

CHANGE NOTIFICATION

NOW PART OF



Analog Devices, Inc.
1630 McCarthy Blvd., Milpitas CA
(408) 432-1900

June 26, 2017

Dear Sir/Madam:

PCN#062617

Subject: Notification of Change to LTC2856-1/-2, LTC2857-1/-2, LTC2858-1/-2 Datasheet

Please be advised that Analog Devices, Inc. Milpitas, California has made a minor change to the LTC2856-1/-2, LTC2857-1/-2, LTC2858-1/-2 product datasheet to facilitate improvement in our manufacturing capability. 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 26, 2017 will be tested to the new limits.

Should you have any questions or concerns please contact your local Analog Devices sales person or you may contact me at 408-432-1900 ext. 2077, or by e-mail at JASON.HU@ANALOG.COM. If I do not hear from you by August 26, 2017, we will consider this change to be approved by your company.

Sincerely,

Jason Hu
Quality Assurance Engineer

LTC2856-1/LTC2856-2
 LTC2857-1/LTC2857-2
 LTC2858-1/LTC2858-2

ELECTRICAL CHARACTERISTICS The ● denotes the specifications which apply over the full operating temperature range, otherwise specifications are at $T_A = 25^\circ\text{C}$. $V_{CC} = 5\text{V}$ unless otherwise noted. (Note 2)

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP | MAX | UNITS |
|-------------------|---|--|-----|------|-----------------|-------|
| Driver | | | | | | |
| V _{OD} | Differential Driver Output Voltage | R = ∞, V _{CC} = 4.5V (Figure 1) | ● | | V _{CC} | V |
| | | R = 27Ω (RS485), V _{CC} = 4.5V (Figure 1) | ● | 1.5 | V _{CC} | V |
| | | R = 50Ω (RS422), V _{CC} = 4.5V (Figure 1) | ● | 2 | V _{CC} | V |
| Δ V _{OD} | Change in Magnitude of Driver Differential Output Voltage for Complementary Output States | R = 27Ω or R = 50Ω (Figure 1) | ● | | 0.2 | V |
| V _{OC} | Driver Common Mode Output Voltage | R = 27Ω or R = 50Ω (Figure 1) | ● | | 3 | V |
| Δ V _{OC} | Change in Magnitude of Driver Common Mode Output Voltage for Complementary Output States | R = 27Ω or R = 50Ω (Figure 1) | ● | | 0.2 | V |
| I _{OZ} | Driver Three-State (High Impedance) Output Current on Y and Z | DE = 0V, (Y or Z) = -7V, 12V, LTC2858-1, LTC2858-2 | ● | | ±10 | μA |
| | | NEW → H-Grade | | | ±50 | μA |
| I _{OSD} | Maximum Driver Short-Circuit Current | -7V ≤ (Y or Z) ≤ 12V (Figure 2) | ● | ±120 | ±250 | mA |
| Receiver | | | | | | |
| I _{IN} | Receiver Input Current (A, B) | DE = TE = 0V, V _{CC} = 0V or 5V, V _{IN} = 12V (Figure 3) (C, I-Grade) | ● | | 125 | μA |
| | | DE = TE = 0V, V _{CC} = 0V or 5V, V _{IN} = -7V, (Figure 3) (C, I-Grade) | ● | -100 | | μA |
| | | DE = TE = 0V, V _{CC} = 0V or 5V, V _{IN} = 12V (Figure 3) (H-Grade) | ● | | 250 | μA |
| | | DE = TE = 0V, V _{CC} = 0V or 5V, V _{IN} = -7V, (Figure 3) (H-Grade) | ● | -145 | | μA |
| R _{IN} | Receiver Input Resistance | $\overline{R_E} = V_{CC}$ or 0V, DE = TE = 0V, V _{IN} = -7V, -3V, 3V, 7V, 12V (Figure 3) (C, I-Grade) | ● | 96 | 125 | kΩ |
| | | $\overline{R_E} = V_{CC}$ or 0V, DE = TE = 0V, V _{IN} = -7V, -3V, 3V, 7V, 12V (Figure 3) (H-Grade) | ● | 48 | 125 | kΩ |
| V _{TH} | Receiver Differential Input Threshold Voltage | -7V ≤ B ≤ 12V | ● | | ±0.2 | V |
| ΔV _{TH} | Receiver Input Hysteresis | B = 0V | | 25 | | mV |
| V _{OH} | Receiver Output High Voltage | I(RO) = -4mA, A-B = 200mV, V _{CC} = 4.5V | ● | 2.4 | | V |
| V _{OL} | Receiver Output Low Voltage | I(RO) = 4mA, A-B = -200mV, V _{CC} = 4.5V | ● | | 0.4 | V |
| I _{OZR} | Receiver Three-State (High Impedance) Output Current on RO | $\overline{R_E} = 5\text{V}$, 0V ≤ RO ≤ V _{CC} , LTC2856-1, LTC2856-2, LTC2858-1, LTC2858-2 | ● | | ±1 | μA |
| Logic | | | | | | |
| V _{IH} | Logic Input High Voltage | DE, DI, $\overline{R_E}$, V _{CC} = 5.5V | ● | 2 | | V |
| V _{IL} | Logic Input Low Voltage | DE, DI, $\overline{R_E}$, V _{CC} = 4.5V | ● | | 0.8 | V |
| I _{INL} | Logic Input Current | DE, DI, $\overline{R_E}$ | ● | 0 | ±10 | μA |
| Supplies | | | | | | |
| I _{CCS} | Supply Current in Shutdown Mode | DE = 0V, $\overline{R_E} = V_{CC}$, LTC2856, LTC2858 (C and I-Grade) | ● | 0 | 5 | μA |
| | | LTC2856, LTC2858 (H-Grade) | ● | 0 | 15 | μA |
| I _{CCR} | Supply Current in Receive Mode | No Load, DE = 0V, $\overline{R_E} = 0\text{V}$, LTC2856-1, LTC2856-2, LTC2858-1, LTC2858-2 | ● | 540 | 900 | μA |

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