

Surface Mount Transformers/Inductors, Gapped and Ungapped, Custom Configurations Available



FEATURES

- Compliant to RoHS Directive 2002/95/EC
- Halogen-free according to IEC 61249-2-21 definition



RoHS
COMPLIANT
HALOGEN
FREE

ELECTRICAL SPECIFICATIONS

Inductance Range: 10 μ H to 3900 μ H, measured at 0.10 V_{RMS} at 10 kHz without DC current, using an HP 4263A or 4284A impedance analyzer

DC Resistance Range: 0.06 Ω to 18.0 Ω , measured at + 25 °C \pm 5 °C

Rated Current Range: 1.00 A to 0.06 A

Dielectric Withstanding Voltage: 500 V_{RMS}, 60 Hz, 5 s

STANDARD ELECTRICAL SPECIFICATIONS

MODEL	IND. (μ H)	IND. TOL.	SCHEMATIC LETTER	DCR MAX. (Ω)	MAX. RATED DC CURRENT (A) ⁽¹⁾	SATURATING CURRENT (A) ⁽²⁾	
LPE3325ER100NU	10	\pm 30 %	A	0.06	1.01	N/A	UNGAPPED MODELS (A)
LPE3325ER150NU	15	\pm 30 %	A	0.08	0.91	N/A	
LPE3325ER220NU	22	\pm 30 %	A	0.09	0.83	N/A	
LPE3325ER330NU	33	\pm 30 %	A	0.11	0.75	N/A	
LPE3325ER470NU	47	\pm 30 %	A	0.14	0.69	N/A	
LPE3325ER680NU	68	\pm 30 %	A	0.16	0.63	N/A	
LPE3325ER101NU	100	\pm 30 %	A	0.20	0.57	N/A	
LPE3325ER151NU	150	\pm 30 %	A	0.76	0.29	N/A	
LPE3325ER221NU	220	\pm 30 %	A	0.92	0.26	N/A	
LPE3325ER331NU	330	\pm 30 %	A	1.13	0.24	N/A	
LPE3325ER471NU	470	\pm 30 %	A	1.35	0.22	N/A	
LPE3325ER681NU	680	\pm 30 %	A	1.62	0.20	N/A	
LPE3325ER102NU	1000	\pm 30 %	A	1.97	0.18	N/A	UNGAPPED MODELS (B)
LPE3325ER152NU	1500	\pm 30 %	A	2.41	0.16	N/A	
LPE3325ER222NU	2200	\pm 30 %	A	3.00	0.15	N/A	
LPE3325ER332NU	3300	\pm 30 %	A	5.96	0.10	N/A	
LPE3325ER392NU	3900	\pm 30 %	A	7.00	0.10	N/A	
LPE3325ER100MG	10	\pm 20 %	A	0.22	0.54	1.480	GAPPED MODELS (B)
LPE3325ER150MG	15	\pm 20 %	A	0.27	0.48	1.240	
LPE3325ER220MG	22	\pm 20 %	A	0.42	0.39	1.050	
LPE3325ER330MG	33	\pm 20 %	A	0.65	0.31	0.872	
LPE3325ER470MG	47	\pm 20 %	A	0.97	0.26	0.740	
LPE3325ER680MG	68	\pm 20 %	A	1.45	0.21	0.622	
LPE3325ER101MG	100	\pm 20 %	A	2.22	0.17	0.518	
LPE3325ER151MG	150	\pm 20 %	A	3.55	0.13	0.426	
LPE3325ER221MG	220	\pm 20 %	A	4.31	0.12	0.354	
LPE3325ER331MG	330	\pm 20 %	A	6.72	0.10	0.290	
LPE3325ER471MG	470	\pm 20 %	A	9.83	0.08	0.244	
LPE3325ER681MG	680	\pm 20 %	A	14.8	0.07	0.204	
LPE3325ER102MG	1000	\pm 20 %	A	18.0	0.06	0.169	

Notes

⁽¹⁾ DC current that will create a maximum temperature rise of 30 °C when applied at + 25 °C ambient.

⁽²⁾ DC current that will typically reduce the initial inductance by 20 %.

- UNGAPPED MODELS:** Highest possible inductance with the lowest DCR and highest Q capability. Beneficial in filter, impedance matching and line coupling devices.

GAPPED MODELS: Capable of handling large amounts of DC current, tighter inductance tolerance with better temperature stability than ungapped models. Beneficial in DC/DC converters or other circuits carrying DC currents or requiring inductance stability over a temperature range.

DESCRIPTION

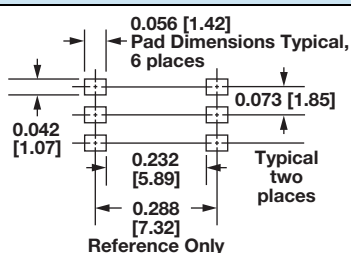
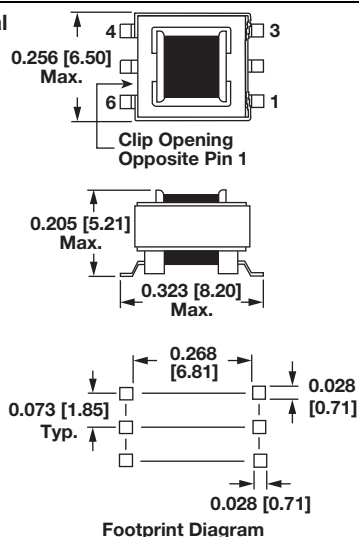
LPE	3325	1000 μ H	\pm 30 %	A	ER	e2
MODEL	SIZE	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	CORE	PACKAGE CODE	JEDEC LEAD (Pb)-FREE STANDARD

GLOBAL PART NUMBER

L	P	E	3	3	2	5	E	R	1	0	2	N	U
PRODUCT FAMILY			SIZE				PACKAGE CODE		INDUCTANCE VALUE			TOL.	CORE

Note

- Series is also available with SnPb terminations by using package code RY for tape and reel (in place of ER) or SM for bulk (in place of EB).

DIMENSIONS in inches [millimeters]**Pad Layout****Dimensional Outline****Notes**

- Pad layout guidelines per MIL-STD-275E (printed wiring for electronic equipment).
- Tolerances: xx ± 0.01" [± 0.25 mm]; xxx ± 0.005" [± 0.12 mm].

SCHEMATIC (top view)**Schematic A****Note**

- Schematic A for both gapped and ungapped LPE series

ENVIRONMENTAL PERFORMANCE

TEST	CONDITIONS
Thermal Cycling	Withstands - 55 °C to + 125 °C
Operating Temperature	- 55 °C to + 125 °C ⁽¹⁾
High Humidity	85 %
Soldering Heat	Tested to + 230 °C
Mechanical Shock	Per MIL-STD-202, method 213 (100G)
Vibration	Per MIL-STD-202, method 204 (20G)
Solderability	Per industry standards

Note

- ⁽¹⁾ Must be checked in end use application

PART MARKING

- Vishay Dale
- Date code
- Marking code (suffix of model #)
- Pin 1 indicator

PACKAGING**TAPE SPECIFICATIONS:**

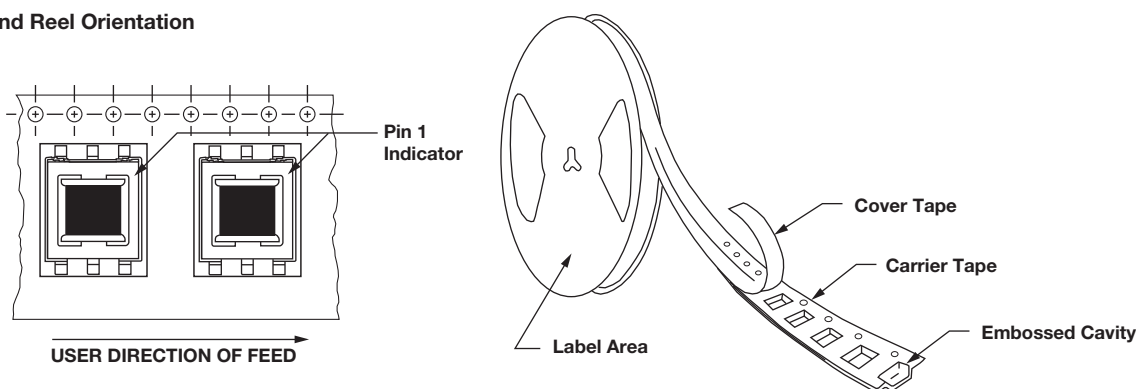
Carrier Tape Type: Conductive
Cover Tape Type: Anti-static
Cover Tape Adhesion to Carrier: 40 g ± 30 g

REEL SPECIFICATIONS:

Diameter (flange): 13" [330.2 mm]
Maximum Width (over flanges): 1.197" [30.4 mm]

STANDARDS: All embossed carrier tape packaging will be accomplished in compliance with latest revision of EIA-481 "Taping of Surface Mount Components for Automatic Placement".

MODEL	TAPE WIDTH	COMPONENT PITCH	UNITS PER 13" REEL
LPE-3325	24 mm	12 mm	1000

Tape and Reel Orientation**Note**

- Top view shown with cover tape removed



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.