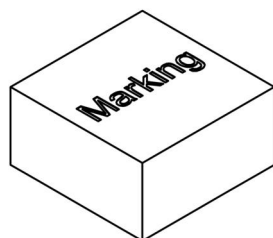
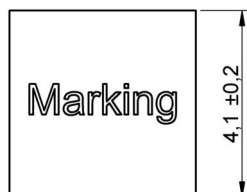
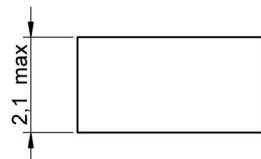
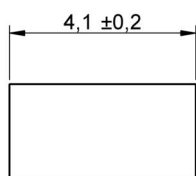
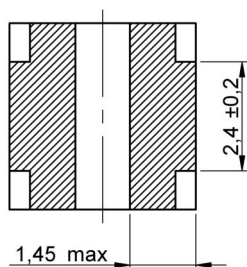
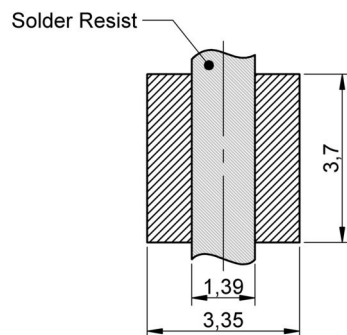


A Dimensions: [mm]

Scale - 6:1

Reference on drawing	Description
Marking	2R2 (Inductance Code)

B Recommended land pattern: [mm]

no vias and traces in restricted area

Scale - 6:1

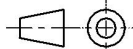
C Schematic:**D Electrical Properties:**

Properties	Test conditions		Value	Unit	Tol.
Inductance	100 kHz/ 10 mA	L	2.2	μH	±20%
Rated current	ΔT = 40 K	I _R	4.7	A	max.
Saturation current	IΔL/LI < 20%	I _{sat}	6.2	A	typ.
DC Resistance	@ 20°C	R _{DC}	29	mΩ	typ.
DC Resistance	@ 20°C	R _{DC}	35	mΩ	max.
Self resonant frequency		f _{res}	34	MHz	typ.

E General information:

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

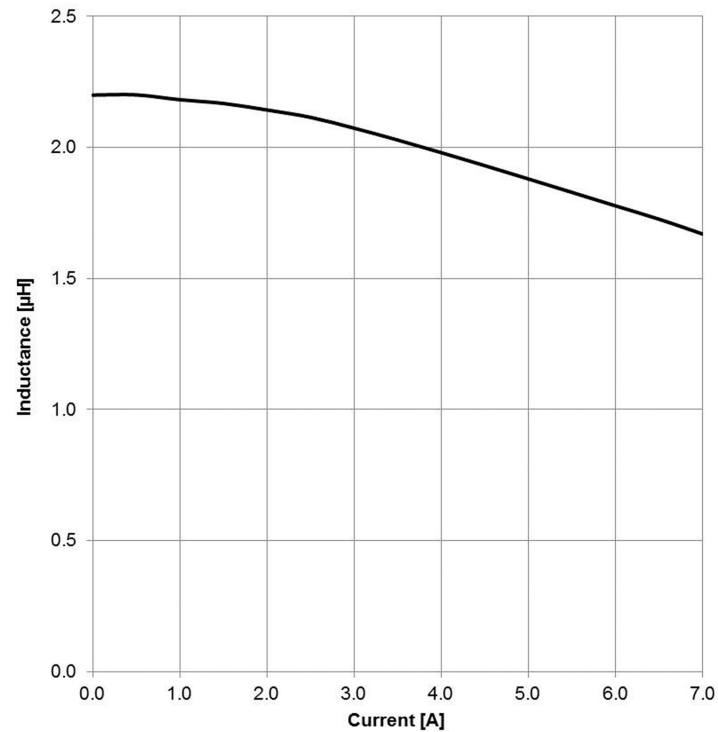
- Ambient temperature: -40°C to +85°C (referring to I_R)
- Operating temperature: -40°C to +125°C
- Storage temperature (on tape & reel): -20°C to +40°C; 75% RH max.
- Test conditions of Electrical Properties: 20°C, 33% RH if not specified differently

				Projection 	DESCRIPTION WE-MAPI SMD Shielded Power Inductor		
				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. 74438356022 Size: 4020	COMPLIANT RoHS&REACH WÜRTH ELEKTRONIK	SIZE A4
1.0	2015-10-28	SSt	DDe				
Preliminary	2015-05-13	SSt	DDe				
REV	DATE	BY	CHECKED				

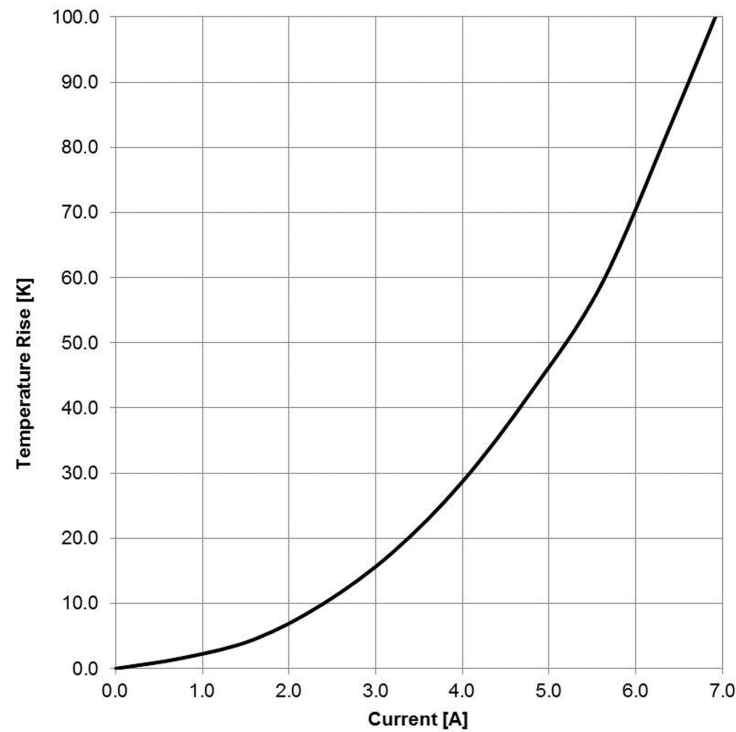


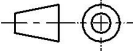


F1 Typical Inductance vs. Current Characteristics:



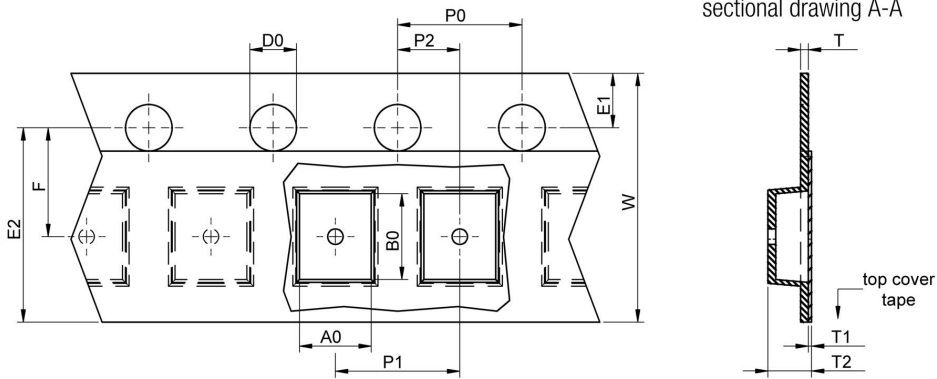
F2 Typical Temperature Rise vs. Current Characteristics:



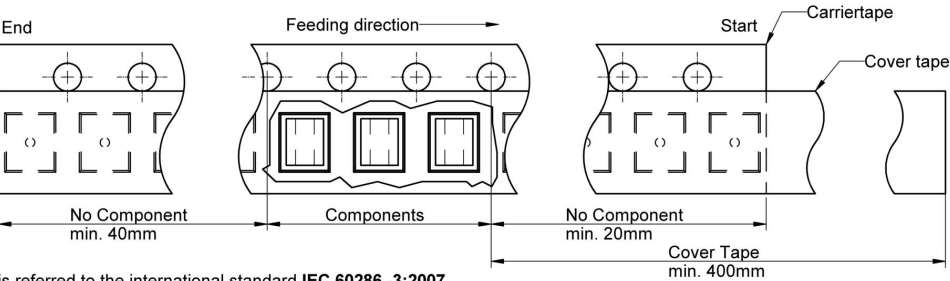
				Projection 		DESCRIPTION
				Würth Elektronik eiSos GmbH & Co. KG EMC & Inductive Solutions Max-Eyth-Str. 1 74638 Waldenburg Germany Tel. +49 (0) 79 42 945 - 0 www.we-online.com eiSos@we-online.com	WE-MAPI SMD Shielded Power Inductor	
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Preliminary	2015-05-13	SSt	DDe			A4
REV	DATE	BY	CHECKED			

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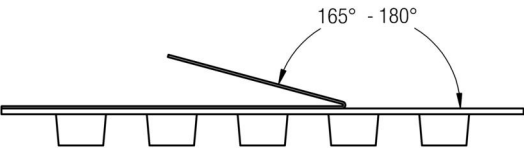
G Packaging Specification - Tape and Reel [mm]:



	tolerance	A0	B0	W	P1	T	T1	T2	D0	E1	E2	F	P0	P2	Tape	VPE / packaging unit
		typ.	typ.	+0,1 -0,1	± 0,1	± 0,1	max.	typ.	+0,1 -0,0	± 0,1	min.	± 0,05	± 0,1	± 0,05		
size	1610	2,05	2,07	8,00	4,00	0,22	0,10	1,10	1,50	1,75	6,25	3,50	4,00	2,00	Polystyrene	3000
	2010	1,90	2,15	8,00	4,00	0,22	0,10	1,15	1,50	1,75	6,25	3,50	4,00	2,00	Polystyrene	3000
	2506	2,30	2,75	8,00	4,00	0,22	0,10	1,80	1,50	1,75	6,25	3,50	4,00	2,00	Polystyrene	3000
	2508	2,30	2,75	8,00	4,00	0,22	0,10	1,80	1,50	1,75	6,25	3,50	4,00	2,00	Polystyrene	3000
	2510	2,30	2,75	8,00	4,00	0,22	0,10	1,80	1,50	1,75	6,25	3,50	4,00	2,00	Polystyrene	3000
	2512	2,30	2,75	8,00	4,00	0,22	0,10	1,30	1,50	1,75	6,25	3,50	4,00	2,00	Polystyrene	3000
	3010	3,50	3,50	12,00	8,00	0,30	0,10	2,00	1,50	1,75	10,25	5,50	4,00	2,00	Polystyrene	1000
	3012	3,50	3,50	12,00	8,00	0,30	0,10	2,00	1,50	1,75	10,25	5,50	4,00	2,00	Polystyrene	1000
	3015	3,50	3,50	12,00	8,00	0,30	0,10	2,00	1,50	1,75	10,25	5,50	4,00	2,00	Polystyrene	1000
	3020	3,68	3,68	12,00	8,00	0,30	0,10	2,30	1,50	1,75	10,25	5,50	4,00	2,00	Polystyrene	1000
	4020	4,60	4,60	12,00	8,00	0,30	0,10	2,40	1,50	1,75	10,25	5,50	4,00	2,00	Polystyrene	1000

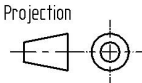


Packaging is referred to the international standard IEC 60286 -3:2007



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

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

DESCRIPTION

WE-MAPI SMD Shielded Power Inductor

Order.- No.

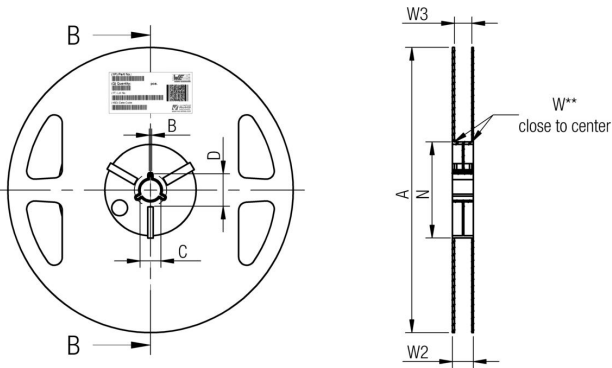
74438356022

Size: 4020

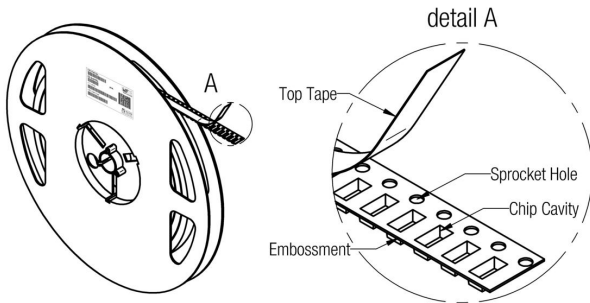


SIZE

A4



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

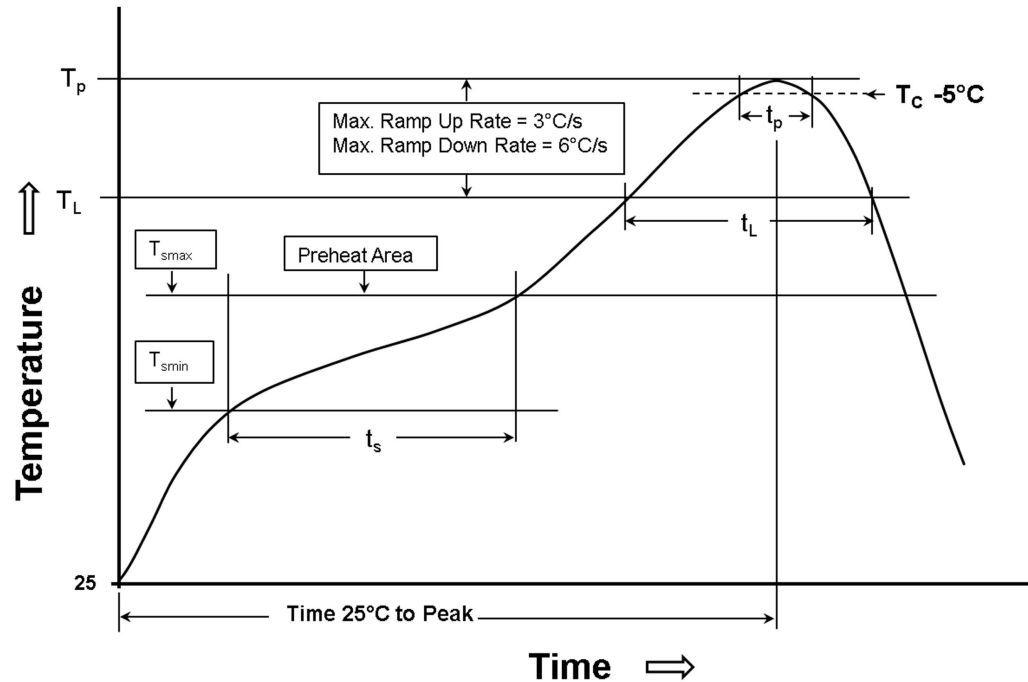


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H Soldering Specifications:



H1: Classification Reflow Profile for SMT components:



H2: Classification Reflow Profiles

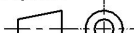
Profile Feature	Pb-Free Assembly
Preheat - Temperature Min (T_{smin}) - Temperature Max (T_{smax}) - Time (t_s) from (T_{smin} to T_{smax})	150°C 200°C 60-120 seconds
Ramp-up rate (T_L to T_P)	3°C/ second max.
Liquidous temperature (T_L) Time (t_L) maintained above T_L	217°C 60-150 seconds
Peak package 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 ³ <350	Volume mm ³ 350 - 2000	Volume mm ³ >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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1.0	2015-10-28	SSt	DDe				
Preliminary	2015-05-13	SSt	DDe				
REV	DATE	BY	CHECKED				

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 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.



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1.0	2015-10-28	SSt	DDe			Order.- No.	SIZE
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