

Micro Gate Drive Transformers



FEATURES

RoHS*
Available

- Deliver MOSFET / IGBT gate power and timing signals simultaneously
- Directly drive high side MOSFETs / IGBTs on busses up to 200 V
- Excellent rise time, overshoot, and peak current characteristics
- For lead (Pb)-free parts, please add “-LF” to the end of the part number
- 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	1500	V _{DC}
	Gate to gate, 1 min	500	V _{DC}
Winding current	Any winding	100	mA _{RMS}
Total power dissipation ⁽¹⁾		400	mW
Operating temperature	Continuous	-55 to +130	°C
Storage temperature	Continuous	-55 to +155	°C
Frequency		125 to 750	kHz
Size (L x W x H)		8.9 x 6.6 x 5.6	mm
Terminals	Surface-mount		

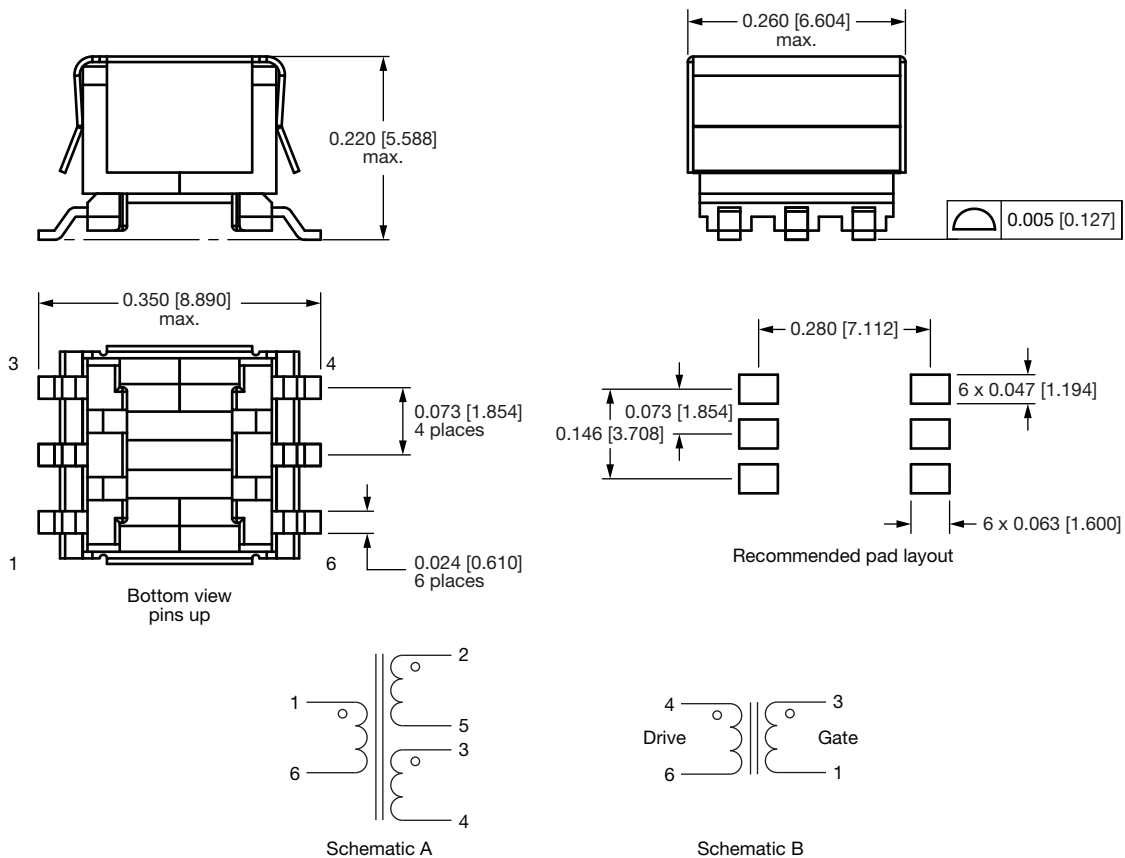
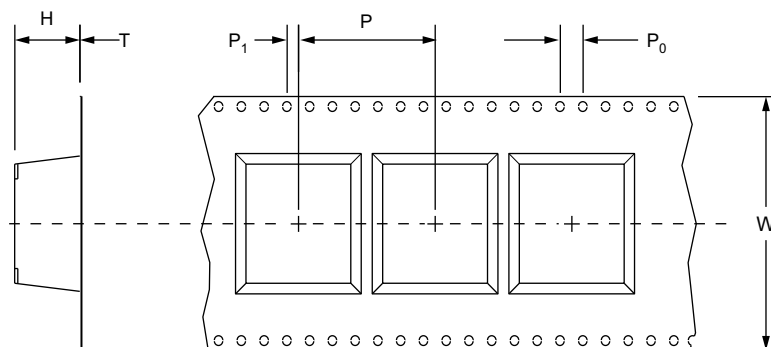
Note

⁽¹⁾ Derate at 5 mW/°C above 25 °C

STANDARD ELECTRICAL SPECIFICATIONS										
PART NUMBER ⁽¹⁾	USEFUL FREQ. RANGE (kHz)	TRANSFER RATIO (± 1 %) ⁽²⁾	DRIVE EXCITATION MAX. (V x μs)	MAGNETIZING INDUCTANCE MIN. (μH) ⁽³⁾⁽⁴⁾	LEAKAGE INDUCTANCE MAX. (nH) ⁽⁵⁾	DC RESISTANCE ⁽³⁾		INTERWINDING CAPACITANCE		SCHEMATIC
						DRIVE MAX. (Ω)	GATES MAX. (Ω)	DRIVE TO GATE MAX. (pF)	GATE TO GATE MAX. (pF)	
MTBAUGDT125050	125 to 500	1 : 0.5 : 0.5	63	330	500	2.0	0.7	60	30	A
MTBAUGDT125075	125 to 500	1 : 0.75 : 0.75	66	360	500	2.0	2.0	60	30	A
MTBAUGDT125100	125 to 500	1 : 1 : 1	63	330	500	2.0	2.0	160	160	A
MTBAUGDT250101	250 to 750	1 : 1	25.8	350	1000	1.0	0.65	75	n/a	B
MTBAUGDT250102	250 to 750	1 : 1 : 1	22.4	264	300	1.5	1.5	95	95	A
MTBAUGDT250251	250 to 750	2.5 : 1	30.6	473	1500	1.5	0.3	25	n/a	B
MTBAUGDT250252	250 to 750	2.5 : 1 : 1	23.8	300	900	1.8	0.3	27	27	A

Notes

- ⁽¹⁾ For lead (Pb)-free parts, please add “-LF” to the end of the part number
- ⁽²⁾ Drive: gate or drive : gate : gate
- ⁽³⁾ T_A = 25 °C
- ⁽⁴⁾ Small signal measurement across the drive winding with both gates open
- ⁽⁵⁾ Small signal measurement a across the drive winding with both gates shorted
- ⁽⁶⁾ Derate at 5 mW/°C above 25 °C

DIMENSIONS in inches [millimeters]

TAPE AND REEL SPECIFICATIONS


PARAMETER	SYMBOL	DIMENSIONS inches [mm]
Tape width	W	0.630 [16.0]
Component pitch	P	0.315 [8.0]
Indexing pitch	P ₀	0.157 [4.0]
Index-to-component offset	P ₁	0.079 [2.0]
Pocket height	H	0.213 [5.4]
Tape thickness	T	0.012 [0.3]
Reel overall diameter	OD	13.0 [330]
Reel axle diameter	AD	0.5 [13]
Reel capacity	Qty	1000/reel



Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Hyperlinks included in this datasheet may direct users to third-party websites. These links are provided as a convenience and for informational purposes only. Inclusion of these hyperlinks does not constitute an endorsement or an approval by Vishay of any of the products, services or opinions of the corporation, organization or individual associated with the third-party website. Vishay disclaims any and all liability and bears no responsibility for the accuracy, legality or content of the third-party website or for that of subsequent links.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.