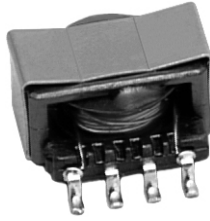




# Surface Mount Transformers/Inductors, Gapped and Ungapped, Custom Configurations Available



### FEATURES

- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



### ELECTRICAL SPECIFICATIONS

**Inductance Range:** 10  $\mu$ H to 47 000  $\mu$ H, measured at 0.10 V<sub>RMS</sub> at 10 kHz without DC current, using an HP 4263A or HP 4284A impedance analyzer

**DC Resistance Range:** 0.03  $\Omega$  to 19.1  $\Omega$ , measured at +25 °C  $\pm$  5 °C

**Rated Current Range:** 2.00 A to 0.09 A

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

**RoHS COMPLIANT**  
**HALOGEN FREE**

### 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>		
LPE4841ER101NU	100	$\pm$ 30 %	A	0.17	0.88	N/A	UNGAPPED MODELS (A)	
LPE4841ER151NU	150	$\pm$ 30 %	A	0.21	0.79	N/A		
LPE4841ER221NU	220	$\pm$ 30 %	A	0.25	0.721	N/A		
LPE4841ER331NU	330	$\pm$ 30 %	A	0.30	0.65	N/A		
LPE4841ER471NU	470	$\pm$ 30 %	A	0.36	0.60	N/A		
LPE4841ER681NU	680	$\pm$ 30 %	A	0.44	0.54	N/A		
LPE4841ER102NU	1000	$\pm$ 30 %	A	0.53	0.49	N/A		
LPE4841ER152NU	1500	$\pm$ 30 %	A	0.65	0.45	N/A		
LPE4841ER222NU	2200	$\pm$ 30 %	A	0.79	0.40	N/A		
LPE4841ER332NU	3300	$\pm$ 30 %	A	1.55	0.29	N/A		
LPE4841ER472NU	4700	$\pm$ 30 %	A	1.85	0.26	N/A		
LPE4841ER682NU	6800	$\pm$ 30 %	A	4.36	0.17	N/A		
LPE4841ER103NU	10 000	$\pm$ 30 %	A	5.29	0.16	N/A	UNGAPPED MODELS (A)	
LPE4841ER153NU	15 000	$\pm$ 30 %	A	6.48	0.14	N/A		
LPE4841ER223NU	22 000	$\pm$ 30 %	A	13.1	0.10	N/A		
LPE4841ER333NU	33 000	$\pm$ 30 %	A	16.0	0.09	N/A		
LPE4841ER473NU	47 000	$\pm$ 30 %	A	19.1	0.08	N/A		
LPE4841ER100MG	10	$\pm$ 20 %	B	0.03	2.03	2.320		GAPPED MODELS (B)
LPE4841ER150MG	15	$\pm$ 20 %	B	0.04	1.84	1.925		
LPE4841ER220MG	22	$\pm$ 20 %	C	0.07	1.32	1.610		
LPE4841ER330MG	33	$\pm$ 20 %	C	0.09	1.20	1.330		
LPE4841ER470MG	47	$\pm$ 20 %	D	0.13	0.98	1.125		
LPE4841ER680MG	68	$\pm$ 20 %	D	0.21	0.79	0.941		
LPE4841ER101MG	100	$\pm$ 20 %	E	0.35	0.58	0.781		
LPE4841ER151MG	150	$\pm$ 20 %	E	0.48	0.52	0.641		
LPE4841ER221MG	220	$\pm$ 20 %	E	0.73	0.42	0.532		
LPE4841ER331MG	330	$\pm$ 20 %	E	1.14	0.34	0.436		
LPE4841ER471MG	470	$\pm$ 20 %	E	1.36	0.31	0.366		
LPE4841ER681MG	680	$\pm$ 20 %	E	2.07	0.25	0.305		
LPE4841ER102MG	1000	$\pm$ 20 %	E	3.15	0.20	0.252	GAPPED MODELS (B)	
LPE4841ER152MG	1500	$\pm$ 20 %	E	4.76	0.16	0.206		
LPE4841ER222MG	2200	$\pm$ 20 %	E	7.29	0.13	0.170		
LPE4841ER332MG	3300	$\pm$ 20 %	E	11.7	0.11	0.139		
LPE4841ER472MG	4700	$\pm$ 20 %	E	17.7	0.09	0.117		

#### 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

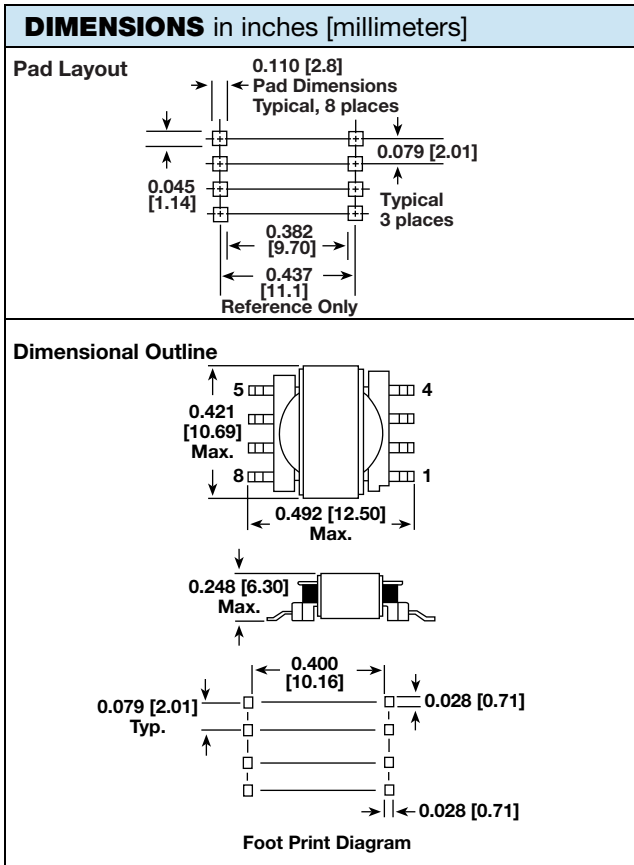
LPE	4841	1000 $\mu$ H	$\pm$ 30 %	A	ER	e2
MODEL	SIZE	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	CORE	PACKAGE CODE	JEDEC LEAD (Pb)-FREE STANDARD

### GLOBAL PART NUMBER

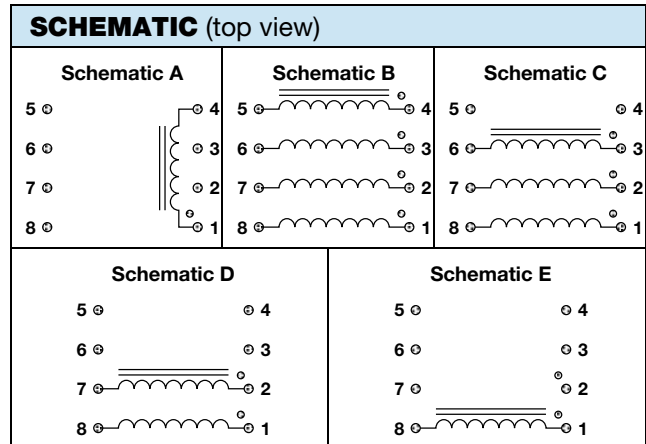
L	P	E	4	8	4	1	E	R	1	0	2	N	U
PRODUCT FAMILY			SIZE			PACKAGE CODE	INDUCTANCE VALUE			TOL.	CORE		

#### 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)



- 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]
  - The underside of these components contains metal and thus should not come in contact with active circuit traces



- 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 <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

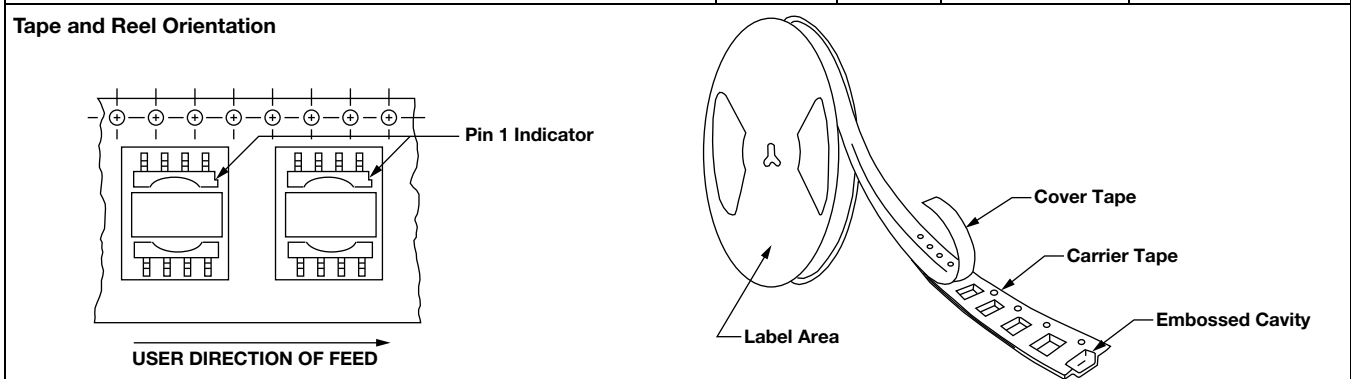
**PACKAGING**

**TAPE SPECIFICATIONS:**  
 Carrier tape type: conductive  
 Cover tape type: anti-static  
 Cover tape adhesion to carrier: 40 g ± 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-4841	24 mm	16 mm	600



- Note**
- Top view shown with cover tape removed



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