

F100314

Low Power Quint Differential Line Receiver

General Description

The F100314 is a monolithic quint differential line receiver with emitter-follower outputs. An internal reference supply (V_{BB}) is available for single-ended reception. When used in single-ended operation the apparent input threshold of the true inputs is 25 mV to 30 mV higher (positive) than the threshold of the complementary inputs. Unlike other F100K ECL devices, the inputs do not have input pull-down resistors.

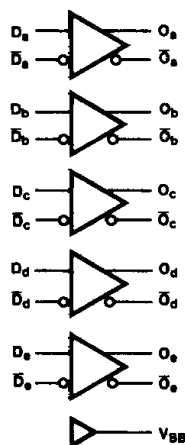
Active current sources provide common-mode rejection of 1.0V in either the positive or negative direction. A defined

output state exists if both inverting and non-inverting inputs are at the same potential between V_{EE} and V_{CC} . The defined state is logic HIGH on the $\bar{O}_a$ – $\bar{O}_e$ outputs.

Features

- 35% power reduction of the F100114
- 2000V ESD protection
- Pin/function compatible with F100114
- Voltage compensated operating range =
–4.2V to –5.7V

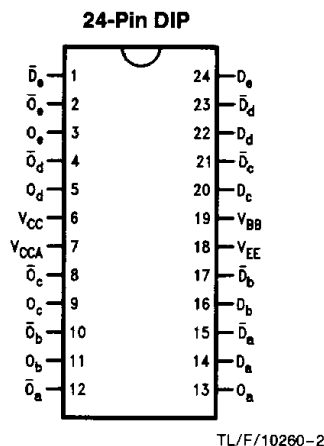
Logic Symbol



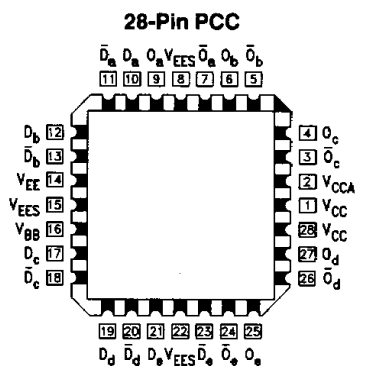
TL/F/10260–1

Pin Names	Description
D_a – D_e	Data Inputs
$\bar{D}_a$ – $\bar{D}_e$	Inverting Data Inputs
O_a – O_e	Data Outputs
$\bar{O}_a$ – $\bar{O}_e$	Complementary Data Outputs

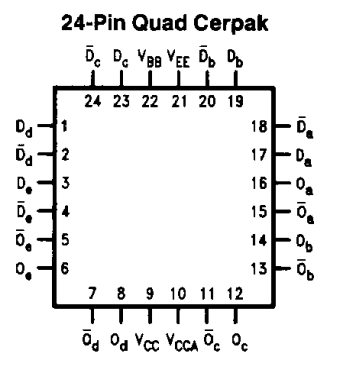
Connection Diagrams



TL/F/10260–2



TL/F/10260–4



TL/F/10260–3