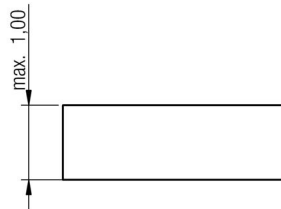
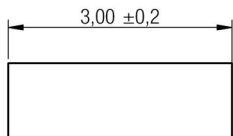
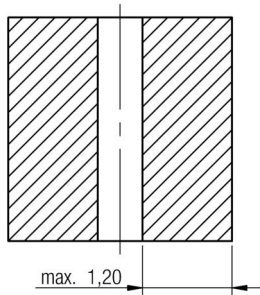
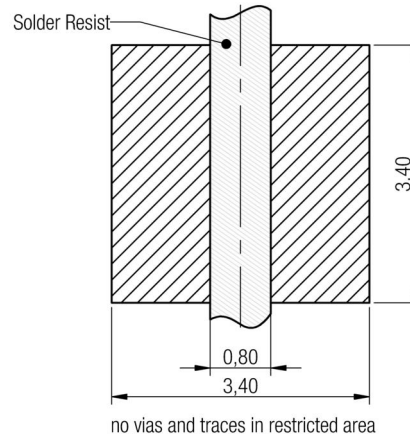


**A Dimensions: [mm]**



Scale - 10:1

**B Recommended land pattern: [mm]**



Scale - 10:1

**C Schematic:**



**D Electrical Properties:**

Properties	Test conditions		Value	Unit	Tol.
<b>Inductance</b>	100 kHz/ 10 mA	L	2.2	μH	±20%
<b>Rated current</b>	ΔT = 40 K	I <sub>R</sub>	1.4	A	max.
<b>Saturation current</b>	ΔL/L  < 20%	I <sub>sat</sub>	3.9	A	typ.
<b>DC Resistance</b>	@ 20°C	R <sub>DC</sub>	150	mΩ	typ.
<b>DC Resistance</b>	@ 20°C	R <sub>DC</sub>	172	mΩ	max.
<b>Self resonant frequency</b>		f <sub>res</sub>	50	MHz	typ.

**E General information:**

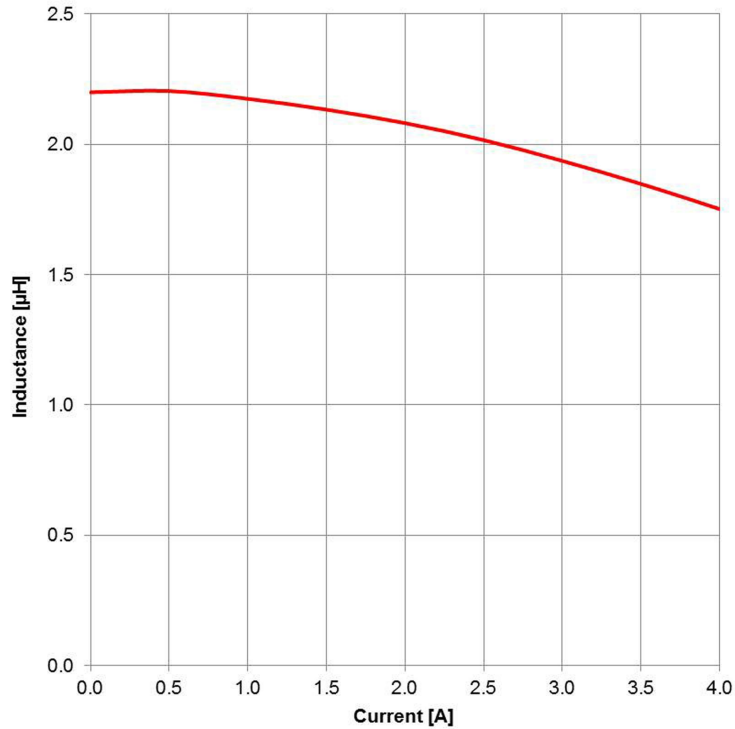
It is recommended that the temperature of the part does not exceed 125°C under worst case operating conditions.

- Ambient temperature: -40°C to +85°C (referring to I<sub>R</sub>)
- 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

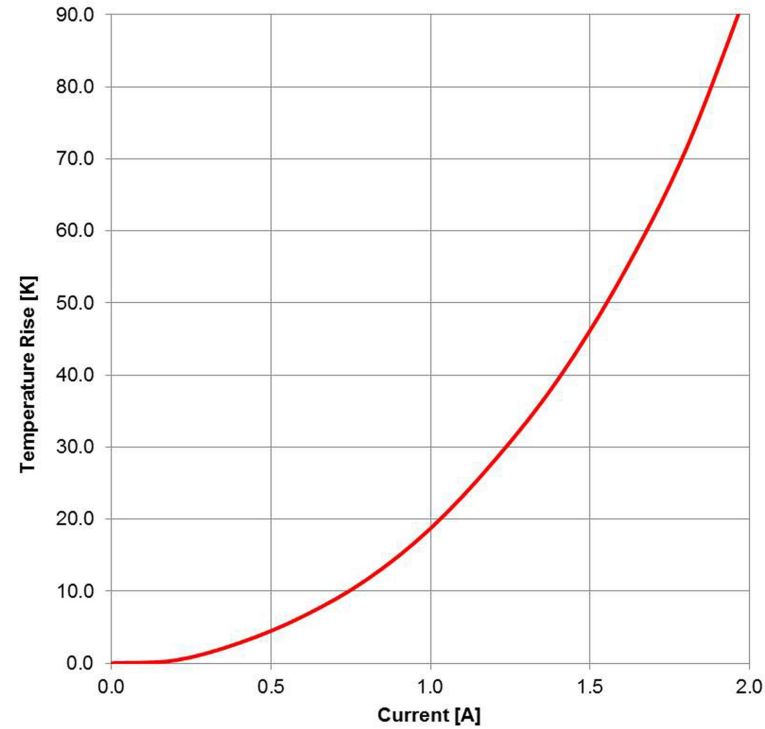
				Projection 	DESCRIPTION	
				<b>WE-MAPI SMD Power Inductor</b>		
				Order.- No.		SIZE
				<b>74438333022</b>		A4
				Size: 3010		
1.1	2013-12-17	SSt	SSt	Würth Elektronik eiSos GmbH & Co. KG EMC & Inductive Solutions Max-Eyth-Str. 1 74638 Waldenburg Germany Tel. +49 (0) 79 42 945 - 0 www.we-online.com eiSos@we-online.com		
1.0	2013-07-31	SSt	DDe			
REV	DATE	BY	CHECKED			



**F1 Typical Inductance vs. Current Characteristics:**



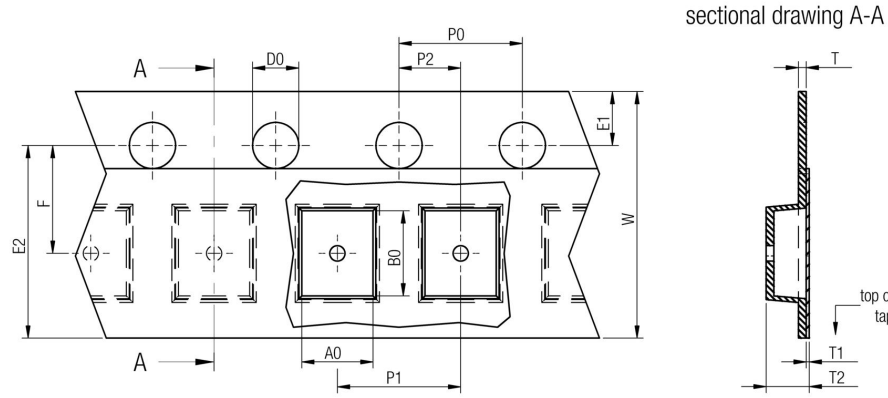
**F2 Typical Temperature Rise vs. Current Characteristics:**



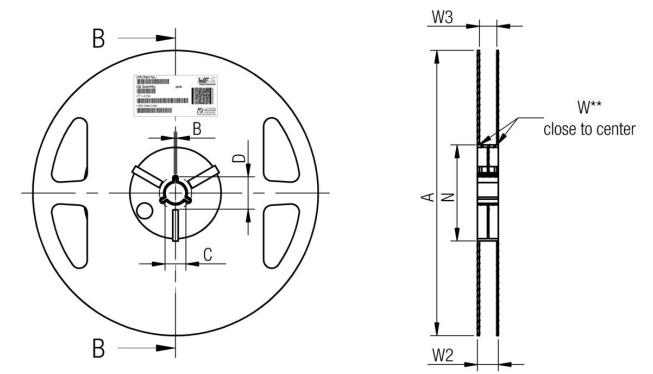
				Projection 	DESCRIPTION  <b>WE-MAPI SMD Power Inductor</b>
				Würth Elektronik eiSos GmbH & Co. KG EMC & Inductive Solutions Max-Eyth-Str. 1 74638 Waldenburg Germany Tel. +49 (0) 79 42 945 - 0 www.we-online.com eiSos@we-online.com	Order.- No.  <b>74438333022</b>
1.1	2013-12-17	SSt	SSt		COMPLIANT <b>RoHS&amp;REACH</b> WÜRTH ELEKTRONIK
1.0	2013-07-31	SSt	DDe		
REV	DATE	BY	CHECKED		SIZE A4
					Size: 3010

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.

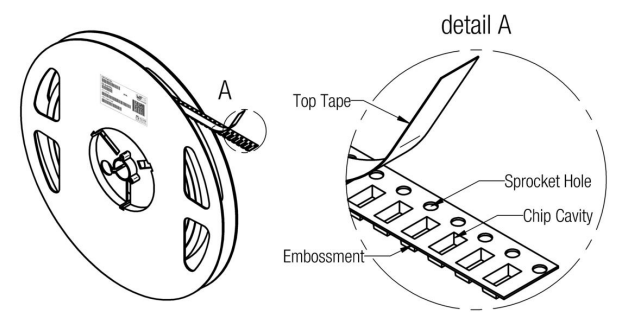
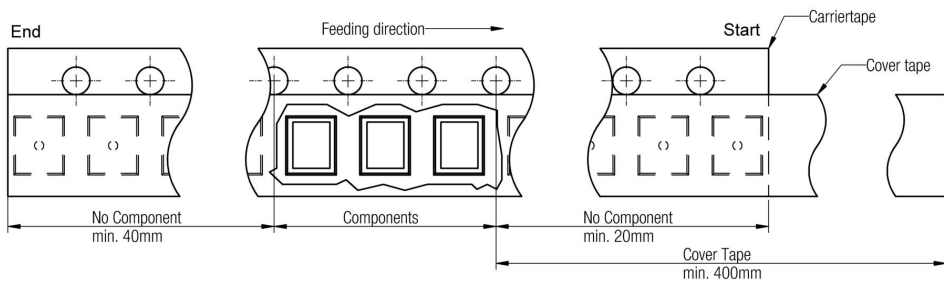
G Packaging Specification - Tape and Reel [mm]:



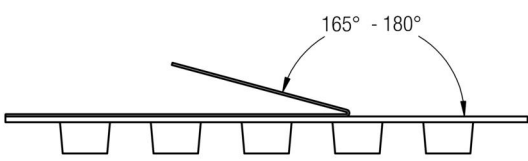
SIZE	A0		B0		W		P1		T		T1		T2		D0		E1		E2		F		P0		P2		Tape	VPE / packaging unit
	tolerance	typ.	typ.	typ.	typ.	typ.	typ.	typ.	typ.	typ.	typ.	typ.	typ.	typ.	typ.	typ.	typ.	typ.	typ.	typ.	typ.	typ.	typ.	typ.	typ.	typ.		
2506	± 0,1	2,30	2,75	8,00	± 0,1	4,00	0,22	0,10	1,80	1,50	1,75	6,25	3,50	4,00	2,00	Polystyrene	3000											
2508	± 0,1	2,30	2,75	8,00	± 0,1	4,00	0,22	0,10	1,80	1,50	1,75	6,25	3,50	4,00	2,00	Polystyrene	3000											
2510	± 0,1	2,30	2,75	8,00	± 0,1	4,00	0,22	0,10	1,80	1,50	1,75	6,25	3,50	4,00	2,00	Polystyrene	3000											
3010	± 0,1	3,50	3,50	12,00	± 0,1	8,00	0,30	0,10	2,00	1,50	1,75	10,25	5,50	4,00	2,00	Polystyrene	1000											
3012	± 0,1	3,50	3,50	12,00	± 0,1	8,00	0,30	0,10	2,00	1,50	1,75	10,25	5,50	4,00	2,00	Polystyrene	1000											
3015	± 0,1	3,50	3,50	12,00	± 0,1	8,00	0,30	0,10	2,00	1,50	1,75	10,25	5,50	4,00	2,00	Polystyrene	1000											



tolerance	A	B	C	D	N	W1	W2	W3	W3
	± 2,0	min.	± 0,8	min.	± 2,0	+ 1,5	max.	min.	max.
Tape width 8 mm	178,00	1,50	13,00	20,20	50,00	8,40	14,40	7,90	10,90
Tape width 12mm	178,00	1,50	13,00	20,20	50,00	12,40	18,40	11,90	15,40



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



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

REV	DATE	BY	CHECKED
1.1	2013-12-17	SSt	SSt
1.0	2013-07-31	SSt	DDe

Projection

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

DESCRIPTION	
<b>WE-MAPI SMD Power Inductor</b>	
Order.- No.	<b>74438333022</b>
Size:	3010

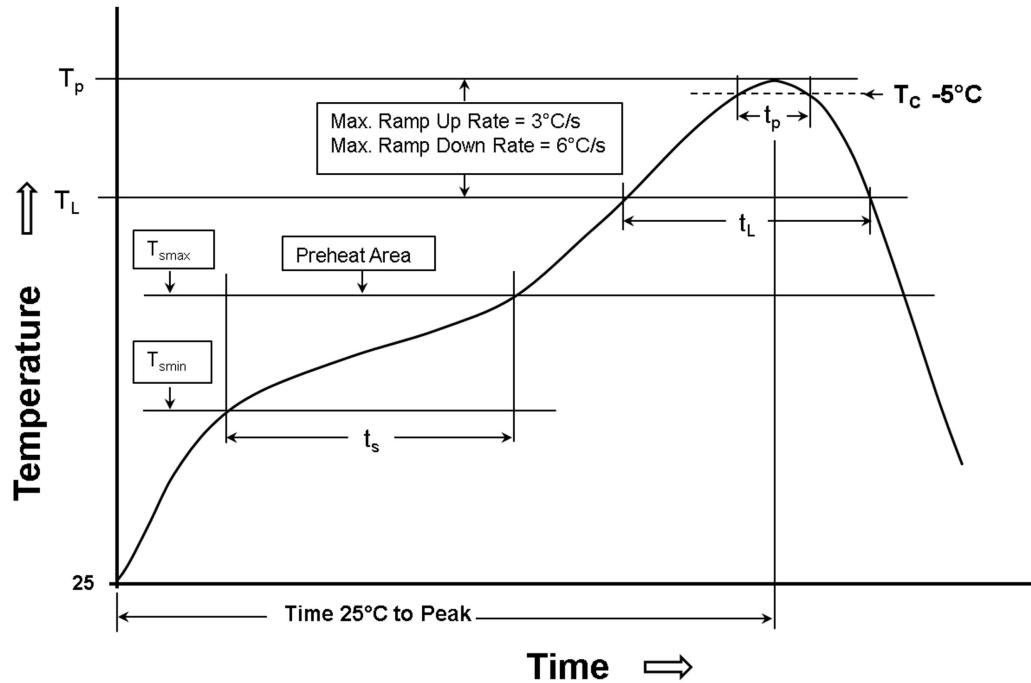


This electronic component has been designed and developed for usage in general electronic equipment only. This product is not authorized for use in equipment where a higher safety standard and reliability standard is especially required or where a failure of the product is reasonably expected to cause 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.

# 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 mm <sup>3</sup> <350	Volume mm <sup>3</sup> 350 - 2000	Volume mm <sup>3</sup> >2000
<b>PB-Free Assembly</b>	< 1.6 mm	260°C	260°C	260°C
<b>PB-Free Assembly</b>	1.6 - 2.5 mm	260°C	250°C	245°C
<b>PB-Free Assembly</b>	≥ 2.5 mm	250°C	245°C	245°C

refer to IPC/JEDEC J-STD-020D

				Projection 	DESCRIPTION  <b>WE-MAPI SMD Power Inductor</b>
				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	
1.1	2013-12-17	SSt	SSt		Order.- No.  <b>74438333022</b>
1.0	2013-07-31	SSt	DDe		<b>COMPLIANT</b> RoHS&REACH WÜRTH ELEKTRONIK
REV	DATE	BY	CHECKED		SIZE A4
					Size: 3010

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.

## I Cautions and Warnings:

The following conditions apply to all goods within the product series of WE-MAPI 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.

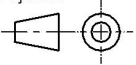

Direct mechanical impact to the product shall be prevented as the iron powder material of the core could flake or in the worst case it could break.

### Product specific:

Follow all instructions mentioned in the data sheet, 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 guaranteed.
- Violation of the technical product specifications such as exceeding the nominal rated current will void the warranty.



				Projection 		DESCRIPTION
						<b>WE-MAPI SMD Power Inductor</b>
				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.
1.1	2013-12-17	SSt	SSt			<b>74438333022</b>
1.0	2013-07-31	SSt	DDe			
REV	DATE	BY	CHECKED			Size: 3010
						SIZE
						A4

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.

