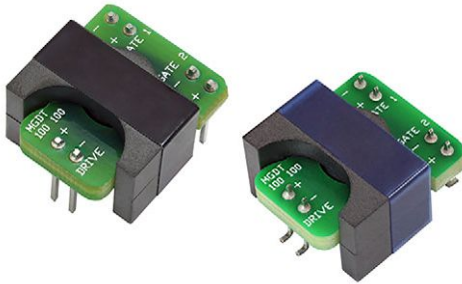


Miniaturized Gate Drive Planar Transformers



FEATURES

RoHS*
Available

- Deliver MOSFET / IGBT gate power and timing signals simultaneously
- Directly drive high side MOSFETs / IGBTs on busses up to 1200 V
- Excellent rise time, overshoot, and peak current characteristics
- 8 mm minimum creepage and clearance from drive to gates
- Low profile planar package
- LF and SM versions are RoHS-compliant
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Note

* This datasheet provides information about parts that are RoHS-compliant and / or parts that are non RoHS-compliant. For example, parts with lead (Pb) terminations are not RoHS-compliant. Please see the information / tables in this datasheet for details

| ABSOLUTE MAXIMUM RATINGS | | | |
|------------------------------|--------------------------------|-----------------------|-----------------|
| PARAMETER | CONDITIONS | LIMITS | UNITS |
| Dielectric withstand voltage | Drive to gate, 1 min | 3750 | V _{AC} |
| | Gate to gate, 1 min | 2500 | V _{AC} |
| Total power dissipation (1) | T _A = 25 °C | 2.0 | W |
| Operating temperature (2) | Continuous | -55 to +125 | °C |
| Storage temperature | Continuous | -55 to +130 | °C |
| Frequency | | 100 to 500 | kHz |
| Size (L x W x H) | | 20.57 x 18.42 x 11.43 | mm |
| Terminals | Through-hole and surface-mount | | |

Note

- (1) Derate at 33.3 mW/°C above 25 °C
 (2) Derate drive level to 60 V/μs above 85°C

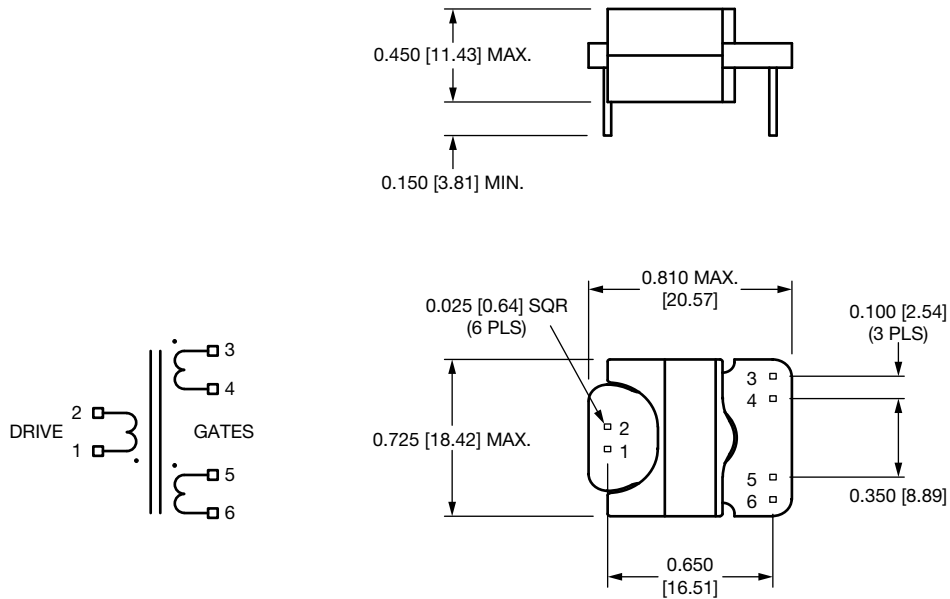
| STANDARD ELECTRICAL SPECIFICATIONS | | | | | | | | | |
|------------------------------------|--------------------------|----------------------------|-----------------------------|---|----------------------------------|-------------------|----------------|--------------------------|------------------------|
| PART NUMBER | USEFUL FREQ. RANGE (kHz) | TRANSFER RATIO (± 3 %) (1) | DRIVE EXCITATION MAX. (Vμs) | MAGNETIZING INDUCTANCE MIN. (μH) (2)(3) | LEAKAGE INDUCTANCE MAX. (μH) (4) | DC RESISTANCE (2) | | INTERWINDING CAPACITANCE | |
| | | | | | | DRIVE MAX. (Ω) | GATES MAX. (Ω) | DRIVE TO GATE MAX. (pF) | GATE TO GATE MAX. (pF) |
| MGDT100100 | 100 to 500 | 1 : 1 : 1 | 80 | 240 | 0.5 | 0.35 | 0.35 | 15 | 10 |
| MGDT100100LF | 100 to 500 | 1 : 1 : 1 | 80 | 240 | 0.5 | 0.35 | 0.35 | 15 | 10 |
| MGDT100100-SM | 100 to 500 | 1 : 1 : 1 | 80 | 240 | 0.5 | 0.35 | 0.35 | 15 | 10 |
| MGDT100125 | 100 to 500 | 1 : 1.25 : 1.25 | 80 | 240 | 0.5 | 0.35 | 0.50 | 25 | 10 |
| MGDT100125LF | 100 to 500 | 1 : 1.25 : 1.25 | 80 | 240 | 0.5 | 0.35 | 0.50 | 25 | 10 |
| MGDT100125-SM | 100 to 500 | 1 : 1.25 : 1.25 | 80 | 240 | 0.5 | 0.35 | 0.50 | 25 | 10 |

Notes

- (1) Drive : gate : gate
 (2) T_A = 25 °C
 (3) 100 mV at 100 kHz across the drive winding with all gates open
 (4) 100 mA at 100 kHz into the drive winding with all gates shorted

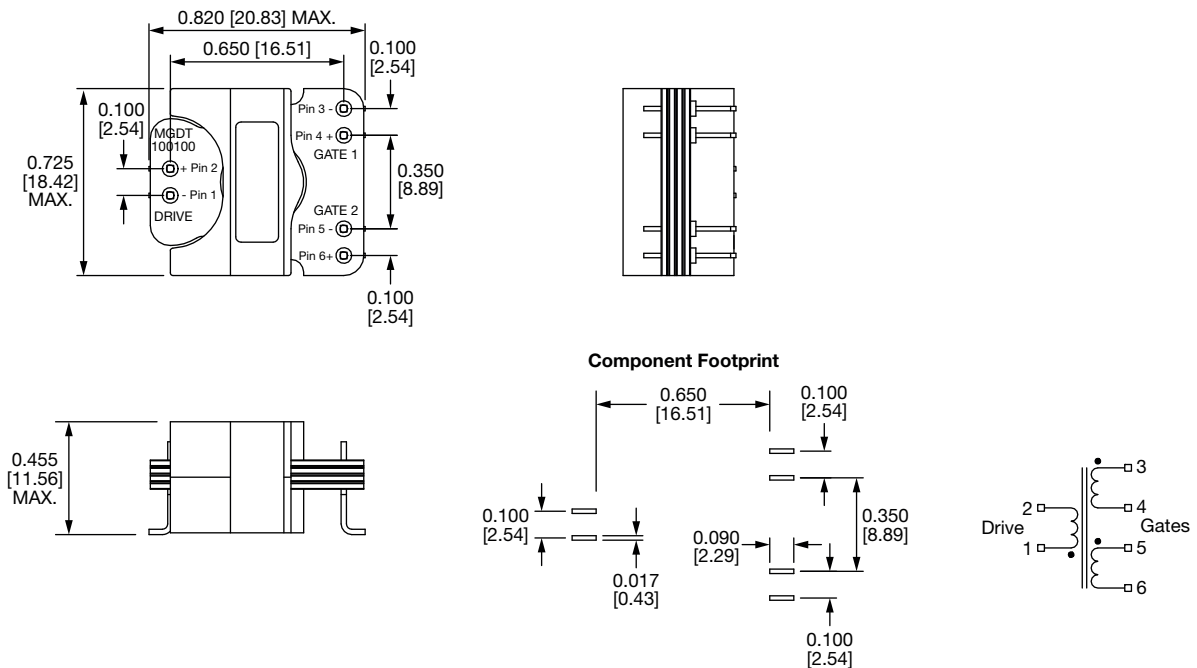
DIMENSIONS in inches [millimeters]

MGDT1001..., MGDT1001..LF



Tolerance on all dimensions is ± 0.010 [0.25] unless otherwise specified.

MGDT1001...-SM





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