



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



# **ELECTRICAL SPECIFICATIONS**

Inductance Range: 10 µH to 3900 µH, measured at 0.10 V RMS at 10 kHz without DC current, using an HP 4263A or 4284A impedance



**DC Resistance Range:**  $0.06\,\Omega$  to  $18.0\,\Omega$ , measured at +  $25\,^{\circ}\text{C} \pm 5\,^{\circ}\text{C}$ 

Rated Current Range: 1.00 amps to 0.06 amps

Dielectric Withstanding Voltage: 500 V RMS, 60 Hz, 5 seconds

<b>DIMENSIONS</b> in inches [millimeters]
Pad Layout
0.056 [1.42] Pad Dimensions Typical, 6 places  0.073 [1.85] 0.042 [1.07] 0.232 [5.89] 0.288 [7.32] Reference Only
Dimensional Outline
0.256 [6.50] Max.
Clip Opening Opposite Pin 1
0.205 [5.21] Max. ↓ 0.323 [8.20] → Max.
0.073 [1.85]
Foot print Diagram
L

NOTE: Pad layout guidelines per MIL-STD-275E (printed wiring for electronic equipment).

Tolerances:  $xx \pm 0.01$ " [ $\pm 0.25$  mm].  $xxx \pm 0.005$ " [± 0.12 mm]

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

<sup>\*</sup> DC current that will create a maximum temperature rise of 30 °C when applied at + 25 °C ambient. \*\* 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 to DC converters or other circuits carrying DC currents or requiring inductance stability over a temperature range.

DESCRIPTION														
LPE	3325	1000 µH			± 30 %		Α		ER			(	e2	
MODEL	SIZE	INDUCTANCE VA	LUE	INDUCTA	NCE TO	LERANCE	CORE	PAC	KAGE C	ODE JE	EDEC LE	EAD (Pb)	-FREE ST	ANDARD
GLOBAL PART NUMBER														
	L	PE	3	3	2	5	E	R	1	0	2	N	U	
	PRO	ODUCT FAMILY		SIZ	ZE		PACKA COD			UCTANO VALUE	CE	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).

## Vishay Dale

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# **SCHEMATIC (TOP VIEW)** Schematic A 4 o

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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*				
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				

<sup>\*</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

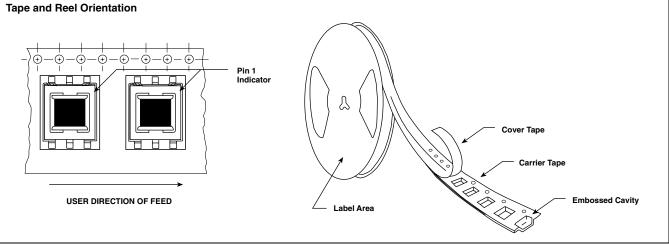
Cover Tape Adhesion to Carrier:  $40 \pm 30$  grams

**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	COMPONENT	UNITS PER
	WIDTH	PITCH	13 INCH REEL
I DE-3335	24 mm	12 mm	1000



NOTE: Top view shown with cover tape removed

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