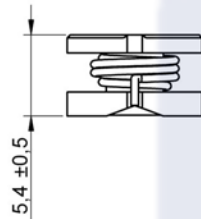
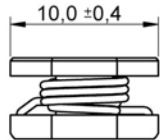
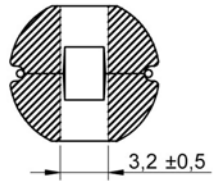


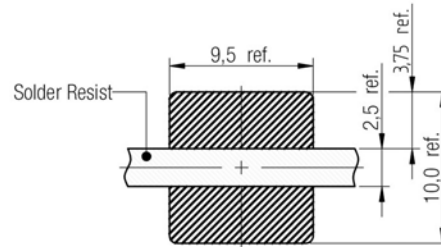
A Dimensions: [mm]



Scale - 2:1

Reference on drawing	Description
•	Start of winding
Marking	120 (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	10 KHz/ 100 mV	L	12	μH	±10%
Rated Current	ΔT = 40 K	I _R	2.72	A	max.
Saturation Current	ΔL/L < 10%	I _{sat}	3.15	A	typ.
DC Resistance	@ 20°C	R _{DC}	0.07	Ω	max.
DC Resistance	@ 20°C	R _{DC}	0.033	Ω	typ.
Self Resonant Freq.	@ 20°C	f _{res}	20	MHz	typ.
Rated Voltage	@ 20°C	U _R	80	V _{DC}	max.

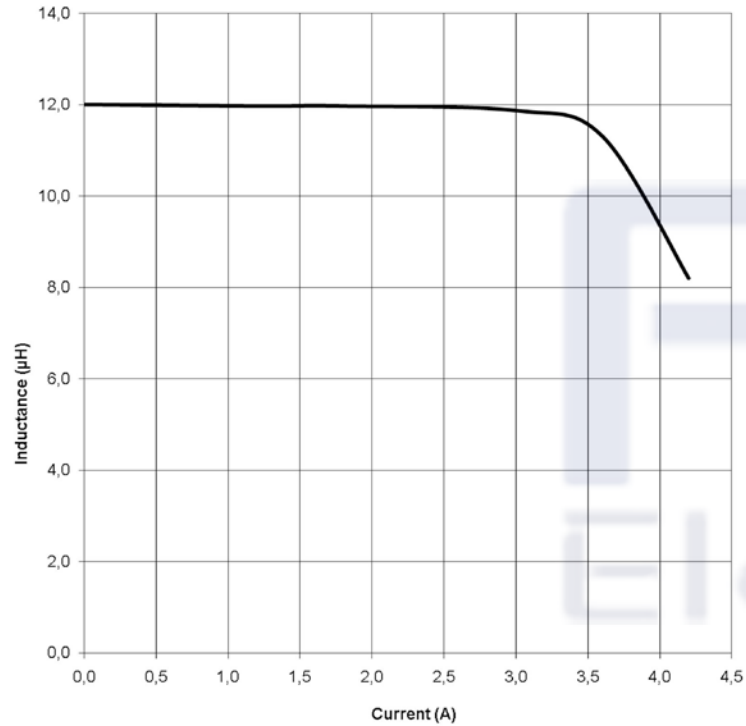
E General information:

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

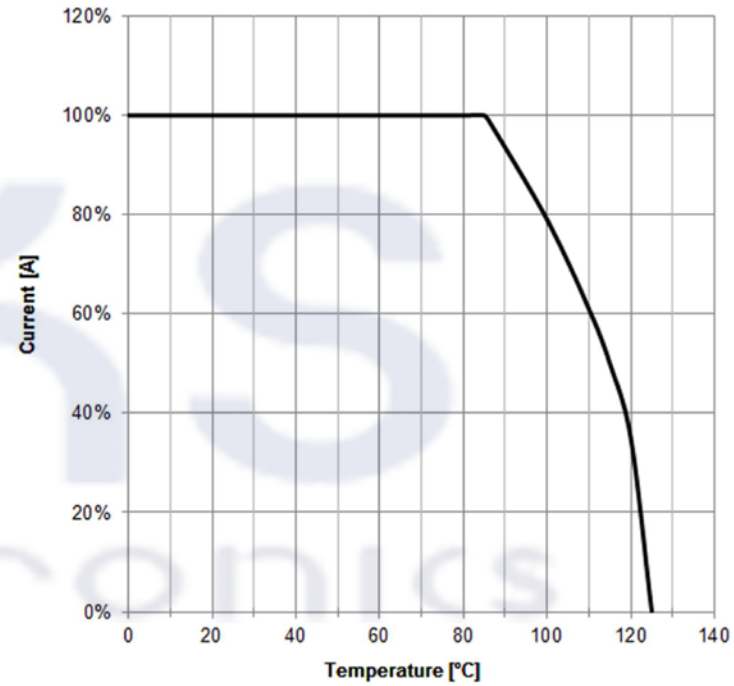
- Ambient temperature: -40°C to +85°C (referring to I_R)
- Operating temperature: -40°C to +125°C
- Storage temperature (on tape & reel): -20°C to +40°C; 75% RH max.
- Coplanarity of the terminal pads: 120μm
- Test conditions of Electrical Properties: 20°C, 33% RH
- AEC-Q 200 qualified

REV	DATE	BY	CHECKED	Projection	DESCRIPTION	
2.3	2015-01-07	SSt	BMoe		SMD Power Inductor	
2.2	2014-05-19	SSt	BMoe			
2.1	2014-03-12	SSt	BMoe	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.	
2.0	2014-02-03	SSt	BMoe		FKS784776112	
1.7	2013-12-05	SSt	BMoe			SIZE
1.6	2013-10-10	SSt	BMoe			A4
1.5	2013-04-10	SSt	SSt		Size: 1054	

F1 Typical Inductance vs. Current Characteristics:

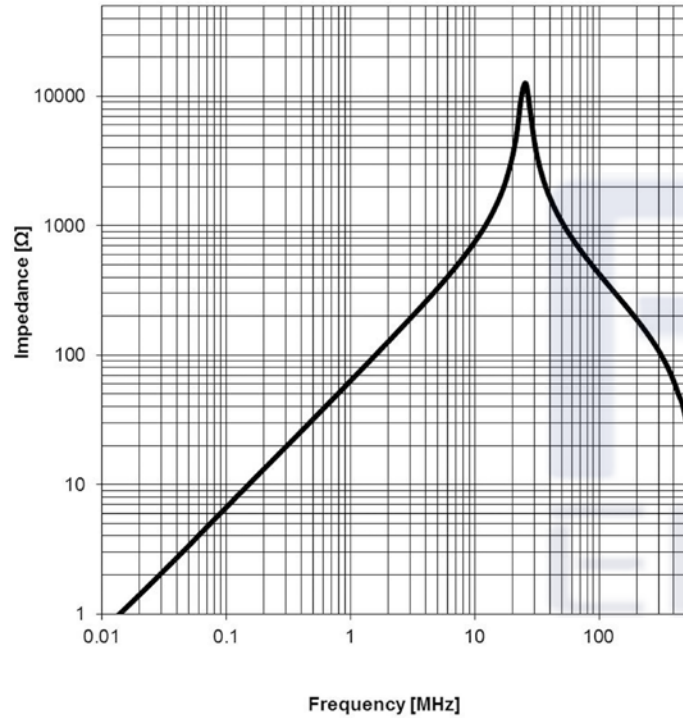


F2 Derating Curve:

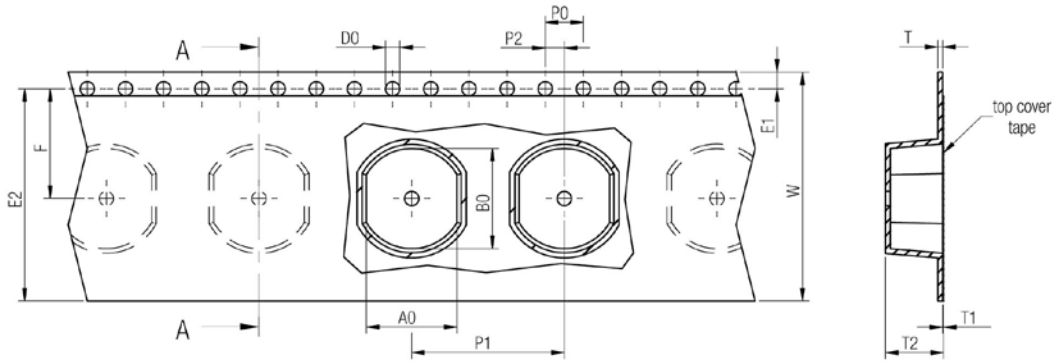


				Projection 		DESCRIPTION
2.3	2015-01-07	SSt	BMoe	Würth Elektronik eiSos GmbH & Co. KG EMC & Inductive Solutions Max-Eyth-Str. 1 74638 Waldenburg Germany Tel. +49 (0) 79 42 945 - 0 www.we-online.com eiSos@we-online.com	SMD Power Inductor	Order.- No.
2.2	2014-05-19	SSt	BMoe			
2.1	2014-03-12	SSt	BMoe			COMPLIANT RoHS&REACH HALOGENFREE
2.0	2014-02-03	SSt	BMoe			
1.7	2013-12-05	SSt	BMoe			A4
1.6	2013-10-10	SSt	BMoe			
1.5	2013-04-10	SSt	SSt			
REV	DATE	BY	CHECKED			

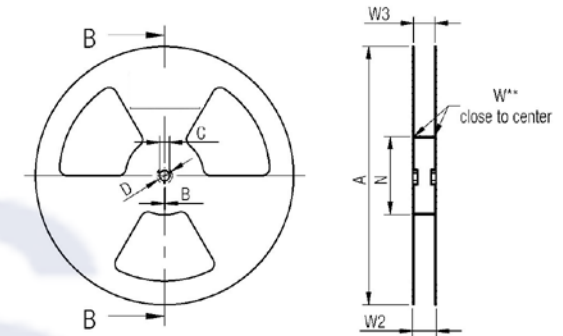
F3 Typical Impedance Characteristics:



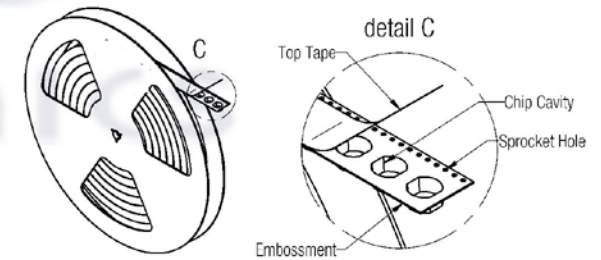
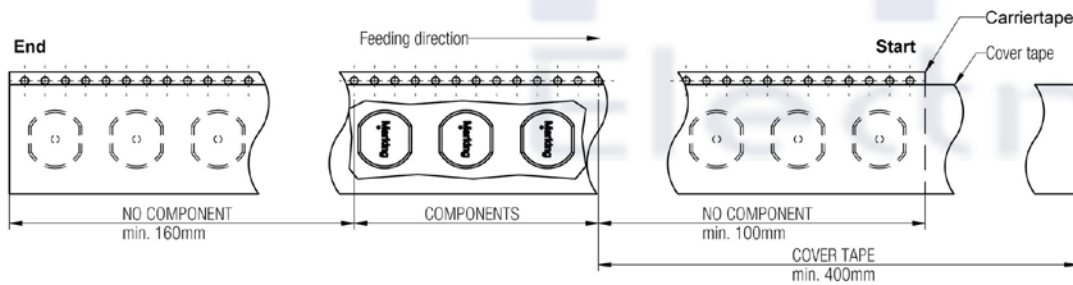
				Projection 	DESCRIPTION	
2.3	2015-01-07	SSt	BMoe	Würth Elektronik eiSos GmbH & Co. KG EMC & Inductive Solutions Max-Eyth-Str. 1 74638 Waldenburg Germany Tel. +49 (0) 79 42 945 - 0 www.we-online.com eiSos@we-online.com	SMD Power Inductor	
2.2	2014-05-19	SSt	BMoe			
2.1	2014-03-12	SSt	BMoe			
2.0	2014-02-03	SSt	BMoe			
1.7	2013-12-05	SSt	BMoe			
1.6	2013-10-10	SSt	BMoe			
1.5	2013-04-10	SSt	SSt			
REV	DATE	BY	CHECKED			
					Order.- No.	
					FKS784776112 COMPLIANT RoHS&REACH HALOGENFREE	SIZE
					Size: 1054	A4



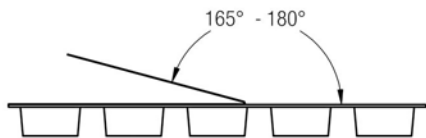
		A0	B0	W	P1	T	T1	T2	D0	E1	E2	F	P0	P2	VPE / packaging unit
tolerance		typ.	typ.	+0,3 -0,1	± 0,1	± 0,1	max.	typ.	+0,3 -0,1	± 0,1	min.	± 0,05	± 0,1	± 0,05	
size	4532	4,50	5,50	16,00	8,00	0,25	0,10	4,00	1,50	1,75	14,25	7,50	4,00	2,00	1500
	5848	5,50	6,50	16,00	8,00	0,25	0,10	5,50	1,50	1,75	14,25	7,50	4,00	2,00	1500
	7850	7,50	8,50	16,00	12,00	0,25	0,10	6,00	1,50	1,75	14,25	7,50	4,00	2,00	500
	1054	9,50	10,50	24,00	16,00	0,50	0,10	7,00	1,50	1,75	22,25	11,50	4,00	2,00	500



		A	B	C	D	N	W1	W2	W3	W3
tolerance			min.	± 0,8	min.	min.	+ 1,5	max.	min.	max.
Tape width	16 mm	330,00	1,50	13,00	20,20	100,00	16,40	22,40	15,90	19,40
	24 mm	330,00	1,50	13,00	20,20	100,00	24,40	30,40	23,90	27,40



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



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

REV	DATE	BY	CHECKED
2.3	2015-01-07	SSt	BMoe
2.2	2014-05-19	SSt	BMoe
2.1	2014-03-12	SSt	BMoe
2.0	2014-02-03	SSt	BMoe
1.7	2013-12-05	SSt	BMoe
1.6	2013-10-10	SSt	BMoe
1.5	2013-04-10	SSt	SSt

Projection

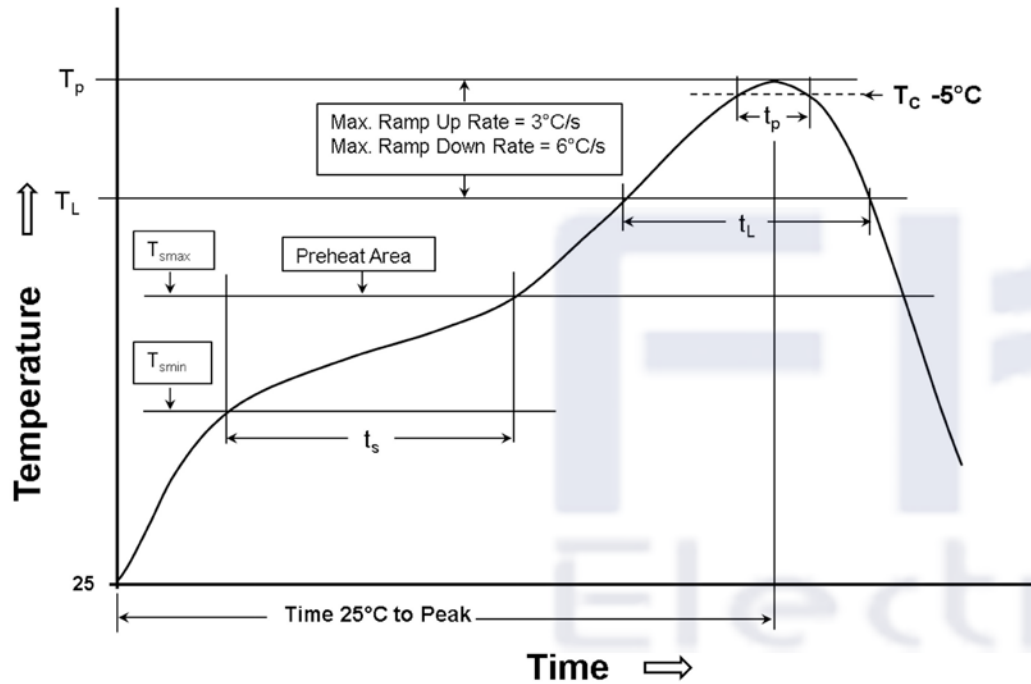
Würth Elektronik eiSos GmbH & Co. KG
EMC & Inductive Solutions
Max-Eyth-Str. 1
74638 Waldenburg
Germany
Tel. +49 (0) 79 42 945 - 0
www.we-online.com
eiSos@we-online.com

DESCRIPTION	
SMD Power Inductor	
Order.- No.	FKS784776112
Size	A4
Size: 1054	



H Soldering Specifications:

H1: Classification Reflow Profile for SMT components:



H2: Classification Reflow Profiles

Profile Feature	Pb-Free Assembly	Sn-Pb 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	100°C 150°C 60-120 seconds
Ramp-up rate (T_L to T_P)	3°C/ second max.	3°C/ second max.
Liquidous temperature (T_L) Time (t_L) maintained above T_L	217°C 60-150 seconds	183°C 60-150 seconds
Peak package body temperature (T_P)	See Table H3	See table H3
Time within 5°C of actual peak temperature (t_p)	30 seconds	20 seconds
Ramp-down rate (T_P to T_L)	6°C/ second max.	6°C/ second max.
Time 25°C to peak temperature	8 minutes max.	6 minutes max.

refer to IPC/JEDEC J-STD-020D

H3: Package Classification Reflow Temperature

	Package Thickness	Volume mm ³ <350	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
Sn-Pb Assembly	< 2.5 mm	235°C	220°C		
Sn-Pb Assembly	≥ 2.5 mm	220°C	220°C		

REV	DATE	BY	CHECKED	Projection	DESCRIPTION	
2.3	2015-01-07	SSt	BMoe		<h2>SMD Power Inductor</h2>	
2.2	2014-05-19	SSt	BMoe			
2.1	2014-03-12	SSt	BMoe	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.	
2.0	2014-02-03	SSt	BMoe		FKS784776112	
1.7	2013-12-05	SSt	BMoe			SIZE
1.6	2013-10-10	SSt	BMoe			A4
1.5	2013-04-10	SSt	SSt		Size: 1054	
REV	DATE	BY	CHECKED			