

CHANGE NOTIFICATION



Linear Technology Corporation
1630 McCarthy Blvd., Milpitas, CA 95035-7417
(408) 432-1900

June 10, 2015

Dear Sir/Madam:

PCN# 061015

Subject: Notification of Change to LT1796 Datasheet

Please be advised that Linear Technology Corporation has made a minor change to the LT1796 product datasheet to facilitate improvement in our manufacturing yield. The change is shown on the attached page of the marked up datasheet. There was no change in form, fit, function, quality or reliability of the product. The product shipped after August 10, 2015 will be tested to the new limits.

Should you have any further questions or concerns please contact your local Linear Technology Sales person or you may contact me at 408-432-1900 ext. 2077, or by e-mail at jason.hu@linear.com. If I do not hear from you by August 10, 2015, we will consider this change to be approved by your company.

Sincerely,

Jason Hu
Quality Assurance Engineer

DC ELECTRICAL CHARACTERISTICS The ● denotes the specifications which apply over the full operating temperature range, otherwise specifications are at $T_A = 25^\circ\text{C}$. $V_{CC} = 4.75\text{V}$ to 5.25V , $V_{RS} = 0\text{V}$ unless otherwise noted.

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS	
V_{TH}	Differential Input Threshold Voltage for Receiver	$V_{RS} = 0\text{V}$, $-7\text{V} < V_{CM} < 12\text{V}$	●	0.5	0.9	V	
		$V_{RS} = 5\text{V}$, $-7\text{V} < V_{CM} < 12\text{V}$	●	0.5	0.9	V	
ΔV_{TH}	Receiver Input Hysteresis	$-7\text{V} < V_{CM} < 12\text{V}$		70		mV	
V_{OH}	Receiver Output High Voltage	$V_{CC} = 4.75\text{V}$, $I_O = -400\mu\text{A}$, $V_{ID} = 500\text{mV}$	●	3	3.6	V	
V_{OL}	Receiver Output Low Voltage	$V_{CC} = 4.75\text{V}$, $I_O = 1.6\text{mA}$, $V_{ID} = 900\text{mV}$	●		0.15	0.4	V
I_{SCR}	Receiver Short-Circuit Current	$0\text{V} < V_O < V_{CC}$, $V_{CC} = 5.25\text{V}$	●	7	20	85	mA
V_{REF}	Reference Output Voltage	$-100\mu\text{A} < I_{REF} < 100\mu\text{A}$	●	2.25	2.5	2.7	V
V_{REFSC}	Reference Output Short-Circuit Current	$0 < V_{REF} < V_{CC}$	●	-20		20	mA
V_{RSSB}	R_S Pin Standby Threshold	$V_{CC} = 5\text{V}$	●	2.5	2.8	4	V
I_{RS}	R_S Input Current	$V_{RS} = 5\text{V}$, $V_{CC} = 5\text{V}$	●		0.1	10	μA
		$V_{RS} = 0\text{V}$, $V_{CC} = 5\text{V}$	●	-270	-200	-140	μA
		$R_S = 47\text{k}$, $V_{CC} = 5\text{V}$	●	-90	-60	-40	μA
I_{CC}	Supply Current	Dominant	●		4.3	7	mA
		Recessive	●		3.8	7	mA
		Standby	●		0.8	1.5	mA

SWITCHING CHARACTERISTICS The ● denotes the specifications which apply over the full operating temperature range. $V_{RS} = 0\text{V}$ unless otherwise noted. (Note 2)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS	
t_{BIT}	Minimum Bit Time	(Note 3)	●		8	μs	
F_{MAX}	Maximum Data Rate	(Note 3)	●	125		kbps	
t_{TXDON}	Driver Input to Bus Active	Figures 1, 2	●		300	500	ns
		$R_S = 47\text{k}$			350	1000	ns
t_{TXDOFF}	Driver Input to Bus Inactive	Figures 1, 2	●		500	400 1200	ns
		$R_S = 47\text{k}$			600	1500	ns
t_{LBON}	Loopback Delay Active	Figures 1, 3	●	0.6	1.5	μs	
t_{LBOFF}	Loopback Delay Inactive	Figures 1, 3	●	1.5	3	μs	
t_{RXDOFF}	Receiver Delay Off	Figures 1, 4	●	400	600	ns	
t_{RXDON}	Receiver Delay On	Figures 1, 4	●	300	600	ns	
$t_{RXDOFFSB}$	Receiver Delay Off, Standby	$V_{RS} = 4\text{V}$, Figures 1, 4	●	1.5	4	μs	
$t_{RXDONSb}$	Receiver Delay On, Standby	$V_{RS} = 4\text{V}$, Figures 1, 4	●	1	4	μs	
t_{WAKE}	Wake-Up Delay from Standby	Figures 1, 5	●	1	15	μs	
SR^+	Positive Slew Rate	$R_S = 0\text{k}$	●	5	12	65	V/ μs
		$R_S = 47\text{k}$	●	2	7	30	V/ μs
SR^-	Negative Slew Rate	$R_S = 0\text{k}$	●	5	36	65	V/ μs
		$R_S = 47\text{k}$	●	2	5	15	V/ μs

Note 1: Absolute Maximum Ratings are those values beyond which the life of the device may be impaired.

Note 2: Unless otherwise specified, testing done at $V_{CC} = 5\text{V}$, $T_A = 25^\circ\text{C}$.

Note 3: Bit time and data rate specifications are guaranteed by driver and receiver delay time measurements.