



Features

- 2 watt gate driver transformer
- Switching frequencies 400 kHz
- High working voltage of 800 V
- Surface mount with 8 mm min. creepage
- Basic insulation per IEC 60664-1
- Operating temperature: -40 °C to +125 °C
- AEC-Q200 compliant & automotive grade

Applications

- Transistor gate drive power
- Inverter circuits
- Battery management systems
- Motor drives
- Power delivery

HVMA03F4A-LP8S Series – ER9.5 Gate Driver Transformer

General Specifications

| | |
|--|--|
| Operating Temp. | -40 °C to +125 °C (including self-temperature rise) |
| Working Voltage | 800 V |
| Level of Insulation..... | Basic |
| Creepage Distance (Primary to Secondary)..... | 8 mm |
| Clearance Distance (Primary to Secondary)..... | 2 mm min. |
| Storage Temp | -40 °C to +85 °C |
| Moisture Sensitivity Level..... | 1 |

Additional Information

Click these links for more information:







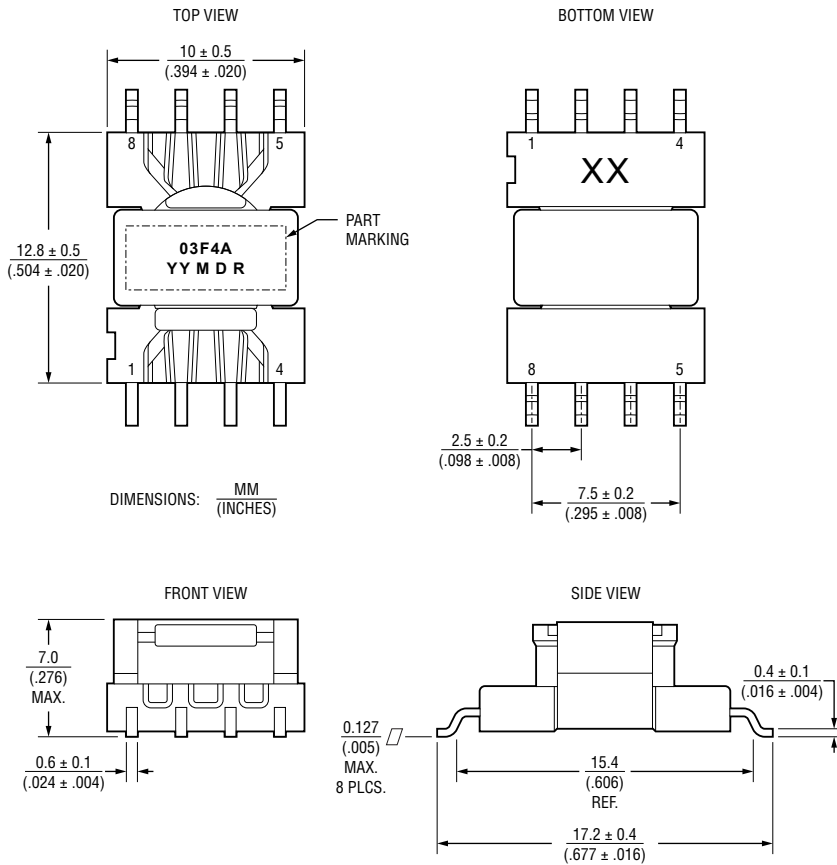
[PRODUCT](#)
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Electrical Specifications @ 25 °C

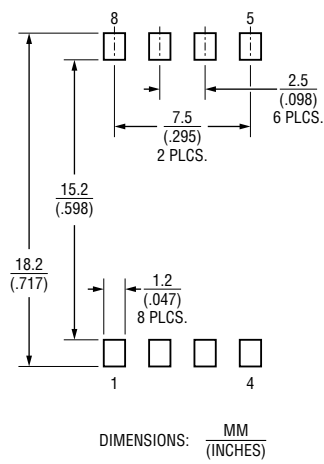
| Bourns Part Number | Primary Inductance @ 100 kHz / 0.1 V | | Leakage Inductance ¹ (nH) | | Turns Ratio | | DCR max. (mΩ) | | Hi-Pot: 60 sec. / 2 mA | Working Voltage (V) |
|--------------------|--------------------------------------|------------|--------------------------------------|-------------|-----------------------|----------------|---------------|-----|------------------------|---------------------|
| | (1-4) | 4 μH ±15 % | (1-4) | 400 nH max. | (1-4) : (8-6) : (6-5) | 5 : 1 : 4 ±5 % | (1-4) | 120 | | |
| HVMA03F4A-LP8S | (1-4) | 4 μH ±15 % | (1-4) | 400 nH max. | (1-4) : (8-6) : (6-5) | 5 : 1 : 4 ±5 % | (1-4) | 120 | 2750 V | 800 |
| | | | | | | | (6-5) | 100 | | |
| | | | | | | | (8-6) | 34 | | |

NOTE: (1) Leakage inductance measured (5,8) shorted @ 100 kHz, 0.1 V.

Product Dimensions



Recommended Layout



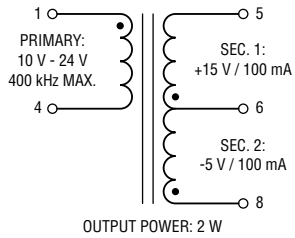
WARNING
 Cancer and Reproductive Harm
www.P65Warnings.ca.gov

*RoHS Directive 2015/863, Mar 31, 2015 and Annex. Specifications are subject to change without notice. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.

HVMA03F4A-LP8S Series – ER9.5 Gate Driver Transformer



Electrical Schematic



Materials

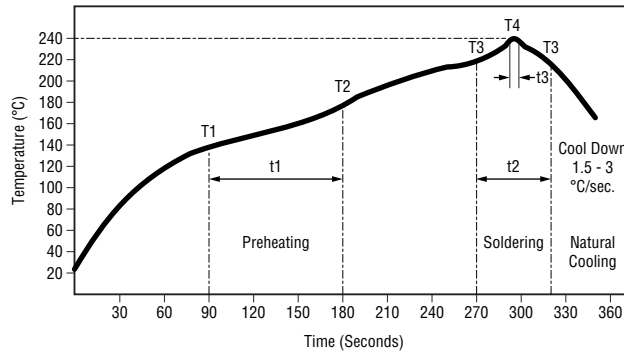
BobbinPhenolic
 WireFully Insulated Copper
 Core Ferrite
 Glue.....Epoxy

How to Order

HVM A 03 F 4 A - LP 8 S

Model _____
 HVM = Gate Driver & Flyback Transf.
 Grade _____
 A = Automotive Grade
 Power Rating _____
 03 = 2 W
 Topology Type _____
 F = Flyback Transformer
 T = Gate Drive Transformer
 Inductance Value _____
 4 = 4 μ H
 A = Series Number _____
 Profile _____
 LP = Low Profile ER9.5
 Creepage _____
 8 = 8 mm
 PCB Type _____
 S = SMD

Lead-Free Soldering Profile



| Preheating | | | Soldering | | Peak | |
|------------|--------|-------------|-----------|------------|------------|--------|
| Temp. | | Time | Temp. | Time | Temp. | Time |
| T1 | T2 | t1 | T3 | t2 | T4 | t3 |
| 140 °C | 180 °C | 60-120 sec. | 220 °C | 40-70 sec. | 240-250 °C | 5 sec. |

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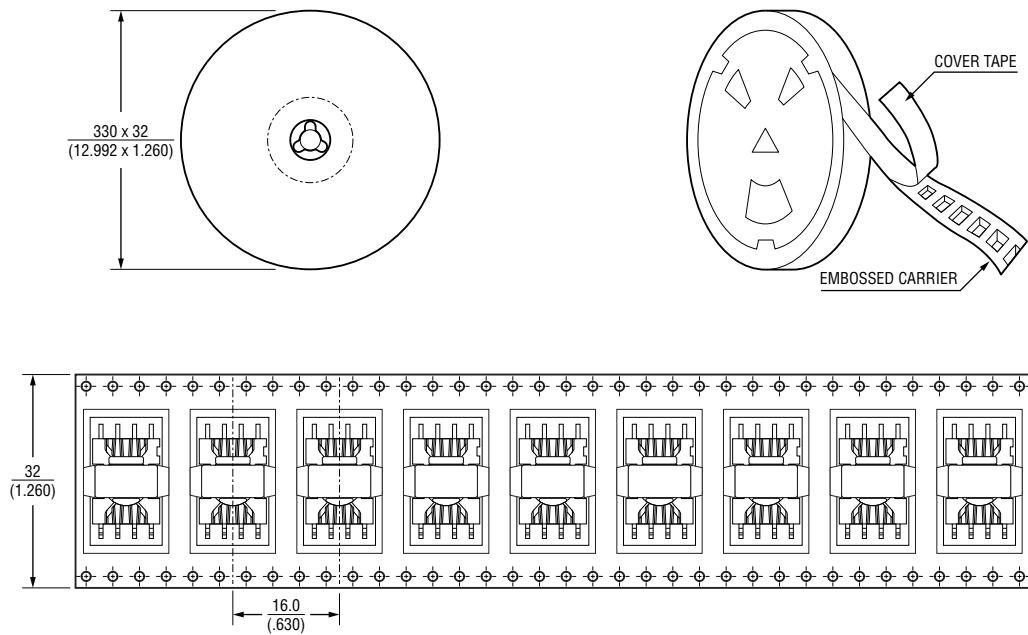
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HVMA03F4A-LP8S Series – ER9.5 Gate Driver Transformer

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Packaging Specifications

HVMA03F4A-LP8S: 600 pcs./reel, 5 reels/carton,
carton: 355 x 355 x 40 mm (14 x 14 x 1.575 inches),
enclosing bag: 380 x 420 mm (15 x 16.5 inches)



DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

BOURNS®

Americas: Tel: +1 951-781-5500 • Email: americus@bourns.com

Mexico: Tel: +52-614-478-0400 • Email: mexicus@bourns.com

Asia: Tel: +886-2-2562-4117 • Email: asiacus@bourns.com

EMEA: Tel: +36 88 885 877 • Email: eurocus@bourns.com

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REV. 09/24

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