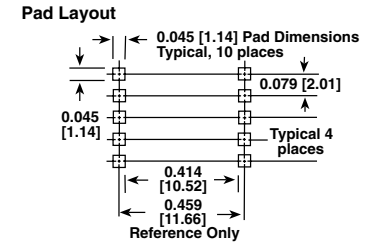
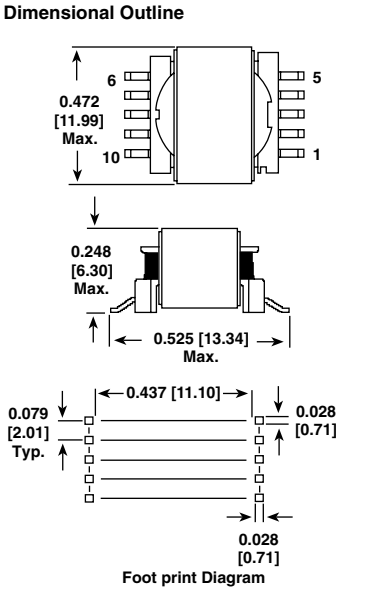
Surface Mount Transformers/Inductors, Gapped and Ungapped Custom Configurations Available

DIMENSIONS in inches [millimeters]





NOTE: 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.

ELECTRICAL SPECIFICATIONS

(Multiple winds are connected in parallel)

Inductance Range: 10 µH to 68 000 µH, 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 24.1 Ω, measured at + 25 °C ± 5 °C

Rated Current Range: 2.29 amps to 0.07 amps

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

Pb-free
RoHS COMPLIANT

STANDARD ELECTRICAL SPECIFICATIONS

MODEL	IND. (µH)	IND. TOL.	SCHEMATIC LETTER	DCR MAX. (Ohms)	MAX. RATED* DC CURRENT (Amps)	SATURATING CURRENT** (Amps)
Ungapped Models (A)						
LPE5047ER151NU	150	± 30 %	A	0.20	0.79	N/A
LPE5047ER221NU	220	± 30 %	A	0.24	0.72	N/A
LPE5047ER331NU	330	± 30 %	A	0.29	0.65	N/A
LPE5047ER471NU	470	± 30 %	A	0.35	0.59	N/A
LPE5047ER681NU	680	± 30 %	A	0.42	0.54	N/A
LPE5047ER102NU	1000	± 30 %	A	0.51	0.49	
LPE5047ER152NU	1500	± 30 %	A	0.63	0.44	N/A
LPE5047ER222NU	2200	± 30 %	A	0.76	0.40	N/A
LPE5047ER332NU	3300	± 30 %	A	1.00	0.35	N/A
LPE5047ER472NU	4700	± 30 %	A	2.24	0.24	N/A
LPE5047ER682NU	6800	± 30 %	A	2.70	0.21	N/A
LPE5047ER103NU	10 000	± 30 %	A	3.27	0.19	N/A
LPE5047ER153NU	15 000	± 30 %	A	6.26	0.14	N/A
LPE5047ER223NU	22 000	± 30 %	A	7.58	0.13	N/A
LPE5047ER333NU	33 000	± 30 %	A	9.50	0.11	N/A
LPE5047ER473NU	47 000	± 30 %	A	18.5	0.08	N/A
LPE5047ER683NU	68 000	± 30 %	A	24.1	0.07	N/A
Gapped Models (B)						
LPE5047ER100MG	10	± 20 %	B	0.03	2.29	2.690
LPE5047ER150MG	15	± 20 %	B	0.04	2.07	2.230
LPE5047ER220MG	22	± 20 %	B	0.05	1.68	1.860
LPE5047ER330MG	33	± 20 %	C	0.09	1.35	1.540
LPE5047ER470MG	47	± 20 %	D	0.13	1.11	1.300
LPE5047ER680MG	68	± 20 %	D	0.15	1.01	1.085
LPE5047ER101MG	100	± 20 %	D	0.24	0.81	0.900
LPE5047ER151MG	150	± 20 %	D	0.37	0.65	0.740
LPE5047ER221MG	220	± 20 %	E	0.55	0.53	0.610
LPE5047ER331MG	330	± 20 %	E	0.85	0.43	0.500
LPE5047ER471MG	470	± 20 %	E	1.29	0.35	0.420
LPE5047ER681MG	680	± 20 %	E	1.96	0.28	0.350
LPE5047ER102MG	1000	± 20 %	E	2.38	0.26	0.290
LPE5047ER152MG	1500	± 20 %	E	3.66	0.21	0.240
LPE5047ER222MG	2200	± 20 %	E	5.47	0.17	0.195
LPE5047ER332MG	3300	± 20 %	E	8.48	0.14	0.160
LPE5047ER472MG	4700	± 20 %	E	13.2	0.11	0.135

* 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

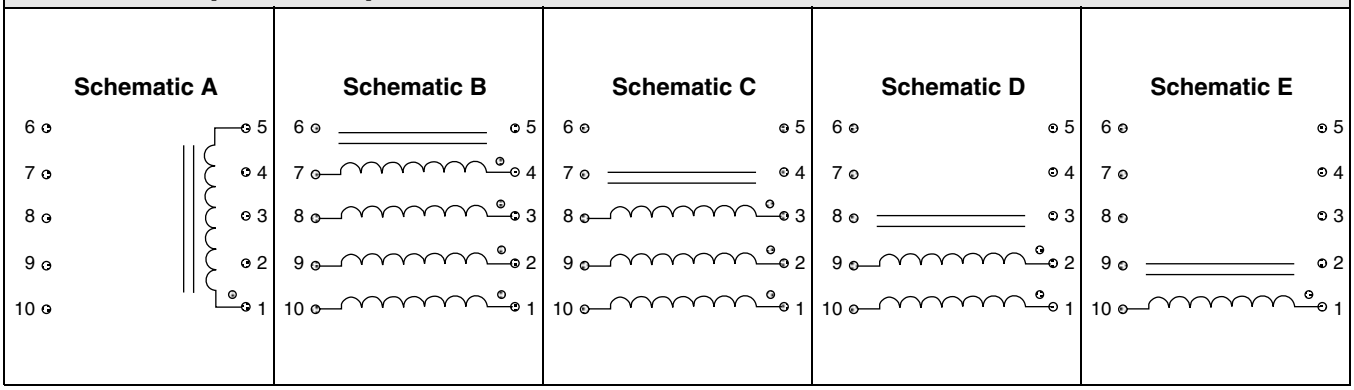
LPE	5047	1000 µH	± 30 %	A	ER	e2
MODEL	SIZE	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	CORE	PACKAGE CODE	JEDEC LEAD (Pb)-FREE STANDARD

GLOBAL PART NUMBER

L	P	E	5	0	4	7	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).

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*
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

* Must be checked in end use application

PART MARKING

- Vishay Dale
- Date code
- Marking code (Suffix of model #)
- Pin 1 indicator

PACKAGING

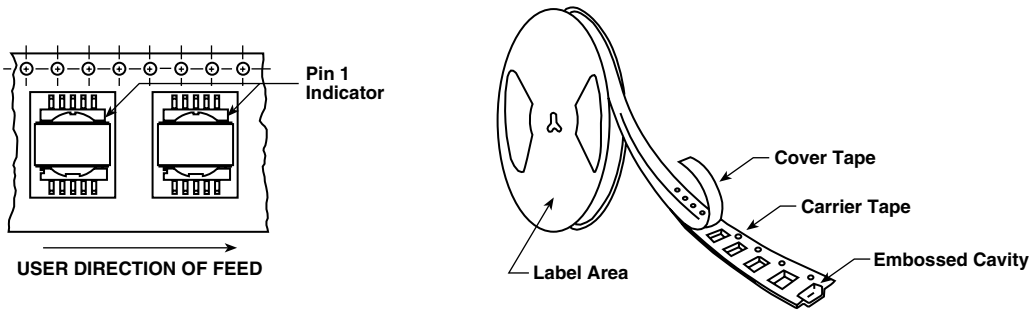
TAPE SPECIFICATIONS:
Carrier Tape Type: Conductive
Cover Tape Type: Anti-static
Cover Tape Adhesion to Carrier: 40 ± 30 grams

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 WIDTH	COMPONENT PITCH	UNITS PER 13 INCH REEL
LPE-5047	24 mm	16 mm	600

Tape and Reel Orientation



NOTE: Top view shown with cover tape removed

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