

## 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:

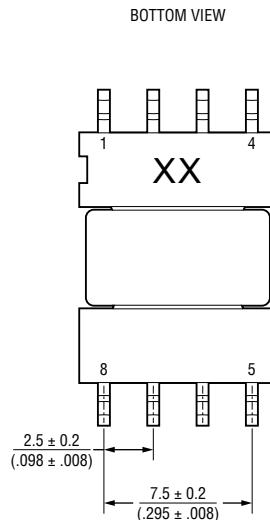
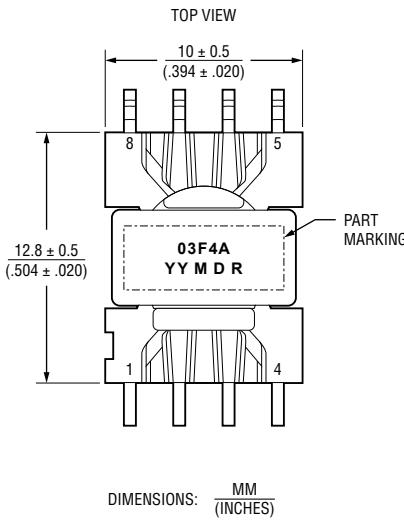


### Electrical Specifications @ 25 °C

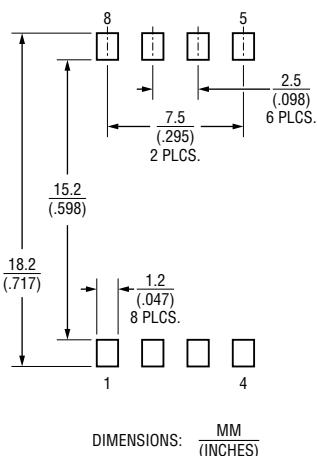
Bourns Part Number	Primary Inductance @ 100 kHz / 0.1 V	Leakage Inductance <sup>1</sup> (nH)	Turns Ratio			DCR max. (mΩ)	Hi-Pot: 60 sec. / 2 mA	Working Voltage (V)	
HVMA03F4A-LP8S	(1-4)	4 µH ±15 %	(1-4)	400 nH max.	(1-4) : (8-6) : (6-5)	5 : 1 : 4 ± 5 %	(1-4) 120 (6-5) 100 (8-6) 34	2750 V	800

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

### Product Dimensions



### Recommended Layout



DIMENSIONS: MM (INCHES)



### WARNING

**Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

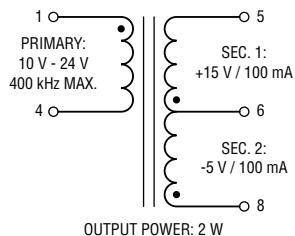
\*RoHS Directive 2015/863, Mar 31, 2015 and Annex. Specifications are subject to change without notice. Users should verify actual device performance in their specific applications.

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# HVMA03F4A-LP8S Series – ER9.5 Gate Driver Transformer

**BOURNS®**

## Electrical Schematic



## Materials

Bobbin ..... Phenolic  
Wire ..... Fully 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  $\mu$ H

A = Series Number \_\_\_\_\_

Profile \_\_\_\_\_

LP = Low Profile ER9.5

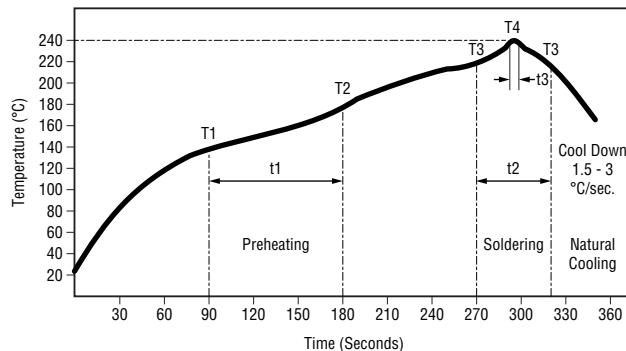
Creepage \_\_\_\_\_

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
140 °C	180 °C	60-120 sec.	220 °C	40-70 sec.	240-250 °C

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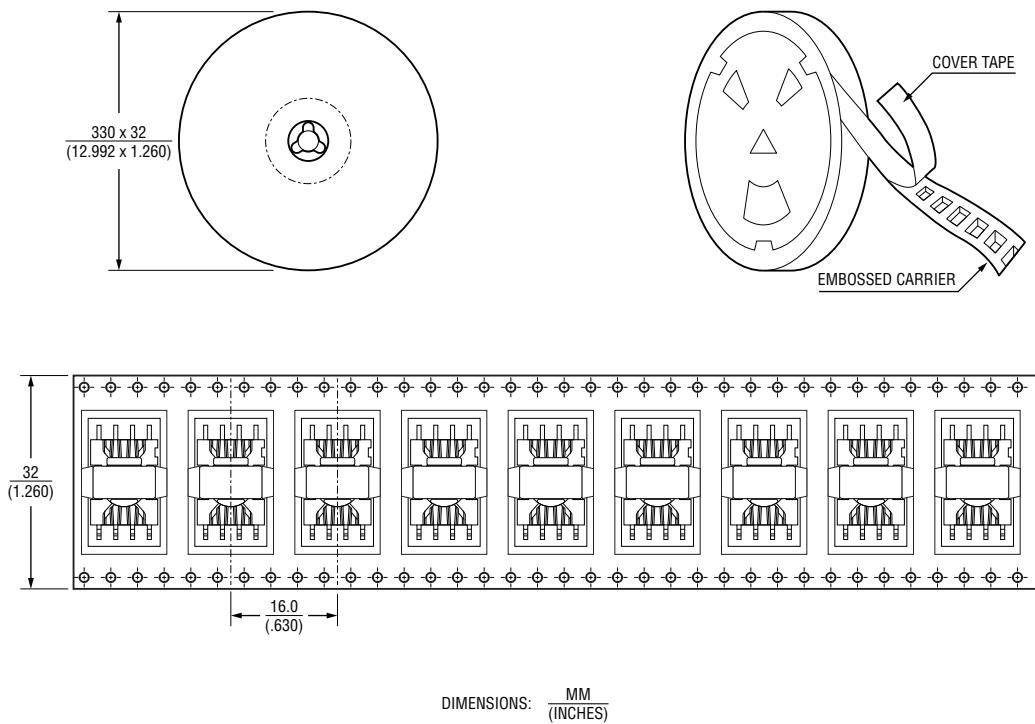
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## HVMA03F4A-LP8S Series – ER9.5 Gate Driver Transformer

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

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