



TDCG

MOLDING CHOKE

一体成型电感

TDCG 天通控股股份有限公司
TDG HOLDING CO.,LTD.

MOLDING CHOKE 2023

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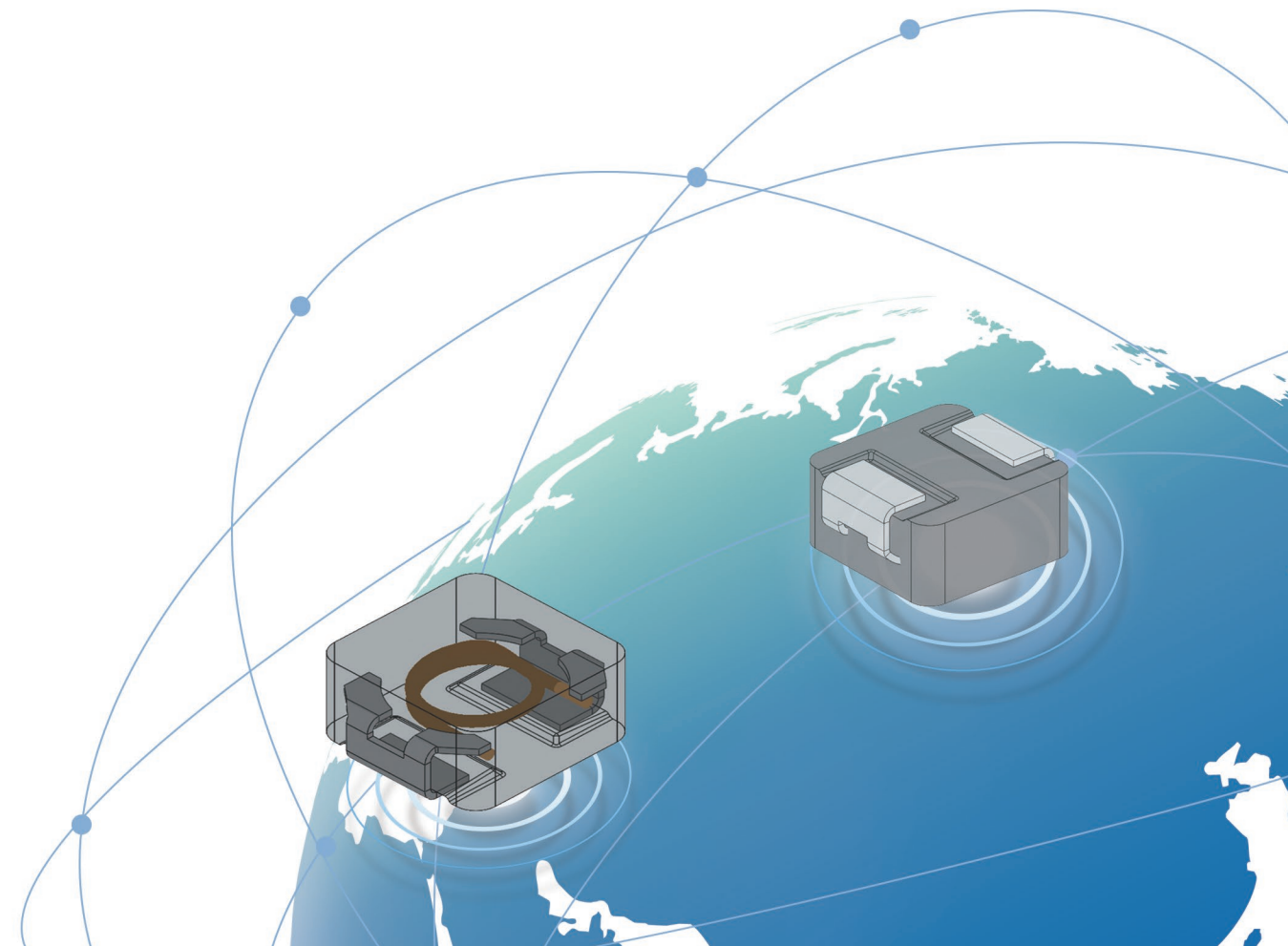
2023 一体成型电感



线上商城



微信公众号



TMAX SERIES | TMAX系列

Company Superiority 公司优势

1. Rich Experience of More Than 30 Years in R&D and Production of Magnetic Materials
30多年专业的磁材研发、生产经验
2. Complete Quality System
完整的品质管理体系
3. Normative Laboratories Certified by CNAS and DiLAC
CNAS和DiLAC双重认证的标准实验室
4. Advanced Equipment for Testing and Production in the Industry
行业内先进的测试、生产设备
5. Professional Technical Team With More Than 10 Years of Experience
10年以上相关经验的技术团队



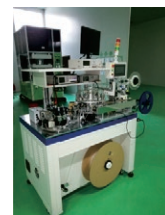
IATF 16949



ISO 9001



ISO 14001



Features & Applications 产品特点及应用

Low Profile and High Rated Current
超薄、高额定电流

Die-Casting by Low Loss metal softmagnetic powder
Low DCR and Surpassingly Anti-Rust Ability
采用低损耗金属软磁粉末压铸，直流电阻低，防锈性能卓越

Following RoHS and Halogen Free
符合RoHS要求、不含卤素

Good EMC performance and low noise
良好的电磁兼容性、低噪

Following AECQ-200
符合AECQ-200

Voltage Regulator Module
电压调节模块

DC/DC Converters
直流-直流转换器

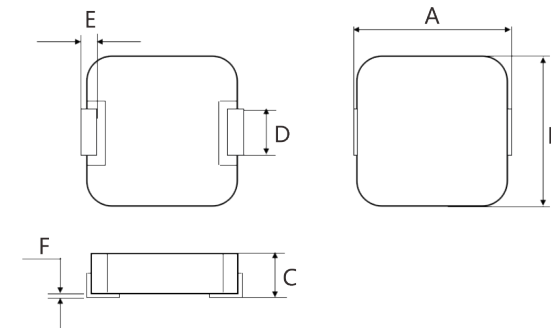
Thin Type on-Board Power Supply
Module for Exchanger
电源供应模块

Laptops and PCs
笔记本及台式电脑

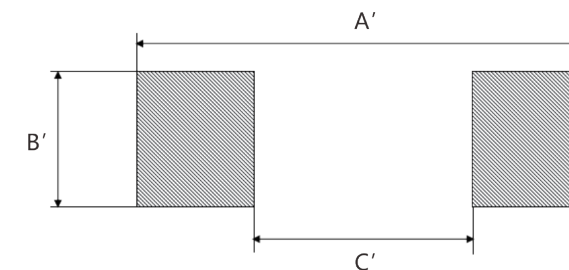
SSD Modules
硬盘模块

Automotive Electronics
汽车电子

Dimensions 产品尺寸

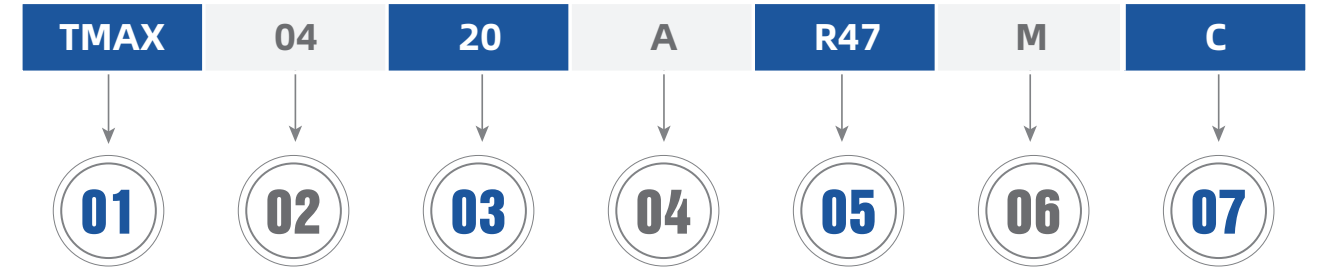


Recommend Land Pattern Dimensions 推荐焊盘尺寸



1 Power Choke

▶ PART NUMBERING



1. Series No

2. SIZE(L*W) : 04=4.4mm*4.2mm

| CODE | 04 | 05 | 06 | 08 | 10 | 13 | 17 |
|-----------|---------|---------|---------|---------|-------|-------|-------|
| DIMENSION | 4.0*4.0 | 5.0*5.0 | 6.0*6.0 | 8.0*8.0 | 10*10 | 13*13 | 17*17 |

3. SIZE(T) : 12=1.2mm max.; 20=2.0mm max.

| CODE | 12 | 15 | 18 | 20 | 30 | 40 | 50 | 60 | 65 | 70 |
|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| DIMENSION | 1.2 | 1.5 | 1.8 | 2.0 | 3.0 | 4.0 | 5.0 | 6.0 | 6.5 | 7.0 |

4. Mold Code

5. Types:

| TYPE | 1 | 2 | 3 | 4 |
|------------------|------|------|-----|-----|
| CODE | R47 | R68 | 1R0 | 2R2 |
| INDUCTANCE VALUE | 0.47 | 0.68 | 1.0 | 2.2 |
| | 100 | 220 | 100 | 200 |

6. Tolerance: M=± 20%

7. Materials Type



IATF 16949



► SPECIFICATION NOTE

Note 1: Inductance Tolerance $\pm 20\%$

Note 2: All test data is referenced to 25°C ambient.

Note 3: Test Condition:100kHz, 1.0Vrms

Note 4: I_{dc} : DC current (A) that will cause an approximate ΔT of 40°C

Note 5: I_{sat} : DC current (A) that will cause L_o to drop approximately 30%

Note 6: The part temperature (ambient + temp rise) should not exceed 125°C under worse case operating conditions. Circuit design , component placement, PWB trace size and thickness, airflow and other cooling provision all affect the part temperature. Part temperature should be verified in the end application.

Note 7: The rated current as listed is either the saturation current or the heating current depending on which value is lower.

► SERIES PRODUCT SPECIFICATION

4*4 SERIES

TMAX0412A (4.45*4.75*1.2mm)

| Part Number | L0 Inductance (μH) | DCR (mohm) | | Heat rating current,I _{dc} (A) | | Saturation current,I _{sat} (A) | |
|---------------|--------------------|------------|------|---|-----|---|-----|
| | | Typical | Max | Typical | Max | Typical | Max |
| TMAX0412AR33M | 0.33 | 10.8 | 12 | 12 | 11 | 13.5 | 12 |
| TMAX0412AR47M | 0.47 | 16 | 18.4 | 9.5 | 8.5 | 10.6 | 9.2 |
| TMAX0412AR56M | 0.56 | 16.9 | 19.9 | 7 | 6.3 | 9.1 | 7.8 |
| TMAX0412A1R0M | 1 | 29 | 34.5 | 5.5 | 4.7 | 7 | 6 |
| TMAX0412A1R5M | 1.5 | 49 | 56 | 5 | 4.5 | 5.8 | 5 |
| TMAX0412A2R2M | 2.2 | 74 | 82 | 3.7 | 3.3 | 4.4 | 3.8 |
| TMAX0412A3R3M | 3.3 | 110 | 124 | 3.1 | 2.8 | 4.1 | 3.5 |
| TMAX0412A4R7M | 4.7 | 124 | 145 | 2.4 | 2.1 | 3.2 | 2.8 |
| TMAX0412A6R8M | 6.8 | 300 | 355 | 1.7 | 1.5 | 2.7 | 2.3 |

TMAX0418A (4.45*4.75*1.8mm)

| Part Number | L0 Inductance (μH) | DCR (mohm) | | Heat rating current,I _{dc} (A) | | Saturation current,I _{sat} (A) | |
|---------------|--------------------|------------|-----|---|-----|---|-----|
| | | Typical | Max | Typical | Max | Typical | Max |
| TMAX0418AR10M | 0.10 | 5.2 | 6 | 15 | 13 | 25 | 23 |
| TMAX0418AR22M | 0.22 | 10.6 | 12 | 10 | 8.5 | 20 | 17 |
| TMAX0418AR47M | 0.47 | 20 | 22 | 6.5 | 5.5 | 13 | 11 |
| TMAX0418A1R0M | 1.0 | 46 | 52 | 4.6 | 4.1 | 8.5 | 7 |
| TMAX0418A2R2M | 2.2 | 89 | 103 | 3.1 | 2.9 | 5.6 | 4.7 |

TMAX0420A (4.45*4.75*2.0mm)

| Part Number | L0 Inductance (μH) | DCR (mohm) | | Heat rating current,I _{dc} (A) | | Saturation current,I _{sat} (A) | |
|---------------|--------------------|------------|-----|---|------|---|-----|
| | | Typical | Max | Typical | Max | Typical | Max |
| TMAX0420AR36M | 0.36 | 8 | 9.2 | 12.8 | 11.5 | 11 | 9.5 |
| TMAX0420AR47M | 0.47 | 8.4 | 9.5 | 11.5 | 10 | 9.5 | 8.5 |
| TMAX0420A1R0M | 1 | 17 | 20 | 7.5 | 6.5 | 8.7 | 7.6 |
| TMAX0420A1R5M | 1.5 | 30 | 36 | 5.8 | 5.2 | 7 | 6 |
| TMAX0420A2R2M | 2.2 | 36 | 42 | 5.5 | 4.8 | 6.5 | 5.7 |
| TMAX0420A3R3M | 3.3 | 55 | 64 | 3.7 | 3.3 | 5 | 4.3 |
| TMAX0420A4R7M | 4.7 | 74 | 89 | 3.5 | 3.1 | 4.6 | 3.8 |
| TMAX0420A6R8M | 6.8 | 128 | 148 | 2.6 | 2.35 | 3.3 | 2.7 |

5*5 SERIES

TMAX0515A (5.4*5.7*1.5mm)

| Part Number | L0 Inductance (μH) | DCR (mohm) | | Heat rating current, I _{dc} (A) | | Saturation current, I _{sat} (A) | |
|---------------|--------------------|------------|------|--|------|--|------|
| | | Typical | Max | Typical | Max | Typical | Max |
| TMAX0515AR12M | 0.12 | 3.2 | 3.7 | 18 | 16 | 29 | 25 |
| TMAX0515AR22M | 0.22 | 3.79 | 4.4 | 16 | 14.5 | 20 | 16.8 |
| TMAX0515AR47M | 0.47 | 10.8 | 12.7 | 10 | 9 | 15 | 12.7 |
| TMAX0515AR68M | 0.68 | 13.5 | 15.5 | 9 | 8.1 | 11.2 | 9.5 |
| TMAX0515A1R0M | 1 | 19 | 23 | 6.5 | 5.8 | 10 | 8.5 |
| TMAX0515A1R2M | 1.2 | 29 | 33.7 | 5.3 | 4.7 | 8 | 6.5 |
| TMAX0515A2R2M | 2.2 | 45 | 52 | 5 | 4 | 7 | 6 |
| TMAX0515A3R3M | 3.3 | 60 | 72 | 3.5 | 3.1 | 5.1 | 4.3 |
| TMAX0515A4R7M | 4.7 | 88 | 100 | 3.1 | 2.7 | 4.2 | 3.7 |
| TMAX0515A100M | 10 | 152 | 170 | 2.1 | 1.9 | 3.1 | 2.7 |

TMAX0518A (5.4*5.7*1.8mm)

| Part Number | L0 Inductance (μH) | DCR (mohm) | | Heat rating current, I _{dc} (A) | | Saturation current, I _{sat} (A) | |
|---------------|--------------------|------------|------|--|------|--|------|
| | | Typical | Max | Typical | Max | Typical | Max |
| TMAX0518AR22M | 0.22 | 3.15 | 3.65 | 20 | 17 | 24 | 20.5 |
| TMAX0518AR24M | 0.24 | 3.15 | 3.65 | 20 | 17 | 23 | 20 |
| TMAX0518AR33M | 0.33 | 4.5 | 5.2 | 17 | 15 | 20 | 17 |
| TMAX0518AR47M | 0.47 | 7.6 | 8.5 | 11.5 | 10.5 | 17 | 16 |
| TMAX0518AR68M | 0.68 | 11.5 | 13.3 | 9.2 | 8.3 | 16.2 | 13.4 |
| TMAX0518A1R0M | 1 | 13.9 | 16 | 8.2 | 7.2 | 11.8 | 10.3 |
| TMAX0518A1R5M | 1.5 | 22.5 | 26 | 6.7 | 6 | 10.5 | 8.3 |
| TMAX0518A2R2M | 2.2 | 28 | 33 | 5.7 | 5 | 7.4 | 6.3 |

TMAX0530A (5.4*5.7*3.0mm)

| Part Number | L0 Inductance (μH) | DCR (mohm) | | Heat rating current, I _{dc} (A) | | Saturation current, I _{sat} (A) | |
|---------------|--------------------|------------|------|--|------|--|------|
| | | Typical | Max | Typical | Max | Typical | Max |
| TMAX0530AR15M | 0.15 | 3.1 | 3.5 | 17 | 14.8 | 30 | 26.4 |
| TMAX0530AR33M | 0.33 | 4.55 | 5.15 | 14 | 12.2 | 19 | 16.5 |
| TMAX0530AR47M | 0.47 | 7.6 | 8.5 | 11 | 9.6 | 16 | 13.9 |
| TMAX0530AR68M | 0.68 | 9 | 10 | 11 | 9.6 | 13 | 11.3 |
| TMAX0530A1R0M | 1 | 12 | 13.5 | 9 | 7.8 | 11 | 9.6 |
| TMAX0530A2R2M | 2.2 | 25 | 29 | 6.5 | 5.7 | 9 | 7.8 |
| TMAX0530A3R3M | 3.3 | 33 | 38 | 5.5 | 4.8 | 8 | 7.0 |
| TMAX0530A4R7M | 4.7 | 51 | 60 | 4.5 | 3.9 | 6 | 5.2 |
| TMAX0530A6R8M | 6.8 | 80 | 90 | 3.5 | 3.0 | 4.5 | 3.9 |
| TMAX0530A100M | 10 | 110 | 125 | 3 | 2.6 | 4 | 3.5 |

6*6 SERIES

TMAX0630A (7.4*6.8*3.0mm)

| Part Number | L0 Inductance (μH) | DCR (mohm) | | Heat rating current, I _{dc} (A) | | Saturation current, I _{sat} (A) | |
|---------------|--------------------|------------|------|--|------|--|------|
| | | Typical | Max | Typical | Max | Typical | Max |
| TMAX0630AR22M | 0.22 | 1.15 | 1.3 | 37 | 32 | 38 | 32 |
| TMAX0630AR36M | 0.36 | 2.3 | 2.55 | 25 | 23 | 31 | 28 |
| TMAX0630AR47M | 0.47 | 2.9 | 3.3 | 23 | 20 | 25 | 23 |
| TMAX0630AR68M | 0.68 | 4.6 | 5.2 | 16.5 | 15.5 | 18.5 | 17 |
| TMAX0630AR82M | 0.82 | 4.7 | 5.4 | 16.2 | 15 | 18 | 15.6 |
| TMAX0630A1R0M | 1 | 5.6 | 6.5 | 16 | 14.4 | 17 | 15 |
| TMAX0630A1R5M | 1.5 | 7.5 | 8.9 | 12 | 11 | 15 | 14 |
| TMAX0630A2R2M | 2.2 | 11 | 12.8 | 10 | 9 | 14 | 12 |
| TMAX0630A3R3M | 3.3 | 18.5 | 21 | 8 | 7 | 11 | 10 |
| TMAX0630A4R7M | 4.7 | 23.6 | 26 | 6.7 | 6 | 8 | 7 |
| TMAX0630A6R8M | 6.8 | 41 | 48 | 5.5 | 5 | 7 | 6.1 |
| TMAX0630A8R2M | 8.2 | 52 | 60 | 5.1 | 4.6 | 6.6 | 5.7 |
| TMAX0630A100M | 10 | 59 | 66 | 4.2 | 3.8 | 6.2 | 5.5 |
| TMAX0630A220M | 22 | 148 | 170 | 2.8 | 2.3 | 3.2 | 2.7 |
| TMAX0630A330M | 33 | 230 | 270 | 2.1 | 1.8 | 3 | 2.5 |

TMAX0650A (7.4*6.8*5.0mm)

| Part Number | L0 Inductance (μH) | DCR (mohm) | | Heat rating current, I _{dc} (A) | | Saturation current, I _{sat} (A) | |
|---------------|--------------------|------------|------|--|------|--|------|
| | | Typical | Max | Typical | Max | Typical | Max |
| TMAX0650AR33M | 0.33 | 2.85 | 3.2 | 22 | 19.1 | 30 | 26.1 |
| TMAX0650AR47M | 0.47 | 4.4 | 4.95 | 18 | 15.7 | 22 | 19.1 |
| TMAX0650A1R0M | 1 | 5.6 | 6 | 15.6 | 13.6 | 13 | 11.3 |
| TMAX0650A3R3M | 3.3 | 15.5 | 17.8 | 7.5 | 6.5 | 10 | 8.7 |
| TMAX0650A5R5M | 5.5 | 27 | 33 | 6.3 | 5.5 | 9.5 | 8.3 |
| TMAX0650A6R8M | 6.8 | 31 | 37 | 6 | 5.2 | 8 | 7.0 |
| TMAX0650A100M | 10 | 53 | 65 | 4 | 3.5 | 6.5 | 5.7 |
| TMAX0650A150M | 15 | 76 | 85 | 3.8 | 3.3 | 5 | 4.3 |
| TMAX0650A180M | 18 | 90 | 100 | 3.5 | 3.0 | 4.5 | 3.9 |
| TMAX0650A220M | 22 | 116 | 130 | 3 | 2.6 | 4 | 3.5 |
| TMAX0650A330M | 33 | 170 | 185 | 2.7 | 2.3 | 3 | 2.6 |
| TMAX0650A470M | 47 | 295 | 330 | 2 | 1.7 | 2.5 | 2.2 |

10*10 SERIES

TMAX1040A (11.5*10.3*4.0mm)

| Part Number | L0 Inductance (μH) | DCR (mohm) | | Heat rating current, I _{dc} (A) | | Saturation current, I _{sat} (A) | |
|---------------|--------------------|------------|------|--|-----|--|------|
| | | Typical | Max | Typical | Max | Typical | Max |
| TMAX1040AR15M | 0.15 | 0.45 | 0.55 | 50 | 45 | 76 | 6 |
| TMAX1040AR22M | 0.22 | 0.82 | 0.93 | 36 | 32 | 63 | 60 |
| TMAX1040AR36M | 0.36 | 1.05 | 1.18 | 33 | 29 | 51 | 42 |
| TMAX1040AR47M | 0.47 | 1.3 | 1.5 | 32 | 28 | 46 | 40 |
| TMAX1040AR56M | 0.56 | 1.59 | 1.8 | 25 | 23 | 33.5 | 28 |
| TMAX1040A1R0M | 1 | 2.85 | 3.3 | 19 | 17 | 29 | 26 |
| TMAX1040A1R5M | 1.5 | 3.8 | 4.2 | 16 | 15 | 22 | 18 |
| TMAX1040A2R2M | 2.2 | 6 | 7 | 12 | 11 | 20 | 16 |
| TMAX1040A3R3M | 3.3 | 10.5 | 12 | 10 | 9 | 16.2 | 13.5 |
| TMAX1040A4R7M | 4.7 | 16.8 | 20 | 8.5 | 7.6 | 15.2 | 13 |
| TMAX1040A5R6M | 5.6 | 19.8 | 23 | 8 | 7.2 | 14.1 | 11.5 |
| TMAX1040A6R8M | 6.8 | 22 | 24.5 | 7.8 | 6.5 | 12 | 9.5 |
| TMAX1040A8R2M | 8.2 | 24 | 26.5 | 7.6 | 6.2 | 9 | 8 |
| TMAX1040A100M | 10 | 27 | 30 | 7.5 | 5.8 | 8.6 | 7.2 |
| TMAX1040A150M | 15 | 39.5 | 45 | 6.3 | 5 | 8 | 6.9 |
| TMAX1040A220M | 22 | 59 | 66 | 5 | 4 | 6.2 | 5.4 |
| TMAX1040A330M | 33 | 84 | 91 | 4.4 | 3.5 | 5.5 | 5 |
| TMAX1040A470M | 47 | 129 | 143 | 3.3 | 2.8 | 4 | 3.7 |

8*8 SERIES

TMAX0840A (8.8*8.0*4.0mm)

| Part Number | L0 Inductance (μH) | DCR (mohm) | | Heat rating current, I _{dc} (A) | | Saturation current, I _{sat} (A) | |
|---------------|--------------------|------------|-----|--|------|--|------|
| | | Typical | Max | Typical | Max | Typical | Max |
| TMAX0840A1R0M | 1 | 4.2 | 4.8 | 18 | 15.7 | 24 | 20.9 |

13*13 SERIES

TMAX1350A (12.8*13.8*5.0mm)

| Part Number | L0 Inductance (μH) | DCR (mohm) | | Heat rating current, I _{dc} (A) | | Saturation current, I _{sat} (A) | |
|---------------|--------------------|------------|------|--|------|--|------|
| | | Typical | Max | Typical | Max | Typical | Max |
| TMAX1350AR47M | 0.47 | 0.9 | 1.05 | 38.5 | 34.2 | 55 | 47.4 |
| TMAX1350AR68M | 0.68 | 1.34 | 1.55 | 35 | 30.5 | 54 | 46 |
| TMAX1350AR82M | 0.82 | 1.45 | 1.65 | 34.2 | 30.2 | 42 | 39 |
| TMAX1350A1R0M | 1 | 1.8 | 2.2 | 30 | 27 | 36 | 32.5 |
| TMAX1350A2R2M | 2.2 | 4 | 5 | 20.5 | 19 | 25 | 22 |
| TMAX1350A3R3M | 3.3 | 5.5 | 7 | 15.5 | 14 | 22.5 | 19.5 |
| TMAX1350A4R7M | 4.7 | 8.5 | 10.3 | 13 | 11.5 | 17.2 | 14.5 |
| TMAX1350A6R8M | 6.8 | 13 | 15 | 11.5 | 10 | 15 | 12 |
| TMAX1350A100M | 10 | 18.9 | 22 | 9 | 8.1 | 13 | 10.5 |
| TMAX1350A150M | 15 | 30 | 35 | 7 | 6.3 | 8 | 6.8 |
| TMAX1350A220M | 22 | 50 | 58 | 5.5 | 5 | 6.6 | 5.7 |

TMAX1365A (12.8*13.8*6.5mm)

| Part Number | L0 Inductance (μH) | DCR (mohm) | | Heat rating current, I _{dc} (A) | | Saturation current, I _{sat} (A) | |
|---------------|--------------------|------------|------|--|------|--|-----|
| | | Typical | Max | Typical | Max | Typical | Max |
| TMAX1350AR68M | 0.68 | 1.45 | 1.68 | 35 | 32 | 75 | 70 |
| TMAX1350A1R0M | 1 | 1.8 | 2.15 | 31 | 28 | 53 | 50 |
| TMAX1350A1R3M | 1.3 | 2.2 | 2.5 | 28.5 | 27.5 | 52 | 49 |
| TMAX1350A1R5M | 1.5 | 2.3 | 2.6 | 28 | 27 | 51 | 48 |
| TMAX1350A1R8M | 1.8 | 2.7 | 3.1 | 25 | 24 | 49 | 47 |
| TMAX1350A2R2M | 2.2 | 3.49 | 4.2 | 22.5 | 21.5 | 46 | 42 |
| TMAX1350A3R3M | 3.3 | 3.75 | 4.4 | 22 | 20 | 42 | 40 |
| TMAX1350A4R7M | 4.7 | 7.8 | 8.5 | 16 | 15 | 30 | 26 |
| TMAX1350A5R6M | 5.6 | 9 | 10.5 | 14 | 12.5 | 28 | 24 |
| TMAX1350A6R8M | 6.8 | 11.5 | 13.5 | 12.5 | 11 | 26 | 22 |
| TMAX1350A8R2M | 8.2 | 14 | 16 | 11.5 | 10 | 21 | 19 |
| TMAX1350A100M | 10 | 16 | 18.5 | 11 | 9 | 20 | 18 |
| TMAX1350A150M | 15 | 32 | 37 | 8.5 | 7.5 | 15 | 13 |
| TMAX1350A220M | 22 | 38 | 44 | 6.5 | 5.8 | 11.5 | 10 |

17*17 SERIES

TMAX1770A(17.5*17.15*7.0mm)

| Part Number | L0 Inductance (μH) | DCR (mohm) | | Heat rating current, I _{dc} (A) | | Saturation current, I _{sat} (A) | |
|---------------|--------------------|------------|------|--|-----|--|------|
| | | Typical | Max | Typical | Max | Typical | Max |
| TMAX1770A2R2M | 2.2 | 2.1 | 2.5 | 37 | 30 | 38 | 33 |
| TMAX1770A3R3M | 3.3 | 3.4 | 3.95 | 29 | 26 | 30 | 26 |
| TMAX1770A4R7M | 4.7 | 4 | 4.6 | 27 | 24 | 28 | 24 |
| TMAX1770A6R8M | 6.8 | 6.5 | 7.5 | 21 | 19 | 25 | 22 |
| TMAX1770A8R2M | 8.2 | 8 | 8.6 | 16 | 15 | 22 | 20 |
| TMAX1770A100M | 10 | 9.2 | 9.9 | 14 | 13 | 20 | 18.5 |
| TMAX1770A150M | 15 | 13.8 | 15.3 | 12 | 11 | 15.5 | 13.5 |
| TMAX1770A200M | 20 | 19.4 | 21.9 | 9.7 | 8.7 | 13 | 11 |
| TMAX1770A220M | 22 | 20 | 23 | 9.7 | 8.7 | 12 | 10.5 |
| TMAX1770A330M | 33 | 32 | 37 | 9.2 | 8 | 10.5 | 8.6 |
| TMAX1770A470M | 47 | 40 | 47 | 6.8 | 6 | 8.5 | 7.5 |
| TMAX1770A680M | 68 | 73 | 85 | 5.2 | 4.7 | 8 | 6.8 |
| TMAX1770A101M | 100 | 110 | 130 | 3.7 | 3.3 | 6 | 5 |

2

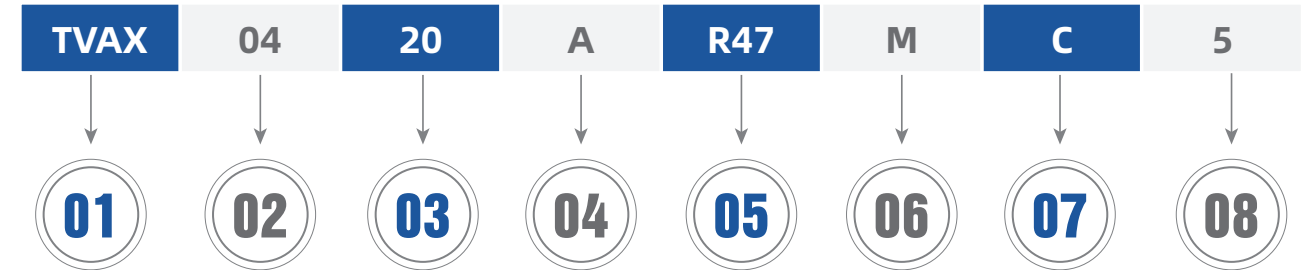
AUTOMOTIVE CHOKE



IATF 16949



▶ PART NUMBERING



1. Series No

2. SIZE(L*W) : 04=4.4mm*4.2mm

| CODE | 04 | 05 | 06 | 08 | 10 |
|-----------|-----------|---------|---------|---------|-----------|
| DIMENSION | 4.45*4.75 | 5.4*5.7 | 6.8*7.4 | 8.0*8.8 | 10.3*11.5 |

3. SIZE(T) : 12=1.2mm max. ; 20=2.0mm max.

| CODE | 12 | 15 | 18 | 20 | 30 | 40 | 50 | 60 | 65 | 70 |
|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| DIMENSION | 1.2 | 1.5 | 1.8 | 2.0 | 3.0 | 4.0 | 5.0 | 6.0 | 6.5 | 7.0 |

4. Mold Code

5. Typess:

| TYPE | 1 | 2 | 3 | 4 |
|------------------|------|------|-----|-----|
| CODE | R47 | R68 | 1R0 | 2R2 |
| INDUCTANCE VALUE | 0.47 | 0.68 | 1.0 | 2.2 |

6. Tolerance: M=± 20%

7. Materials Type

8. Operating Temp.

| CODE | NA | 5 | 6 |
|-----------------|-------------|-------------|-------------|
| OPERATING TEMP. | -55°C~125°C | -55°C~155°C | -55°C~165°C |

► SPECIFICATION NOTE

Note 1: Inductance Tolerance $\pm 20\%$

Note 2: All test data is referenced to 25°C ambient.

Note 3: Test Condition:100kHz, 1.0Vrms

Note 4: I_{dc} : DC current (A) that will cause an approximate ΔT of 40°C

Note 5: I_{sat} : DC current (A) that will cause L_o to drop approximately 30%

Note 6: The part temperature (ambient + temp rise) should not exceed 125°C under worse case operating conditions. Circuit design , component placement, PWB trace size and thickness, airflow and other cooling provision all affect the part temperature. Part temperature should be verified in the end application.

Note 7: The rated current as listed is either the saturation current or the heating current depending on which value is lower.

► SERIES PRODUCT SPECIFICATION

4*4 SERIES

TVAX0420A (4.45*4.75*2.0mm)

| Part Number | L0 Inductance (μH) | DCR (mohm) | | Heat rating current, I _{dc} (A) | | Saturation current, I _{sat} (A) | |
|---------------|--------------------|------------|-----|--|------|--|-----|
| | | Typical | Max | Typical | Max | Typical | Max |
| TVAX0420AR36M | 0.36 | 8 | 9.2 | 12.8 | 11.5 | 11 | 9.5 |
| TVAX0420AR47M | 0.47 | 8.4 | 9.5 | 11.5 | 10 | 9.5 | 8.5 |
| TVAX0420A1R0M | 1 | 17 | 20 | 7.5 | 6.5 | 8.7 | 7.6 |
| TVAX0420A1R5M | 1.5 | 30 | 36 | 5.8 | 5.2 | 7 | 6 |
| TVAX0420A2R2M | 2.2 | 36 | 42 | 5.5 | 4.8 | 6.5 | 5.7 |
| TVAX0420A3R3M | 3.3 | 55 | 64 | 3.7 | 3.3 | 5 | 4.3 |
| TVAX0420A4R7M | 4.7 | 74 | 89 | 3.5 | 3.1 | 4.6 | 3.8 |
| TVAX0420A6R8M | 6.8 | 128 | 148 | 2.6 | 2.35 | 3.3 | 2.7 |

6*6 SERIES

TVAX0630A (7.4*6.8*3.0mm)

| Part Number | L0 Inductance (μH) | DCR (mohm) | | Heat rating current, I _{dc} (A) | | Saturation current, I _{sat} (A) | |
|---------------|--------------------|------------|------|--|------|--|------|
| | | Typical | Max | Typical | Max | Typical | Max |
| TVAX0630AR22M | 0.22 | 1.15 | 1.3 | 37 | 32 | 38 | 32 |
| TVAX0630AR36M | 0.36 | 2.3 | 2.55 | 25 | 23 | 31 | 28 |
| TVAX0630AR47M | 0.47 | 2.9 | 3.3 | 23 | 20 | 25 | 23 |
| TVAX0630AR68M | 0.67 | 4.6 | 5.2 | 16.5 | 15.5 | 18.5 | 17 |
| TVAX0630AR82M | 0.82 | 4.7 | 5.4 | 16.2 | 15 | 18 | 15.6 |
| TVAX0630A1R0M | 1 | 5.6 | 6.5 | 16 | 14.4 | 17 | 15 |
| TVAX0630A1R5M | 1.5 | 7.5 | 8.9 | 12 | 11 | 15 | 14 |
| TVAX0630A2R2M | 2.2 | 11 | 12.8 | 10 | 9 | 14 | 12 |
| TVAX0630A3R3M | 3.3 | 18.5 | 21 | 8 | 7 | 11 | 10 |
| TVAX0630A4R7M | 4.7 | 23.6 | 26 | 6.7 | 6 | 8 | 7 |
| TVAX0630A6R8M | 6.8 | 41 | 48 | 5.5 | 5 | 7 | 6.1 |
| TVAX0630A8R2M | 8.2 | 52 | 60 | 5.1 | 4.6 | 6.6 | 5.7 |
| TVAX0630A100M | 10 | 59 | 66 | 4.2 | 3.8 | 6.2 | 5.5 |
| TVAX0630A220M | 22 | 148 | 170 | 2.8 | 2.3 | 3.2 | 2.7 |

8*8 SERIES

TVAX0854A (8.8*8.0*5.4mm)

| Part Number | L0 Inductance (μH) | DCR (mohm) | | Heat rating current, I _{dc} (A) | | Saturation current, I _{sat} (A) | |
|---------------|--------------------|------------|------|--|------|--|------|
| | | Typical | Max | Typical | Max | Typical | Max |
| TVAX0854A1R5M | 1.5 | 6.1 | 7.3 | 11.4 | 10.3 | 16.3 | 14 |
| TVAX0854A2R2M | 2.2 | 9.5 | 11.4 | 9.7 | 8.7 | 14.8 | 12.7 |
| TVAX0854A3R3M | 3.3 | 14 | 15.4 | 8 | 7.2 | 13.5 | 11.6 |
| TVAX0854A4R7M | 4.7 | 19 | 20.9 | 7 | 6.3 | 13.1 | 11.2 |
| TVAX0854A5R6M | 5.6 | 21.5 | 24 | 6.5 | 5.9 | 10.6 | 9.1 |
| TVAX0854A6R8M | 6.8 | 24.2 | 26.6 | 6.1 | 5.5 | 10.2 | 8.7 |
| TVAX0854A8R2M | 8.2 | 29 | 31.9 | 5.6 | 5 | 9 | 7.7 |
| TVAX0854A100M | 10 | 34.5 | 38 | 5.2 | 4.7 | 8 | 6.9 |
| TVAX0854A150M | 15 | 60 | 66 | 3.8 | 3.4 | 6.9 | 5.9 |
| TVAX0854A220M | 22 | 85 | 93.5 | 3.3 | 3 | 6.3 | 5.4 |

10*10 SERIES

TVAX1040A (11.5*10.3*4.0mm)

| Part Number | L0 Inductance (μH) | DCR (mohm) | | Heat rating current, I _{dc} (A) | | Saturation current, I _{sat} (A) | |
|---------------|--------------------|------------|------|--|-----|--|------|
| | | Typical | Max | Typical | Max | Typical | Max |
| TVAX1040AR15M | 0.15 | 0.45 | 0.55 | 50 | 45 | 76 | 64 |
| TVAX1040AR22M | 0.22 | 0.82 | 0.93 | 36 | 32 | 63 | 60 |
| TVAX1040AR36M | 0.36 | 1.05 | 1.18 | 33 | 29 | 51 | 42 |
| TVAX1040AR47M | 0.47 | 1.3 | 1.5 | 32 | 28 | 46 | 40 |
| TVAX1040AR56M | 0.56 | 1.59 | 1.8 | 25 | 23 | 33.5 | 28 |
| TVAX1040A1R0M | 1 | 2.85 | 3.3 | 19 | 17 | 29 | 26 |
| TVAX1040A1R5M | 1.5 | 3.8 | 4.2 | 16 | 15 | 22 | 18 |
| TVAX1040A2R2M | 2.2 | 6 | 7 | 12 | 11 | 20 | 16 |
| TVAX1040A3R3M | 3.3 | 10.5 | 12 | 10 | 9 | 16.2 | 13.5 |
| TVAX1040A4R7M | 4.7 | 16.8 | 20 | 8.5 | 7.6 | 15.2 | 13 |
| TVAX1040A5R6M | 5.6 | 19.8 | 23 | 8 | 7.2 | 14.1 | 11.5 |
| TVAX1040A6R8M | 6.8 | 22 | 24.5 | 7.8 | 6.5 | 12 | 9.5 |
| TVAX1040A8R2M | 8.2 | 24 | 26.5 | 7.6 | 6.2 | 9 | 8 |
| TVAX1040A100M | 10 | 27 | 30 | 7.5 | 5.8 | 8.6 | 7.2 |
| TVAX1040A150M | 15 | 39.5 | 45 | 6.3 | 5 | 8 | 6.9 |
| TVAX1040A220M | 22 | 59 | 66 | 5 | 4 | 6.2 | 5.4 |

TVAX1050A (11.5*10.3*5.0mm)

| Part Number | L0 Inductance (μH) | DCR (mohm) | | Heat rating current, I _{dc} (A) | | Saturation current, I _{sat} (A) | |
|---------------|--------------------|------------|------|--|------|--|------|
| | | Typical | Max | Typical | Max | Typical | Max |
| TVAX1050A1R0M | 1 | 2.15 | 2.4 | 25 | 21.7 | 35 | 30.4 |
| TVAX1050A1R5M | 1.5 | 2.6 | 3 | 20 | 17.4 | 25 | 21.7 |
| TVAX1050A2R2M | 2.2 | 3.9 | 4.3 | 15 | 13 | 18 | 15.7 |
| TVAX1050A3R3M | 3.3 | 8.2 | 9.5 | 13 | 11.3 | 18 | 15.7 |
| TVAX1050A4R7M | 4.7 | 11.9 | 13.6 | 12 | 10.4 | 23 | 20.0 |
| TVAX1050A5R6M | 5.6 | 11.9 | 13.7 | 11 | 9.6 | 17 | 14.8 |
| TVAX1050A6R8M | 6.8 | 16.8 | 19.4 | 9 | 7.8 | 15 | 13.0 |
| TVAX1050A100M | 10 | 22.1 | 25.4 | 7.3 | 6.3 | 12 | 10.4 |
| TVAX1050A120M | 12 | 23.5 | 26.8 | 7.5 | 6.5 | 11 | 9.6 |
| TVAX1050A150M | 15 | 31 | 35.5 | 6 | 5.2 | 8 | 7.0 |
| TVAX1050A220M | 22 | 48.8 | 56.1 | 5 | 4.3 | 6.8 | 5.9 |

13*13 SERIES

TVAX1350A (12.8*13.8*5.0mm)

| Part Number | L0 Inductance (μH) | DCR (mohm) | | Heat rating current, I _{dc} (A) | | Saturation current, I _{sat} (A) | |
|---------------|--------------------|------------|------|--|------|--|------|
| | | Typical | Max | Typical | Max | Typical | Max |
| TVAX1350AR47M | 0.47 | 0.9 | 1.05 | 38.5 | 34.2 | 55 | 47.4 |
| TVAX1350AR68M | 0.68 | 1.34 | 1.55 | 35 | 30.5 | 54 | 46 |
| TVAX1350AR82M | 0.82 | 1.45 | 1.65 | 34.2 | 30.2 | 42 | 39 |
| TVAX1350A1R0M | 1 | 1.8 | 2.2 | 30 | 27 | 36 | 32.5 |
| TVAX1350A2R2M | 2.2 | 3.98 | 5 | 20.5 | 19 | 25 | 22 |
| TVAX1350A3R3M | 3.3 | 5.5 | 7 | 15.5 | 14 | 22.5 | 19.5 |
| TVAX1350A4R7M | 4.7 | 8.5 | 10.3 | 13 | 11.5 | 17.2 | 14.5 |
| TVAX1350A6R8M | 6.8 | 13 | 15 | 11.5 | 10 | 15 | 12 |
| TVAX1350A100M | 10 | 18.9 | 22 | 9 | 8.1 | 13 | 10.5 |
| TVAX1350A150M | 15 | 30 | 35 | 7 | 6.3 | 8 | 6.8 |
| TVAX1350A220M | 22 | 50 | 58 | 5.5 | 5 | 6.6 | 5.7 |

TVAX1365A (12.8*13.8*6.5mm)

| Part Number | L0 Inductance (μH) | DCR (mohm) | | Heat rating current, I _{dc} (A) | | Saturation current, I _{sat} (A) | |
|---------------|--------------------|------------|------|--|------|--|-----|
| | | Typical | Max | Typical | Max | Typical | Max |
| TVAX1365AR68M | 0.68 | 1.45 | 1.68 | 35 | 32 | 75 | 70 |
| TVAX1365A1R0M | 1 | 1.8 | 2.15 | 31 | 28 | 53 | 50 |
| TVAX1365A1R3M | 1.3 | 2.2 | 2.5 | 28.5 | 27.5 | 52 | 49 |
| TVAX1365A1R5M | 1.5 | 2.3 | 2.6 | 28 | 27 | 51 | 48 |
| TVAX1365A1R8M | 1.8 | 2.7 | 3.1 | 25 | 24 | 49 | 47 |
| TVAX1365A2R2M | 2.2 | 3.49 | 4.2 | 22.5 | 21.5 | 46 | 42 |
| TVAX1365A3R3M | 3.3 | 3.75 | 4.4 | 22 | 20 | 42 | 40 |
| TVAX1365A4R7M | 4.7 | 7.8 | 8.5 | 16 | 15 | 30 | 26 |
| TVAX1365A5R6M | 5.6 | 9 | 10.5 | 14 | 12.5 | 28 | 24 |
| TVAX1365A6R8M | 6.8 | 11.5 | 13.5 | 12.5 | 11 | 26 | 22 |
| TVAX1365A8R2M | 8.2 | 14 | 16 | 11.5 | 10 | 21 | 19 |
| TVAX1365A100M | 10 | 16 | 18.5 | 11 | 9 | 20 | 18 |
| TVAX1365A150M | 15 | 32 | 37 | 8.5 | 7.5 | 15 | 13 |
| TVAX1365A220M | 22 | 38 | 44 | 6.5 | 5.8 | 11.5 | 10 |