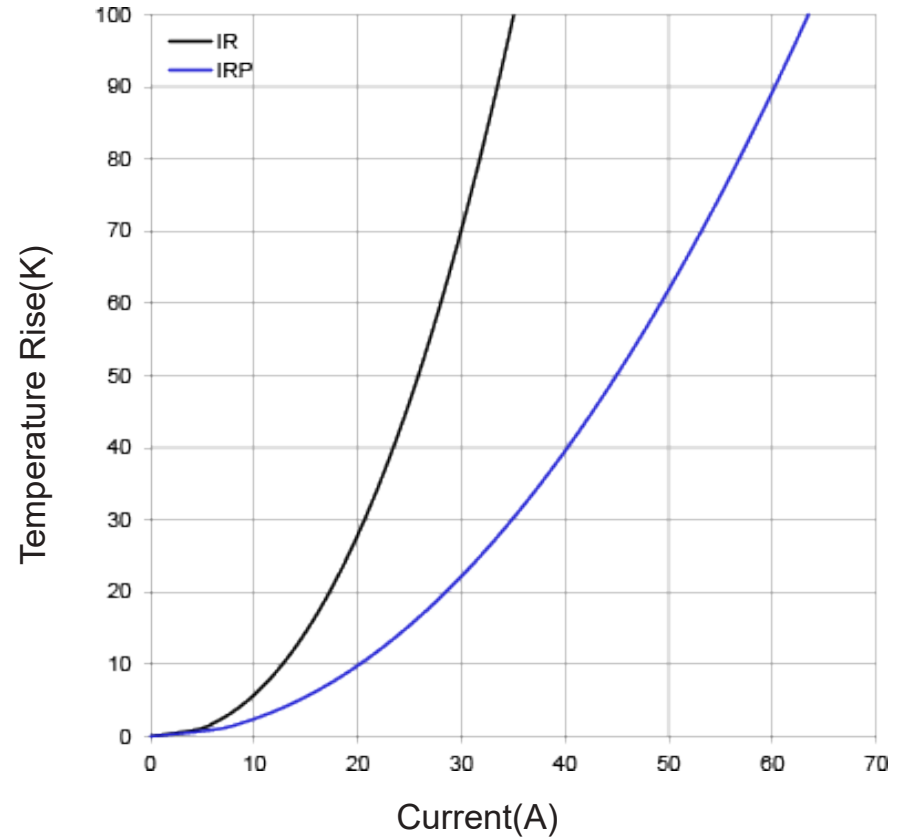


CHARACTERISTICS

Typical Inductance vs. Current Characteristics:



Typical Temperature Rise vs. Current Characteristics:



| | | | | |
|-------------|--------------|-----------------|---------|--------------|
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CHARACTERISTICS

RECOMMENDED SOLDERING TEMP. GRAPH



| A | B | C | D | E |
|-------|-------|-------|-------|-----------|
| 260°C | 230°C | 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/s2 (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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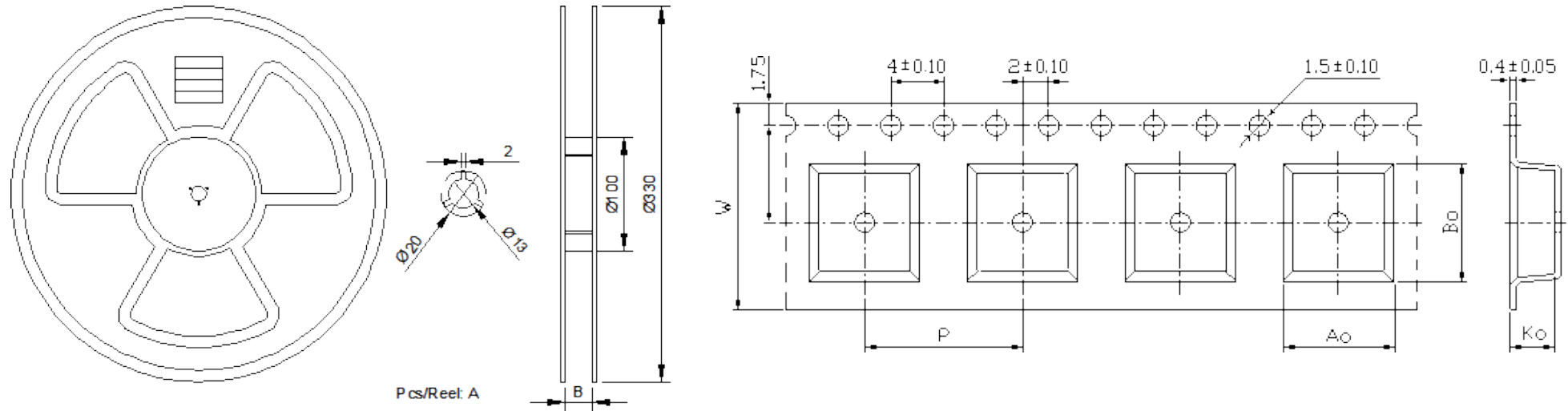
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PACKING INFORMATION

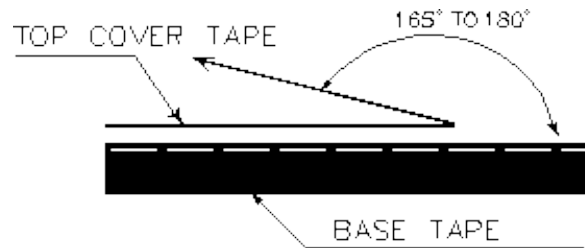
CARRIER TAPEING REEL & CARRIER MATERIALS (PAPER PLASTICS) UNIT: (mm)



| A(Pcs/Reel) | B |
|-------------|----------|
| 300 | 24.5±0.5 |

| W | P | Ao | Bo | Ko |
|----|----|----------|----------|---------|
| 24 | 20 | 11.8±0.1 | 12.5±0.1 | 10.5TYP |

Typical Pulling Force: 10 ~ 130 grams:



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