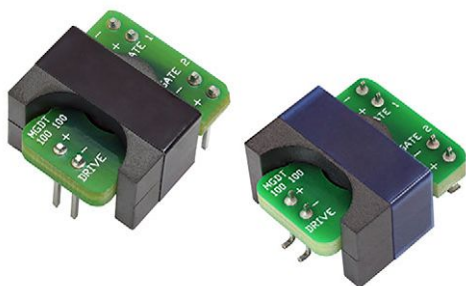


## Miniaturized Gate Drive Planar Transformers



### 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](http://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 <sub>AC</sub>
	Gate to gate, 1 min	2500	V <sub>AC</sub>
Total power dissipation <sup>(1)</sup>	T <sub>A</sub> = 25 °C	2.0	W
Operating temperature <sup>(2)</sup>	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

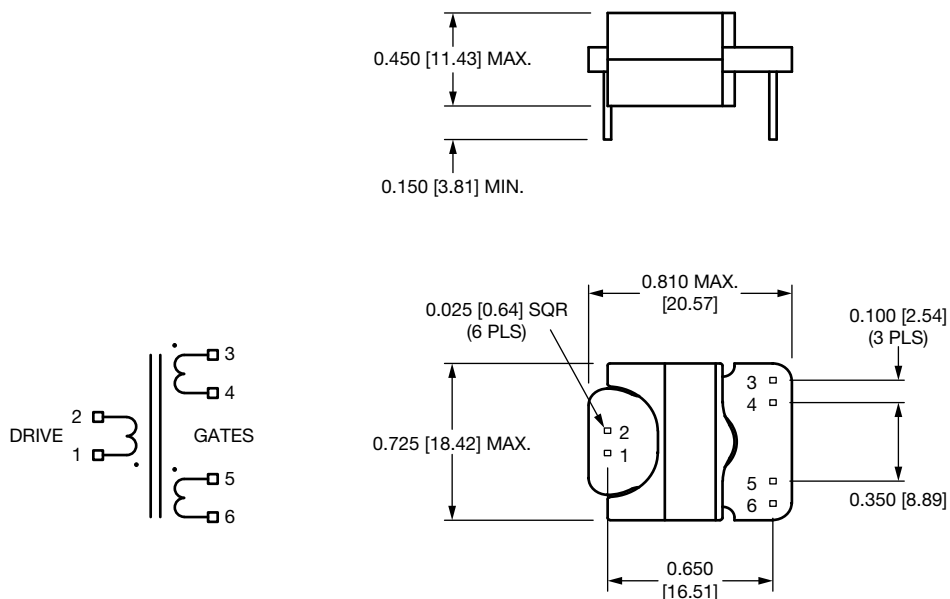
- <sup>(1)</sup> Derate at 33.3 mW/°C above 25 °C  
<sup>(2)</sup> Derate drive level to 60 V/μs above 85°C

STANDARD ELECTRICAL SPECIFICATIONS									
PART NUMBER	USEFUL FREQ. RANGE (kHz)	TRANSFER RATIO (± 3 %) <sup>(1)</sup>	DRIVE EXCITATION MAX. (Vμs)	MAGNETIZING INDUCTANCE MIN. (μH) <sup>(2)(3)</sup>	LEAKAGE INDUCTANCE MAX. (μH) <sup>(4)</sup>	DC RESISTANCE <sup>(2)</sup>		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

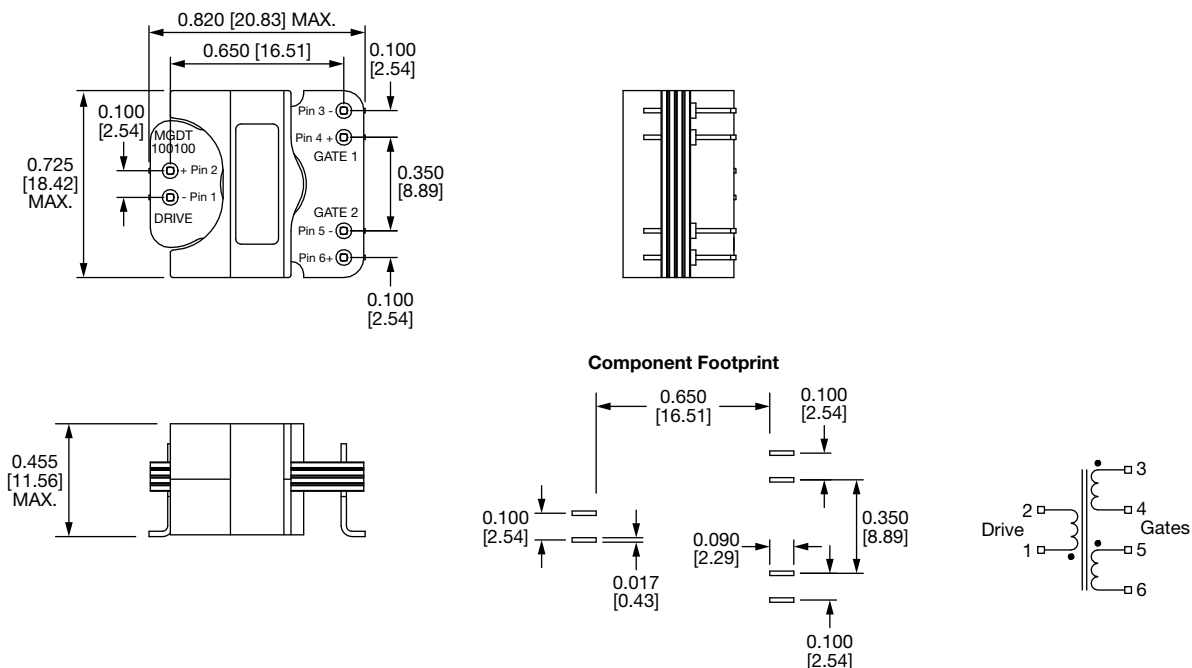
### Notes

- <sup>(1)</sup> Drive : gate : gate  
<sup>(2)</sup> T<sub>A</sub> = 25 °C  
<sup>(3)</sup> 100 mV at 100 kHz across the drive winding with all gates open  
<sup>(4)</sup> 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  $\pm 0.010$  [0.25] unless otherwise specified.

**MGDT1001...-SM**




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