

PCN Number:	20200526002	PCN Date:	May 29, 2020
Title:	Datasheet for TLIN2029-Q1, TLIN1021-Q1, TLIN2021-Q1, TLIN1441-Q1, TLIN1029-Q1, TLIN1028S-Q1, TLIN2022-Q1, TLIN1022-Q1, TLIN1024-Q1, TLIN2441-Q1		
Customer Contact:	PCN Manager	Dept:	Quality Services
Change Type:			
<input type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design
<input type="checkbox"/>	Assembly Process	<input checked="" type="checkbox"/>	Data Sheet
<input type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change
<input type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Test Site
<input type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Site
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Material
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Process
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Site
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Materials
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Process

Notification Details

Description of Change:

Texas Instruments Incorporated is announcing an information only notification. The product datasheet(s) is being updated as summarized below. The following change history provides further details.



TLIN2029-Q1

SLLSEY6E –OCTOBER 2017–REVISED MAY 2020

Changes from Revision D (April 2020) to Revision E	Page
• Added: (See SLLA490) to the <i>Features</i> list.....	1
• Added : See errata TLIN1029-Q1 and TLIN2029-Q1 Duty Cycle Over V_{SUP}	8

Changes from Revision C (July 2019) to Revision D	Page
• Changed Feature From: ± 58 -V LIN bus fault protection To: ± 60 -V LIN bus fault protection.....	1
• Changed the 200 pF capacitor To: 220 pF in the <i>Simplified Schematics, Master Mode</i>	1
• Changed the 200 pF capacitor To: 220 pF in the <i>Simplified Schematics, Slave Mode</i>	1
• Changed V_{LIN} from MIN = -58, MAX = 58 To: MIN = -60, MAX = 60 in the Absolute Maximum Ratings.....	5
• Changed C_{LINPIN} from MAX = 45 pF To: MAX = 25 pF and added $V_{SUP} = 14$ V for Test Condition in Electrical Characteristics.....	7
• Changed text From: "For slave applications a 200 pF capacitor" To: "For slave applications a 220 pF capacitor" For Pin 6 (LIN) in the <i>Layout Guidelines</i>	27



TLIN1021-Q1

SLLSEU9C –JUNE 2019–REVISED MAY 2020

Changes from Revision B (May 2020) to Revision C	Page
• Added: (See SLLA493) to the <i>Features</i> list.....	1
• Added : See errata TLIN1021-Q1 and TLIN2021-Q1 Duty Cycle Over V_{SUP}	8

Changes from Revision A (December 2019) to Revision B	Page
• Changed note 3 to: Results given here are specific to the SAE J2962-1 Communication Transceivers Qualification Requirements - LIN. Testing performed by OEM approved independent 3 rd party up to ± 35 V, EMC report available upon request. ± 85 V verified internally during characterization.....	5
• Changed C_{LIN} max value from 45pF to 25pF.....	7
• Changed text in the <i>WAKE</i> section from: The WAKE pin is a high-voltage reverse-blocked input used for the local wake-up (LWU) function. To: The WAKE pin is a high-voltage input used for the local wake-up (LWU) function.	24
• Changed text in the <i>Local Wake-Up (LWU) via WAKE Input Terminal</i> section From: The WAKE terminal is a bi-directional high-voltage reverse battery protected input To: The WAKE terminal is a bi-directional high-voltage input.....	27

Changes from Revision A (May 2020) to Revision B **Page**

- Added: (See SLLA493) to the *Features* list 1
- Added : See errata TLIN1021-Q1 and TLIN2021-Q1 Duty Cycle Over V_{SUP} 9

Changes from Original (December 2019) to Revision A **Page**

- Changed note 3 to: Results given here are specific to the SAE J2962-1 Communication Transceivers Qualification Requirements - LIN. Testing performed by OEM approved independent 3rd party up to $\pm 35V$, EMC report available upon request. $\pm 85V$ verified internally during characterization 6
- Changed C_{LIN} max value from 45pF to 25pF 8
- Changed text in the *WAKE* section from: The *WAKE* pin is a high-voltage reverse-blocked input used for the local wake-up (LWU) function. To: The *WAKE* pin is a high-voltage input used for the local wake-up (LWU) function. 24
- Changed text in the *Local Wake-Up (LWU) via WAKE Input Terminal* section From: The *WAKE* terminal is a bi-directional high-voltage reverse battery protected input To: The *WAKE* terminal is a bi-directional high-voltage input 27

Changes from Revision B (March 2019) to Revision C **Page**

- Added: (See SLLA494) to the *Features* list 1
- Added : See errata TLIN1441-Q1 and TLIN2441-Q1 Duty Cycle Over V_{SUP} 8
- Changed the capacitor value on pin 5 (LIN) From: 220 pF to 200 pF in [Figure 38](#) and [Figure 39](#) 39
- Changed the capacitor value on LIN From: 220 pF to 200 pF in [Figure 51](#) 45

Changes from Revision D (March 2020) to Revision E **Page**

- Added: (See SLLA490) to the *Features* list 1
- Added : See errata TLIN1029-Q1 and TLIN2029-Q1 Duty Cycle Over V_{SUP} 8

Changes from Revision C (July 2019) to Revision D **Page**

- Changed the 200 pF capacitor To: 220 pF in the *Simplified Schematics, Master Mode* 1
- Changed the 200 pF capacitor To: 220 pF in the *Simplified Schematics, Slave Mode* 1
- Changed C_{LINPIN} from MAX = 45 pF To: MAX = 25 pF and added $V_{SUP} = 14 V$ for Test Condition in Electrical Characteristics 7
- Changed text From: "For slave applications a 200 pF capacitor" To: "For slave applications a 220 pF capacitor" For Pin 6 (LIN) in the *Layout Guidelines* 27

Changes from Original (November 2019) to Revision A **Page**

- Added: (See SLLA495) to the *Features* list 1
- Added *Feature*: Functional Safety-Capable 1
- Added : See errata TLIN1028S-Q1 Duty Cycle Over V_{SUP} 7

Changes from Revision B (April 2020) to Revision C
Page

- Added: (See SLLA491) to the *Features* list 1
- Added : See errata TLIN1022-Q1 and TLIN2022-Q1 Duty Cycle Over V_{SUP} 7

Changes from Revision A (January 2019) to Revision B
Page

- Changed Feature From: ± 58 V LIN bus fault protection To: ± 60 V LIN bus fault protection 1
- Deleted *Product Preview* from the VSON (14) (DMT) package 1
- Changed V_{SUP} from max = 58 V to max = 60 V in Absolute Maximum Ratings 4
- Changed V_{LIN} from min = -58 V, max = 58 V to min = -60 V, max = 60 V in Absolute Maximum Ratings 4
- Changed V_{LOGIC} from max = 5.5 V to: 6 V in Absolute Maximum Ratings 4
- Changed C_{LINPIN} from max = 45 pF to max = 25 pF and added $V_{SUP} = 14$ V for test condition in electrical characteristics 6

Changes from Revision B (April 2020) to Revision C
Page

- Added: (See SLLA491) to the *Features* list 1
- Added : See errata TLIN1022-Q1 and TLIN2022-Q1 Duty Cycle Over V_{SUP} 7

Changes from Revision A (January 2019) to Revision B
Page

- Deleted *Product Preview* from the VSON (14) (DMT) package 1
- Changed V_{LOGIC} from max = 5.5 V to: 6 V in Absolute Maximum Ratings 4
- Changed C_{LINPIN} from max = 45 pF to max = 25 pF and added $V_{SUP} = 14$ V for test condition in electrical characteristics 6

Changes from Revision B (December 2019) to Revision C
Page

- Added: (See SLLA492) to the *Features* list 1
- Added : See errata TLIN1024-Q1 Duty Cycle Over V_{SUP} 7

Changes from Revision A (May 2018) to Revision B
Page

- Changed *Feature* From: HBM Classification level: ± 6 kV To: HBM Classification level: ± 8 kV 1
- Changed the V_{LOGIC} MAX value From: 5.5 V To: 6 V in the Absolute Maximum Ratings 5
- Deleted J2962-1 ESD and ISO Pulses from ESD Ratings 5
- Changed the HBM value from ± 6000 to ± 8000 in the ESD Ratings 5
- Changed IEC 61000-4-2 to IEC 62228-2 and made three rows, two for contact and added indirect ESD 5
- Changed I_{CC} to I_{SUP} 6
- Changed the Supply Current 4 V Sleep Mode TYP values From: 20 μ A To: 7 μ A and the MAX value From: 40 μ A To: 20 μ A 6
- Changed the Supply Current 14 V Sleep Mode MAX value From: 60 μ A To: 30 μ A 6
- Changed the C_{LINPIN} MAX value From: 45 pF To: 25 pF 7
- Added TEST CONDITION: $V_{SUP} = 14$ V to C_{LINPIN} 7
- Changed From ± 42 V To: ± 45 V in Overview Section 21
- Cleaned up wording in Overview section second paragraph 21

Changes from Revision A (March 2019) to Revision B	Page
• Added: (See SLLA494) to the <i>Features</i> list	1
• Added : See errata TLIN1441-Q1 and TLIN2441-Q1 Duty Cycle Over V_{SUP}	8
• Changed the capacitor value on pin 5 (LIN) From: 220 pF to 200 pF in Figure 32 and Figure 33	39
• Changed the capacitor value on LIN From: 220 pF to 200 pF in Figure 44	45

The datasheet number will be changing.

Device Family	Change From:	Change To:
TLIN2029-Q1	SLLSEY6C	SLLSEY6E
TLIN1021-Q1	SLLSEU9A	SLLSEU9C
TLIN2021-Q1	SLLSF61	SLLSF61B
TLIN1441-Q1	SLLSF27B	SLLSF27C
TLIN1029-Q1	SLLSEY5C	SLLSEY5E
TLIN1028S-Q1	SLLSFG0	SLLSFG0A
TLIN2022-Q1	SLLSF01A	SLLSF01C
TLIN1022-Q1	SLLSEZ8A	SLLSEZ8C
TLIN1024-Q1	SLLSF04A	SLLSF04C
TLIN2441-Q1	SLLSF28A	SLLSF28B

These changes may be reviewed at the datasheet links provided.

<http://www.ti.com/product/TLIN2029-Q1>

<http://www.ti.com/product/TLIN1021-Q1>

<http://www.ti.com/product/TLIN2021-Q1>

<http://www.ti.com/product/TLIN1441-Q1>

<http://www.ti.com/product/TLIN1029-Q1>

<http://www.ti.com/product/TLIN1028S-Q1>

<http://www.ti.com/product/TLIN2022-Q1>

<http://www.ti.com/product/TLIN1022-Q1>

<http://www.ti.com/product/TLIN1024-Q1>

<http://www.ti.com/product/TLIN2441-Q1>

Reason for Change:

To accurately reflect device characteristics.

Anticipated impact on Fit, Form, Function, Quality or Reliability (positive / negative):

This is a specification change announcement only. There are no changes to the actual device. If the datasheet changes affect your system TI recommends you notify your OEM and request a variance.

Changes to product identification resulting from this PCN:

None.

Product Affected:			
TLIN2029DQ1	TLIN2029DRBRQ1	TLIN2029DRBTQ1	TLIN2029DRQ1
TLIN1021DRBRQ1	TLIN1021DRQ1	TLIN2021DRBRQ1	TLIN2021DRBRQ1
TLIN14413DMTRQ1	TLIN14413DMTTQ1	TLIN14415DMTRQ1	TLIN14415DMTTQ1
TLIN1029DQ1	TLIN1029DRBRQ1	TLIN1029DRBTQ1	TLIN1029DRQ1
TLIN1029MDRBRQ1	TLIN10283SDRQ1	TLIN10285SDRQ1	TLIN2022DMTRQ1
TLIN2022DMTTQ1	TLIN2022DRQ1	TLIN1022DMTRQ1	TLIN1022DMTTQ1
TLIN1022DRQ1	TLIN1024RGYRQ1	TLIN1024RGYTQ1	TLIN24413DMTRQ1
TLIN24413DMTTQ1	TLIN24415DMTRQ1	TLIN24415DMTTQ1	

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