Dimensions: [mm]

3

2

1

0,5 ±0,3

7,6 ±0,3

0,8 ±0,2

4

Recommended Land Pattern: [mm]

0,35

0,8

3

2

Electrical Properties:

•				_	
Properties		Test conditions	Value	Unit	Tol.
Frequency Range Min & Max			2400-2500	MHz	
VSWR		2400 - 2500 MHz	2		max.
Impedance	Ζ		50	Ω	typ.
Peak Gain	G _{peak}	2400 - 2500 MHz	1.3	dBi	typ.

Certification:

N

4

6

1,2

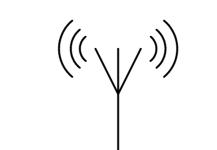
5 **6**

Scale - 3:1

 $\overline{\mathcal{T}}$

RoHS Approval	Compliant [2011/65/EU&2015/863]
REACh Approval	Conform or declared [(EC)1907/2006]
Halogen Free	Conform [JEDEC JS709B]
Halogen Free	Conform [IEC 61249-2-21]

Schematic:



6,6

General	Inform	ation:
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CHECKED

MuK

DESCRIPTION

SIZE/TYPE 7.6 x 3.5 mm REVISION

002.000

DATE (YYYY-MM-DD)

2021-07-06

WE-MCA Multilayer Chip Antenna

It is recommended that the temperature of the component does not exceed +85°C under worst case conditions								
Operating Temperature -40 up to +85 °C								
Storage Conditions (in original packaging)	< 40 °C;< 75 °C RH							
Moisture Sensitivity Level (MSL)	1							
Test Board	7488920EB							
Test conditions of Electrical Properties: +20 °C, 33 % RH if not specified differently								

GENERAL TOLERANCE

BUSINESS UNIT

eiSos

DIN ISO 2768-1m

PROJECTION METHOD

7488920245

ORDER CODE

STATUS

Valid

 $\overline{\bigcirc}$

PAGE

1/10

Scale - 3:1

RoHS

REACh

HALOGEN

WÜRTH ELEKTRONIK

00000

1,1 ±0,15

±0,2

3,5

0,55 ±0,15

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 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 Wirth Elektronik elSos GmbH & Co KG must be informed about the intent of such usage before the design-in stage. In addition, sufficient reliability valuation checks for safety ransportation isgnal, disaster prevention, medical, public information network etc.. Wurth Elektronik elSos GmbH & Co KG must be informed about the intent of such usage before the design-in stage. In addition, sufficient reliability valuation checks for safety ransportation isgnal, disaster prevention, medical, public information network etc.. Wurth Elektronik elSos GmbH & Co KG must be informed about the intent of such usage before the design-in stage. In addition, sufficient reliability valuation checks for safety more than common of the intent of such usage before the design-in stage. In addition, sufficient reliability transportation isgnal, disaster prevention, medical, public information network etc.. Wurth Elektronik elSos GmbH & Co KG must be informed about the intent of such usage before the design-in stage. In addition, sufficient reliability transportation isgnal, disaster prevention, medical, public information network etc... Wurth Elektronik elSos GmbH & Co KG must be informed about the intent of such usage before the design-in stage. In addition, sufficient reliability transportation isgnal, disaster prevention, medical, public information network etc... Wurth Elektronik elsos GmbH & Co KG must be information network etc... Wurth Elektronik elsos GmbH & Co KG

Würth Elektronik eiSos GmbH & Co. KG

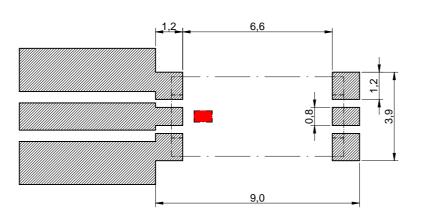
EMC & Inductive Solutions Max-Eyth-Str. 1 74638 Waldenburg

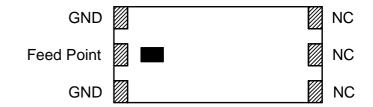
Germany Tel. +49 (0) 79 42 945 - 0 www.we-online.com eiSos@we-online.com

Sca

Recommended Matching Circuit: [mm]

Without Matching Circuit:



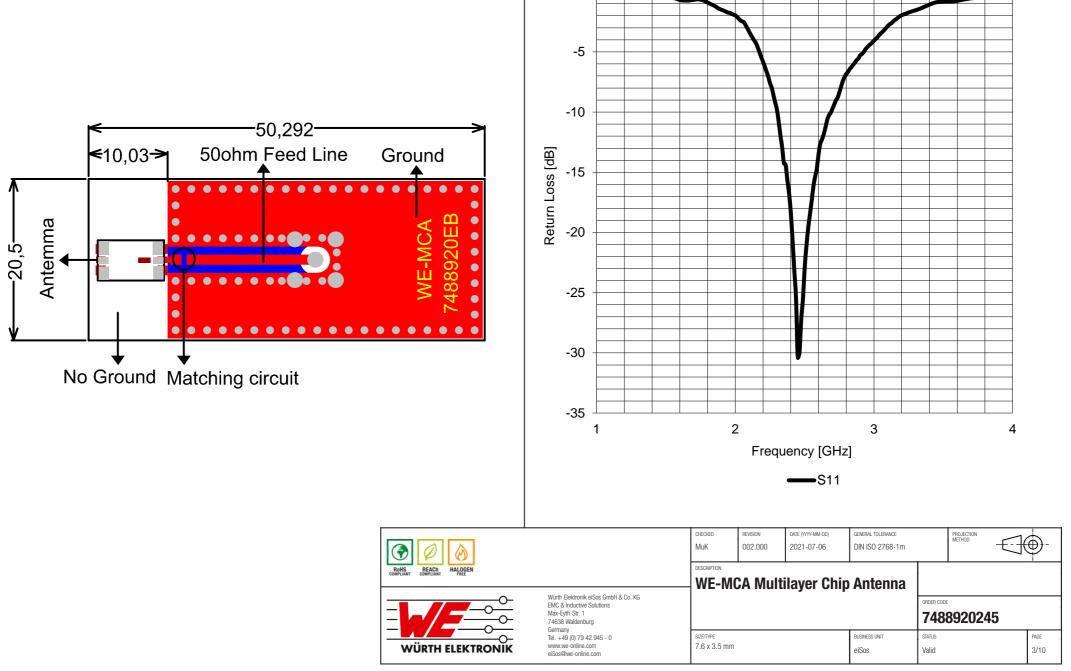


The matching circuit shown has been designed based on the Würth Elektronik evaluation board and cannot be reused. It is recommended to leave a 'Pi' or

'T' type	matching	circuit s	space for	antenna	matching	circuit for	other boards.

		CHECKED	002.000	DATE (YYYY-MM-DD) 2021-07-06	GENERAL TOLERANCE DIN ISO 2768-1m	PI		-
ROHS COMPLIANT HALOGEN		DESCRIPTION	CA Mult	ilayer Chip	Antenna			
	Würth Elektronik eiSos GmbH & Co. KG EMC & Inductive Solutions Max-Eyth-Str. 1 74638 Waldenburg Germanv					ORDER CODE	920245	
	elementary Tel. +49 (0) 79 42 945 - 0 www.we-online.com elSos@we-online.com	SIZE/TYPE 7.6 x 3.5 mm			BUSINESS UNIT eiSos	status Valid		PAGE 2/10

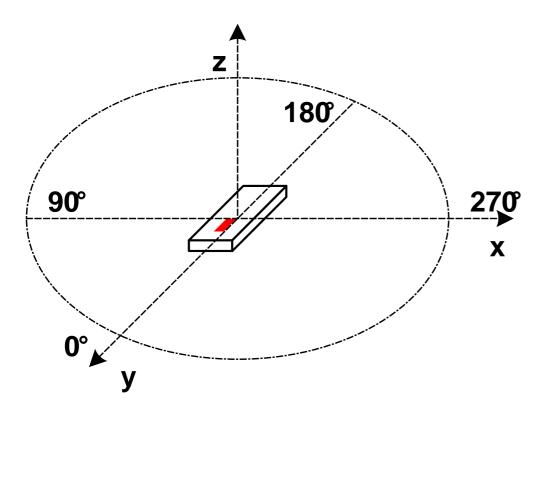
This electronic component has been designed and developed for usage in general electronic equipment only. This product is not authorized for use in equipment where a higher safety standard and reliability standard is especially required or where a failure of the product is not authorized tor use in equipment 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 elSos GmbH & Co KG must be informed about the intent of such usage before the design-in stage. In addition, sufficient reliability valuation checks for safety must be performed on every electronic component which is used in electrical incurbic for severamce.

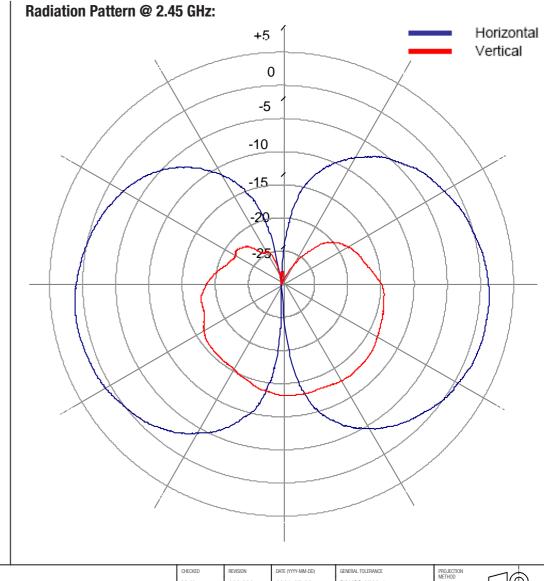


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This electronic component has been designed and developed for usage in general electronic equipment only. This product is not authorized for use in equipment where a higher safety standard and reliability standard is especially required or where a failure of the product is 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 Warth 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 profromed on every electronic component which is used in electrical incurves the relative information. Control with a require ling is addition of performance.

XY-cut scanning direction:

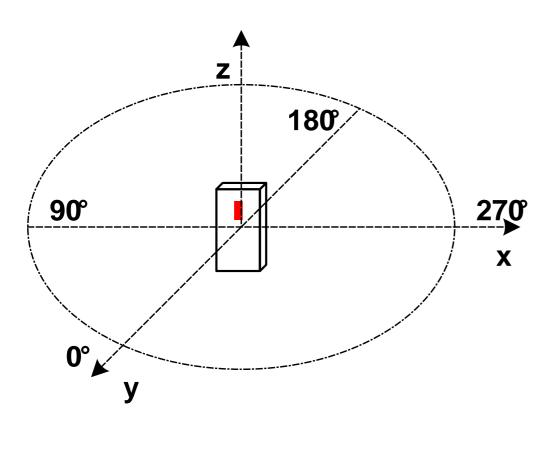


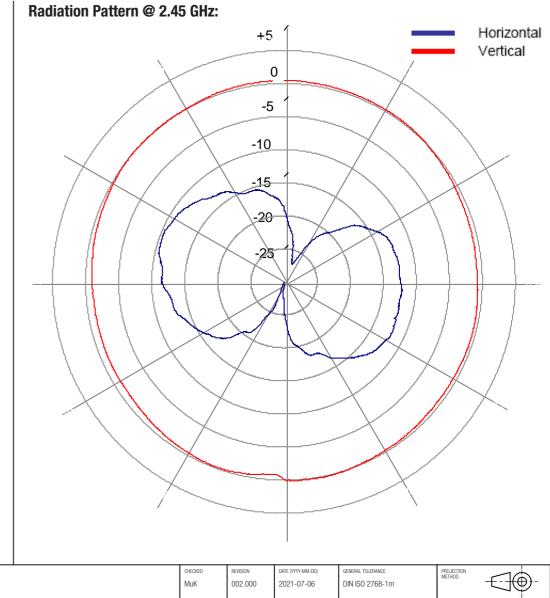


		CHECKED	002.000	DATE (YYYY-MM-DD) 2021-07-06	GENERAL TOLERANCE DIN ISO 2768-1m		PROJECTION METHOD	_ -
Better HALOGEN Würth Elektronik elSos GmbH & Co. KG EMCLART Max-Eyth-Sr.1 74638 Waldenburg		DESCRIPTION	CA Mult	ilayer Chip	Antenna			
						ORDER CODE	3920245	
	Germany Tel. +49 (0) 79 42 945 - 0 www.we-online.com eiSos@we-online.com	size/type 7.6 x 3.5 mm			BUSINESS UNIT eiSos	status Valid		PAGE 4/10

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 not authorized to 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 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 Würth Elektronik eiSos GmbH & Co KG must be informed about the intent of such usage before the design-in stage. In addition, sufficient reliability 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 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 transportation signal, disaster prevention, medical, public information.

XZ-cut scanning direction:

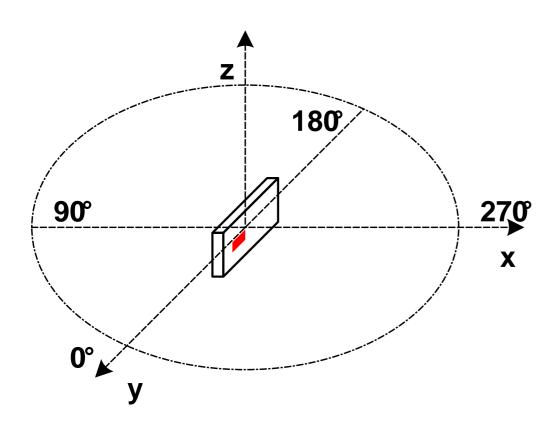


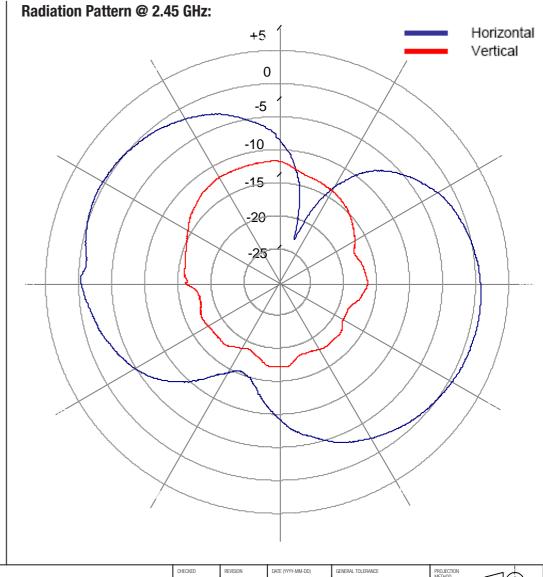


		MuK	002.000	2021-07-06	DIN ISO 2768-1m		METHOD	-	⊕ -
ROHS REACH HALOGEN		DESCRIPTION	CA Mult	ilayer Chip	Antenna				
Würth Elektronik elSos GmbH & Co. KG EMC & Inductive Solutions Max-Eght-Str. 1 74638 Waldenburg Germany						ORDER CODE	892024	5	
	elinariy Tel. +49 (0) 79 42 945 - 0 www.we-online.com elSos@we-online.com	SIZE/TYPE 7.6 x 3.5 mm			BUSINESS UNIT eiSos	status Valid			page 5/10

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 not authorized tor 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 elSos GmbH & Co KG must be informed about the intent of such usage before the design-in stage. In addition, sufficient reliability valuation checks for safety must be performed on every electronic component which is used in electrical incurbic for severamce.

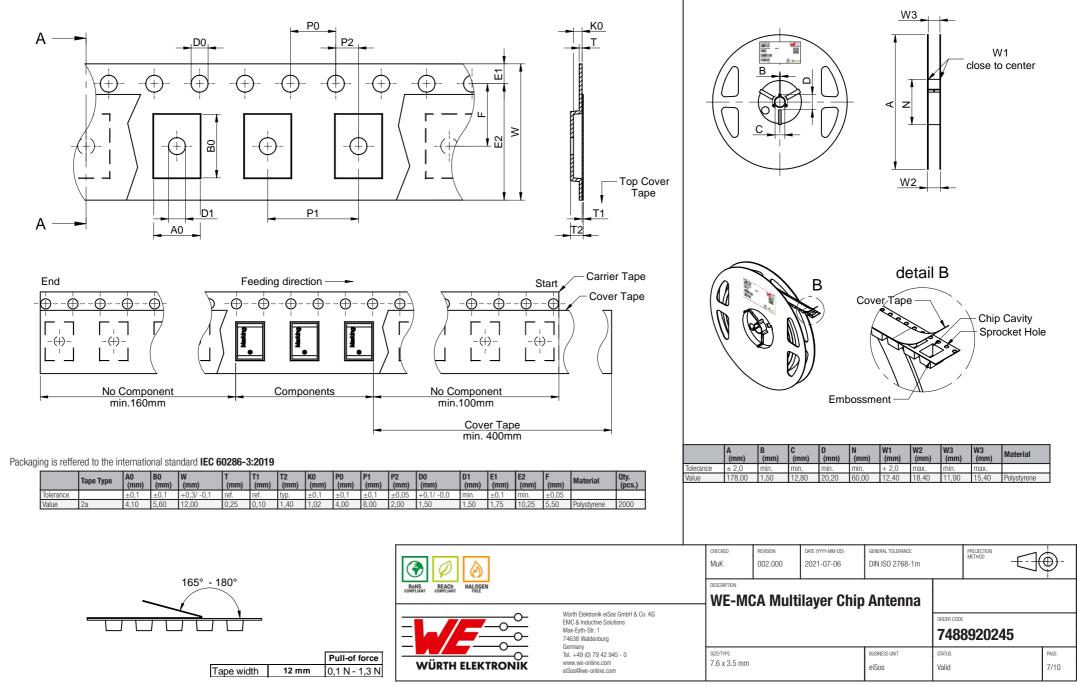
YZ-cut scanning direction:





		CHECKED	REVISION 002.000	DATE (YYYY-MM-DD) 2021-07-06	GENERAL TOLERANCE DIN ISO 2768-1m	PF		-
ROMS REACH HALOGEN		DESCRIPTION	CA Mult	ilayer Chip	Antenna			
	Würth Elektronik eiSos GmbH & Co. KG EMC & Inductive Solutions Max-Eyth-Str. 1 74638 Waldenburg Germany					ORDER CODE	920245	
	eermany Tel. +49 (0) 79 42 945 - 0 www.we-online.com elSos@we-online.com	size/type 7.6 x 3.5 mm			BUSINESS UNIT eiSos	status Valid		PAGE 6/10

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 not authorized tor uses evere personal injury or death, unless the parties have executed an agreement specifically governing such use. Moreover Würth Elektronik elSos GmbH & Co KG products are neither designed not intended for use in areas such as military, aerospace, availation, nuclear, availation, subfacent reliability transportation signal, disaster prevention, medical, public information network elc... Worth Elektronik elSos GmbH & Co KG must be informed about the intent of such usage before the design-in stage. In addition, sufficient reliability valuation checks for safety must be performed on every electronic component which is used in leactrical circuits and reliability reliability formance. Packaging Specification - Tape and Reel: [mm]



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 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 Warth 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 profromed on every electronic component which is used in electrical incurves the relative information. Control with a require ling is addition of performance.

Classification Reflow Profile for SMT components:



Classification Reflow Soldering Profile:

Profile Feature		Value
Preheat Temperature Min	T _{s min}	150 °C
Preheat Temperature Max	T _{s max}	200 °C
Preheat Time $\rm t_s$ from $\rm T_{s\ min}$ to $\rm T_{s\ max}$	t _s	60 - 120 seconds
Ramp-up Rate (T _L to T _P)		3 °C/ second max.
Liquidous Temperature	TL	217 °C
Time t_L maintained above T_L	t	60 - 150 seconds
Peak package body temperature	Т _р	$T_p \le T_c$, see Table below
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-020E

Package Classification Reflow Temperature (T_c):

Properties	Volume mm ³ <350	Volume mm ³ 350-2000	Volume mm ³ >2000
PB-Free Assembly I 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 I Package Thickness > 2.5 mm	250 °C	245 °C	245 °C

refer to IPC/ JEDEC J-STD-020E

COMPLIANT COMPLIANT FREE		CHECKED MuK	REVISION 002.000	DATE (YYYY-MM-DD) 2021-07-06	GENERAL TOLERANCE DIN ISO 2768-1m	P	ROJECTION METHOD	-
			CA Mult	ilayer Chip	Antonna			
Würth Elektronik elSos GmbH & Co. KG EMC & Inductive Solutions Max Eyth-Str. 1 74638 Waldenburg				nayer uni	Antenna	ORDER CODE	920245	
	Germany Tel. + 49 (0) 79 42 945 - 0 www.we-online.com eiSos@we-online.com	SIZE/TYPE 7.6 x 3.5 mm			BUSINESS UNIT eiSos	status Valid		PAGE 8/10

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 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 elSos GmbH & Co KG must be informed about the intent of such usage before the design-in stage. In addition, sufficient reliability valuation checks for safety must be produced on expected on cause severe personal injury or death, unless the parties have executed an agreement specifically governing such use. Moreover Würth Elektronik elSos GmbH & Co KG must be informed about the intent of such usage before the design-in stage. In addition, sufficient reliability valuation checks for safety must be produced on expected controlic component which is used in the relatival or cause. A leading of the electrical circuits the relatival expected on expected and electrical controls must be produced on expected on expected and the intent of such usage before the design-in stage. In addition, sufficient reliability valuation checks for safety must be produced on expected and the electrical circuits that require high safety and reliability for the electrical circuits that require high safety and reliability for the electrical circuits that require high safety and reliability for the electrical circuits that require high safety and reliability for the electrical circuits that require high safety and reliability for the electrical circuits that require high safety and reliability for the electrical circuits that require high safety and reliability for the electrical circuits that the electrical circuits that the electrical circuits the electrica

Cautions and Warnings:

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

	READ READ OBFLIAR READ REA		CHECKED MuK	REVISION 002.000	DATE (YYYY-MM-DD) 2021-07-06	GENERAL TOLERANCE DIN ISO 2768-1m		PROJECTION METHOD	\bigcirc	€-
			WE-MCA Multilayer Chip Antenna							
	Wurth Elektronik eloss Gimb 1 EMC & Inductive Solutions Max-Eyth-Str. 1 74638 Waldenburg Germany Tel. +49 (0) 79 42 945 - 0 www.we-online.com elSos@we-online.com	Max-Eyth-Str. 1 74638 Waldenburg					ORDER CODE 7488920245			
		Tel. +49 (0) 79 42 945 - 0 www.we-online.com	SIZE/TYPE 7.6 x 3.5 mm			BUSINESS UNIT eiSos	status Valid		1	PAGE 9/10

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 evaluation (automotive control, train control, stip control, train control, train control, stip control, train contro

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 MuK	REVISION 002.000	DATE (YYYY-MM-DD) 2021-07-06	GENERAL TOLERANCE DIN ISO 2768-1m		PROJECTION METHOD	-	€-
		WE-MCA Multilayer Chip Antenna							
	Würth Elektronik eiSos GmbH & Co. KG EMC & Inductive Solutions Max-Eyth-Str. 1 74638 Waldenburg Germanv					ORDER CODE	892024	15	
	elerinariy Tel: +49 (0) 79 42 945 - 0 www.we-online.com elSos@we-online.com	SIZE/TYPE 7.6 x 3.5 mm			BUSINESS UNIT eiSos	status Valid			PAGE 10/10

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 W6102B0100
 YE572113

 30RSMM
 108-00014-50
 66089-2406
 SPDA17RP918
 A09-F8NF-M
 A09-F5NF-M
 RGFRA1903041A1T
 W3593B0100
 W3921B0100

 SIMNA-868
 SIMNA-915
 SIMNA-433
 W1044
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 A75-001
 WTL2449CQ1-FRSMM
 CPL9C
 EXB148BN
 0600-00060

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 GD53-25
 GD5W-21P-NF
 C37
 MAF94051
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 EXD420PL
 B1322NR
 QWFTB120

 MAF94271
 MAF94300
 GPSMB301
 FG4403
 AO-AGSM-OM54
 5200232
 MIKROE-2349
 WCM.01.0111
 MIKROE-2393
 MIKROE-2352

 MIKROE-2350
 MIKROE-2350
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