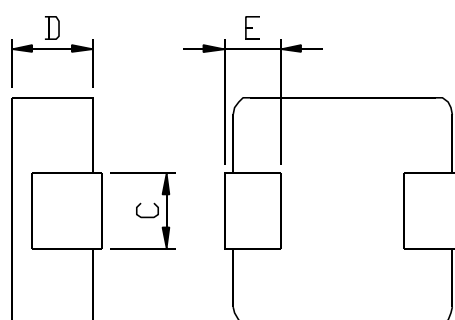
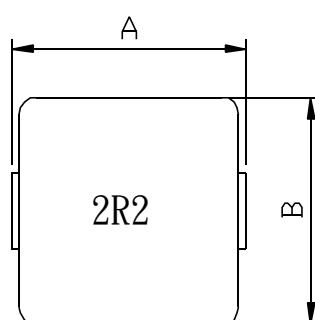


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## Shenzhen Besrich Electronics Co;Ltd

|          |                  |                               |          |           |
|----------|------------------|-------------------------------|----------|-----------|
| PRODUCT  | BEC0630-2R2M-G/B | <b>COIL<br/>SPECIFICATION</b> | DATE     | 2017/5/20 |
| SPEC.NO. | W-12-0520-01     |                               | CODE NO. | W-12-0520 |

### EXTERNAL DIMENSIONS :

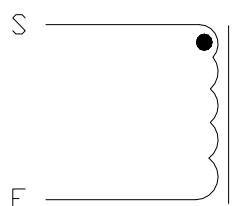


|   |         |     |
|---|---------|-----|
| A | 7.5MAX  | m/m |
| B | 6.6±0.2 | m/m |
| C | 3.0±0.2 | m/m |
| D | 3.0Max. | m/m |
| E | 1.6±0.3 | m/m |

### ELECTRICAL CHARACTERISTIC :

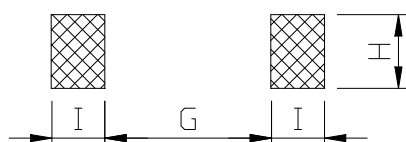
|           |         |                                             |
|-----------|---------|---------------------------------------------|
| L(μH) :   | 2.2±20% | 100KHz 1.0V                                 |
| DCR(mΩ) : | 15.0    | Max. 12.7                                   |
| Isat(A) : | 12.0    | Typ. ( L10.0A drop 30% TYP. @ 100KHz/1.0V ) |
| Irms(A) : | 8.0     | Typ.                                        |

### SCHEMATIC DRAWING :



" ● " START FOR STAND

### PCB PATTERN :



|     |      |     |
|-----|------|-----|
| G : | 2.50 | m/m |
| H : | 3.50 | m/m |
| I : | 2.50 | m/m |

### MATERIAL LIST :

| NO | ITEM   | MATERIAL | SUPPLIER OF THE MATERIAL |
|----|--------|----------|--------------------------|
| 1  | CORE   |          |                          |
| 2  | COPPER |          |                          |
| 3  | EPOXY  |          |                          |
| 4  | EPOXY  |          |                          |

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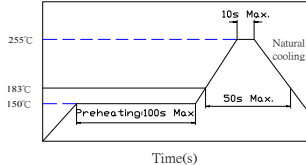
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|----------|------------------|-----------------------|----------|-----------|
| PRODUCT  | BEC0630-2R2M-G/B | COIL<br>SPECIFICATION | DATE     | 2017/5/20 |
| SPEC.NO. | W-12-0520-01     |                       | CODE NO. | W-12-0520 |

TEST DATA

| ELECTRICAL CHARACTERISTICS |             |         |         |        |         |         |        |         |
|----------------------------|-------------|---------|---------|--------|---------|---------|--------|---------|
| MEAS. ITEM                 | L(μH)       | DCR(mΩ) | Isat(A) | A      | B       | C       | D      | E       |
| TEST FREQ.                 | 100KHz 1.0V | Max.    | Typ.    | m/m    | m/m     | m/m     | m/m    | m/m     |
| YOUR                       |             |         |         |        |         |         |        |         |
| SPEC.                      | 2.2±20%     | 15.0    | 12.0    | 7.5MAX | 6.6±0.2 | 3.0±0.2 | 3.0MAX | 1.6±0.3 |
| 1                          | 2.06        | 12.69   | 1.67    | 7.25   | 6.58    | 3.03    | 2.72   | 1.58    |
| 2                          | 1.98        | 12.74   | 1.61    | 7.22   | 6.53    | 3.01    | 2.77   | 1.54    |
| 3                          | 2.05        | 12.71   | 1.66    | 7.24   | 6.55    | 3.01    | 2.75   | 1.56    |
| 4                          | 2.03        | 12.66   | 1.64    | 7.26   | 6.57    | 3.02    | 2.74   | 1.52    |
| 5                          | 1.94        | 12.72   | 1.57    | 7.23   | 6.54    | 3.01    | 2.69   | 1.55    |
| 6                          | 1.89        | 12.76   | 1.53    | 7.25   | 6.52    | 3.03    | 2.73   | 1.53    |
| 7                          | 2.01        | 12.68   | 1.63    | 7.27   | 6.56    | 3.02    | 2.71   | 1.57    |
| 8                          | 1.92        | 12.81   | 1.56    | 7.24   | 6.55    | 3.04    | 2.68   | 1.54    |
| 9                          | 1.97        | 12.78   | 1.60    | 7.28   | 6.59    | 3.02    | 2.72   | 1.56    |
| 10                         | 2.05        | 12.67   | 1.66    | 7.23   | 6.54    | 3.01    | 2.69   | 1.53    |
| X                          | 1.990       | 12.722  | 1.613   | 7.247  | 6.553   | 3.020   | 2.720  | 1.548   |
| R                          | 0.170       | 0.150   | 0.140   | 0.060  | 0.070   | 0.030   | 0.090  | 0.060   |

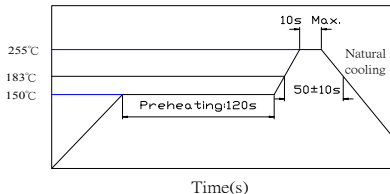
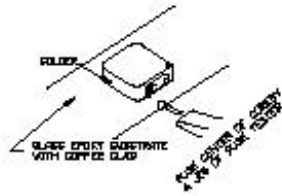
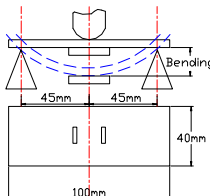
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## Shenzhen Besrich Electronics Co;Ltd

|                                           |                                                                                                                            |                                                                                                                                                                                       |          |           |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------|
| PRODUCT                                   | BEC0630-2R2M-G/B                                                                                                           | COIL<br>SPECIFICATION                                                                                                                                                                 | DATE     | 2017/5/20 |
| SPEC.NO.                                  | W-12-0520-01                                                                                                               |                                                                                                                                                                                       | CODE NO. | W-12-0520 |
|                                           |                                                                                                                            |                                                                                                                                                                                       |          |           |
| TEST ITEMS                                | SPECIFICATIONS                                                                                                             | TEST CONDITIONS / TEST METHODS                                                                                                                                                        |          |           |
| <b><u>ELECTRICAL PERFORMANCE TEST</u></b> |                                                                                                                            |                                                                                                                                                                                       |          |           |
| L                                         | REFER TO STANDARD ELEC-TRICAL CHARACTERISTIC LIST.                                                                         | MICROTEST6377                                                                                                                                                                         |          |           |
| DCR                                       |                                                                                                                            | TH2511                                                                                                                                                                                |          |           |
| RATED CURRENT                             |                                                                                                                            | APPLIED THE CURRENT TO COILS THE IDUCTANCE CHANGE SHOULD BE LESS THAN 30% TO INITIAL VALUE AND TEMPERATURE RISE SHOULD NOT BE 40℃ TYPICAL                                             |          |           |
| TEMPERATURERISE TEST                      | 40℃ MAX (△t)                                                                                                               | 1. APPLIED THE ALLOWED DC CURRENT FOR 4 HOUR<br>2. TEMPERATURE MEASURE BY DIGITAL SURFACE THERMOMETER.                                                                                |          |           |
| OVER LOAD TEST                            | NO EVIDENCE OF ELECTRICAL DAMAGE                                                                                           | APPLIED 1.5 TIMES OF RATED ALLOWED DC CURRENT TO INDUCTORS FOR A PERIOD OF 5 MINUTES.                                                                                                 |          |           |
| <b><u>MECHANICAL PERFORMANCE TEST</u></b> |                                                                                                                            |                                                                                                                                                                                       |          |           |
| SOLDER HEAT RESISTANCE                    | 1. INDUCTORS SHOULD HAVE NO EVIDENCE OF ELEC- TRICAL AND MICHANICAL DAMAGE<br>2. INDUCTANCE SHOULD NOT HANGE MORE THAN±10% | PREHEAT:150℃ 100s Max.<br><br>SOLDER TEMPERATURE:<br><br>255±5℃<br><br>DIP TIME:10s Max.<br><br> |          |           |
| VIBRATION TEST (LOW FREQUENCY)            |                                                                                                                            | 1.AMPLITUDE: 1.5 mm<br><br>2.FREQUENCY: 10-55-10HZ / 1 MIN<br><br>3.DIRECTION: X, Y, Z<br><br>4.DURATION: 2 HRS/X, Y, Z                                                               |          |           |
| SHOCK TEST                                |                                                                                                                            | INDUCTORS SHOULD BE DROPPED 10 TIMES FROM A HEIGHT OF 1m ONTO 3cm WOODEN BOARD.                                                                                                       |          |           |
|                                           |                                                                                                                            |                                                                                                                                                                                       |          |           |

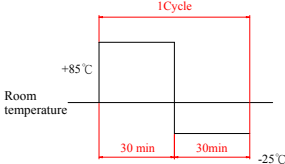
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## Shenzhen Besrich Electronics Co;Ltd

|                                        |                                                                                            |                                                                                                                                                                                                                                                                                       |                                                                                       |           |
|----------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-----------|
| PRODUCT                                | BEC0630-2R2M-G/B                                                                           | COIL<br>SPECIFICATION                                                                                                                                                                                                                                                                 | DATE                                                                                  | 2017/5/20 |
| SPEC.NO.                               | W-12-0520-01                                                                               |                                                                                                                                                                                                                                                                                       | CODE NO.                                                                              | W-12-0520 |
| TEST ITEMS                             | SPECIFICATIONS                                                                             | TEST CONDITIONS / TEST METHODS                                                                                                                                                                                                                                                        |                                                                                       |           |
| MECHANICAL PERFORMANCE TEST            |                                                                                            |                                                                                                                                                                                                                                                                                       |                                                                                       |           |
| SOLDERABILITY TEST                     | MORE THAN 90% OF<br>TERMINAL ELECTRODE<br>SHOULD BE COVERED WITH<br>SOLDER.                | PREHEAT:150℃ 120x<br>SOLDER BATH AT 255±5℃<br>DIP TIME:10s Max.                                                                                                                                                                                                                       |    |           |
| COMPONENT<br>ADHESION<br>( PUSH TEST ) | 1.5Kg Min                                                                                  | THE DEVICE SHOULD BE REFLOW<br>SOLDERED ( 255±5℃ FOR 10<br>SECONDS ) TO A TINNED COPPER<br>SUBSTRATE. A DYNAMETER FORCE<br>GAUGE SHOULD BE APPLIED TO THE<br>SIDE OF THE COMPONENT. THE<br>DEVICE MUST WITH- STAND A<br>MINIMUM FORCE OF 1.5Kg WITHOUT<br>AILURE OF THE TERMINATION . |   |           |
| COMPONENT<br>ADHESION<br>( PULL TEST ) | 1.5Kg Min                                                                                  | 1.INSERT 10cm WIRE INTO THE<br>REMAINING OPEN EYE BEND THE<br>ENDS OF EVEN WIRE LENGTHS<br>UPWARD AND WIND TOGETHER<br>2. TERMINAL SHALL NOT<br>BEREMARKABLY DAMAGED                                                                                                                  |  |           |
| FLEXTURE STRENGTH                      | THE FORCES APPLIED<br>SHOULD NOT DAMAGE THE<br>DIELECTRIC.                                 | SOLDER A CHIP ON A TEST<br>SUBSTRATE, BEND THE SUBSTRATE<br>BY 2mm AND RETURN.                                                                                                                                                                                                        |  |           |
| RESISTANCE TO<br>SOLVENT TEST          | THERE SHOULD BE NO<br>CASEDEFORMATION, CHANGE<br>IN APPEARANCE OR<br>BITERATION OF MARKING | INDUCTERS SHALL WITHSTAND 6 MINTES OF ALCOHOL                                                                                                                                                                                                                                         |                                                                                       |           |

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|                                                                     |                                                                     |                                                                                                                                                                              |          |           |
|---------------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------|
| PRODUCT                                                             | BEC0630-2R2M-G/B                                                    | COIL<br>SPECIFICATION                                                                                                                                                        | DATE     | 2017/5/20 |
| SPEC.NO.                                                            | W-12-0520-01                                                        |                                                                                                                                                                              | CODE NO. | W-12-0520 |
|                                                                     |                                                                     |                                                                                                                                                                              |          |           |
| TEST ITEMS                                                          | SPECIFICATIONS                                                      | TEST CONDITIONS / TEST METHODS                                                                                                                                               |          |           |
| <u>CLIMATIC TEST</u>                                                |                                                                     |                                                                                                                                                                              |          |           |
| TEMPERATURE CHARACTERISTIC                                          | 1.APPEARANCE:NO DAMAGE<br>2.INDUCTANCE:WITHIN±10% OF INITIAL VALUE. | -55℃ ~ +125℃                                                                                                                                                                 |          |           |
| HUMIDITY TEST                                                       |                                                                     | 60℃±2℃ / 96±2 HOURS<br>R.H:90-95%RH                                                                                                                                          |          |           |
| LOW TEMPERATURE STORAGE                                             |                                                                     | 1.TEMPERATURE:-55℃±2℃<br>2.TIME: 96±2 HOURS                                                                                                                                  |          |           |
| THERMAL SHOCK TEST                                                  |                                                                     | 1.-25±5℃ FOR 30 MINUTES.<br>+125±5℃ FOR 30 MINUTES.<br>2.TOTAL: 10 CYCLES<br><div></div> |          |           |
| HIGH TEMPERATURE STORAGE                                            |                                                                     | 1.APPLIED CURRENT: MAX RATED CURRENT<br>2.TEMPERATURE:120℃±2℃                                                                                                                |          |           |
| NOTE : INDUCTORS ARE TO BE TESTED AFTER 2 HOUR AT ROOM TEMPERATURE. |                                                                     |                                                                                                                                                                              |          |           |
| <u>LIFE TEST</u>                                                    |                                                                     |                                                                                                                                                                              |          |           |
| HIGH TEMPERATURE LOAD LIFE TEST                                     | INDUCTORS SHOULD BE NO EVIDENCE OF SHORT OR OPEN CIRCUIT            | 1. TEMPERATURE: 125±2℃<br>2. TIME: 500±12 HOURS<br>3. LOAD: ALLOWED DC CURREN                                                                                                |          |           |
| HUMIDITY LOAD LIFE TEST                                             |                                                                     | 1. TEMPERATURE: 60±2℃<br>2. R.H.: 90-95%<br>3. TIME: 500±12 HOURS<br>4. LOAD: ALLOWED DC CURREN                                                                              |          |           |
|                                                                     |                                                                     |                                                                                                                                                                              |          |           |

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| PRODUCT  | BEC0630-2R2M-G/B | <b>COIL<br/>SPECIFICATION</b> | DATE     | 2017/5/20 |
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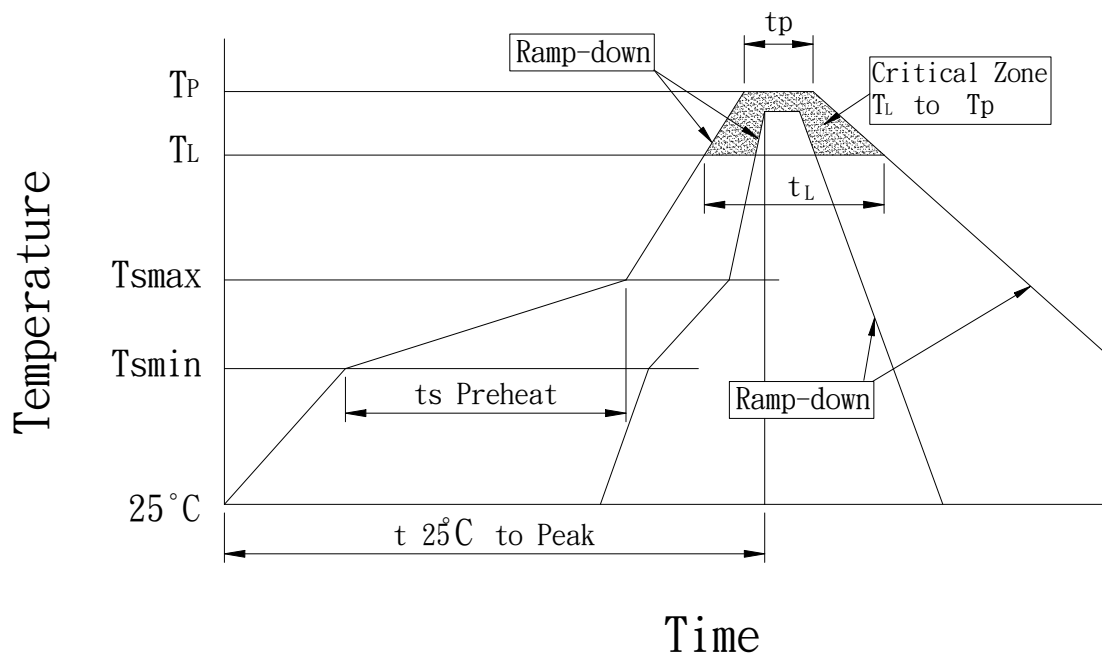
**RECOMMENDED SOLDERING CONDITIONS :**

CLASSIFICATION REFLOW PROFILES

| Profile Feature                                 | Sn-Pb Eutectic Assembly |               | Pb-Free Assembly |               |
|-------------------------------------------------|-------------------------|---------------|------------------|---------------|
|                                                 | Large Body              | Small Body    | Large Body       | Small Body    |
| Average ramp-up rate<br>( $T_L$ to $T_P$ )      | 3°C/second max.         |               | 3°C/second max.  |               |
| Preheat                                         |                         |               |                  |               |
| -Temperature Min ( $T_{smin}$ )                 | 100°C                   |               | 150°C            |               |
| -Temperature Min ( $T_{smax}$ )                 | 150°C                   |               | 200°C            |               |
| -Time (min to max) (ts)                         | 60-120 seconds          |               | 60-180 seconds   |               |
| $T_{smax}$ to $T_L$                             |                         |               |                  |               |
| -Ramp-up Rate                                   |                         |               | 3°C/second max.  |               |
| Time maintained above:                          |                         |               |                  |               |
| -Temperature ( $T_L$ )                          | 183°C                   |               | 217°C            |               |
| -Time ( $t_L$ )                                 | 60-150 seconds          |               | 60-150 seconds   |               |
| Peak Temperature ( $T_P$ )                      | 225 +0/-5°C             | 240 +0/-5°C   | 245 +0/-5°C      | 255 +5/-5°C   |
| Time within 5°C of actual Peak Temperature (tp) | 10-30 seconds           | 10-30 seconds | 10-30 seconds    | 20-40 seconds |
| Ramp-down Rate                                  | 6°C/second max.         |               | 6°C/second max.  |               |
| Time 25°C to Peak Temperature                   | 6 minutes max.          |               | 8 minutes max.   |               |

Note : All temperatures refer to topside of the package. Measured on the package body surface.

REFLOW SOLDERINGS

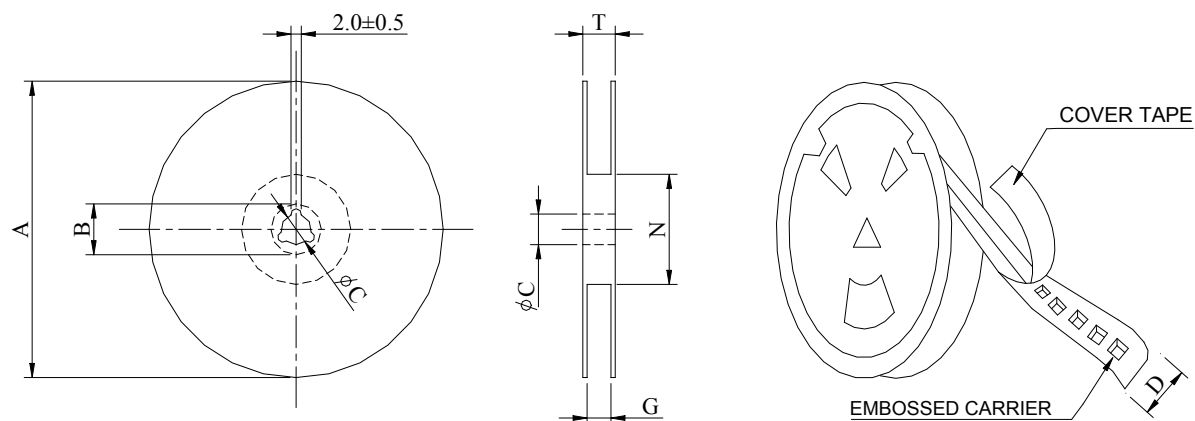


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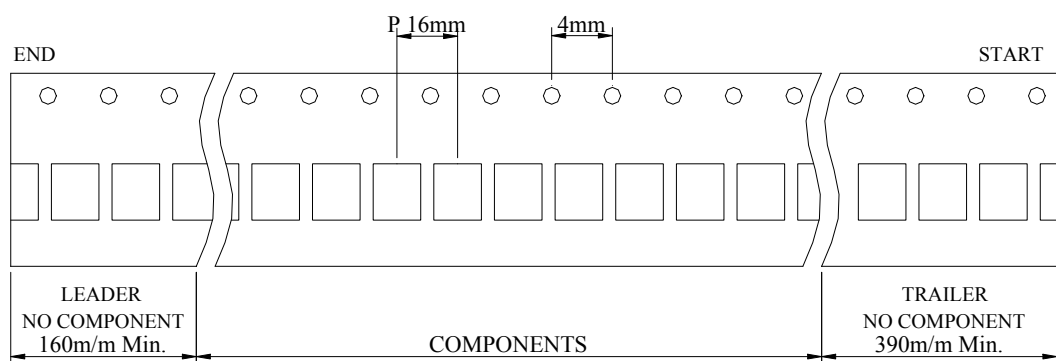
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| SPEC.NO. | W-12-0520-01     |                               | CODE NO. | W-12-0520 |

### PACKAGE :



\*CARRIER TAPE WIDTH : D



USER DIRECTION OF FEED →

| STYLE | DIMENSIONS (m/m) |     |       |       |    |     |     |    |
|-------|------------------|-----|-------|-------|----|-----|-----|----|
|       | Q'TY (PCS)       | A   | B±0.8 | C±0.5 | D  | G+0 | N-0 | T  |
| 13    | 2,000            | 330 | 21    | 13    | 16 | 16  | 50  | 19 |