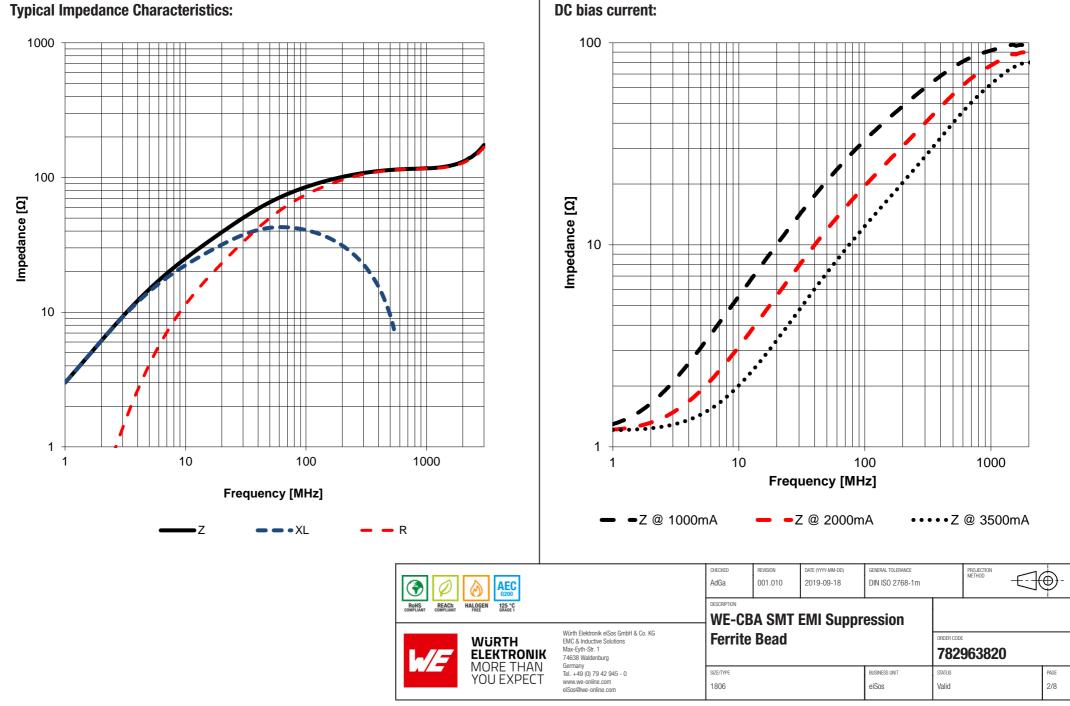
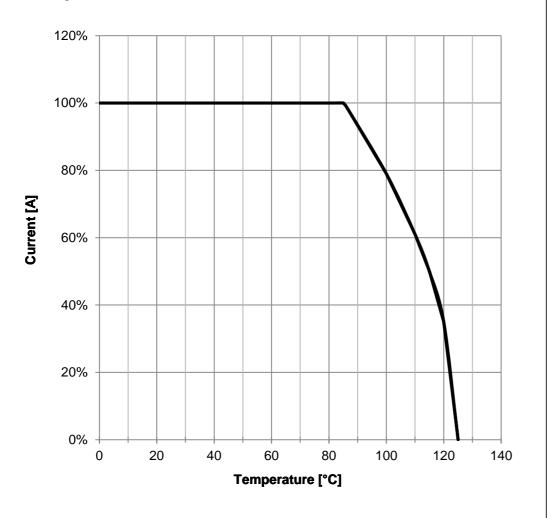
Dimensions: [mm]		Recommended Land Pat	tern: [mm]	Electrical	Propertie	es:				
				Properties			Test conditions	Value	Unit	Tol.
		, w		Impedance @	@ 100 MHz	Z	100 MHz	82	Ω	±25%
		3,0		Maximum Im	pedance	Z <sub>max</sub>	1 GHz	110	Ω	typ.
				Rated Curren	t	I <sub>R</sub>	ΔT = 40 K	3500	mA	max.
					e	R <sub>DC</sub>	@ 20 °C	0.02	Ω	max.
$0,5 \pm 0,3$				Туре				High Current		
				Certificat	ion:					
		WIDE BAND / HIGH SI		<b>RoHS Approv</b>	al		Compliant [	2011/65/EU&2015	/863]	
		HIGH CURRENT:	W = 6,5	<b>REACh Appro</b>	val		Conform or o	eclared [(EC)1907	/2006]	
$4,5 \pm 0,2$				Halogen Free			Confor	m [JEDEC JS709B	]	
	+			Halogen Free				n [IEC 61249-2-21	]	
	0,2		Scale - 5:1	Component O	ualification		AE	C-Q200 Grade1		
	Ŧ	Schematic:		Automotive A	pproval			Released		
1,6 ± 0,2		Z <sub>F</sub>			nformatio s part constanti perature (refe mperature	y beyond the Ra harm t	the component -5	s will create excess 5 up to +85 °C 5 up to +125 °C	sive heat	and can
				Storage Cond packaging)			< 40	°C;< 75% RH		
				Moisture Sen	-	· · · ·		1		
	Scale - 8:1			lest co	onditions of Ele	ctrical Properties	s: +20 °C, 33 % F	H if not specified o	differently	
				CHECKED AdGa		NATE (YYYY-MM-DD) 2019-09-18	general tolerance DIN ISO 2768-1m	PROJECTION METHOD		
					001.010 2	_010.00-10				۳
		RoHS REACH HALOGEN 125 °C COMPLIANT COMPLIANT FREE GRADE 1				MI Suppre	ecion			
			Würth Elektronik elSos GmbH & Co. KG EMC & Inductive Solutions Max-Eyth-Str. 1 74638 Waldenburg	Ferrite				ORDER CODE 782963820	)	
		MORE THAN YOU EXPECT	Germany Tel. +49 (0) 79 42 945 - 0 www.we-online.com eiSos@we-online.com	SIZE/TYPE 1806			BUSINESS UNIT	status Valid		PAGE 1/8

This electronic component has been designed and developed for usage in general electronic equipment only. This product is not authorized for use in equipment only and and and reliability standard and reliability standard and reliability required or where a failure of the product is not authorized for use in 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 Winth Elektronik elSos 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 reasonably expected to cause severe personal injury or death, unless the parties have executed an agreement specifically governing such use. Moreover Winth Elektronik elSos 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 inclusions or performance.



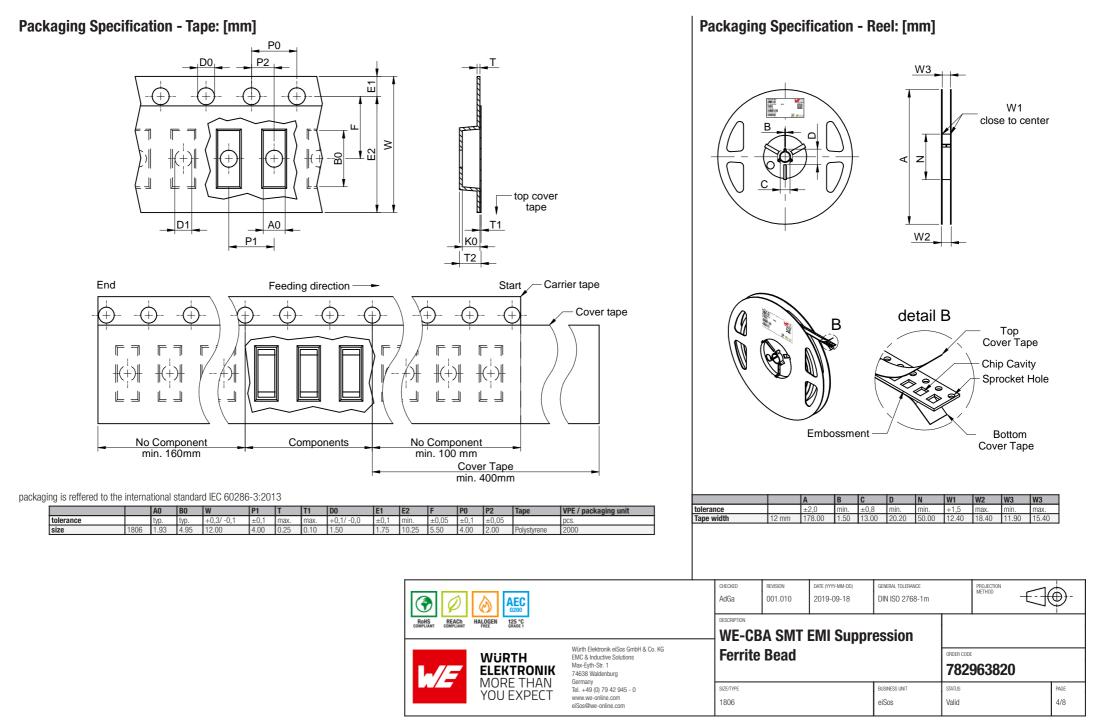
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## **Derating Curve:**



		CHECKED         REVISION         DATE (YYY+MM-00)         GENERAL TOLERANCE           AdGa         001.010         2019-09-18         DIN ISO 2768-1m           Description					PROJECTION METHOD	<b>_</b> -	
L/F	WÜRTH Elektronik elSos GmbH & Co. KG EMC & Inductive Solutions Mac-Eyth-Str. 1 74638 Waldenburg			A SMT Bead	EMI Suppr	ession	ORDER CODE	963820	
	MORE THAN YOU EXPECT	Germany Tel. +49 (0) 79 42 945 - 0 www.we-online.com eiSos@we-online.com	SIZE/TYPE 1806			BUSINESS UNIT eiSos	status Valid		PAGE 3/8

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## **Classification Reflow Profile for SMT components:**



## Classification Reflow Soldering Profile:

Profile Feature		Value
Preheat Temperature Min	T <sub>s min</sub>	150 °C
Preheat Temperature Max	T <sub>s max</sub>	200 °C
Preheat Time $\rm t_s$ from $\rm T_{s\ min}$ to $\rm T_{s\ max}$	t <sub>s</sub>	60 - 120 seconds
Ramp-up Rate (T <sub>L</sub> to T <sub>P</sub> )		3 °C/ second max.
Liquidous Temperature	TL	217 °C
Time $t_L$ maintained above $T_L$	tL	60 - 150 seconds
Peak package body temperature	Т <sub>р</sub>	$T_p \le T_c$ , see Table below
Time within 5°C of actual peak temperature	t <sub>p</sub>	20 - 30 seconds
Ramp-down Rate (T <sub>P</sub> to T <sub>L</sub> )		6 °C/ second max.
Time 25°C to peak temperature		8 minutes max.

refer to IPC/ JEDEC J-STD-020E

## Package Classification Reflow Temperature (T<sub>c</sub>):

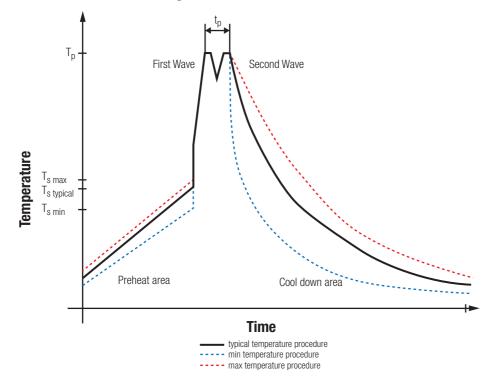
Properties	Volume mm <sup>3</sup> <350	Volume mm <sup>3</sup> 350-2000	Volume mm <sup>3</sup> >2000
PB-Free Assembly   Package Thickness < 1.6 mm	260 °C	260 °C	260 °C
PB-Free Assembly   Package Thickness 1.6 mm - 2.5 mm	260 °C	250 °C	245 °C
PB-Free Assembly   Package Thickness > 2.5 mm	250 °C	245 °C	245 °C
Sn-PB Assembly   Package Thickness < 2.5 mm	235 °C	220 °C	
Sn-PB Assembly I Package Thickness $\ge 2.5$ mm	220 °C	220 °C	

refer to IPC/ JEDEC J-STD-020E

		CHECKED AdGa	revision 001.010	DATE (YYYY-MM-DD) 2019-09-18	GENERAL TOLERANCE DIN ISO 2768-1m		PROJECTION		€-	
ROHS REACH HALOGEN 125 °C COMPLIANT COMPLIANT HALOGEN 125 °C				WE-CBA SMT EMI Suppression						
		Würth Elektronik eiSos GmbH & Co. KG EMC & Inductive Solutions Max-Eyth-Str. 1 74638 Waldenburg Germany	Ferrite	Bead			ORDER CODE	963820		
	MORE THAN YOU EXPECT	een many Tel. +49 (0) 79 42 945 - 0 www.we-online.com eiSos@we-online.com	size/type 1806			BUSINESS UNIT eiSos	status Valid		1	page 5/8

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## **Classification Wave Soldering Profile:**



## **Classification Wave Soldering Profile:**

Profile Feature		Pb-Free Assembly	Sn-Pb Assembly
Preheat Temperature Min	T <sub>s min</sub>	100 °C	100 °C
Preheat Temperature Typical	T <sub>s typical</sub>	120 °C	120 °C
Preheat Temperature Max	T <sub>s max</sub>	130 °C	130 °C
Preheat Time $\rm t_s$ from $\rm T_{smin}$ to $\rm T_{smax}$	t <sub>s</sub>	70 seconds	70 seconds
Ramp-up Rate	ΔT	150 °C max.	150 °C max.
Peak Temperature	Τ <sub>ρ</sub>	250 °C - 260 °C	235 °C - 260 °C
Time of actual peak temperature	tp	max. 10 seconds max. 5 seconds each wave	max. 10 seconds max. 5 seconds each wave
Ramp-down Rate, Min		~ 2 K/ second	~ 2 K/ second
Ramp-down Rate, Typical		~ 3.5 K/ second	~ 3.5 K/ second
Ramp-down Rate, Max		~ 5 K/ second	~ 5 K/ second
Time 25 °C to 25 °C		4 minutes	4 minutes

refer to EN61760-1:2006

		CHECKED AdGa	REVISION 001.010	DATE (YYYY-MM-DD) 2019-09-18	GENERAL TOLERANCE DIN ISO 2768-1m		PROJECTION METHOD	]@-	
ROMALIANT REACT HALOGEN 125 °C				A SMT Bead	EMI Suppr				
ELEI	WüRTH ELEKTRONIK WÜRTH BELEKTRONIK Max-Eyth-Str. 1 74638 Waldenburg						ORDER CODE	963820	
MORE THAN YOU EXPECT		Germany Tel. +49 (0) 79 42 945 - 0 www.we-online.com eiSos@we-online.com	size/type 1806			BUSINESS UNIT eiSos	status Valid		PAGE 6/8

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### **Cautions and Warnings:**

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

#### General:

- This electronic component is designed and manufactured for use in general electronic equipment.
- Würth Elektronik must be asked for written approval (following the PPAP procedure) before incorporating the components into any
  equipment in fields such as military, aerospace, aviation, nuclear control, submarine, transportation (automotive control, train control,
  ship control), transportation signal, disaster prevention, medical, public information network, etc. where higher safety and reliability are
  especially required and/or if there is the possibility of direct damage or human injury.
- · Electronic components that will be used in safety-critical or high-reliability applications, should be pre-evaluated by the customer.
- The component is designed and manufactured to be used within the datasheet specified values. If the usage and operation conditions
  specified in the datasheet are not met, the component may be damaged or dissolved.
- Do not drop or impact the components, the component may be damaged
- Würth Elektronik products are qualified according to international standards, which are listed in each product reliability report. Würth
  Elektronik does not warrant any customer qualified product characteristics beyond Würth Elektroniks' specifications, for its validity and
  sustainability over time.
- The responsibility for the applicability of the customer specific products and use in a particular customer design is always within the authority of the customer. All technical specifications for standard products also apply to customer specific products.

#### **Product specific:**

#### Soldering:

- The solder profile must comply with the technical product specifications. All other profiles will void the warranty. Wave soldering is
  allowed for components bigger than 0805 after evaluation and approval.
- · All other soldering methods are at the customers' own risk.

#### **Cleaning and Washing:**

• Washing agents used during the production to clean the customer application might damage or change the characteristics of the wire insulation, marking or plating. Washing agents may have a negative effect on the long-term functionality of the product.

#### Potting:

• If the product is potted in the customer application, the potting material might shrink or expand during and after hardening. Shrinking could lead to an incomplete seal, allowing contaminants into the core. Expansion could damage the components. We recommend a manual inspection after potting to avoid these effects.

#### **Storage Conditions:**

- A storage of Würth Elektronik products for longer than 12 months is not recommended. Within other effects, the terminals may suffer degradation, resulting in bad solderability. Therefore, all products shall be used within the period of 12 months based on the day of shipment.
- Do not expose the components to direct sunlight.
- The storage conditions in the original packaging are defined according to DIN EN 61760-2.
- The storage conditions stated in the original packaging apply to the storage time and not to the transportation time of the components.

#### Packaging:

 The packaging specifications apply only to purchase orders comprising whole packaging units. If the ordered quantity exceeds or is lower than the specified packaging unit, packaging in accordance with the packaging specifications cannot be ensured.

#### Handling:

- · Violation of the technical product specifications such as exceeding the nominal rated current will void the warranty
- The temperature rise of the component must be taken into consideration. The operating temperature is comprised of ambient temperature and temperature rise of the component. The operating temperature of the component shall not exceed the maximum temperature specified.

These cautions and warnings 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.

Rehs, Corright Reach Halogen Halogen 125 °C Rehs, Corright Halogen 125 °C Reach Halogen 125 °C		CHECKED AdGa	REVISION 001.010	DATE (YYYY-MM-DD) 2019-09-18	general tolerance DIN ISO 2768-1m		PROJECTION METHOD	$-\bigcirc$	<b>⊕</b> -	
		WE-CB	SA SMT	EMI Suppr	ession					
		Würth Elektronik eiSos GmbH & Co. KG EMC & Inductive Solutions Max-Eyth-Str. 1 74638 Waldenburg Germany	Ferrite	Bead			ORDER CODE	963820		
	MORE THAN YOU EXPECT	Tel. +49 (0) 79 42 945 - 0 www.we-online.com eiSos@we-online.com	size/type 1806			BUSINESS UNIT eiSos	status Valid			page 7/8

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### **Important Notes**

## The following conditions apply to all goods within the product range of Würth Elektronik eiSos GmbH & Co. KG:

#### 1. General Customer Responsibility

Some goods within the product range of Würth Elektronik eiSos GmbH & Co. KG contain statements regarding general suitability for certain application areas. These statements about suitability are based on our knowledge and experience of typical requirements concerning the areas, serve as general guidance and cannot be estimated as binding statements about the suitability for a customer application. The responsibility for the applicability and use in a particular customer design is always solely within the authority of the customer. Due to this fact it is up to the customer to evaluate, where appropriate to investigate and decide whether the device with the specific product characteristics described in the product specification is valid and suitable for the respective customer application or not.

#### 2. Customer Responsibility related to Specific, in particular Safety-Relevant Applications

It has to be clearly pointed out that the possibility of a malfunction of electronic components or failure before the end of the usual lifetime cannot be completely eliminated in the current state of the art, even if the products are operated within the range of the specifications. In certain customer applications requiring a very high level of safety and especially in customer applications in which the malfunction or failure of an electronic component could endanger human life or health it must be ensured by most advanced technological aid of suitable design of the customer application that no injury or damage is caused to third parties in the event of malfunction or failure of an electronic component. Therefore, customer is cautioned to verify that data sheets are current before placing orders. The current data sheets can be downloaded at www.we-online.com.

#### 3. Best Care and Attention

Any product-specific notes, cautions and warnings must be strictly observed. Any disregard will result in the loss of warranty.

#### 4. Customer Support for Product Specifications

Some products within the product range may contain substances which are subject to restrictions in certain jurisdictions in order to serve specific technical requirements. Necessary information is available on request. In this case the field sales engineer or the internal sales person in charge should be contacted who will be happy to support in this matter.

#### 5. Product R&D

Due to constant product improvement product specifications may change from time to time. As a standard reporting procedure of the Product Change Notification (PCN) according to the JEDEC-Standard inform about minor and major changes. In case of further queries regarding the PCN, the field sales engineer or the internal sales person in charge should be contacted. The basic responsibility of the customer as per Section 1 and 2 remains unaffected.

#### 6. Product Life Cycle

Due to technical progress and economical evaluation we also reserve the right to discontinue production and delivery of products. As a standard reporting procedure of the Product Termination Notification (PTN) according to the JEDEC-Standard we will inform at an early stage about inevitable product discontinuance. According to this we cannot guarantee that all products within our product range will always be available. Therefore it needs to be verified with the field sales engineer or the internal sales person in charge about the current product availability expectancy before or when the product for application design-in disposal is considered. The approach named above does not apply in the case of individual agreements deviating from the foregoing for customer-specific products.

#### 7. Property Rights

All the rights for contractual products produced by Würth Elektronik eiSos GmbH & Co. KG on the basis of ideas, development contracts as well as models or templates that are subject to copyright, patent or commercial protection supplied to the customer will remain with Würth Elektronik eiSos GmbH & Co. KG does not warrant or represent that any license, either expressed or implied, is granted under any patent right, copyright, mask work right, or other intellectual property right relating to any combination, application, or process in which Würth Elektronik eiSos GmbH & Co. KG components or services are used.

#### 8. General Terms and Conditions

Unless otherwise agreed in individual contracts, all orders are subject to the current version of the "General Terms and Conditions of Würth Elektronik eiSos Group", last version available at www.we-online.com.

		CHECKED AdGa	REVISION 001.010	DATE (YYYY-MM-DD) 2019-09-18	GENERAL TOLERANCE DIN ISO 2768-1m		PROJECTION METHOD		€-	
ROHS REACH HALOGEN 125 °C GIRADE 1			WE-CBA SMT EMI Suppression							
WURTH ELEKTRONIK MORE THAN YOU EXPECT	ELEKTRONIK	Würth Elektronik eiSos GmbH & Co. KG EMC & Inductive Solutions Max-Eyth-Str. 1 74638 Waldenburg	Ferrite	Bead			ORDER CODE	963820		
						BUSINESS UNIT eiSos	status Valid		1	PAGE 8/8

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 NCB312K900TR500F
 NCB 

 H0805A102TR150F
 NCB-H0805A221TR300F
 NCB-H1806E181TR300F
 NCB0402P300TR030F
 NCB0402P700TR050F

 NCB0805A102TR040F
 NCB1806E151TR020F
 NCB-H0603R121TR300F
 NCB-H0805A220TR600F
 NCB-H0805A390TR400F

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 EMI0805R-220
 74279250
 7427924
 CZB1JGTTD202P
 ABUPDE160808121Y00