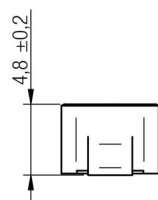
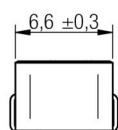
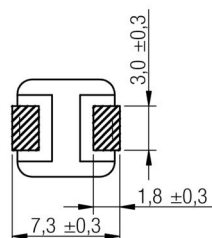
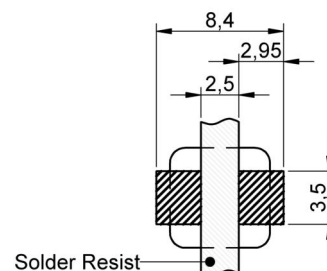


A Dimensions: [mm]

Scale - 2:1

Reference on drawing	Description
Marking	R47 (Inductance Code)

B Recommended land pattern: [mm]

no vias and traces in restricted area

Scale- 2:1

C Schematic:**D Electrical Properties:**

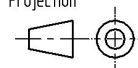
Properties	Test conditions		Value	Unit	Tol.
Inductance	100 kHz/ 10 mA	L	0.47	μH	±20%
Rated current	ΔT = 40 K	I _R	13.5	A	max.
Saturation current	IΔL/L < 20%	I _{sat}	30.0	A	typ.
DC Resistance	@ 20°C	R _{DC}	3.5	mΩ	typ.
DC Resistance	@ 20°C	R _{DC}	3.9	mΩ	max.
Self resonant frequency		f _{res}	96	MHz	typ.

E General information:

It is recommended that the temperature of the part does not exceed 125°C under worst case operating conditions.

- Ambient temperature: -40°C to +85°C (referring to I_R)
- Operating temperature: -40°C to +125°C
- Storage temperature (on tape & reel): -20°C to +40°C; 75% RH max.
- Test conditions of Electrical Properties: 20°C, 33% RH if not specified differently

Projection



Würth Elektronik eiSos GmbH & Co. KG
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eiSos@we-online.com

DESCRIPTION

WE-LHMI SMD Power Inductor

Order.- No.

744373490047

Size: 7050

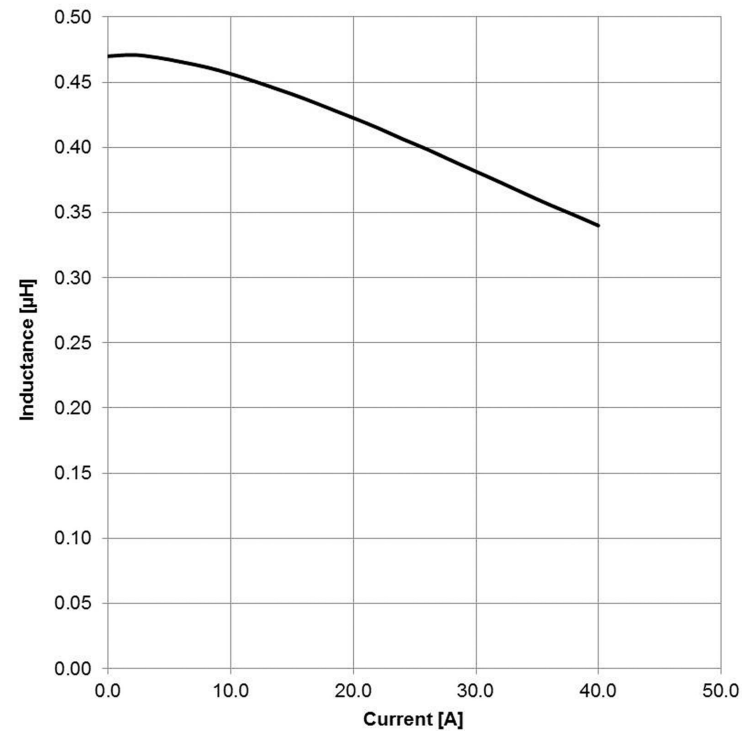


SIZE

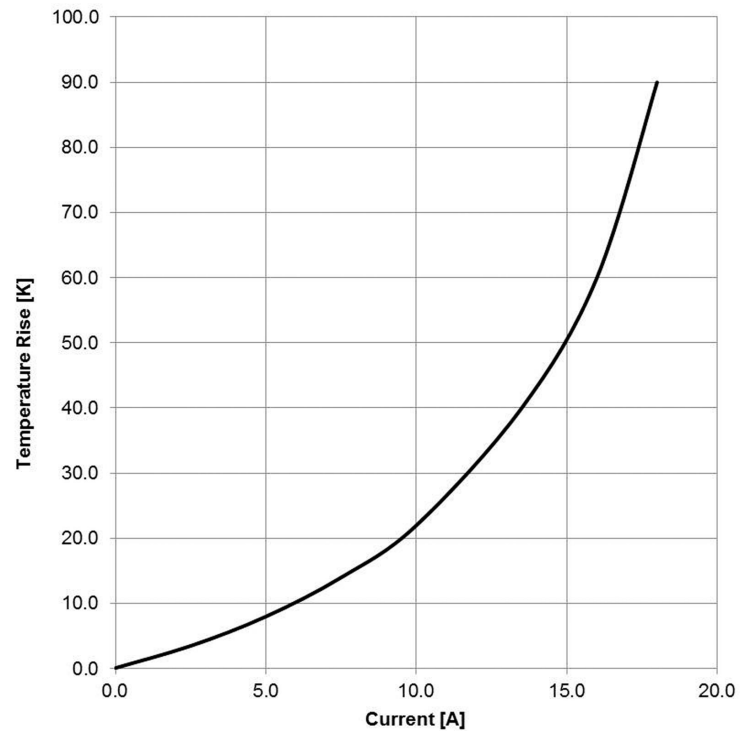
A4

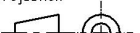


F1 Typical Inductance vs. Current Characteristics:



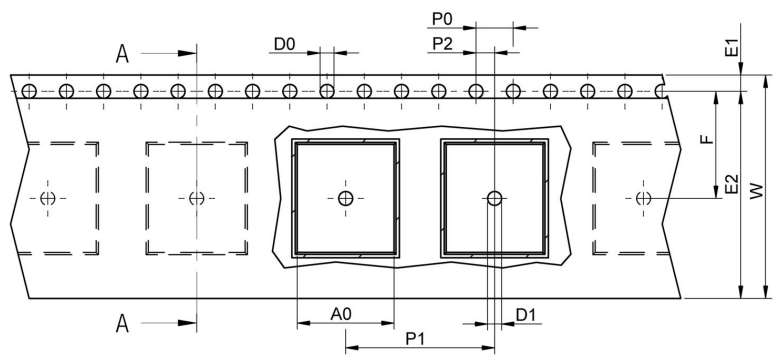
F2 Typical Temperature Rise vs. Current Characteristics:



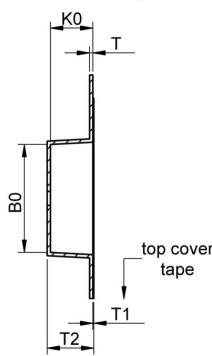
				Projection 		DESCRIPTION				
1.11	2015-05-18	SSt	DDe			WE-LHMI SMD Power Inductor				
1.10	2014-11-24	SSt	DDe							
1.9	2014-09-04	SSt	DDe	Würth Elektronik eiSos GmbH & Co. KG EMC & Inductive Solutions Max-Eyth-Str. 1 74638 Waldenburg Germany Tel. +49 (0) 79 42 945 - 0 www.we-online.com eiSos@we-online.com			Order.- No.		 COMPLIANT RoHS&REACH WÜRTH ELEKTRONIK	SIZE
1.8	2013-12-18	SSt	SSt				744373490047			A4
1.7	2013-09-03	SSt	DDe							
1.6	2013-04-29	SSt	SSt							
1.5	2012-12-06	SSt	SSt							
REV	DATE	BY	CHECKED							Size: 7050

This electronic component has been designed and developed for usage in general electronic equipment only. This product is not authorized for use in equipment where a higher safety standard and reliability standard is especially required or where a failure of the product is reasonably expected to cause severe personal injury or death, unless the parties have executed an agreement specifically governing such use. Moreover Würth Elektronik eiSos GmbH & Co KG products are neither designed nor intended for use in areas such as military, aerospace, aviation, nuclear control, submarine, transportation (automotive control, train control, ship control), transportation signal, disaster prevention, medical, public information network etc.. Würth Elektronik eiSos GmbH & Co KG must be informed about the intent of such usage before the design-in stage. In addition, sufficient reliability evaluation checks for safety must be performed on every electronic component which is used in electrical circuits that require high safety and reliability functions or performance.

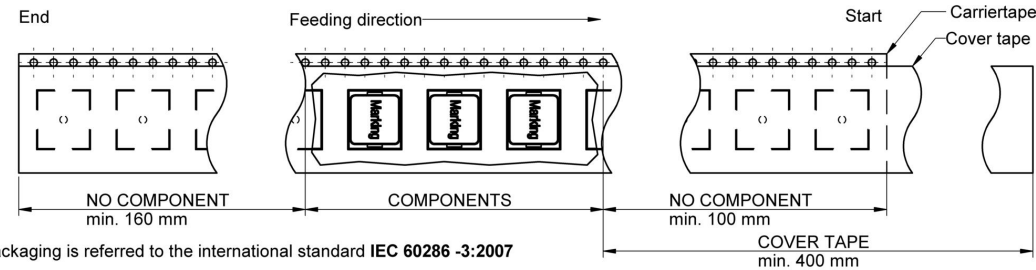
G Packaging Specification - Tape and Reel [mm]:



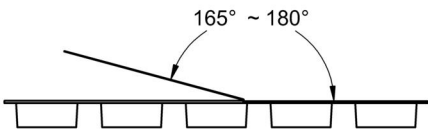
sectional drawing A-A



	A0	B0	W	P1	T	T1	T2	K0	D0	D1	E1	E2	F	P0	P2	Tape	VPE / packaging unit
tolerance	typ.	typ.	±0,3	±0,1	max.	min.	ref.	typ.	+0,1	min.	±0,1	min.	±0,05	±0,1	±0,05		pcs.
size	4012	4,40	5,00	12,00	8,00	0,60	0,10	1,80	1,50	1,50	1,75	10,25	5,50	4,00	2,00	Polystyrene	4000
size	4020	4,40	5,00	12,00	8,00	0,60	0,10	2,60	2,30	1,50	1,75	10,25	5,50	4,00	2,00	Polystyrene	3000
size	5020	5,50	6,30	12,00	8,00	0,60	0,10	2,60	2,30	1,50	1,75	10,25	5,50	4,00	2,00	Polystyrene	3000
size	5030	5,50	6,20	12,00	8,00	0,60	0,10	3,60	3,30	1,50	1,75	10,25	5,50	4,00	2,00	Polystyrene	2000
size	7030	7,00	7,70	16,00	12,00	0,60	0,10	3,60	3,30	1,50	1,75	14,25	7,50	4,00	2,00	Polystyrene	1000
size	7050	7,00	7,70	16,00	12,00	0,60	0,10	5,60	5,30	1,50	1,75	14,25	7,50	4,00	2,00	Polystyrene	800
size	8030	8,70	10,20	24,00	16,00	0,60	0,10	3,40	3,10	1,50	1,75	22,25	11,50	4,00	2,00	Polystyrene	1000
size	8040	8,70	10,20	24,00	16,00	0,60	0,10	4,40	4,10	1,50	1,75	22,25	11,50	4,00	2,00	Polystyrene	800
size	1040	10,40	11,60	24,00	16,00	0,60	0,10	4,80	4,50	1,50	1,75	22,25	11,50	4,00	2,00	Polystyrene	500
size	1335	12,90	14,10	24,00	16,00	0,60	0,10	4,30	4,00	1,50	1,75	22,25	11,50	4,00	2,00	Polystyrene	500

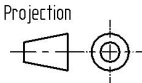


Packaging is referred to the international standard IEC 60286 -3:2007



Tape width	Pull-of force	
	12 mm	0,1 N - 1,3 N
	16 mm	0,1 N - 1,3 N
	24 mm	0,1 N - 1,3 N

1.11	2015-05-18	SSt	DDe	
1.10	2014-11-24	SSt	DDe	
1.9	2014-09-04	SSt	DDe	
1.8	2013-12-18	SSt	SSt	
1.7	2013-09-03	SSt	DDe	
1.6	2013-04-29	SSt	SSt	
1.5	2012-12-06	SSt	SSt	
REV	DATE	BY	CHECKED	



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DESCRIPTION

WE-LHMI SMD Power Inductor

Order.- No.

744373490047

Size: 7050

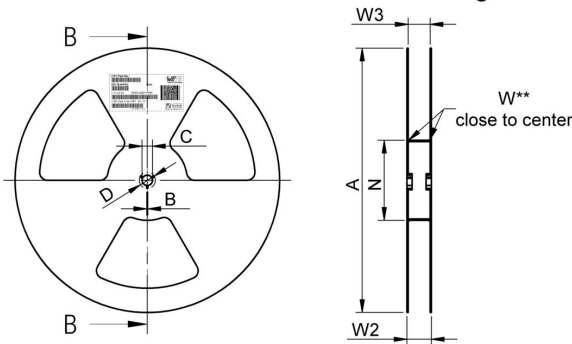


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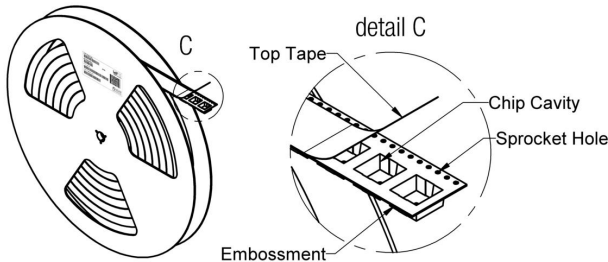
A4



sectional drawing B-B



	A	B	C	D	N	W1	W2	W3	W3
tolerance	± 2,0	min.	± 0,8	min.	min.	+ 2	max.	min.	max.
Tape width	12 mm	330,00	1,50	13,00	20,20	60,00	12,40	18,40	11,90
	16 mm	330,00	1,50	13,00	20,20	60,00	16,40	22,40	15,90
	24 mm	330,00	1,50	13,00	20,20	80,00	24,40	30,40	23,90



H Soldering Specifications:



H1: Classification Reflow Profile for SMT components:



H2: Classification Reflow Profiles

Profile Feature	Pb-Free Assembly
Preheat - Temperature Min (T_{smin}) - Temperature Max (T_{smax}) - Time (t_s) from (T_{smin} to T_{smax})	150°C 200°C 60-120 seconds
Ramp-up rate (T_L to T_p)	3°C/ second max.
Liquidous temperature (T_L) Time (t_L) maintained above T_L	217°C 60-150 seconds
Peak package body temperature (T_p)	See Table H3
Time within 5°C of actual peak temperature (t_p)	20-30 seconds
Ramp-down rate (T_p to T_L)	6°C/ second max.
Time 25°C to peak temperature	8 minutes max.

refer to IPC/JEDEC J-STD-020D

H3: Package Classification Reflow Temperature

	Package Thickness	Volume mm³ <350	Volume mm³ 350 - 2000	Volume mm³ >2000
PB-Free Assembly	< 1.6 mm	260°C	260°C	260°C
PB-Free Assembly	1.6 - 2.5 mm	260°C	250°C	245°C
PB-Free Assembly	≥ 2.5 mm	250°C	245°C	245°C

refer to IPC/JEDEC J-STD-020D

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1.7	2013-09-03	SSt	DDe			
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1.5	2012-12-06	SSt	SSt			
REV	DATE	BY	CHECKED			
				Würth Elektronik eiSos GmbH & Co. KG EMC & Inductive Solutions Max-Eyth-Str. 1 74638 Waldenburg Germany Tel. +49 (0) 79 42 945 - 0 www.we-online.com eiSos@we-online.com		Order.- No. 744373490047 Size: 7050
						SIZE A4

I Cautions and Warnings:

The following conditions apply to all goods within the product series of WE-LHMI of Würth Elektronik eiSos GmbH & Co. KG:

General:

All recommendations according to the general technical specifications of the data sheet have to be complied with.

The usage and operation of the product within ambient conditions, which probably alloy or harm the wire isolation, has to be avoided.

If the product is potted in customer applications, the potting material might shrink during and after hardening. The product is exposed to the pressure of the potting material with the effect that the core, wire and termination is possibly damaged by this pressure and so the electrical as well as the mechanical characteristics are endangered to be affected. After the potting material is cured, the core, wire and termination of the product have to be checked if any reduced electrical or mechanical functions or destructions have occurred.

The responsibility for the applicability of customer specific products and use in a particular customer design is always within the authority of the customer. All technical specifications for standard products do also apply to customer specific products.

Cleaning agents that are used to clean the customer application might damage or change the characteristics of the component, body, pins or termination.

Direct mechanical impact to the product shall be prevented as the iron powder material of the core could flake or in the worst case it could break.

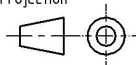
Product specific:

Follow all instructions mentioned in the datasheet, especially:

- The soldering profile has to be complied with according to the technical reflow soldering specification, otherwise this will void the warranty.
- All products shall be used before the end of the period of 12 months based on the product date code, if not a 100% solderability can't be ensured.
- Violation of the technical product specifications such as exceeding the nominal rated current will void the warranty.

The general and product specific cautions comply with the state of the scientific and technical knowledge and are believed to be accurate and reliable; however, no responsibility is assumed for inaccuracies or incompleteness.



				Projection		DESCRIPTION	
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1.6	2013-04-29	SSt	SSt				
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				Order.- No.		SIZE	
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				Size: 7050			

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