

## 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  $\mu$ H to 3900  $\mu$ H, measured at 0.10 V<sub>RMS</sub> at 10 kHz without DC current, using an HP 4263A or 4284A impedance analyzer

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

**Rated Current Range:** 1.00 A to 0.06 A

**Dielectric Withstanding Voltage:** 500 V<sub>RMS</sub>, 60 Hz, 5 s

### STANDARD ELECTRICAL SPECIFICATIONS

MODEL	IND. ( $\mu$ H)	IND. TOL.	SCHEMATIC LETTER	DCR MAX. ( $\Omega$ )	MAX. RATED DC CURRENT (A) <sup>(1)</sup>	SATURATING CURRENT (A) <sup>(2)</sup>	
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	GAPPED 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	
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

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

<sup>(2)</sup> 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 $\mu$ H	$\pm$ 30 %	A	ER	e2
MODEL	SIZE	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	CORE	PACKAGE CODE	JEDEC LEAD (Pb)-FREE STANDARD

### GLOBAL PART NUMBER

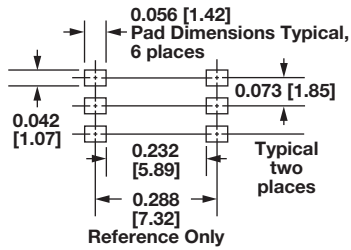
L	P	E	3	3	2	5	E	R	1	0	2	N	U
PRODUCT FAMILY			SIZE				PACKAGE CODE		INDUCTANCE VALUE			TOL.	CORE

#### Note

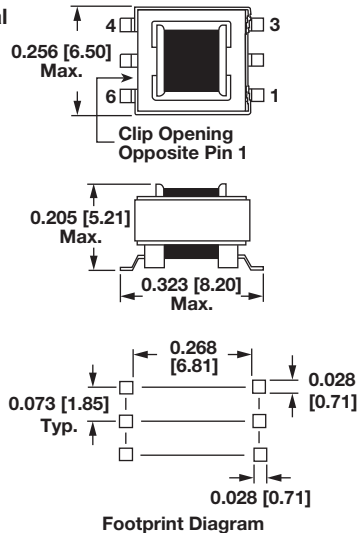
- Series is also available with SnPb terminations by using package code RY for tape and reel (in place of ER) or SM for bulk (in place of EB).

## DIMENSIONS in inches [millimeters]

### Pad Layout



### Dimensional Outline



### Notes

- Pad layout guidelines per MIL-STD-275E (printed wiring for electronic equipment).
- Tolerances:  $xx \pm 0.01$  [ $\pm 0.25$  mm];  $xxx \pm 0.005$  [ $\pm 0.12$  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 <sup>(1)</sup>
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

- <sup>(1)</sup> 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

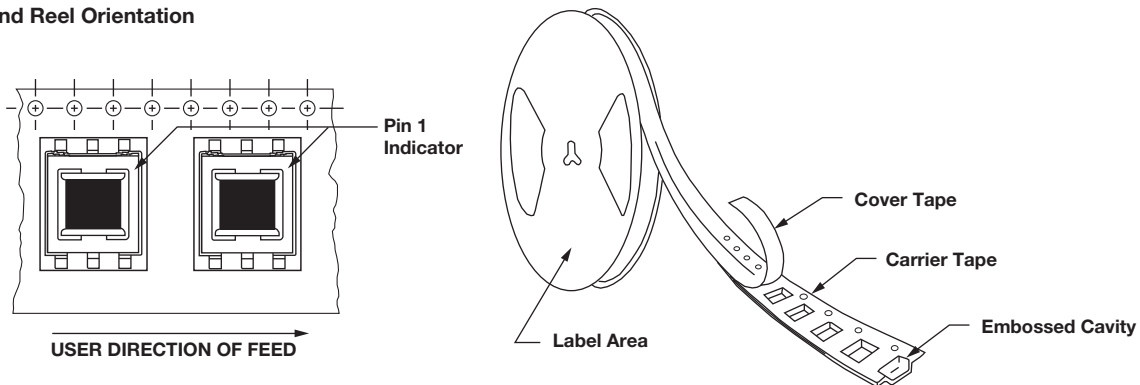
### REEL SPECIFICATIONS:

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-3325	24 mm	12 mm	1000

### Tape and Reel Orientation



### Note

- Top view shown with cover tape removed



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# Mouser Electronics

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