



# Miniaturized Gate Drive Transformers



- Deliver MOSFET/IGBT gate power and timing signals simultaneously
- Directly drive high-side MOSFETs/IGBTs on busses up to 1200V
- Excellent risetime, overshoot, and peak current characteristics
- >8 mm minimum creepage and clearance from drive to gates
- Low profile planar package
- Available in through-hole and surface mount packages (contact engineering)

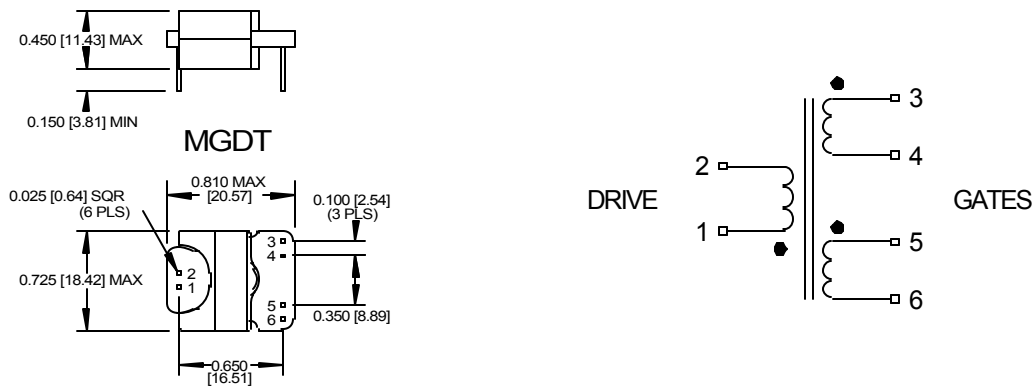
**Model Selection Table**

| HiRel P/N  | Package Style | Useful Freq. Range (KHz) | Transfer Ratio <sup>1</sup> (+/-3%) | Drive Excitation (V·nS MAX) | Magnetizing Inductance <sup>2,3</sup> (nH MIN) | Leakage Inductance <sup>4</sup> (nH MAX) | DC Resistance <sup>2</sup> |               | Capacitance         |                    |
|------------|---------------|--------------------------|-------------------------------------|-----------------------------|--|--|----------------------------|---------------|---------------------|--------------------|
|            |               |                          |                                     |                             |  |  | Drive (W MAX)              | Gates (W MAX) | Drive-Gate (pF MAX) | Gate-Gate (pF MAX) |
| MGDT100100 | TH            | 100 ~ 500                | 1 : 1 : 1                           | 80                          | 240  | 500                                      | 0.50                       | 0.50          | 15                  | 10                 |

**Absolute Maximum Ratings (All Models)**

| Parameter                            | Conditions            | Limit(s)   | Units |
|--------------------------------------|-----------------------|------------|-------|
| Dielectric Withstand Voltage         | Drive-gate; 1 min     | 3750       | VAC   |
|                                      | Gate-gate; 1 min      | 2500       | VAC   |
| Total Power Dissipation <sup>5</sup> | T <sub>A</sub> = 25°C | 2.0        | W     |
| Operating Temperature                | Continuous            | -40 ~ +85  | °C    |
| Storage Temperature                  | Continuous            | -40 ~ +105 | °C    |

1. Drive : Gate : Gate.
2. T<sub>A</sub> = 25°C.
3. 100mV @ 100KHz across the Drive winding with all Gates open.
4. 100mA @ 100KHz into the Drive winding with all Gates shorted.
5. Derate at 33.3mW / °C above 25°C.



Units are inches [mm].  
Tolerance on all dimensions is +/-0.010 unless otherwise specified.  
Specifications are subject to change without notice.

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