

## **Electrical / Environmental**

# **HM42**

**Gate Drive Transformers** 



-40°C to +125°C

- Ambient Temperature, Maximum
- +85°C
- 1500Vdc Isolation between Gate and Drive
- Basic Insulation 1500Vrms between Primary and Secondary







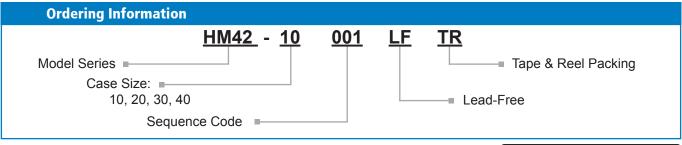
| Elect                                  | trical Schematics |                    |          |                  |
|--|-------------------|--------------------|----------|------------------|
| ı                                      | Figure 1          | Figure 2           | Figure 3 | Figure 4         |
| 1 ———————————————————————————————————— | 5 N3 N3 4         | 1 N2 N2 6 4 8 N3 5 | 1 6 N2 3 | 1 4<br>N1 8 N2 5 |

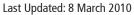
| Specific       | ations @       | 25°C                              |                                   |                           |                              |                       |                         |              |
|----------------|----------------|-----------------------------------|-----------------------------------|---------------------------|------------------------------|-----------------------|-------------------------|--------------|
| Part<br>Number | Turns<br>Ratio | Primary<br>Inductance<br>(µH Min) | Leakage<br>Inductance<br>(µH Max) | Primary<br>DCR<br>(Ω Max) | Secondary DCR $(\Omega Max)$ | Pri-Sec<br>Insulation | Electrical<br>Schematic | Case<br>Size |
| HM42-10001LF   | 1:1:1          | 300                               | 2.30                              | 2.00                      | 2.00                         | 1500Vdc               | Figure 1                | 10           |
| HM42-10002LF   | 2:1:1          | 300                               | 2.30                              | 2.00                      | 1.00                         | 1500Vdc               | Figure 1                | 10           |
| HM42-20001LF   | 1:1            | 695                               | 0.50                              | 1.00                      | 1.00                         | 1500Vdc               | Figure 3                | 20           |
| HM42-20002LF   | 1:1            | 785                               | 0.46                              | 0.60                      | 0.60                         | 1500Vdc               | Figure 3                | 20           |
| HM42-30001LF   | 1:1:1          | 980                               | 0.75                              | 0.50                      | 0.50                         | 1500Vac               | Figure 1                | 30           |
| HM42-30002LF   | 1:1            | 980                               | 0.75                              | 0.50                      | 0.50                         | 1500Vac               | Figure 3                | 30           |
| HM42-30003LF   | 1:1:1          | 1500                              | 0.50                              | 0.62                      | 0.62                         | 1500Vac               | Figure 1                | 30           |
| HM42-40001LF   | 1:1:1          | 3300                              | 0.70                              | 1.60                      | 1.60                         | 1500Vdc               | Figure 2                | 40           |
| HM42-40002LF   | 1:1            | 1400                              | 0.50                              | 0.60                      | 0.60                         | 1500Vac               | Figure 4                | 40           |
| HM42-40003LF   | 1:1            | 1200                              | 0.50                              | 0.50                      | 0.50                         | 1500Vac               | Figure 4                | 40           |
| HM42-40004LF   | 2:1:1          | 1200                              | 0.60                              | 0.60                      | 0.30                         | 1500Vac               | Figure 2                | 40           |

Notes:

- (1) Inductance is measured at 100kHz, 0.1Vrms.
- (2) It is recommended that the temperature of the component (ambient plus temperature rise) does not exceed 125°C under worst case operating conditions.

| Packaging |                                |           |              |   |               |  |  |
|-----------|--------------------------------|-----------|--------------|---|---------------|--|--|
| Standard: | Standard: Embossed Tape & Reel |           |              |   |               |  |  |
|           | Reel:                          | Diameter: |              | = | 13" (330.2mm) |  |  |
|           |                                | Capacity: | Case size 10 | = | 750 Units     |  |  |
|           |                                |           | Case size 20 | = | 1,500 Units   |  |  |
|           |                                |           | Case size 30 | = | 1,000 Units   |  |  |
|           |                                |           | Case size 40 | = | 450 Units     |  |  |



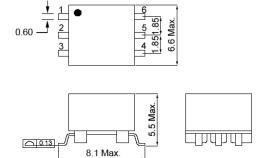




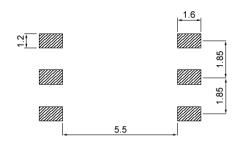


# **Outline Dimensions (Inch/mm)**

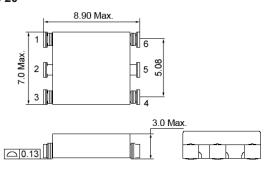
### Case 10



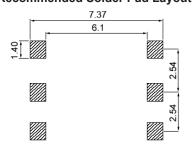
### **Recommended Solder Pad Layout**



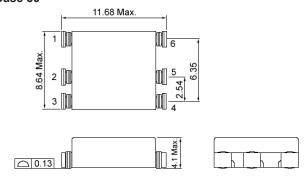
Case 20



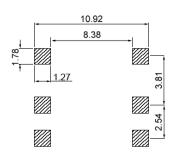
**Recommended Solder Pad Layout** 



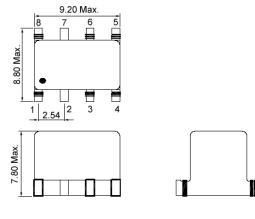
#### Case 30



**Recommended Solder Pad Layout** 



#### Case 40



### **Recommended Solder Pad Layout**

