Product / Process Change Notification

N° 2018-135-A

Dear Customer,

Please find attached our INFINEON Technologies PCN:

Post regulator robustness enhancement for low ESR capacitors and datasheet update for TLE7368 family

Important information for your attention:

- Please respond to this PCN by indicating your decision on the approval form, sign it and return to your sales partner before **28th January 2020.**
- Infineon aligns with the widely-recognized JEDEC STANDARD **"JESD46",** which stipulates: **"Lack of acknowledgement of the PCN within 30 days constitutes acceptance of the change."**

Your prompt reply will help Infineon Technologies to assure a smooth and well executed transition. If Infineon does not hear from your side by the due date, we will assume your full acceptance to this proposed change and its implementation.

Your attention and response to this matter is greatly appreciated.

Infineon Technologies AG
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Chairman of the Supervisory Board: Dr. Eckart Sünner
Management Board: Dr. Reinhard Ploss (CEO), Dr. Helmut Gassel, Jochen Hanebeck, Dr. Sven Schneider
Registered Office: Neubiberg
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▸ Products affected:

Please refer to attached affected product list 1_cip18135_A

▸ Detailed Change Information:

Subject: Post regulator robustness enhancement for low ESR capacitors and datasheet update for TLE7368 family

Reason: Device robustness was improved for LDO1/2/3 using output capacitors with low ESR values.

Within the datasheet, the minimum ESR values for LDO output capacitors were updated to reflect the most relevant application conditions.

Description:	**Old**	**New**
TLE7368E	■ SP-No: SP001311434 ■ OPN: TLE7368EXUMA3	■ SP-No: SP001614712 ■ OPN: TLE7368EXUMA5
TLE7368-2E	■ SP-No: SP001311436 ■ OPN: TLE73682EXUMA2	■ SP-No: SP001614702 ■ OPN: TLE73682EXUMA3
TLE7368-3E	■ SP-No: SP001311438 ■ OPN: TLE73683EXUMA2	■ SP-No: SP001614360 ■ OPN: TLE73683EXUMA3
Silicon redesign	■ LDO output voltages may show instable behavior under light load (oscillation) that may trigger an UV reset, if output capacitors with low ESR values are used.	■ The redesign now ensures stable behavior also for low ESR output capacitors.
Output capacitors C_{Q_LDO1}, C_{Q_LDO2}, C_{Q_T1}, C_{Q_T2}, C_{Q_STBY}	■ min. ESR = 0 ohm	■ min. ESR value removed
Output capacitor C_{FB_EXT}	■ min. ESR = 0 ohm	■ min. ESR = 0.006 ohms
Output capacitor C_{Q_LDO2}	■ test condition = 10kHz	■ test condition = 1MHz
Feedback voltage V_{FB_EXT}	■ min = 1.51V	■ min = 1.505V
UV reset threshold $V_{URT\ Q\_LDO2,de}$	■ min = 2.485V	■ min = 2.470V
LDO_3/DRV_EXT recommended external power NPN transistors	■ Fairchild KSH200, or ■ ON-Semi NJD2873T4	■ Fairchild KSH200
Description of watchdog circuit, fault operation	■ Imprecise	■ Revised to be more precise
Datasheet update	■ Revision 2.1	■ Revision 2.6

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▶ Product Identification:

Traceability assured via date code.
SP number and ordering part number are different.

▶ Impact of Change:

Based on the qualification performed, Infineon does not see any negative impact on quality, function and reliability. No change in fit and form.
DeQuMa-IDs: SEM-DS-01 / SEM-DE-01

▶ Attachments:

1_cip18135_A	affected product list
4_cip18135_A	datasheet update
6_cip18135_A	product replacement list

▶ Time Schedule:

■ Final qualification report:	available
■ First samples available:	on request
■ Intended start of delivery:	01-July-2020 or earlier after customer approval

If you have any questions, please do not hesitate to contact your local Sales office.

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Sales name	SP number	OPN	Package
TLE7368E	SP001311434	TLE7368EXUMA3	PG-DSO-36
TLE7368-2E	SP001311436	TLE73682EXUMA2	PG-DSO-36
TLE7368-3E	SP001311438	TLE73683EXUMA2	PG-DSO-36