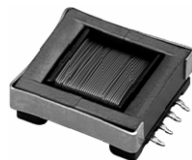


Surface Mount Transformers/Inductors, Gapped and Ungapped, Custom Configurations Available



FEATURES

- Compliant to RoHS directive 2002/95/EC

ELECTRICAL SPECIFICATIONS

(Multiple winds are connected in parallel)

Inductance Range: 10 μ H to 150 000 μ H, measured at 0.10 V_{RMS} at 10 kHz without DC current, using an HP 4263A or HP 4284A impedance analyzer

DC Resistance Range: 0.02 Ω to 46.2 Ω , measured at + 25 °C $\pm$ 5 °C

Rated Current Range: 3.20 A to 0.17 A

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



**RoHS
COMPLIANT**

STANDARD ELECTRICAL SPECIFICATIONS

MODEL	IND. (μ H)	IND. TOL.	SCHEMATIC LETTER	DCR MAX. (Ω)	MAX. RATED DC CURRENT (A) ⁽¹⁾	SATURATING CURRENT (A) ⁽²⁾	
LPE6855ER151NU	150	$\pm$ 30 %	A	0.28	0.84	N/A	UNGAPPED MODELS (A)
LPE6855ER221NU	220	$\pm$ 30 %	A	0.34	0.76	N/A	
LPE6855ER331NU	330	$\pm$ 30 %	A	0.41	0.69	N/A	
LPE6855ER471NU	470	$\pm$ 30 %	A	0.49	0.63	N/A	
LPE6855ER681NU	680	$\pm$ 30 %	A	0.59	0.57	N/A	
LPE6855ER102NU	1000	$\pm$ 30 %	A	0.72	0.52	N/A	
LPE6855ER152NU	1500	$\pm$ 30 %	A	0.88	0.47	N/A	
LPE6855ER222NU	2200	$\pm$ 30 %	A	1.07	0.43	N/A	
LPE6855ER332NU	3300	$\pm$ 30 %	A	1.31	0.39	N/A	
LPE6855ER472NU	4700	$\pm$ 30 %	A	1.56	0.35	N/A	
LPE6855ER682NU	6800	$\pm$ 30 %	A	1.88	0.32	N/A	
LPE6855ER103NU	10 000	$\pm$ 30 %	A	7.17	0.16	N/A	UNGAPPED MODELS (A)
LPE6855ER153NU	15 000	$\pm$ 30 %	A	8.78	0.15	N/A	
LPE6855ER223NU	22 000	$\pm$ 30 %	A	10.6	0.14	N/A	
LPE6855ER333NU	33 000	$\pm$ 30 %	A	13.0	0.12	N/A	
LPE6855ER473NU	47 000	$\pm$ 30 %	A	15.5	0.11	N/A	
LPE6855ER683NU	68 000	$\pm$ 30 %	A	18.7	0.10	N/A	
LPE6855ER104NU	100 000	$\pm$ 30 %	A	37.7	0.07	N/A	
LPE6855ER154NU	150 000	$\pm$ 30 %	A	46.2	0.06	N/A	
LPE6855ER100MG	10	$\pm$ 20 %	B	0.02	3.21	3.375	GAPPED MODELS (B)
LPE6855ER150MG	15	$\pm$ 20 %	B	0.03	2.90	2.790	
LPE6855ER220MG	22	$\pm$ 20 %	B	0.04	2.64	2.325	
LPE6855ER330MG	33	$\pm$ 20 %	B	0.05	2.12	1.910	
LPE6855ER470MG	47	$\pm$ 20 %	B	0.08	1.73	1.610	
LPE6855ER680MG	68	$\pm$ 20 %	B	0.12	1.41	1.350	
LPE6855ER101MG	100	$\pm$ 20 %	B	0.15	1.28	1.120	
LPE6855ER151MG	150	$\pm$ 20 %	C	0.23	1.02	0.915	
LPE6855ER221MG	220	$\pm$ 20 %	D	0.35	0.83	0.757	
LPE6855ER331MG	330	$\pm$ 20 %	D	0.55	0.67	0.620	
LPE6855ER471MG	470	$\pm$ 20 %	D	0.82	0.54	0.520	GAPPED MODELS (B)
LPE6855ER681MG	680	$\pm$ 20 %	E	1.23	0.45	0.433	
LPE6855ER102MG	1000	$\pm$ 20 %	E	1.89	0.36	0.358	
LPE6855ER152MG	1500	$\pm$ 20 %	E	2.90	0.29	0.292	
LPE6855ER222MG	2200	$\pm$ 20 %	E	4.50	0.23	0.242	
LPE6855ER332MG	3300	$\pm$ 20 %	E	5.50	0.21	0.197	
LPE6855ER472MG	4700	$\pm$ 20 %	E	8.30	0.17	0.166	

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

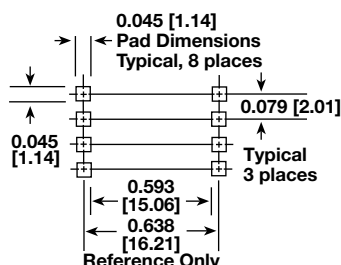
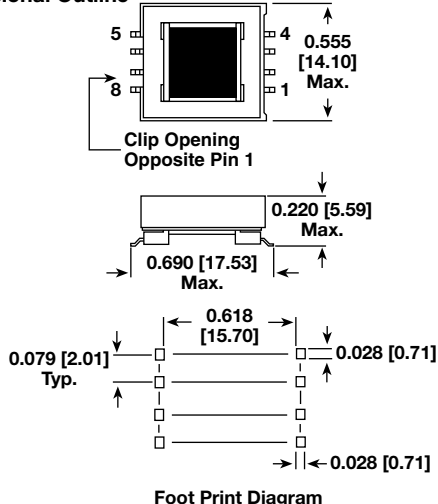
LPE	6855	1000 μ H	$\pm$ 30 %	A	ER	e2
MODEL	SIZE	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	CORE	PACKAGE CODE	JEDEC LEAD (Pb)-FREE STANDARD

GLOBAL PART NUMBER

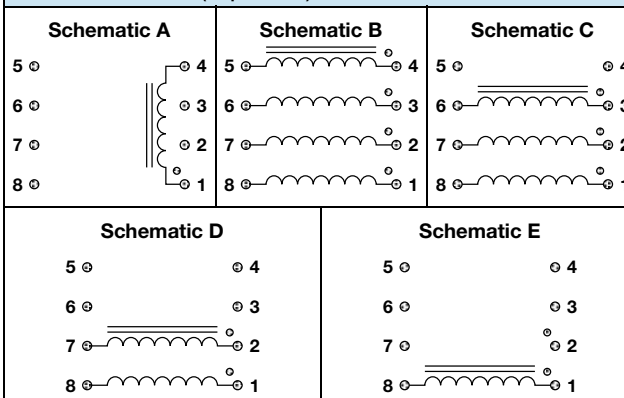
L	P	E	6	8	5	5	E	R	1	0	2	N	U
PRODUCT FAMILY			SIZE				PACKAGE CODE		INDUCTANCE VALUE			TOL.	CORE

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: $xx \pm 0.01''$ [± 0.25 mm]; $xxx \pm 0.005''$ [± 0.12 mm].

SCHEMATIC (top view)**Note**

- Schematic A is for 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

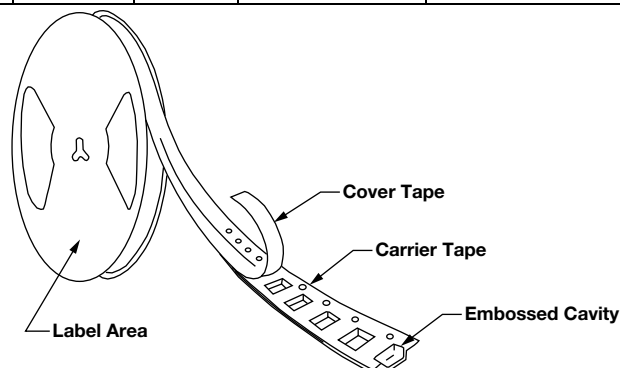
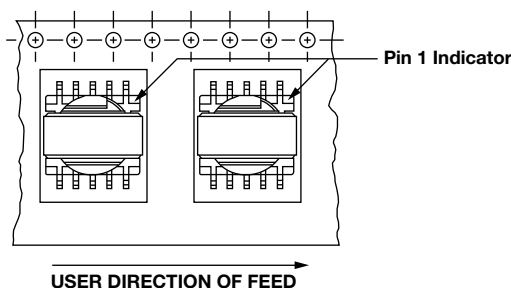
Cover Tape Adhesion to Carrier: 40 g $\pm$ 30 g**REEL SPECIFICATIONS:**

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-6855	32 mm	20 mm	450

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.

Vishay products are not designed for use in life-saving or life-sustaining applications or any application in which the failure of the Vishay product could result in personal injury or death unless specifically qualified in writing by Vishay. 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.