

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 47 000 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: 0.03 Ω to 19.1 Ω , measured at + 25 $^{\circ}$ C \pm 5 $^{\circ}$ C

Rated Current Range: 2.00 A to 0.09 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⁾
LPE4841ER101NU	100	\pm 30 %	A	0.17	0.88	N/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
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
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
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 $^{\circ}$ C when applied at + 25 $^{\circ}$ 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.

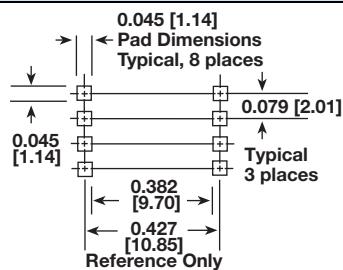
DESCRIPTION													
MODEL	SIZE	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	CORE	PACKAGE CODE	JEDEC	LEAD (Pb)-FREE	STANDARD					
GLOBAL PART NUMBER													
L	P	E	4	8	4	1	E	R	1	0	2	N	U
PRODUCT FAMILY	SIZE	PACKAGE CODE	INDUCTANCE VALUE	TOL.	CORE								

Note

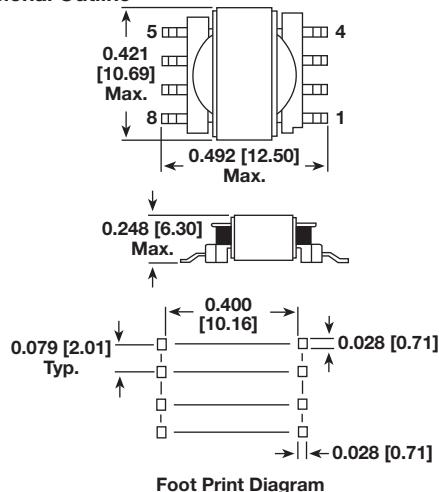
- Series is also available with SnPb terminations by using package code RY for tape and reel (in place of ER) or SM for bulk (in place of EB).

DIMENSIONS in inches [millimeters]

Pad Layout

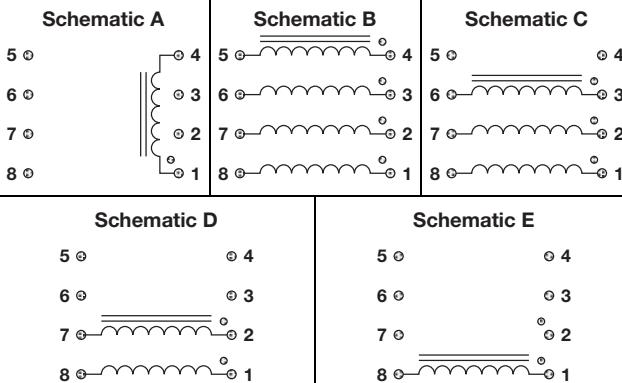


Dimensional Outline



Notes

- Pad layout guidelines per MIL-STD-275E (printed wiring for electronic equipment).
- Tolerances: $xx \pm 0.01" [\pm 0.25 \text{ mm}]$; $xxx \pm 0.005" [\pm 0.12 \text{ mm}]$.
- The underside of these components contains metal and thus should not come in contact with active circuit traces.

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:**

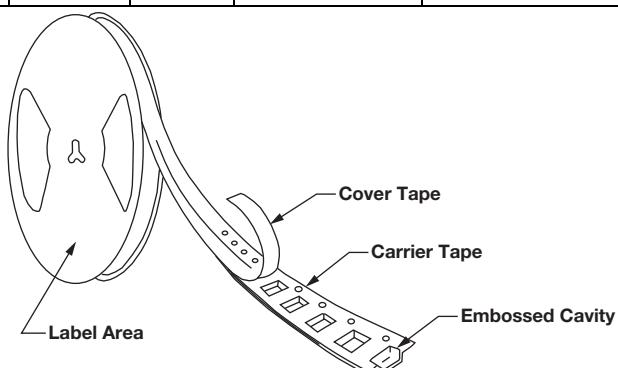
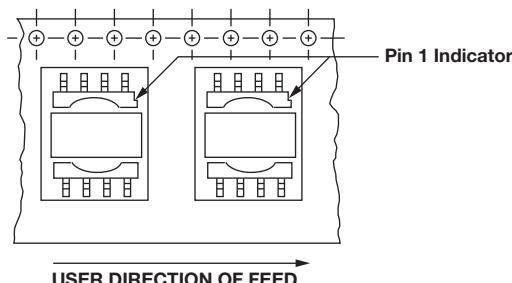
Diameter (flange): 13" [330.2 mm]

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-4841	24 mm	16 mm	600

Tape and Reel Orientation



Note

- Top view shown with cover tape removed

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