



Product / Process Change Notification (PCN)

- Major change
 Minor change

PCN #: PCN_IndGFH_20210201
Affected Series: WE-GFH; 7447649xxx; 7447669xxx
PCN Date: November 16, 2020
Effective Date: February 01, 2021

Change Category:
 Equipment / Location
 General Data
 Material
 Process
 Product Design
 Shipping / Packaging
 Supplier
 Software

Contact: Product Management
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E-Mail: pcn.eisos@we-online.com

Data Sheet Change:
 Yes No
Attachment:
 Yes No

DESCRIPTION AND PURPOSE OF CHANGE:

Due to internal standardization, Würth Elektronik will change the varnish of the wire.

The last 3 digits of the lot number indicate the varnish of the article. All articles with the ending 001 of the lot number are affected by the change.

Due to the change of the varnish, the self-resonant frequency of the individual inductance values will change. Furthermore the Q value and reflow conditions will be updated.

There will be no change in form, fit, quality or reliability of the product.

DETAIL OF CHANGE:

The last 3 digits need to be used for product specific improvements. The meanings of the digits are shown in the following table.

Code Block description	Description of the product changes	Valid Date
000	This number stands for the GFH with the old material and varnish	01.11.2020
001	This number stands for the GFH with the new material and varnish	01.11.2020

Würth Elektronik eiSos GmbH & Co. KG

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The illustration of the label is shown in the follows:

Example:

GFH with the old material and varnish

(1P) Part No.: 744 764 9xx /74 476 69x x 



(Q) Quantity: 500 pcs.



(1T) Lot No.: 226xxxxxxx00 



4532
0.22 μ H; 450 mA; 0.32 Ω

(16D) Date Code: 2020 - 12 - 01



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GFH with the new material and varnish

(1P) Part No.: 744 764 9xx /74 476 69x x 



(Q) Quantity: 500 pcs.



(1T) Lot No.: 226xxxxxxx00 



4532
0.22 μ H; 450 mA; 0.32 Ω

(16D) Date Code: 2020 - 12 - 01



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Technical specs:

The corrected technical specs are marked with **red** before and **green** after change.

	3225					
	Q min				SRF [MHz]	
	Before		After		Before	After
	Test Cond. [MHz]	Value	Test Cond. [MHz]	Value		
744764901	1,25	20	7,96	15	210	175
7447649015	1,25	25	7,96	15	127	100
744764902	1,25	25	7,96	15	100	85
744764903	1,25	25	7,96	15	79	70
744764904	1,39	30	7,96	15	63	55
744764910	1,47	30	2,52	30	40	35
7447649115	1,47	35	2,52	30	34	30
7447649122	1,47	35	2,52	35	27	22
7447649133	1,65	35	2,52	35	22	20
7447649147	1,65	35	2,52	35	17	15
7447649168	1,92	45	2,52	40	14	12
744764920	0,796	45	0,796	45	12	10

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	4532					
	Q min				SRF [MHz]	
	Before		After		Before	After
	Test Cond. [MHz]	Value	Test Cond. [MHz]	Value		
744766901	1,6	25	7,96	15	254	265
7447669012	1,6	30	7,96	15	182	180
744766902	1,6	30	7,96	15	79	110
744766903	1,45	30	7,96	15	61	55
7447669039	1,45	30	7,96	15	55	50
744766904	1,25	30	7,96	15	53	47
744766906	1,06	30	7,96	15	42	35
744766910	1,06	35	2,52	25	36	29
7447669112	1,06	35	2,52	25	31	28
7447669115	1,06	35	2,52	25	27	24
7447669118	1,06	35	2,52	25	24	21
7447669122	1,06	35	2,52	25	23	20
7447669127	1,06	35	2,52	25	20	17
7447669133	0,975	35	2,52	25	19	16,5
7447669139	0,975	40	2,52	30	17	14,5
7447669147	0,975	40	2,52	30	15	14
7447669156	0,975	40	2,52	30	14	11
7447669168	0,975	40	2,52	30	12	10,5
7447669182	0,975	40	2,52	30	11	10
744766920	0,796	40	0,796	40	10	8,5
7447669212	0,796	40	0,796	40	9	8
7447669218	0,796	40	0,796	40	7	6,5
7447669220	0,796	40	0,796	40	6,5	6

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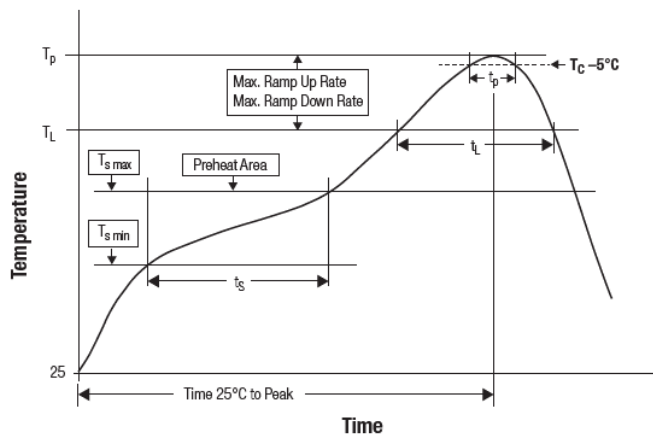
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Reflow Profile:

The samples are tested with a peak temperature at the reflow soldering of 250°C according to IPC/ JEDEC J-STD-020E.

Classification Reflow Profile for SMT components:



current

Profile Feature		Value
Preheat Temperature Min	$T_{s \text{ min}}$	150 °C
Preheat Temperature Max	$T_{s \text{ max}}$	200 °C
Preheat Time t_s from $T_{s \text{ min}}$ to $T_{s \text{ max}}$	t_s	60 - 120 seconds
Ramp-up Rate (T_L to T_p)		3 °C/ second max.
Liquidous Temperature	T_L	217 °C
Time t_L maintained above T_L	t_L	60 - 150 seconds
Peak package body temperature	T_p	245 °C max.
Time within 5 °C of actual peak temperature	t_p	20 - 30 seconds
Ramp-down Rate (T_L to T_p)		6 °C / second max.
Time 25 °C to peak temperature		8 minutes max.

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will change to

Profile Feature		Value
Preheat Temperature Min	$T_{s \text{ min}}$	150 °C
Preheat Temperature Max	$T_{s \text{ max}}$	200 °C
Preheat Time t_s from $T_{s \text{ min}}$ to $T_{s \text{ max}}$	t_s	60 - 120 seconds
Ramp-up Rate (T_L to T_p)		3 °C/ second max.
Liquidous Temperature	T_L	217 °C
Time t_L maintained above T_L	t_L	60 - 150 seconds
Peak package body temperature	T_p	250°C max.
Time within 5 °C of actual peak temperature	t_p	20 - 30 seconds
Ramp-down Rate (T_L to T_p)		6 °C / second max.
Time 25 °C to peak temperature		8 minutes max.

RELIABILITY / QUALIFICATION SUMMARY:

Product approval is according to the specification and is internally released by the Product Management Department.

Furthermore a Five Time Reflow (according JEDEC J-STD-020E [with 250°C]) was performed.