

# Specification for Approval

|               |                                       |
|---------------|---------------------------------------|
| Customer      |                                       |
| Product Name  | Wire Wound Molded SMD Power Inductors |
| Customer P/N: |                                       |
| Cjiang P/N:   | FAUL Series                           |

[  New Released,  Revised ]

SPEC No.:

|                            |  |  |
|----------------------------|--|--|
| REMARK:                    |  |  |
| Customer Approval Feedback |  |  |
|                            |  |  |

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### Version change history

| Rev | Date     | Description | APPROVED | CHECKED | DRAWN |
|-----|----------|-------------|----------|---------|-------|
| 1.0 | 2022/8/9 | 文件制定        | Bond     | Charles | 王云燕   |

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### Introduction

- ROHS, Halogen Free and REACH compliance
- High rated current
- Low core loss
- Ultra low buzz noise due to molding construction
- AEC-Q200 qualified



AEC-Q200



### Electrical Characteristics

Operating temperature range (Including self-heating):  $-55^{\circ}\text{C} \sim +155^{\circ}\text{C}$ .

Storage temperature and humidity range (product with tapping):  $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$ , RH 70% Max

### Applications

- Automotive applications

### Product Identification

|             |             |             |           |
|-------------|-------------|-------------|-----------|
| <u>FAUL</u> | <u>1040</u> | <u>-1R5</u> | <u>MT</u> |
| ①           | ②           | ③           | ④         |

- ① FAUL ----- Series name
- ② 1040 ----- Dimension
- ③ 1R5 ----- Inductance Value (1R5 =  $1.5\mu\text{H}$ )
- ④ M ----- Inductance Tolerance ( M=  $\pm 20\%$  )

### Dimension-mm



| Series   | A        | B          | C       | D        | E           | I Typ. | J Typ. | H Typ. |
|----------|----------|------------|---------|----------|-------------|--------|--------|--------|
| FAUL0412 | 4.2±0.25 | 4.4±0.35   | 1.0±0.2 | 0.8±0.3  | 2.0±0.3     | 1.5    | 2.2    | 2.5    |
| FAUL0420 | 4.2±0.25 | 4.4±0.35   | 1.8±0.2 | 0.8±0.3  | 2.0±0.3     | 1.5    | 2.2    | 2.5    |
| FAUL0518 | 5.2±0.2  | 5.4±0.35   | 1.6±0.2 | 1.20±0.2 | 2.2±0.3     | 1.9    | 2.2    | 2.5    |
| FAUL0530 | 5.2±0.2  | 5.4±0.35   | 2.8±0.2 | 1.20±0.2 | 2.2±0.3     | 1.9    | 2.2    | 2.5    |
| FAUL0618 | 6.6±0.2  | 7.0±0.3    | 1.6±0.2 | 1.60±0.3 | 3.0±0.3     | 2.35   | 3.7    | 3.5    |
| FAUL0620 | 6.6±0.2  | 7.0±0.3    | 1.8±0.2 | 1.60±0.3 | 3.0±0.3     | 2.35   | 3.7    | 3.5    |
| FAUL0624 | 6.6±0.2  | 7.0±0.3    | 2.2±0.2 | 1.60±0.3 | 3.0±0.3     | 2.35   | 3.7    | 3.5    |
| FAUL0630 | 6.6±0.2  | 7.0±0.3    | 2.8±0.2 | 1.60±0.3 | 3.0±0.3     | 2.35   | 3.7    | 3.5    |
| FAUL0640 | 6.6±0.2  | 7.0±0.3    | 3.8±0.2 | 1.60±0.3 | 3.0±0.3     | 2.35   | 3.7    | 3.5    |
| FAUL0650 | 6.6±0.2  | 7.0±0.3    | 4.8±0.2 | 1.60±0.3 | 3.0±0.3     | 2.35   | 3.7    | 3.5    |
| FAUL0754 | 7.2±0.2  | 7.9±0.3    | 5.2±0.2 | 2.0±0.3  | 3.0±0.3     | 3.2    | 2.6    | 3.5    |
| FAUL1030 | 10.0±0.3 | 11.5 Max   | 2.8±0.2 | 2.0±0.5  | 3.0±0.3     | 4.1    | 5.4    | 4.1    |
| FAUL1040 | 10.0±0.3 | 11.0±0.5   | 3.8±0.2 | 2.0±0.5  | 3.0±0.5     | 4.1    | 5.4    | 4.1    |
| FAUL1050 | 10.0±0.3 | 11.5 Max   | 4.8±0.2 | 2.0±0.5  | 3.0±0.5     | 4.1    | 5.4    | 4.1    |
| FAUL1340 | 12.8±0.5 | 13.45±0.35 | 4.0Max. | 2.0±0.5  | See Remarks | 3.25   | 8.0    | 5.5    |
| FAUL1350 | 12.6±0.3 | 13.45±0.35 | 4.8±0.2 | 2.0±0.5  | See Remarks | 3.25   | 8.0    | 5.5    |
| FAUL1360 | 12.6±0.3 | 13.45±0.35 | 5.8±0.2 | 2.0±0.5  | See Remarks | 3.25   | 8.0    | 5.5    |
| FAUL1365 | 12.6±0.3 | 13.45±0.35 | 6.5Max. | 2.0±0.5  | 5.0±0.3     | 3.25   | 8.0    | 5.5    |
| FAUL1770 | 17.15Max | 17.15±0.35 | 7.0Max  | 2.5±0.5  | 12.0±0.3    | 3.50   | 11.2   | 12.8   |

Remarks:

| Series   | E(mm)    | Dimensions   |
|----------|----------|--|
| FAUL1340 | 3.85±0.5 | R22/R47  |
|          | 5.0±0.3  | R68/R82/1R0/1R5/2R2/3R3/4R7/6R8/ 100/150/220                             |
| FAUL1350 | 3.85±0.5 | R22/R36/R50/R68/R82/ 1R0/ 1R5/2R2  |
|          | 5.0±0.3  | 3R3/4R7/6R8/100/ 150/220/330/470   |
| FAUL1360 | 3.85±0.5 | 1R5/2R2  |
|          | 5.0±0.3  | 3R3/4R7/5R6/6R8/8R2/ 100/ 120/150/ 180/220/270/330/470/680/ 101/121/ 151 |

## Marking

The inductor is marked with a 3-digit code

| Nominal Inductance |               |
|--------------------|---------------|
| Example            | Nominal Value |
| 1R0                | 1.0 $\mu$ H   |
| 100                | 10 $\mu$ H    |
| 101                | 100 $\mu$ H   |

Note : Using Ink for marking



## Structure and Components

| Symbol | Components | Material                 |
|--------|------------|--------------------------|
| a      | MARKING    | Ink(black)               |
| b      | CORE       | Alloy Sponge Powder      |
| c      | WIRE       | Polyurethane copper wire |
| d      | Terminal   | Copper plated with Sn    |



### Appendix A: Electrical Characteristics

FAUL0412-XXX Series

| Part Number    | Inductance | DC Resistance | Saturation Current *3 |       | Heat Rating Current <sup>*4</sup> |      |
|----------------|------------|---------------|-----------------------|-------|-----------------------------------|------|
|                | @100KHZ,1V | Max.          | Max.                  | Typ.  | Max.                              | Typ. |
| Units          | uH         | mΩ            | A                     |       | A                                 |      |
| Symbol         | L          | DCR           | Isat                  |       | Irms                              |      |
| FAUL0412-R15MT | 0.15±20%   | 9             | 12.00                 | 15.00 | 6.80                              | 7.50 |
| FAUL0412-R22MT | 0.22±20%   | 11            | 8.80                  | 11.00 | 6.50                              | 7.00 |
| FAUL0412-R33MT | 0.33±20%   | 19            | 6.70                  | 8.40  | 5.70                              | 6.50 |
| FAUL0412-R47MT | 0.47±20%   | 21            | 5.40                  | 6.80  | 5.20                              | 6.00 |
| FAUL0412-R68MT | 0.68±20%   | 36            | 4.80                  | 6.00  | 4.20                              | 4.70 |
| FAUL0412-1R0MT | 1.0±20%    | 47            | 4.40                  | 5.50  | 3.80                              | 4.50 |
| FAUL0412-1R5MT | 1.5±20%    | 75            | 3.20                  | 4.00  | 2.70                              | 3.25 |
| FAUL0412-2R2MT | 2.2±20%    | 83.5          | 2.40                  | 3.00  | 2.20                              | 2.75 |
| FAUL0412-3R3MT | 3.3±20%    | 160           | 2.38                  | 2.7   | 1.77                              | 2.00 |
| FAUL0412-4R7MT | 4.7±20%    | 195           | 1.80                  | 2.20  | 1.45                              | 1.80 |

FAUL0420 -XXX Series

| Part Number    | Inductance | DC Resistance | Saturation Current *3 |       | Heat Rating Current <sup>*4</sup> |       |
|----------------|------------|---------------|-----------------------|-------|-----------------------------------|-------|
|                | @100KHZ,1V | Max.          | Max.                  | Typ.  | Max.                              | Typ.  |
| Units          | uH         | mΩ            | A                     |       | A                                 |       |
| Symbol         | L          | DCR           | Isat                  |       | Irms                              |       |
| FAUL0420-R10MT | 0.10±20%   | 4             | 17.60                 | 22.00 | 11.20                             | 13.00 |
| FAUL0420-R22MT | 0.22±20%   | 6.6           | 10.00                 | 12.50 | 8.20                              | 9.50  |
| FAUL0420-R33MT | 0.33±20%   | 11            | 9.60                  | 12.00 | 8.60                              | 10.00 |
| FAUL0420-R47MT | 0.47±20%   | 14            | 7.60                  | 9.50  | 6.65                              | 7.50  |
| FAUL0420-R56MT | 0.56±20%   | 16            | 7.20                  | 9.00  | 6.10                              | 7.00  |

|                |          |     |      |      |      |      |
|----------------|----------|-----|------|------|------|------|
| FAUL0420-R68MT | 0.68±20% | 18  | 6.40 | 8.00 | 6.15 | 7.00 |
| FAUL0420-1R0MT | 1.0±20%  | 27  | 5.60 | 7.00 | 5.40 | 6.00 |
| FAUL0420-1R2MT | 1.2±20%  | 27  | 5.20 | 6.50 | 5.40 | 6.00 |
| FAUL0420-1R5MT | 1.5±20%  | 46  | 4.40 | 5.50 | 4.30 | 5.00 |
| FAUL0420-2R2MT | 2.2±20%  | 58  | 4.00 | 5.00 | 3.80 | 4.50 |
| FAUL0420-3R3MT | 3.3±20%  | 87  | 2.80 | 3.50 | 2.80 | 3.30 |
| FAUL0420-4R7MT | 4.7±20%  | 105 | 2.40 | 3.00 | 2.20 | 2.80 |
| FAUL0420-6R8MT | 6.8±20%  | 175 | 2.00 | 2.50 | 1.90 | 2.40 |
| FAUL0420-100MT | 10±20%   | 282 | 1.60 | 2.00 | 1.30 | 1.60 |
| FAUL0420-220MT | 22±20%   | 363 | 1.12 | 1.40 | 0.90 | 1.20 |

FAUL0518 -XXX Series

| Part Number    | Inductance | DC Resistance | Saturation Current <sup>*3</sup> |       | Heat Rating Current <sup>*4</sup> |       |
|----------------|------------|---------------|----------------------------------|-------|-----------------------------------|-------|
|                | @100KHZ,1V | Max.          | Max.                             | Typ.  | Max.                              | Typ.  |
| Units          | uH         | mΩ            | A                                |       | A                                 |       |
| Symbol         | L          | DCR           | Isat                             |       | Irms                              |       |
| FAUL0518-R47MT | 0.47±20%   | 9             | 9.60                             | 12.00 | 9.50                              | 10.50 |
| FAUL0518-R56MT | 0.56±20%   | 10            | 8.80                             | 11.00 | 8.20                              | 9.50  |
| FAUL0518-1R0MT | 1.0±20%    | 17            | 7.20                             | 9.00  | 7.20                              | 8.00  |
| FAUL0518-1R5MT | 1.5±20%    | 26            | 6.40                             | 8.00  | 6.60                              | 7.50  |
| FAUL0518-2R2MT | 2.2±20%    | 35            | 4.80                             | 6.00  | 4.20                              | 5.00  |
| FAUL0518-3R3MT | 3.3±20%    | 58            | 3.84                             | 4.80  | 3.80                              | 4.50  |
| FAUL0518-4R7MT | 4.7±20%    | 85            | 3.20                             | 4.00  | 3.00                              | 3.50  |
| FAUL0518-6R8MT | 6.8±20%    | 120           | 2.72                             | 3.40  | 2.40                              | 2.80  |
| FAUL0518-100MT | 10±20%     | 155           | 2.00                             | 2.50  | 2.20                              | 2.50  |

FAUL0530 -XXX Series

| Part Number    | Inductance | DC Resistance | Saturation Current <sup>3</sup> |       | Heat Rating Current <sup>4</sup> |       |
|----------------|------------|---------------|---------------------------------|-------|----------------------------------|-------|
|                | @100KHZ,1V | Max.          | Max.                            | Typ.  | Max.                             | Typ.  |
| Units          | uH         | mΩ            | A                               |       | A                                |       |
| Symbol         | L          | DCR           | Isat                            |       | Irms                             |       |
| FAUL0530-R10MT | 0.10±20%   | 3.0           | 24.00                           | 30.00 | 23.00                            | 25.00 |
| FAUL0530-R20MT | 0.20±20%   | 3.9           | 16.00                           | 20.00 | 13.00                            | 14.00 |
| FAUL0530-R33MT | 0.33±20%   | 5.5           | 14.40                           | 18.00 | 13.10                            | 14.00 |
| FAUL0530-R47MT | 0.47±20%   | 8.5           | 12.00                           | 15.00 | 10.00                            | 11.00 |
| FAUL0530-R68MT | 0.68±20%   | 12            | 9.20                            | 11.50 | 8.20                             | 9.00  |
| FAUL0530-R82MT | 0.82±20%   | 10.4          | 9.20                            | 10.50 | 9.0                              | 10.5  |
| FAUL0530-1R0MT | 1.0±20%    | 14            | 8.00                            | 10.00 | 7.80                             | 8.50  |
| FAUL0530-1R2MT | 1.2±20%    | 16            | 7.60                            | 9.50  | 7.85                             | 8.50  |
| FAUL0530-1R5MT | 1.5±20%    | 25            | 7.20                            | 9.00  | 7.60                             | 8.20  |
| FAUL0530-2R2MT | 2.2±20%    | 29            | 5.60                            | 7.00  | 6.40                             | 7.00  |
| FAUL0530-3R3MT | 3.3±20%    | 38            | 4.80                            | 6.00  | <b>5.00</b>                      | 5.50  |
| FAUL0530-4R7MT | 4.7±20%    | 60            | 3.68                            | 4.60  | 4.00                             | 4.50  |
| FAUL0530-6R8MT | 6.8±20%    | 90            | 2.88                            | 3.60  | 2.90                             | 3.50  |
| FAUL0530-100MT | 10±20%     | 125           | 2.80                            | 3.50  | 2.80                             | 3.20  |
| FAUL0530-150MT | 15±20%     | 170           | 2.00                            | 2.20  | 1.60                             | 1.80  |

FAUL0618 -XXX Series

| Part Number    | Inductance | DC Resistance | Saturation Current <sup>3</sup> |       | Heat Rating Current <sup>4</sup> |       |
|----------------|------------|---------------|---------------------------------|-------|----------------------------------|-------|
|                | @100KHZ,1V | Max.          | Max.                            | Typ.  | Max.                             | Typ.  |
| Units          | uH         | mΩ            | A                               |       | A                                |       |
| Symbol         | L          | DCR           | Isat                            |       | Irms                             |       |
| FAUL0618-R10MT | 0.10±20%   | 2.3           | 30.40                           | 38.00 | 23.00                            | 25.00 |
| FAUL0618-R22MT | 0.22±20%   | 3.5           | 19.20                           | 24.00 | 20.00                            | 22.00 |



|                |          |     |       |       |       |       |
|----------------|----------|-----|-------|-------|-------|-------|
| FAUL0618-R47MT | 0.47±20% | 8.4 | 14.40 | 18.00 | 10.00 | 11.50 |
| FAUL0618-R68MT | 0.68±20% | 12  | 13.20 | 16.50 | 8.40  | 9.50  |
| FAUL0618-1R0MT | 1.0±20%  | 16  | 9.60  | 12.00 | 7.60  | 8.50  |
| FAUL0618-1R5MT | 1.5±20%  | 26  | 7.36  | 9.20  | 7.10  | 8.00  |
| FAUL0618-2R2MT | 2.2±20%  | 35  | 6.40  | 8.00  | 6.20  | 7.00  |
| FAUL0618-3R3MT | 3.3±20%  | 50  | 4.80  | 6.00  | 3.80  | 4.50  |
| FAUL0618-4R7MT | 4.7±20%  | 62  | 4.00  | 5.00  | 3.50  | 4.00  |
| FAUL0618-6R8MT | 6.8±20%  | 110 | 3.60  | 4.50  | 2.40  | 3.00  |
| FAUL0618-8R2MT | 8.2±20%  | 135 | 2.90  | 3.60  | 2.10  | 2.40  |
| FAUL0618-100MT | 10±20%   | 155 | 3.20  | 4.00  | 1.95  | 2.30  |
| FAUL0618-220MT | 22±20%   | 350 | 1.84  | 2.30  | 1.40  | 1.80  |

FAUL0620-XXX Series

| Part Number    | Inductance | DC Resistance | Saturation Current <sup>*3</sup> |      | Heat Rating Current <sup>*4</sup> |      |
|----------------|------------|---------------|----------------------------------|------|-----------------------------------|------|
|                | @100KHZ,1V | Max.          | Max.                             | Typ. | Max.                              | Typ. |
| Units          | uH         | mΩ            | A                                |      | A                                 |      |
| Symbol         | L          | DCR           | Isat                             |      | Irms                              |      |
| FAUL0620-1R5MT | 1.5±20%    | 18            | 10                               | 12   | 7.0                               | 8.0  |
| FAUL0620-4R7MT | 4.7±20%    | 60            | -                                | 5.5  | -                                 | 4.3  |
| FAUL0620-100MT | 10±20%     | 145           | -                                | 4.0  | -                                 | 2.8  |

FAUL0624 -XXX Series

| Part Number    | Inductance | DC Resistance | Saturation Current <sup>*3</sup> |       | Heat Rating Current <sup>*4</sup> |       |
|----------------|------------|---------------|----------------------------------|-------|-----------------------------------|-------|
|                | @100KHZ,1V | Max.          | Max.                             | Typ.  | Max.                              | Typ.  |
| Units          | uH         | mΩ            | A                                |       | A                                 |       |
| Symbol         | L          | DCR           | Isat                             |       | Irms                              |       |
| FAUL0624-R22MT | 0.22±20%   | 3             | 24.00                            | 30.00 | 19.00                             | 21.00 |

|                |          |      |       |       |       |       |
|----------------|----------|------|-------|-------|-------|-------|
| FAUL0624-R33MT | 0.33±20% | 4.1  | 19.60 | 24.50 | 16.00 | 18.00 |
| FAUL0624-R47MT | 0.47±20% | 5.1  | 16.00 | 20.00 | 13.50 | 15.00 |
| FAUL0624-R56MT | 0.56±20% | 6.5  | 13.60 | 17.00 | 11.50 | 13.00 |
| FAUL0624-R68MT | 0.68±20% | 7    | 12.80 | 16.00 | 10.50 | 12.00 |
| FAUL0624-1R0MT | 1.0±20%  | 13.5 | 12.00 | 15.00 | 8.00  | 9.00  |
| FAUL0624-1R5MT | 1.5±20%  | 20   | 10.80 | 13.50 | 7.00  | 8.20  |
| FAUL0624-2R2MT | 2.2±20%  | 28   | 8.00  | 10.00 | 6.20  | 7.00  |
| FAUL0624-3R3MT | 3.3±20%  | 39   | 6.40  | 8.00  | 4.80  | 5.50  |
| FAUL0624-4R7MT | 4.7±20%  | 50   | 5.20  | 6.50  | 4.30  | 5.00  |
| FAUL0624-6R8MT | 6.8±20%  | 70   | 4.80  | 6.00  | 3.20  | 4.00  |
| FAUL0624-100MT | 10±20%   | 101  | 3.20  | 4.00  | 2.40  | 3.10  |
| FAUL0624-150MT | 15±20%   | 160  | 2.64  | 3.30  | 2.00  | 2.50  |
| FAUL0624-220MT | 22±20%   | 230  | 2.00  | 2.50  | 1.60  | 2.00  |

FAUL0630 -XXX Series

| Part Number    | Inductance | DC Resistance | Saturation Current <sup>3</sup> |       | Heat Rating Current <sup>4</sup> |       |
|----------------|------------|---------------|---------------------------------|-------|----------------------------------|-------|
|                | @100KHZ,1V | Max.          | Max.                            | Typ.  | Max.                             | Typ.  |
| Units          | uH         | mΩ            | A                               |       | A                                |       |
| Symbol         | L          | DCR           | Isat                            |       | Irms                             |       |
| FAUL0630-R22MT | 0.22±20%   | 3             | 27.20                           | 34.00 | 21.00                            | 24.00 |
| FAUL0630-R24MT | 0.24±20%   | 3.1           | 22.40                           | 28.00 | 18.40                            | 23.00 |
| FAUL0630-R33MT | 0.33±20%   | 3.5           | 20.00                           | 25.00 | 19.00                            | 21.00 |
| FAUL0630-R47MT | 0.47±20%   | 4.1           | 16.00                           | 20.00 | 16.50                            | 18.00 |
| FAUL0630-R56MT | 0.56±20%   | 4.5           | 14.40                           | 18.00 | 15.00                            | 16.50 |
| FAUL0630-R68MT | 0.68±20%   | 5.3           | 13.60                           | 17.00 | 14.50                            | 16.00 |
| FAUL0630-R82MT | 0.82±20%   | 6.0           | 12.80                           | 16.00 | 12.50                            | 14.00 |

|                |         |      |       |       |       |       |
|----------------|---------|------|-------|-------|-------|-------|
| FAUL0630-1R0MT | 1.0±20% | 7.4  | 12.00 | 15.00 | 10.50 | 12.00 |
| FAUL0630-1R5MT | 1.5±20% | 12.1 | 9.60  | 12.00 | 10.50 | 12.00 |
| FAUL0630-1R8MT | 1.8±20% | 15   | 14.0  | 15.5  | 8.7   | 9.5   |
| FAUL0630-2R2MT | 2.2±20% | 15   | 8.00  | 10.00 | 8.50  | 9.50  |
| FAUL0630-3R3MT | 3.3±20% | 22   | 7.60  | 9.50  | 7.50  | 8.50  |
| FAUL0630-4R7MT | 4.7±20% | 33   | 7.20  | 9.00  | 5.00  | 6.00  |
| FAUL0630-5R6MT | 5.6±20% | 42   | 5.20  | 6.50  | 4.80  | 5.50  |
| FAUL0630-6R8MT | 6.8±20% | 48   | 4.80  | 6.00  | 4.20  | 5.00  |
| FAUL0630-8R2MT | 8.2±20% | 60   | 4.40  | 5.50  | 4.20  | 5.00  |
| FAUL0630-100MT | 10±20%  | 68   | 4.40  | 5.50  | 3.80  | 4.50  |
| FAUL0630-150MT | 15±20%  | 113  | 3.20  | 4.00  | 2.30  | 3.00  |
| FAUL0630-220MT | 22±20%  | 170  | 2.40  | 3.00  | 2.00  | 2.50  |
| FAUL0630-330MT | 33±20%  | 270  | 2.00  | 2.50  | 1.60  | 2.00  |
| FAUL0630-470MT | 47±20%  | 385  | 1.60  | 2.00  | 1.20  | 1.50  |

FAUL0640 -XXX Series

| Part Number    | Inductance | DC Resistance | Saturation Current <sup>*3</sup> |       | Heat Rating Current <sup>*4</sup> |      |
|----------------|------------|---------------|----------------------------------|-------|-----------------------------------|------|
|                | @100KHZ,1V | Max.          | Max.                             | Typ.  | Max.                              | Typ. |
| Units          | uH         | mΩ            | A                                |       | A                                 |      |
| Symbol         | L          | DCR           | Isat                             |       | Irms                              |      |
| FAUL0640-R68MT | 0.68±20%   | 4.8           | 15.0                             | 19.0  | 13.6                              | 17.0 |
| FAUL0640-1R0MT | 1.0±20%    | 6.6           | 12.6                             | 16.0  | 10.8                              | 13.5 |
| FAUL0640-1R5MT | 1.5±20%    | 10            | 10                               | 12.5  | 9.92                              | 12.4 |
| FAUL0640-2R2MT | 2.2±20%    | 14            | 8.80                             | 11.00 | 7.80                              | 10.0 |
| FAUL0640-3R3MT | 3.3±20%    | 20            | 7.6                              | 9.5   | 6.8                               | 8.5  |
| FAUL0640-4R7MT | 4.7±20%    | 30            | 7.20                             | 9.00  | 6.00                              | 6.50 |
| FAUL0640-6R8MT | 6.8±20%    | 45            | 5.2                              | 6.5   | 4.5                               | 5.5  |
| FAUL0640-100MT | 10±20%     | 65            | 4.8                              | 6.0   | 4                                 | 4.8  |

|                |        |     |      |      |      |      |
|----------------|--------|-----|------|------|------|------|
| FAUL0640-150MT | 15±20% | 95  | 3.60 | 4.50 | 2.80 | 3.70 |
| FAUL0640-220MT | 22±20% | 125 | 3.2  | 4.0  | 2.7  | 3.3  |
| FAUL0640-330MT | 33±20% | 240 | 2.4  | 3.0  | 1.8  | 2.2  |
| FAUL0640-470MT | 47±20% | 320 | 2    | 2.5  | 1.5  | 1.8  |

FAUL0650 -XXX Series

| Part Number    | Inductance | DC Resistance | Saturation Current <sup>3</sup> |       | Heat Rating Current <sup>4</sup> |       |
|----------------|------------|---------------|---------------------------------|-------|----------------------------------|-------|
|                | @100KHZ,1V | Max.          | Max.                            | Typ.  | Max.                             | Typ.  |
| Units          | uH         | mΩ            | A                               |       | A                                |       |
| Symbol         | L          | DCR           | Isat                            |       | Irms                             |       |
| FAUL0650-R47MT | 0.47±20%   | 3.9           | 16.80                           | 21.00 | 17.00                            | 20.00 |
| FAUL0650-R68MT | 0.68±20%   | 4.5           | 14.40                           | 18.00 | 14.50                            | 16.50 |
| FAUL0650-1R0MT | 1.0±20%    | 6.6           | 12.80                           | 16.00 | 10.00                            | 12.00 |
| FAUL0650-1R5MT | 1.5±20%    | 10            | 10.40                           | 13.00 | 8.20                             | 9.50  |
| FAUL0650-2R2MT | 2.2±20%    | 12.5          | 8.80                            | 11.00 | 8.00                             | 9.00  |
| FAUL0650-3R3MT | 3.3±20%    | 22            | 8.00                            | 10.00 | 7.60                             | 8.50  |
| FAUL0650-4R7MT | 4.7±20%    | 29            | 6.40                            | 8.00  | 5.00                             | 6.00  |
| FAUL0650-6R8MT | 6.8±20%    | 41            | 5.04                            | 6.30  | 4.00                             | 5.80  |
| FAUL0650-8R2MT | 8.2±20%    | 48            | 4.40                            | 5.50  | 4.80                             | 5.50  |
| FAUL0650-100MT | 10±20%     | 60            | 4.24                            | 5.30  | 3.80                             | 4.50  |
| FAUL0650-150MT | 15±20%     | 90            | 3.20                            | 4.00  | 2.60                             | 3.10  |
| FAUL0650-220MT | 22±20%     | 140           | 2.80                            | 3.50  | 2.00                             | 2.60  |
| FAUL0650-330MT | 33±20%     | 190           | 2.40                            | 3.00  | 1.80                             | 2.30  |
| FAUL0650-470MT | 47±20%     | 230           | 2.08                            | 2.60  | 1.50                             | 2.00  |

FAUL0754- XXX Series

| Part Number     | Inductance | DC Resistance | Saturation Current <sup>*3</sup> |       | Heat Rating Current <sup>*4</sup> |       |
|-----------------|------------|---------------|----------------------------------|-------|-----------------------------------|-------|
|                 | @100KHZ,1V | Max.          | Max.                             | Typ.  | Max.                              | Typ.  |
| Units           | uH         | mΩ            | A                                |       | A                                 |       |
| Symbol          | L          | DCR           | Isat                             |       | Irms                              |       |
| FAUL0754-1R5MT  | 1.5±20%    | 7.3           | 14.00                            | 16.30 | 10.30                             | 11.40 |
| FAUL0754-2R2MT  | 2.2 ± 20%  | 11.4          | 12.70                            | 14.80 | 8.70                              | 9.70  |
| FAUL0754-3R3MT  | 3.3 ±20%   | 15.4          | 11.60                            | 13.50 | 7.20                              | 8.00  |
| FAUL0754-4R7MT  | 4.7 ±20%   | 20.9          | 11.20                            | 13.10 | 6.30                              | 7.00  |
| FAUL0754-6R8MT  | 6.8 ±20%   | 26.6          | 8.70                             | 10.20 | 5.50                              | 6.10  |
| FAUL0754-8R2MT  | 8.2 ±20%   | 31.9          | 7.70                             | 9.00  | 5.00                              | 5.60  |
| FAUL0754- 100MT | 10± 20%    | 38            | 6.90                             | 8.00  | 4.70                              | 5.20  |
| FAUL0754- 150MT | 15± 20%    | 66            | 5.90                             | 6.90  | 3.40                              | 3.80  |
| FAUL0754-220MT  | 22± 20%    | 93.5          | 5.40                             | 6.30  | 3.00                              | 3.30  |
| FAUL0754-330MT  | 33±20%     | 127.6         | 4.20                             | 4.90  | 2.80                              | 3.20  |
| FAUL0754-470MT  | 47±20%     | 171.6         | 3.50                             | 4.10  | 2.20                              | 2.40  |
| FAUL0754-560MT  | 56±20%     | 209.3         | 2.80                             | 3.30  | 2.00                              | 2.20  |
| FAUL0754-680MT  | 68±20%     | 255           | 2.40                             | 2.80  | 1.80                              | 2.00  |
| FAUL0754- 101MT | 100±20%    | 348           | 2.00                             | 2.40  | 1.60                              | 1.80  |

FAUL1030 -XXX Series

| Part Number    | Inductance | DC Resistance | Saturation Current <sup>*3</sup> |       | Heat Rating Current <sup>*4</sup> |       |
|----------------|------------|---------------|----------------------------------|-------|-----------------------------------|-------|
|                | @100KHZ,1V | Max.          | Max.                             | Typ.  | Max.                              | Typ.  |
| Units          | uH         | mΩ            | A                                |       | A                                 |       |
| Symbol         | L          | DCR           | Isat                             |       | Irms                              |       |
| FAUL1030-R22MT | 0.22±20%   | 1.2           | 44.24                            | 50.00 | 29.20                             | 33.00 |
| FAUL1030-R33MT | 0.33±20%   | 1.6           | 28.30                            | 32.00 | 20.35                             | 23.00 |

|                |          |       |       |       |       |       |
|----------------|----------|-------|-------|-------|-------|-------|
| FAUL1030-R36MT | 0.36±20% | 1.6   | 24.80 | 28.00 | 20.35 | 23.00 |
| FAUL1030-R47MT | 0.47±20% | 2.5   | 23.00 | 26.00 | 19.47 | 22.00 |
| FAUL1030-R82MT | 0.82±20% | 3.7   | 20.35 | 23.00 | 15.93 | 18.00 |
| FAUL1030-1R0MT | 1.0±20%  | 6.0   | 18.58 | 21.00 | 13.27 | 15.00 |
| FAUL1030-1R5MT | 1.5±20%  | 7.5   | 17.69 | 20.00 | 11.50 | 13.00 |
| FAUL1030-2R2MT | 2.2±20%  | 9.0   | 12.38 | 14.00 | 9.73  | 11.00 |
| FAUL1030-3R3MT | 3.3±20%  | 16.0  | 10.61 | 12.00 | 7.96  | 9.00  |
| FAUL1030-4R7MT | 4.7±20%  | 22.5  | 8.84  | 10.00 | 6.19  | 7.00  |
| FAUL1030-8R2MT | 8.2±20%  | 45.0  | 6.20  | 7.00  | 4.42  | 5.00  |
| FAUL1030-100MT | 10±20%   | 55.0  | 5.75  | 6.50  | 3.98  | 4.50  |
| FAUL1030-330MT | 33±20%   | 160.0 | 3.53  | 4.00  | 2.30  | 2.60  |

FAUL1040 -XXX Serie

| Part Number    | Inductance | DC Resistance | Saturation Current <sup>*3</sup> |       | Heat Rating Current <sup>*4</sup> |       |
|----------------|------------|---------------|----------------------------------|-------|-----------------------------------|-------|
|                | @100KHZ,1V | Max.          | Max.                             | Typ.  | Max.                              | Typ.  |
| Units          | uH         | mΩ            | A                                |       | A                                 |       |
| Symbol         | L          | DCR           | Isat                             |       | Irms                              |       |
| FAUL1040-R15MT | 0.15±20%   | 0.65          | 60.00                            | 75.00 | 40.00                             | 45.00 |
| FAUL1040-R22MT | 0.22±20%   | 1             | 48.00                            | 60.00 | 30.00                             | 35.00 |
| FAUL1040-R30MT | 0.30±20%   | 1.1           | 36.00                            | 45.00 | 30.00                             | 35.00 |
| FAUL1040-R36MT | 0.36±20%   | 1.2           | 36.00                            | 45.00 | 25.00                             | 30.00 |
| FAUL1040-R45MT | 0.45±20%   | 1.5           | 34.00                            | 43.00 | 25.00                             | 30.00 |
| FAUL1040-R47MT | 0.47±20%   | 1.7           | 32.00                            | 40.00 | 25.00                             | 30.00 |
| FAUL1040-R56MT | 0.56±20%   | 1.8           | 26.40                            | 33.00 | 20.00                             | 25.00 |
| FAUL1040-R68MT | 0.68±20%   | 2.4           | 24.00                            | 30.00 | 19.00                             | 23.00 |
| FAUL1040-R80MT | 0.80±20%   | 2.7           | 23.20                            | 29.00 | 19.00                             | 23.00 |
| FAUL1040-1R0MT | 1.0±20%    | 3.3           | 22.40                            | 28.00 | 16.00                             | 19.00 |

|                |         |      |       |       |       |       |
|----------------|---------|------|-------|-------|-------|-------|
| FAUL1040-1R5MT | 1.5±20% | 4.2  | 19.20 | 24.00 | 14.00 | 16.00 |
| FAUL1040-2R2MT | 2.2±20% | 7    | 13.20 | 16.50 | 10.00 | 12.00 |
| FAUL1040-3R3MT | 3.3±20% | 11.8 | 12.80 | 16.00 | 9.50  | 11.00 |
| FAUL1040-4R7MT | 4.7±20% | 20   | 10.40 | 13.00 | 7.50  | 9.00  |
| FAUL1040-6R8MT | 6.8±20% | 25   | 9.60  | 12.00 | 7.00  | 8.50  |
| FAUL1040-8R2MT | 8.2±20% | 27   | 7.20  | 9.00  | 6.80  | 8.00  |
| FAUL1040-100MT | 10±20%  | 30   | 6.80  | 8.50  | 6.90  | 7.80  |
| FAUL1040-150MT | 15±20%  | 45   | 5.60  | 7.00  | 5.60  | 6.50  |
| FAUL1040-220MT | 22±20%  | 66   | 4.40  | 5.50  | 4.20  | 5.00  |
| FAUL1040-330MT | 33±20%  | 92   | 3.84  | 4.80  | 3.80  | 4.40  |
| FAUL1040-470MT | 47±20%  | 145  | 3.10  | 3.50  | 2.80  | 3.30  |
| FAUL1040-680MT | 68±20%  | 195  | 2.40  | 3.00  | 2.00  | 2.50  |
| FAUL1040-820MT | 82±20%  | 285  | 2.3   | 2.8   | 2.1   | 2.3   |
| FAUL1040-101MT | 100±20% | 340  | 2.1   | 2.3   | 1.8   | 2     |

FAUL1050-XXX Series

| Part Number    | Inductance | DC Resistance | Saturation Current <sup>*3</sup> |      | Heat Rating Current <sup>*4</sup> |      |
|----------------|------------|---------------|----------------------------------|------|-----------------------------------|------|
|                | @100KHZ,1V | Max.          | Max.                             | Typ. | Max.                              | Typ. |
| Units          | uH         | mΩ            | A                                |      | A                                 |      |
| Symbol         | L          | DCR           | Isat                             |      | Irms                              |      |
| FAUL1050-R22MT | 0.22±20%   | 0.8           | 57.5                             | 65   | 32.5                              | 37   |
| FAUL1050-1R0MT | 1.0±20%    | 3.0           | 28.0                             | 30   | 20.3                              | 23   |
| FAUL1050-1R5MT | 1.5±20%    | 3.8           | 22.0                             | 25   | 18.5                              | 21   |
| FAUL1050-2R2MT | 2.2±20%    | 6.0           | 16.8                             | 19   | 13.2                              | 15   |
| FAUL1050-3R3MT | 3.3±20%    | 10            | 14.0                             | 16   | 11.5                              | 13   |
| FAUL1050-4R7MT | 4.7±20%    | 14            | 13.2                             | 15   | 9.7                               | 11   |
| FAUL1050-5R6MT | 5.6±20%    | 17            | 12.3                             | 14   | 8.5                               | 9.5  |

|                |         |      |      |     |     |     |
|----------------|---------|------|------|-----|-----|-----|
| FAUL1050-6R8MT | 6.8±20% | 18.5 | 12.3 | 14  | 8.0 | 9.0 |
| FAUL1050-100MT | 10±20%  | 28   | 8.8  | 10  | 7.0 | 8.0 |
| FAUL1050-150MT | 15±20%  | 42   | 6.5  | 7.5 | 5.7 | 6.5 |
| FAUL1050-220MT | 22±20%  | 50   | 5.3  | 6.0 | 5.0 | 5.5 |
| FAUL1050-330MT | 33±20%  | 86   | 4.6  | 5.2 | 4.2 | 4.8 |
| FAUL1050-470MT | 47±20%  | 127  | 4.0  | 4.5 | 3.2 | 3.7 |
| FAUL1050-101MT | 100±20% | 290  | 2.5  | 2.8 | 1.8 | 2.1 |

FAUL1340-XXX Series

| Part Number    | Inductance | DC Resistance | Saturation Current <sup>3</sup> |       | Heat Rating Current <sup>4</sup> |       |
|----------------|------------|---------------|---------------------------------|-------|----------------------------------|-------|
|                | @100KHZ,1V | Max.          | Max.                            | Typ.  | Max.                             | Typ.  |
| Units          | uH         | mΩ            | A                               |       | A                                |       |
| Symbol         | L          | DCR           | Isat                            |       | Irms                             |       |
| FAUL1340-R22MT | 0.22±20%   | 0.9           | 40.00                           | 50.00 | 38.00                            | 42.00 |
| FAUL1340-R47MT | 0.47±20%   | 2.0           | 38.40                           | 48.00 | 29.00                            | 33.00 |
| FAUL1340-R68MT | 0.68±20%   | 3.5           | 37.60                           | 47.00 | 24.00                            | 28.00 |
| FAUL1340-R82MT | 0.82±20%   | 4.5           | 32.00                           | 40.00 | 24.00                            | 28.00 |
| FAUL1340-1R0MT | 1.0±20%    | 7.5           | 28.00                           | 35.00 | 20.00                            | 24.00 |
| FAUL1340-1R5MT | 1.5±20%    | 9.5           | 24.40                           | 30.50 | 17.00                            | 20.00 |
| FAUL1340-2R2MT | 2.2±20%    | 11.5          | 20.80                           | 26.00 | 15.00                            | 18.00 |
| FAUL1340-3R3MT | 3.3±20%    | 13.0          | 16.80                           | 21.00 | 13.00                            | 15.00 |
| FAUL1340-4R7MT | 4.7±20%    | 14.5          | 14.40                           | 18.00 | 11.00                            | 13.00 |
| FAUL1340-6R8MT | 6.8±20%    | 20.0          | 11.20                           | 14.00 | 8.00                             | 9.00  |
| FAUL1340-100MT | 10±20%     | 25.0          | 8.00                            | 10.00 | 7.00                             | 8.00  |
| FAUL1340-150MT | 15±20%     | 39.0          | 6.00                            | 7.50  | 5.80                             | 6.50  |
| FAUL1340-220MT | 22±20%     | 51.0          | 4.80                            | 6.00  | 3.80                             | 4.50  |



FAUL1350-XXX Series

| Part Number    | Inductance | DC Resistance | Saturation Current <sup>*3</sup> |       | Heat Rating Current <sup>*4</sup> |       |
|----------------|------------|---------------|----------------------------------|-------|-----------------------------------|-------|
|                | @100KHZ,1V | Max.          | Max.                             | Typ.  | Max.                              | Typ.  |
| Units          | uH         | mΩ            | A                                |       | A                                 |       |
| Symbol         | L          | DCR           | Isat                             |       | Irms                              |       |
| FAUL1350-R22MT | 0.22±20%   | 0.7           | 60.00                            | 75.00 | 45.00                             | 50.00 |
| FAUL1350-R36MT | 0.36±20%   | 0.85          | 40.00                            | 50.00 | 37.00                             | 42.00 |
| FAUL1350-R50MT | 0.50±20%   | 1.15          | 38.40                            | 48.00 | 33.00                             | 38.00 |
| FAUL1350-R68MT | 0.68±20%   | 1.55          | 36.80                            | 46.00 | 29.00                             | 33.00 |
| FAUL1350-R82MT | 0.82±20%   | 1.67          | 31.20                            | 39.00 | 26.00                             | 30.00 |
| FAUL1350-1R0MT | 1.0±20%    | 2.2           | 28.00                            | 35.00 | 22.00                             | 26.00 |
| FAUL1350-1R5MT | 1.5±20%    | 3.2           | 26.40                            | 33.00 | 19.00                             | 23.00 |
| FAUL1350-2R2MT | 2.2±20%    | 5.0           | 19.20                            | 24.00 | 13.00                             | 15.00 |
| FAUL1350-3R3MT | 3.3±20%    | 7             | 17.60                            | 22.00 | 12.00                             | 14.00 |
| FAUL1350-4R7MT | 4.7±20%    | 9             | 16.00                            | 20.00 | 11.00                             | 13.00 |
| FAUL1350-6R8MT | 6.8±20%    | 18            | 12.80                            | 16.00 | 10.00                             | 12.00 |
| FAUL1350-100MT | 10±20%     | 22            | 9.60                             | 12.00 | 8.00                              | 9.00  |
| FAUL1350-150MT | 15±20%     | 30            | 8.00                             | 10.00 | 7.00                              | 8.00  |
| FAUL1350-220MT | 22±20%     | 58            | 5.20                             | 6.50  | 3.80                              | 4.50  |
| FAUL1350-330MT | 33±20%     | 84            | 4.80                             | 6.00  | 2.80                              | 3.50  |
| FAUL1350-470MT | 47±20%     | 130           | 4.00                             | 5.00  | 2.60                              | 3.00  |

FAUL1360-XXX Series

| Part Number    | Inductance  | DC Resistance | Saturation Current <sup>*3</sup> |       | Heat Rating Current <sup>*4</sup> |       |
|----------------|-------------|---------------|----------------------------------|-------|-----------------------------------|-------|
|                | @100KHZ, 1V | Max.          | Max.                             | Typ.  | Max.                              | Typ.  |
| Units          | uH          | mΩ            | A                                |       | A                                 |       |
| Symbol         | L           | DCR           | Isat                             |       | Irms                              |       |
| FAUL1360-1R5MT | 1.5±20%     | 2.9           | 27                               | 30    | 23                                | 27    |
| FAUL1360-2R2MT | 2.2±20%     | 4.2           | 24                               | 28    | 18                                | 22    |
| FAUL1360-3R3MT | 3.3±20%     | 6.8           | 21                               | 25    | 14                                | 17    |
| FAUL1360-4R7MT | 4.7±20%     | 9             | 19.20                            | 24.00 | 12.00                             | 15.00 |
| FAUL1360-5R6MT | 5.6±20%     | 11            | 18.00                            | 22.50 | 11.00                             | 13.00 |
| FAUL1360-6R8MT | 6.8±20%     | 13.5          | 15.20                            | 19.00 | 10.00                             | 12.00 |
| FAUL1360-8R2MT | 8.2±20%     | 16            | 10.80                            | 13.50 | 9.00                              | 11.00 |
| FAUL1360-100MT | 10±20%      | 20.7          | 11.10                            | 12.50 | 8.50                              | 10.00 |
| FAUL1360-120MT | 12±20%      | 23            | 8.00                             | 10.00 | 7.80                              | 9.00  |
| FAUL1360-150MT | 15±20%      | 29            | 7.20                             | 9.00  | 7.50                              | 8.50  |
| FAUL1360-180MT | 18±20%      | 35            | 6.40                             | 8.00  | 6.50                              | 7.50  |
| FAUL1360-220MT | 22±20%      | 39.5          | 6.00                             | 7.50  | 6.00                              | 7.00  |
| FAUL1360-270MT | 27±20%      | 56            | 5.20                             | 6.50  | 5.00                              | 6.00  |
| FAUL1360-330MT | 33±20%      | 75            | 4.80                             | 6.00  | 4.80                              | 5.50  |
| FAUL1360-470MT | 47±20%      | 90            | 4.40                             | 5.50  | 4.20                              | 5.00  |
| FAUL1360-680MT | 68±20%      | 140           | 3.60                             | 4.50  | 3.20                              | 4.00  |
| FAUL1360-101MT | 100±20%     | 200           | 2.80                             | 3.50  | 2.50                              | 3.00  |
| FAUL1360-121MT | 120±20%     | 235           | 2.56                             | 3.20  | 1.70                              | 2.00  |
| FAUL1360-151MT | 150±20%     | 350           | 2.16                             | 2.70  | 1.20                              | 1.50  |

FAUL1365-XXX Series

| Part Number    | Inductance | DC Resistance | Saturation Current <sup>*3</sup> |      | Heat Rating Current <sup>*4</sup> |      |
|----------------|------------|---------------|----------------------------------|------|-----------------------------------|------|
|                | @100KHZ,1V | Max.          | Max.                             | Typ. | Max.                              | Typ. |
| Units          | uH         | mΩ            | A                                |      | A                                 |      |
| Symbol         | L          | DCR           | Isat                             |      | Irms                              |      |
| FAUL1365-4R7MT | 4.7±20%    | 8.5           | -                                | 24   | -                                 | 16   |
| FAUL1365-5R6MT | 5.6±20%    | 10.5          | -                                | 22.5 | -                                 | 14   |
| FAUL1365-6R8MT | 6.8±20%    | 12            | -                                | 19   | -                                 | 13   |
| FAUL1365-8R2MT | 8.2±20%    | 14            | -                                | 16   | -                                 | 12   |
| FAUL1365-100MT | 10±20%     | 16.5          | -                                | 15   | -                                 | 11   |
| FAUL1365-150MT | 15±20%     | 26            | -                                | 11   | -                                 | 9.5  |
| FAUL1365-220MT | 22±20%     | 36            | -                                | 9    | -                                 | 8    |
| FAUL1365-330MT | 33±20%     | 65            | -                                | 8    | -                                 | 6.5  |
| FAUL1365-470MT | 47±20%     | 70            | -                                | 6.8  | -                                 | 5.5  |
| FAUL1365-680MT | 68±20%     | 120           | -                                | 5.2  | -                                 | 4.8  |
| FAUL1365-820MT | 82±20%     | 135           | -                                | 4.5  | -                                 | 4.0  |
| FAUL1365-101MT | 100±20%    | 170           | -                                | 4.0  | -                                 | 3.5  |

FAUL1770-XXX Series

| Part Number    | Inductance | DC Resistance | Saturation Current <sup>*3</sup> |      | Heat Rating Current <sup>*4</sup> |      |
|----------------|------------|---------------|----------------------------------|------|-----------------------------------|------|
|                | @100KHZ,1V | Max.          | Max.                             | Typ. | Max.                              | Typ. |
| Units          | uH         | mΩ            | A                                |      | A                                 |      |
| Symbol         | L          | DCR           | Isat                             |      | Irms                              |      |
| FAUL1770-2R2MT | 2.2±20%    | 2.5           | -                                | 34   | -                                 | 29   |
| FAUL1770-3R3MT | 3.3±20%    | 3.95          | -                                | 30   | -                                 | 24   |
| FAUL1770-4R7MT | 4.7±20%    | 4.75          | -                                | 24   | -                                 | 21   |
| FAUL1770-6R8MT | 6.8±20%    | 7.5           | -                                | 22   | -                                 | 17   |
| FAUL1770-8R2MT | 8.2±20%    | 8.7           | -                                | 20   | -                                 | 13   |
| FAUL1770-100MT | 10±20%     | 9.9           | -                                | 19   | -                                 | 12   |

|                |         |     |   |      |   |     |
|----------------|---------|-----|---|------|---|-----|
| FAUL1770-150MT | 15±20%  | 17  | - | 14.5 | - | 11  |
| FAUL1770-220MT | 22±20%  | 23  | - | 11.5 | - | 8.5 |
| FAUL1770-330MT | 33±20%  | 37  | - | 10   | - | 8.0 |
| FAUL1770-470MT | 47±20%  | 47  | - | 7.5  | - | 6.0 |
| FAUL1770-680MT | 68±20%  | 85  | - | 6.5  | - | 5.2 |
| FAUL1770-101MT | 100±20% | 130 | - | 5.0  | - | 3.7 |

※1: All test data is referenced to 20°C ambient;

※2: Rated current: Isat or Irms, whichever is smaller;

※3: Isat(Typ): DC current at which the inductance drops approximate 30% from its value without current;

※4: Isat(Max): DC current at which the inductance drops approximate 20% from its value without current;

※5: Irms(Typ): DC current that causes the temperature rise ( $\Delta T = 40^\circ\text{C}$ ) from 20°C ambient.

※6: Irms(Max): DC current that causes the temperature rise ( $\Delta T = 20^\circ\text{C}$ ) from 20°C ambient.

※7: Absolute maximum voltage 30VDC

## Test and Measurement Procedures

### Test Conditions

**1 Unless otherwise specified, the standard atmospheric conditions for measurement/test as:**

- a. Ambient Temperature:  $20\pm 15^{\circ}\text{C}$
- b. Relative Humidity:  $65\pm 20\%$
- c. Air Pressure: 86 KPa to 106 KPa

**2 If any doubt on the results, measurements/tests should be made within the following limits:**

- a. Ambient Temperature:  $20\pm 2$
- b. Relative Humidity:  $65\pm 5\%$
- c. Air Pressure: 86KPa to 106 KPa

### 3 Visual Examination

- a. Inspection Equipment: 10 X magnifier

### 4 Electrical Test

DC Resistance (DCR)

- a. Refer to **Appendix A**.
- b. Test equipment (Analyzer): HIOKI3540 or equivalent.

Inductance (L)

- a. Refer to **Appendix A**.
- b. Test equipment: Wayne kerr3260+3265B or equivalent.

Rated Current

- a. Refer to **Appendix A**.
- b. Test equipment: Wayne kerr3260+3265B, Agilent E3633A, R2M-2H3 or equivalent.
- c. Definition of Rated Current (Ir): With the condition of the DC current pass, the inductance decrease approximate 30% of the standard value, compare to the temperature rise approximate  $40^{\circ}\text{C}$ , the smaller is Rated Current.(reference environment temperature: $20^{\circ}\text{C}$ )

| Mechanical Reliability   |   |  |
|--------------------------|---|--|
| Item                     | Specification and Requirement   | Test Method  |
| Solderability            | 1. No case deformation or change in appearance<br><br>2. New solder coverage<br>More than 95% | 1.Preheat: 155℃±5℃ , 60S±2S<br>2.Tin: lead-free.<br>3.Temperature:240℃±5℃, flux 3.0S±0.5S.   |
| Mechanical shock         | 1. No case deformation or change in appearance<br><br>2. $\Delta L/L_0 \leq \pm 10\%$         | 1. Peak value: 100G<br>2. Pulse time:: 6ms<br>3. 3 times in each positive and negative direction of 3 mutual perpendicular directions  |
| Mechanical vibration     | 1. No case deformation or change in appearance<br><br>2. $\Delta L/L_0 \leq \pm 10\%$         | 1. Reflow: 2times<br>2. Frequency: 10HZ~2000HZ~10HZ, 20 Min/Cycles<br>3. Amplitude: 1.52 mm<br>4. Directions: X,Y,Z<br>5. Time: 12 cycle / direction   |
| Endurance Reliability    |   |  |
| Item                     | Specification and Requirement   | Test Method  |
| Thermal Shock            | Inductance change:<br>Within $\pm 10\%$ Without distinct damage in appearance                 | 1. Repeat 100 cycles as follow:<br>(-55 $\pm$ 2 °C; 30 $\pm$ 3 min)<br>→(Room temp., 5 min)<br>→ (+155 $\pm$ 2 °C, 30 $\pm$ 3 min)<br>→ (Room temp., 5 min)<br>2. Recovery: 48 + 4 / -0 hours of recovery under the standard condition after the test. |
| Humidity Resistance      | Inductance change:<br>Within $\pm 10\%$ Without distinct damage in appearance                 | 1.Reflow 2 times,<br>2.85℃,85%RH,1000 hours<br>3.Measured at room temperature after placing for 24 $\pm$ 2 hours   |
| Low temperature storage  | Inductance change:<br>Within $\pm 10\%$ Without distinct damage in appearance                 | 1. Temperature: -55 $\pm$ 2°C<br>2. Time: 1000 hours<br>3. Measured at room temperature after placing for 24 $\pm$ 2 hours   |
| High temperature storage | Inductance change:<br>Within $\pm 10\%$ Without distinct damage in appearance                 | 1. Temperature: +155 $\pm$ 2°C<br>2. Time: 1000 hours<br>3. Measured at room temperature after placing for 24 $\pm$ 2 hours  |

## Recommended Soldering Technologies

### (1) Re-flowing Profile

Preheat condition: 150 ~200°C/60~120sec.

Allowed time above 217°C: 60~90sec.

Max temp: 260°C

Max time at max temp: 10 sec.

Solder paste: Sn/3.0Ag/0.5Cu

Allowed Reflow time: 2x max



### (2) Iron Soldering Profile

Iron soldering power: Max. 30W

Pre-heating: 150°C/60sec.

Soldering Tip temperature: 350°C Max.

Soldering time: 3sec. Max.

Solder paste: Sn/3.0Ag/0.5Cu

Max.1 times for iron soldering



**Packaging, Storage and Transportation**

Tape Carrier Packaging:

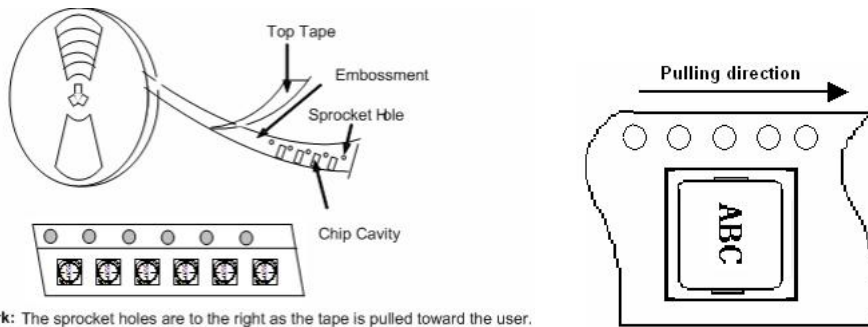
Packaging code: T

Tape carrier packaging are specified in attached figure Fig: a1、a2

Tape carrier packaging quantity:

| Type     | Standard Quantity<br>(pcs/reel) | Type     | Standard Quantity<br>(pcs/reel) |
|----------|---------------------------------|----------|---------------------------------|
| FAUL0412 | 3000                            | FAUL0630 | 1500                            |
| FAUL0420 | 3000                            | FAUL0640 | 1000                            |
| FAUL0518 | 2000                            | FAUL0650 | 1000                            |
| FAUL0530 | 2000                            | FAUL1040 | 500                             |
| FAUL0618 | 1500                            | FAUL1340 | 500                             |
| FAUL0620 | 1500                            | FAUL1350 | 500                             |
| FAUL0624 | 1500                            | FAUL1360 | 500                             |
| FAUL1365 | 500                             | FAUL1770 | 200                             |
| FAUL1030 | 800                             | FAUL1050 | 500                             |
| FAUL0754 | 500                             |          |                                 |

Taping Drawings (Unit: mm) Fig:a1



Remark: The sprocket holes are to the right as the tape is pulled toward the user.

Reel and Taping Dimensions (Unit: mm) Fig:a2



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Remark: (FAUL0412- FAUL1770)



| Type     | Reel dimensions (mm) |         |              |              | Tape dimensions (mm) |        |       |               |               |         |         |  |
|----------|----------------------|---------|--------------|--------------|----------------------|--------|-------|---------------|---------------|---------|---------|--|
|          | A                    | N       | C            | W            | W0                   | P      | P0    | H             | T             | A0      | B0      |  |
| FAUL0412 | 330±2.0              | 100±2.0 | 13±1.0       | 12.4±<br>2.0 | 12±0.3               | 8±0.1  | 4±0.1 | 1.5±<br>0.05  | 0.30±<br>0.05 | 4.4±0.1 | 4.9±0.1 |  |
| FAUL0420 | 330±2.0              | 100±2.0 | 13±1.0       | 12.4±<br>2.0 | 12±0.3               | 8±0.1  | 4±0.1 | 2.3±<br>0.05  | 0.35±<br>0.05 | 4.4±0.1 | 4.9±0.1 |  |
| FAUL0518 | 330±2.0              | 100±2.0 | 13±1.0       | 12.4±<br>2.0 | 12±0.3               | 8±0.1  | 4±0.1 | 2.1 ±<br>0.05 | 0.35±<br>0.05 | 5.4±0.1 | 5.9±0.1 |  |
| FAUL0530 | 330±2.0              | 100±2.0 | 13±1.0       | 12.4±<br>2.0 | 12±0.3               | 8±0.1  | 4±0.1 | 3.3±<br>0.05  | 0.35±<br>0.05 | 5.4±0.1 | 5.9±0.1 |  |
| FAUL0618 | 330±2.0              | 100±2.0 | 13±1.0       | 16.4±<br>2.0 | 16±0.3               | 12±0.1 | 4±0.1 | 2.1 ±<br>0.05 | 0.35±<br>0.05 | 6.9±0.1 | 7.5±0.1 |  |
| FAUL0620 | 330±2.0              | 100±2.0 | 13±1.0       | 16.4±<br>2.0 | 16±0.3               | 12±0.1 | 4±0.1 | 2.2±0.1       | 0.35±<br>0.05 | 6.9±0.1 | 7.5±0.1 |  |
| FAUL0624 | 330±2.0              | 100±2.0 | 13±1.0       | 16.4±<br>2.0 | 16±0.3               | 12±0.1 | 4±0.1 | 2.7±<br>0.05  | 0.35±<br>0.05 | 6.9±0.1 | 7.5±0.1 |  |
| FAUL0630 | 330±2.0              | 100±2.0 | 13±1.0       | 16.4±<br>2.0 | 16±0.3               | 12±0.1 | 4±0.1 | 3.3±<br>0.05  | 0.35±<br>0.05 | 6.9±0.1 | 7.5±0.1 |  |
| FAUL0640 | 330±2.0              | 97±0.5  | 13.2±<br>0.2 | 16.8±<br>2.0 | 16±0.3               | 12±0.1 | 4±0.1 | 4.2±<br>0.10  | 0.35±<br>0.05 | 6.9±0.1 | 7.5±0.1 |  |
| FAUL0650 | 330±2.0              | 100±2.0 | 13±1.0       | 16.4±<br>2.0 | 16±0.3               | 12±0.1 | 4±0.1 | 5.2±<br>0.10  | 0.4±<br>0.05  | 6.9±0.1 | 7.5±0.1 |  |
| FAUL0754 | 330±2.0              | 97±0.5  | 13.2±<br>0.2 | 16.8±<br>2.0 | 16±0.3               | 12±0.1 | 4±0.1 | 5.7±<br>0.10  | 0.4±<br>0.05  | 7.6±0.1 | 8.1±0.1 |  |

|          |         |         |        |              |        |        |       |              |               |               |               |
|----------|---------|---------|--------|--------------|--------|--------|-------|--------------|---------------|---------------|---------------|
| FAUL1030 | 330±2.0 | 100±2.0 | 13±1.0 | 24.4±<br>2.0 | 24±0.3 | 16±0.1 | 4±0.1 | 3.3±<br>0.10 | 0.35±<br>0.05 | 10.4±<br>0.1  | 11.6±<br>0.1  |
| FAUL1040 | 330±2.0 | 100±2.0 | 13±1.0 | 24.4±<br>2.0 | 24±0.3 | 16±0.1 | 4±0.1 | 4.3±<br>0.10 | 0.35±<br>0.05 | 10.4±<br>0.1  | 11.5±<br>0.1  |
| FAUL1340 | 330±2.0 | 100±2.0 | 13±1.0 | 24.4±<br>2.0 | 24±0.3 | 16±0.1 | 4±0.1 | 4.3±<br>0.10 | 0.5±<br>0.05  | 13.4±<br>0.1  | 14.4±<br>0.1  |
| FAUL1050 | 330±2.0 | 100±2.0 | 13±1.0 | 24.4±<br>2.0 | 24±0.3 | 16±0.1 | 4±0.1 | 5.4±<br>0.10 | 0.5±<br>0.05  | 10.4±<br>0.1  | 11.6±<br>0.1  |
| FAUL1350 | 330±2.0 | 100±2.0 | 13±1.0 | 24.4±<br>2.0 | 24±0.3 | 16±0.1 | 4±0.1 | 5.3±<br>0.10 | 0.5±<br>0.05  | 13.2±<br>0.1  | 14.4±<br>0.1  |
| FAUL1360 | 330±2.0 | 100±2.0 | 13±1.0 | 24.4±<br>2.0 | 24±0.3 | 16±0.1 | 4±0.1 | 6.3±<br>0.10 | 0.5±<br>0.05  | 13.2±<br>0.1  | 14.4±<br>0.1  |
| FAUL1365 | 330±2.0 | 97±0.5  | 13±0.2 | 24.0±<br>0.5 | 24±0.3 | 16±0.1 | 4±0.1 | 6.8±<br>0.10 | 0.5±<br>0.05  | 13.1 ±<br>0.1 | 14.0±<br>0.1  |
| FAUL1770 | 330±2.0 | 97±0.5  | 13±0.2 | 24.4±<br>2.0 | 32±0.3 | 24±0.1 | 4±0.1 | 7.3±<br>0.10 | 0.5±<br>0.05  | 17.5±<br>0.1  | 18.1 ±<br>0.1 |

Peeling off force: 10gf to 130gf in the direction show below. Fig:C1

Top tape or cover tape



## Storage

- (1) The solderability of the external electrodes may deteriorate if packages are stored in high humidity. Besides, to ensure packing material's good state, packages must be stored at -10℃ to 40℃ and 70% RH Max.
- (2) The solderability of the external electrodes may deteriorate if packages are exposed to dust of harmful gas (e.g. HCl, sulfurous gas of H<sub>2</sub>S).
- (3) Packaging materials may deform if packages are exposed directly to sunlight.
- (4) Minimum packages, such as polyvinyl heat-seal packages shall not be opened until they are used. If opened, use the reels as soon as possible.
- (5) Solderability shall be guaranteed for a period of time from the date of delivery on condition that they are stored at the specified environment.  
For those parts, which passed more than the time shall be checked solderability before using.
- (6) For magnetic products, keep clear of anything that may generate magnetic fields to avoid change of products performance.
- (7) To avoid any damage to products, do not load mechanic force on products or place heavy goods on products, and exclude strong vibration or drop.
- (8)** In case of storage over 12 months, solderability shall be checked before actual usage.

## Warning and Attentions

### Precautions on Use

- (1) Always wear static control bands to protect against ESD.
- (2) Any devices used with the products (soldering irons, measuring instruments) should be properly grounded.
- (3) Keep bare hands and metal conductors (i.e., metal desk) away from electrodes or conductive areas that lead to electrodes.
- (4) Preheat when soldering.
- (5) Don't apply current in excess of the rated current value. It may reduce the impedance or inductance, or cause damage to components due to over-current.
- (6) For magnetic products, keep clear of anything that may generate magnetic fields such as speakers and coils. Use non-magnetic tweezers when handing the chips.
- (7) When soldering, the electrical characteristics may be varied due to hot energy and mechanical stress.
- (8) When coating products with resin, the relatively high resin curing stress may change the electrical characteristics. For exterior coating, select resin carefully so that electrical and mechanical performance of the product is not affected. Before using, please evaluate reliability with the product mounted in your application set.
- (9) When mount chips with adhesive in preliminary assembly, do appropriate check before the soldering stage, i.e., the size of land pattern, type of adhesive, amount applied, hardening of the adhesive on proper usage and amounts of adhesive to use.
- (10) Mounting density: Add special attention to radiating heat of products when mounting other components nearby. The excessive heat by other products may cause deterioration at joint of this product with substrate.
- (11) Since some products are constructed like an open magnetic circuit, narrow spacing between components may cause magnetic coupling.
- (12) Please do not give the product any excessive mechanical shocks in transportation.
- (13) Please do not touch wires by sharp terminals such as tweezers to avoid causing any damage to wires.
- (14) Please do not add any shock and power to the soldered product to avoid causing any damage to chip body.
- (15) Please do not touch the electrodes by naked hand as the solderability of the external electrodes may deteriorate by grease or oil on the skin.

## PCB Bending Design

The following shall be considered when designing and laying out PCB's.

- (1) PCB shall be designed so that products are not subjected to the mechanical stress from board warp or deflection.



- (2) Products location on PCB separation.



Product shall be located carefully because they may be subjected to the mechanical stress in order of  $A > C = B > D$ .

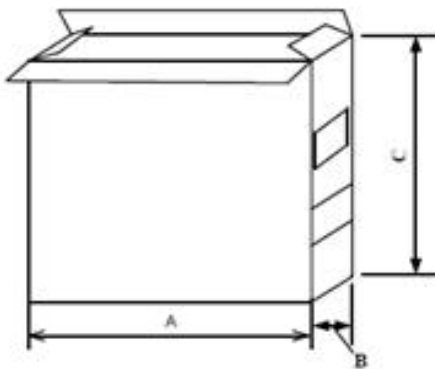
- (3) When splitting the PCB board, or insert (remove) connector, or fasten thread after mounting components, care is required so as not to give any stress of deflection or twisting to the board. Because mechanical force may cause deterioration of the bonding strength of electrode and solder, even crack of product body. Board separation should not be done manually, but by using appropriate device

### Recommended PCB Design for SMT Land-Patterns

When chips are mounted on a PCB, the amount of solder used (size of fillet) can directly affect chip performance. Therefore, the following items must be carefully considered in the design of solder land patterns:

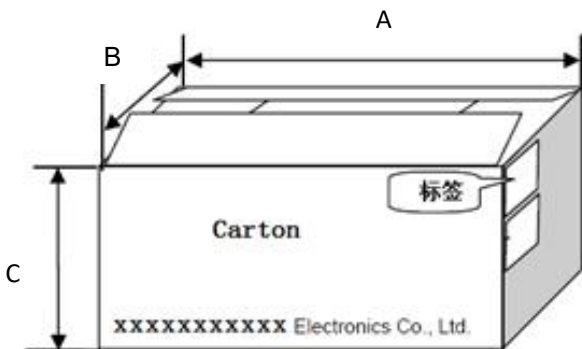
- (1) The amount of solder applied can affect the ability of chips to withstand mechanical stresses which may lead to breaking or cracking. Therefore, when designing land-patterns it is necessary to consider the appropriate size and configuration of the solder pads which in turn determines the amount of solder necessary to form the fillets.
- (2) When more than one part is jointly soldered onto the same land or pad, the pad must be designed that each component's soldering Point is separated by solder-resist  
Recommended land dimensions please refer to product specification.

#### Inner Box



| Packaging type | A (mm) | B (mm) | C (mm) |
|----------------|--------|--------|--------|
| Inner box      | 335    | 70     | 340    |

#### Carton



| Packaging type | A (mm) | B (mm) | C (mm) |
|----------------|--------|--------|--------|
| type           | 360    | 360    | 360    |

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[HCR15JTRF](#) [NIN-HCR33JTRF](#) [NIN-HDR22JTRF](#) [NIN-HDR82JTRF](#) [NIN-HK2N7STRF](#) [NIN-PA150KTR370F](#) [NIN-PB100KTR550F](#)