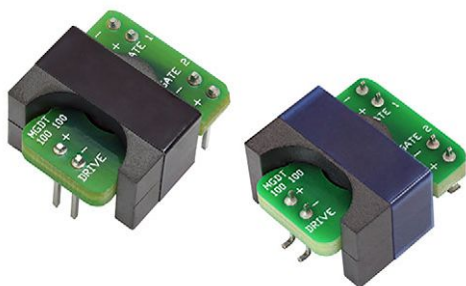


Miniaturized Gate Drive Planar Transformers



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

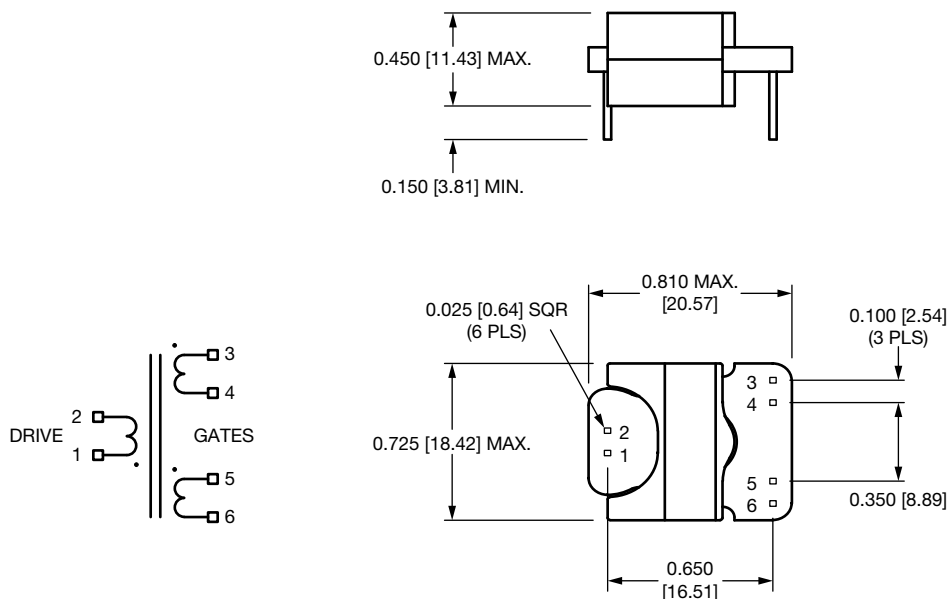
Notes

- (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



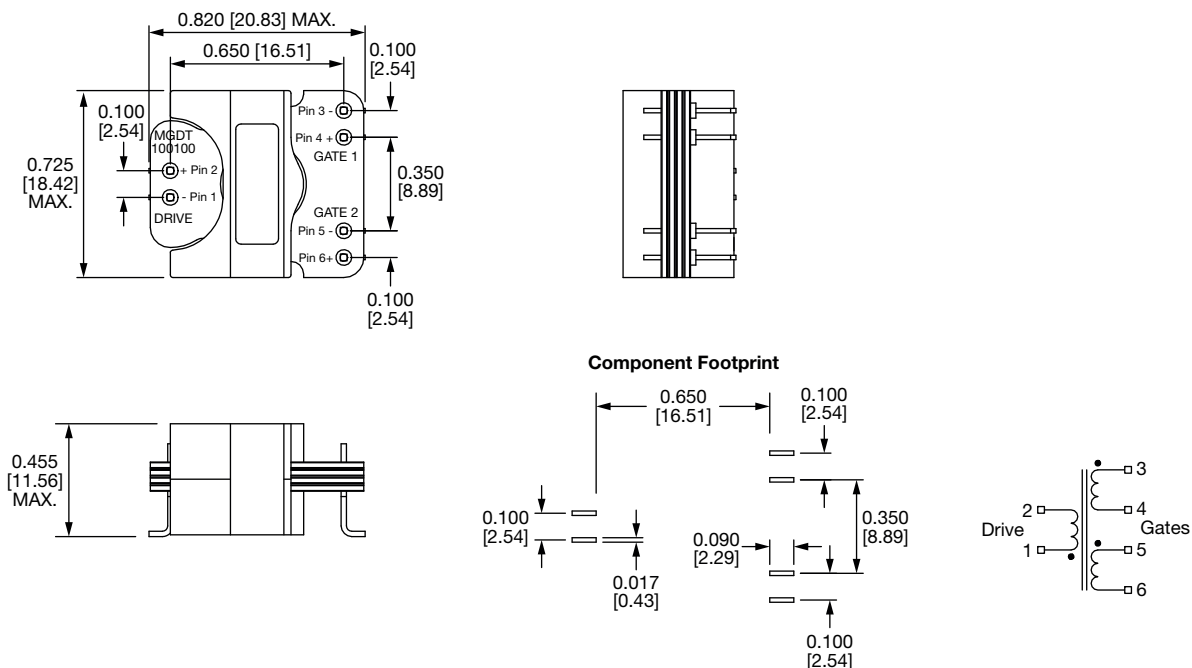
DIMENSIONS in inches [millimeters]

MGDT1001..., MGDT1001...LF



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

MGDT1001...-SM





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