

Supplemental Information

This notice describes the differences between the updated version and its previous version of the IDT82V3011 Data Sheet. It helps readers to identify the changes when the data sheet is upgraded.

Revision History

Revision Date	PCN Number (if applicable)	Date Code	Changed Items
November 18, 2004	-	-	Item 5 to 4
October 22, 2003	-	-	Item 3 to 1

Changed Items

November 18, 2004

Item 5: Added green package option (page 1, 30)

Item 4: Changed descriptions on State Control Circuit (2nd paragraph on page 10)

Old: "When changing the operating mode, the TIE control block is enabled/disabled automatically by the state control circuit as shown in [Figure - 3](#), except for the changes from Normal (S1) to Auto-Holdover (S2), and from Auto-Holdover (S2) and Holdover (S3) to Normal (S1). During these three changes, the TIE control block can be enabled or disabled, depending on the logic level on the TIE_en pin."

New: "When the operating mode is changed from one to another, the TIE control block is automatically disabled as shown in [Figure - 3](#), except the changes from Holdover (S3) or Auto-Holdover (S2) to Normal (S1). In the case of changing from S3 or S2 to S1, the TIE control block is enabled or disabled by the TIE_en pin."

October 22, 2003

Item 3: 8.2 Input/Output Timing has been changed. (Page 25)

Old:

8.2 Input/Output Timing

Parameter	Description	Min	Typ	Max	Units	Test Conditions
t_{RW}	Reference input pulse width high or low	100			ns	8 kHz, 1.544 MHz or 2.048 MHz reference input
		5			ns	19.44 MHz reference input
t_{IRF}	Reference input rise or fall time			10	ns	
t_{R8D}	8 kHz reference input to F8o delay	0		25	ns	
t_{R15D}	1.544 MHz reference input to F8o delay	326		342	ns	
t_{R2D}	2.048 MHz reference input to F8o delay	248		264	ns	
t_{R19D}	19.44 MHz reference input to F8o delay		5		ns	
t_{FOD}	F8o to $\overline{F0o}$ delay	111		130	ns	
t_{F16S}	$\overline{F16o}$ setup to $\overline{C16o}$ falling	25		40	ns	
t_{F16H}	$\overline{F16o}$ hold to $\overline{C16o}$ falling	25		40	ns	

8.2 Input/Output Timing (Continued)

Parameter	Description	Min	Typ	Max	Units	Test Conditions
t_{F19S}	F19o setup to C19o falling		25		ns	
t_{F19H}	F19o hold to C19o falling		25		ns	
t_{C15D}	F8o to C1.5o delay	-10		10	ns	
t_{C3D}	F8o to $\overline{C3o}$ delay	-10		10	ns	
t_{C6D}	F8o to C6o delay	-10		10	ns	
t_{C2D}	F8o to C2o	-11		5	ns	
t_{C4D}	F8o to $\overline{C4o}$	-11		5	ns	
t_{C8D}	F8o to C8o delay	-11		5	ns	
t_{C16D}	F8o to $\overline{C16o}$ delay	-11		5	ns	
t_{C19D}	F8o to C19o delay	-11		5	ns	
t_{C32D}	F8o to $\overline{C32o}$ delay	-11		5	ns	
t_{TSPD}	F8o to TSP delay	-6		10	ns	
t_{RSPD}	F8o to RSP delay	-8		8	ns	
t_{C15W}	C1.5o pulse width high or low	309		339	ns	
t_{C3W}	$\overline{C3o}$ pulse width high or low	154		169	ns	
t_{C6W}	C6o pulse width high or low	70		86	ns	
t_{C2W}	C2o pulse width high or low	232		258	ns	
t_{C4W}	$\overline{C4o}$ pulse width high or low	111		133	ns	
t_{C8W}	C8o pulse width high or low	52		70	ns	
t_{C16W}	$\overline{C16o}$ pulse width high or low	24		35	ns	
t_{C19W}	C19o pulse width high or low		25		ns	
t_{C32W}	$\overline{C32o}$ pulse width high or low	14		16.78	ns	
t_{TSPW}	TSP pulse width high	478		494	ns	
t_{RSPW}	RSP pulse width high	474		491	ns	
t_{F0WL}	$\overline{F0o}$ pulse width low	234		254	ns	
t_{F8WH}	F8o pulse width high	109		135	ns	
t_{F16WL}	$\overline{F16o}$ pulse width low	47		72	ns	
t_{F19WH}	F19o pulse width low		25		ns	
t_{ORF}	Output clock and frame pulse rise or fall time			9	ns	
t_S	Input controls setup Time	100			ns	
t_H	Input controls hold Time	100			ns	
t_{F16D}	F8o to $\overline{F16o}$ delay	24		38	ns	

8.2 Input/Output Timing (Continued)

Parameter	Description	Min	Typ	Max	Units	Test Conditions
t_{F19D}	F8o to F19o delay		25		ns	
t_{F32D}	F8o to $\overline{F32o}$ delay	12		19	ns	
t_{F32S}	$\overline{F32o}$ setup to $\overline{C32o}$ falling	11			ns	
t_{F32H}	$\overline{F32o}$ hold to $\overline{C32o}$ falling	11			ns	
t_{F32WL}	$\overline{F32o}$ pulse width low	15		31	ns	

New:

8.2 Input/Output Timing

Parameter	Description	Min	Typ	Max	Units	Test Conditions
t_{RW}	Reference input pulse width high or low	51			ns	8 kHz, 1.544 MHz or 2.048 MHz reference input
		5			ns	19.44 MHz reference input
t_{IRF}	Reference input rise or fall time			10	ns	
t_{R8D}	8 kHz reference input to F8o delay		8		ns	
t_{R15D}	1.544 MHz reference input to F8o delay		332		ns	
t_{R2D}	2.048 MHz reference input to F8o delay		253		ns	
t_{R19D}	19.44 MHz reference input to F8o delay		8		ns	
t_{F0D}	F8o to $\overline{F0o}$ delay	118	121	124	ns	
t_{F16S}	$\overline{F16o}$ setup to $\overline{C16o}$ falling	25		40	ns	
t_{F16H}	$\overline{F16o}$ hold to $\overline{C16o}$ falling	25		40	ns	
t_{F19S}	F19o setup to C19o falling	20		35	ns	
t_{F19H}	F19o hold to C19o falling	20		35	ns	
t_{C15D}	F8o to C1.5o delay	-3	0	+3	ns	
t_{C3D}	F8o to $\overline{C3o}$ delay	-3	1.6	+3	ns	
t_{C6D}	F8o to C6o delay	-3	1.6	+3	ns	
t_{C2D}	F8o to C2o	-2	0	+2	ns	
t_{C4D}	F8o to $\overline{C4o}$	-2	0	+2	ns	
t_{C8D}	F8o to C8o delay	-2	0	+2	ns	
t_{C16D}	F8o to $\overline{C16o}$ delay	-2	0	+2	ns	
t_{C19D}	F8o to C19o delay	-8	0	8	ns	
t_{C32D}	F8o to $\overline{C32o}$ delay	-2	2	+2	ns	
t_{TSPD}	F8o to TSP delay	-3	0	+3	ns	
t_{RSPD}	F8o to RSP delay	-3	0	+3	ns	
t_{C15W}	C1.5o pulse width high or low		323		ns	

8.2 Input/Output Timing (Continued)

Parameter	Description	Min	Typ	Max	Units	Test Conditions
t_{C3W}	$\overline{C3o}$ pulse width high or low		161		ns	
t_{C6W}	C6o pulse width high or low		82		ns	
t_{C2W}	C2o pulse width high or low		244		ns	
t_{C4W}	$\overline{C4o}$ pulse width high or low		122		ns	
t_{C8W}	C8o pulse width high or low		61		ns	
t_{C16W}	$\overline{C16o}$ pulse width high or low		30.5		ns	
t_{C19W}	C19o pulse width high or low		25		ns	
t_{C32WH}	$\overline{C32o}$ pulse width high		14.4		ns	
t_{TSPW}	TSP pulse width high		486		ns	
t_{RSPW}	RSP pulse width high		490		ns	
t_{F0WL}	$\overline{F0o}$ pulse width low		243		ns	
t_{F8WH}	F8o pulse width high		123.6		ns	
t_{F16WL}	$\overline{F16o}$ pulse width low		60.9		ns	
t_{F19WH}	F19o pulse width high		25		ns	
t_{ORF}	Output clock and frame pulse rise or fall time		3		ns	
t_S	Input controls setup Time	100			ns	
t_H	Input controls hold Time	100			ns	
t_{F16D}	F8o to $\overline{F16o}$ delay	27.1	30.1	33.1	ns	
t_{F19D}	F8o to F19o delay	17	25	33	ns	
t_{F32D}	F8o to $\overline{F32o}$ delay	12	15.8	19	ns	
t_{F32S}	$\overline{F32o}$ setup to $\overline{C32o}$ falling	11			ns	
t_{F32H}	$\overline{F32o}$ hold to $\overline{C32o}$ falling	11			ns	
t_{F32WL}	$\overline{F32o}$ pulse width low		30.6		ns	

Item 2: 7.5 C19o (19.44 MHz) Intrinsic Jitter Filtered Table has been updated. (page 20)

Old:

7.5 C19o (19.44 MHz) INTRINSIC JITTER FILTERED

Description	Min.	Typ.	Max.	Units	Test Conditions / Notes (see "Notes" on page 23)
Intrinsic jitter (500 Hz to 1.3 MHz filter)			2	nspp	1-13, 20-23, 35
Intrinsic jitter (65 kHz to 1.3 MHz filter)			0.5	nspp	1-13, 20-23, 35

New:

7.5 C19o (19.44 MHz) INTRINSIC JITTER FILTERED

Description	Min.	Typ.	Max.	Units	Test Conditions / Notes (see "Notes" on page 23)
Intrinsic jitter (500 Hz to 1.3 MHz filter)		0.4	0.5	nspp	1-13, 20-23, 35
Intrinsic jitter (65 kHz to 1.3 MHz filter)		0.2	0.3	nspp	1-13, 20-23, 35

Item 1: Holdover frequency accuracy has been updated.

Old: Holdover frequency accuracy of 0.00625 ppm (page 1)

New: Holdover frequency accuracy of 0.025 ppm

Old: The frequency accuracy in the Holdover mode is ± 0.00625 ppm, which corresponds to a worst case of 18 frame (125 μ s per frame) slips in 24 hours. (page 10)

New: The frequency accuracy in the Holdover mode is ± 0.025 ppm, which corresponds to a worst case of 18 frame (125 μ s per frame) slips in 24 hours.

Old: The amount of phase drift while in holdover can be negligible because the Holdover mode is very accurate (e.g., 0.00625 ppm). (page 10)

New: The amount of phase drift while in holdover can be negligible because the Holdover mode is very accurate (e.g., 0.025 ppm).

Old: (page 19)

Performance

Description	Min.	Typ.	Max.	Units	Test Conditions / Notes (see "Notes" on page 23)
Holdover Mode accuracy with OSCi at: 0 ppm	-0.00625		+0.00625	ppm	2, 4-7, 41, 42
Holdover Mode accuracy with OSCi at: ± 32 ppm	-0.00625		+0.00625	ppm	2, 4-7, 41, 42
Holdover Mode accuracy with OSCi at: ± 100 ppm	-0.00625		+0.00625	ppm	2, 4-7, 41, 42

New:

Performance

Description	Min.	Typ.	Max.	Units	Test Conditions / Notes (see "Notes" on page 23)
Holdover Mode accuracy with OSCi at: 0 ppm	-0.025		+0.025	ppm	2, 4-7, 41, 42
Holdover Mode accuracy with OSCi at: ± 32 ppm	-0.025		+0.025	ppm	2, 4-7, 41, 42
Holdover Mode accuracy with OSCi at: ± 100 ppm	-0.025		+0.025	ppm	2, 4-7, 41, 42

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Corporate Headquarters

TOYOSU FORESIA, 3-2-24 Toyosu,
Koto-ku, Tokyo 135-0061, Japan
www.renesas.com

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