VANTIS
BEYOND PERFORMANCE

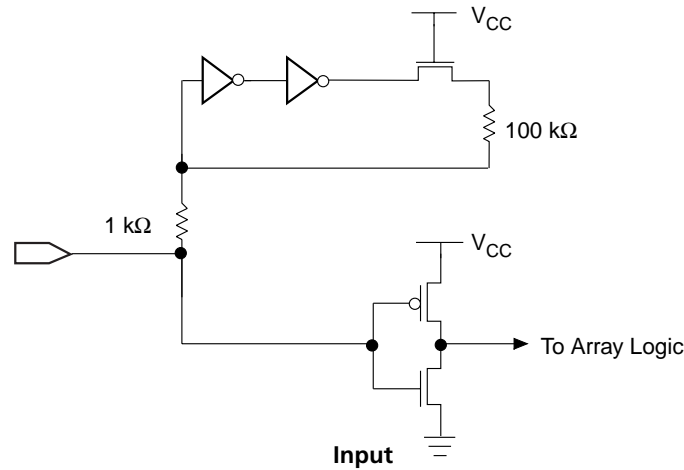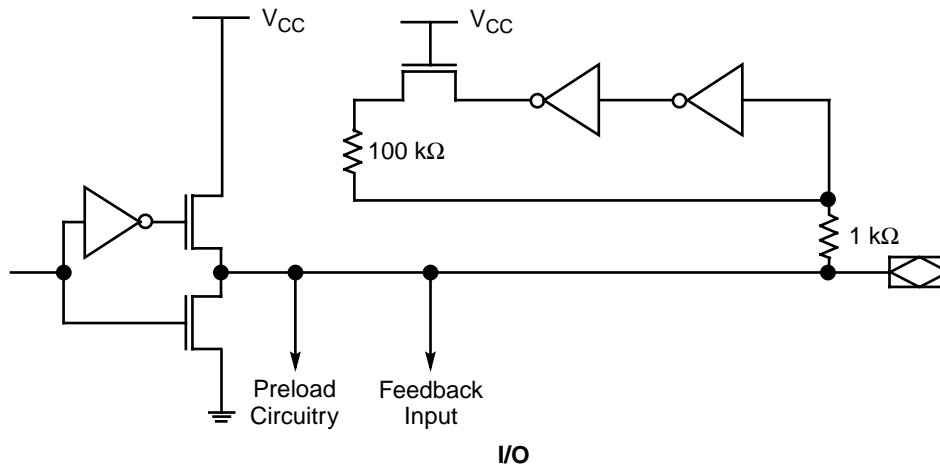# Endurance Characteristics

The MACH® families are manufactured using Vantis' advanced electrically-erasable (EE) CMOS process. This technology uses an EE cell to replace the fuse link used in bipolar parts. As a result, the device can be erased and reprogrammed, a feature which allows 100% testing at the factory.

Parameter Symbol	Parameter Description	Value	Unit	Test Conditions
t_{DR}	Min Pattern Data Retention Time	20	Years	Max Operating Temperature
		10	Years	Max Storage Temperature
N	Max Reprogramming Cycles	100	Cycles	Normal Programming Conditions

INPUT/OUTPUT EQUIVALENT SCHEMATICS

Input   19671B-001

I/O   19671B-002

Figure 1. Bus-Friendly™ Latch

> 50 kΩ

V$_{CC}$

V$_{CC}$

ESD
Protection
and
Clamping

Programming
Pins only

Programming
Voltage
Detection

Positive
Overshoot
Filter

Programming
Circuitry

19671B-3

Input

V$_{CC}$

V$_{CC}$
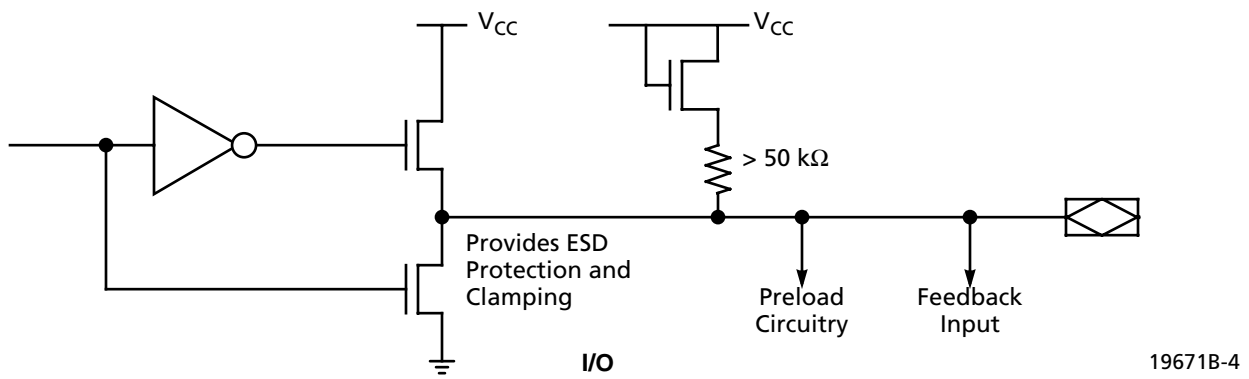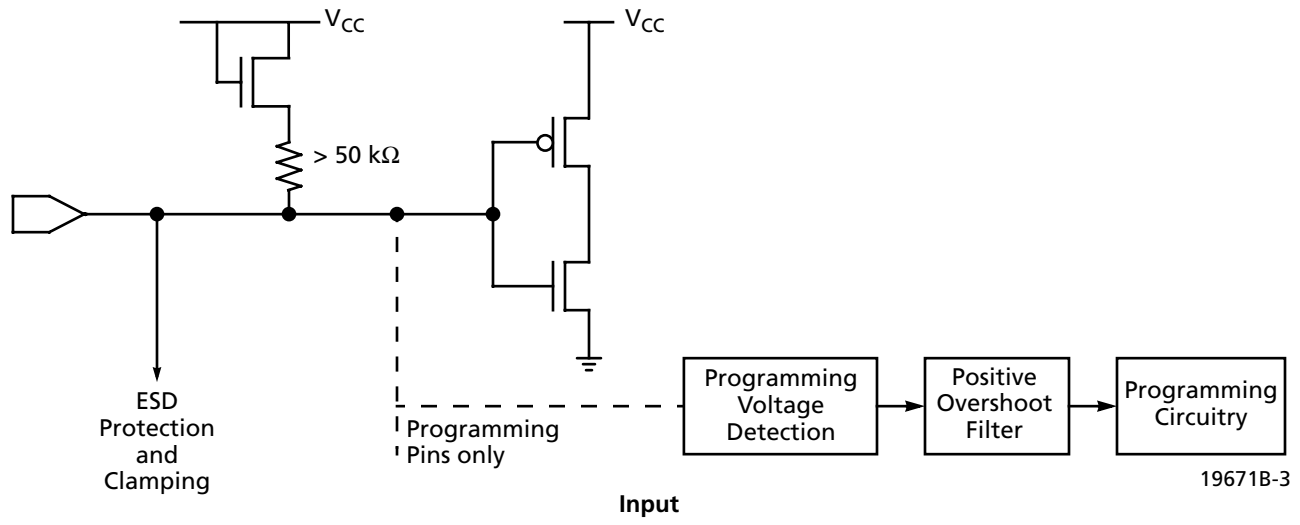
> 50 kΩ

Provides ESD
Protection and
Clamping

Preload
Circuitry

Feedback
Input

19671B-4

I/O

Figure 2. Pull-up Resistor