eMemory
Embedded Wisely, Embedded Widely

NeoBit®– Most Widely Used OTP Solution

Overview

eMemory's NeoBit is an one-time programmable memory solution using floating gate technology. One of the world's most widely used OTP, NeoBit has been embedded in more than 23 million of wafers shipped worldwide.

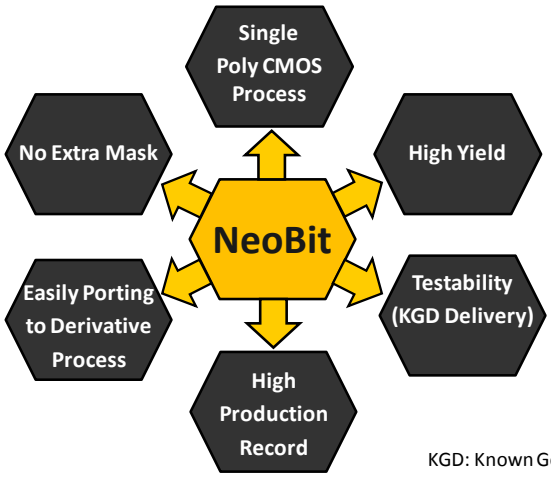
Feature

Low VDD Operation	Low Power Operation	High Reliability
• Vdd=0.9V read operation in 0.18um process	• Standby current <1μW • Read operation current < 0.4mW/MHz	• High temperature retention with testability • Automotive design for zero failure

Advantage

NeoBit is compatible to logic processes and does not require additional mask layers. It is an ideal replacement of ROM and EPROM.

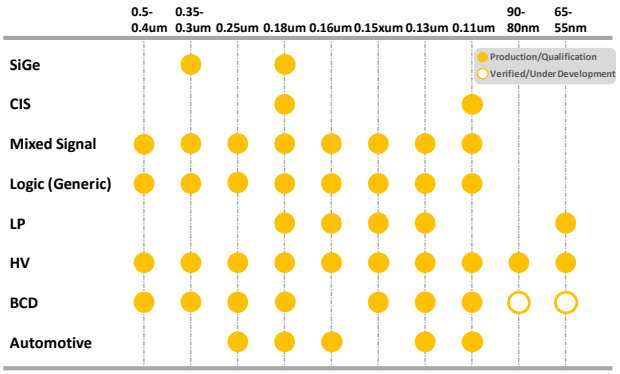
Other benefits include high fabrication yield, ease of implementation, simple interface, re-programmability with UV erase etc.



KGD: Known Good Dies

Availability

NeoBit is available from 0.5um to 55nm. The IP has been silicon proven for over 313 process technologies at 19 foundries worldwide.



Application

NeoBit has a broad range of applications:

- ❖ Code storage in MCU
- ❖ Parameter settings in NB camera controller
- ❖ Encryption in set-top box
- ❖ Fuse devices in memory redundancy design
- ❖ Function selection in SoC chip
- ❖ Signal trimming in analog and RF circuits.

NeoBit is designed to meet specific needs of consumer, industrial and automotive applications.

Product Grade		IP Features	Available Platform
Commercial Grade		• Operation range: -40˚C ~ 125˚C • Retention: >10year@85˚C	• General offering in logic - derivative processes (HV, LP, CIS and SiGe)
Industrial Grade		• Operation range: -40˚C ~ 150˚C • Retention: >10year@125˚C	• General offering in BCD
Automotive Grade		• Operation range: -40˚C~ 150˚C • Retention: >10year@150˚C* • AEC-Q100 qualified • Zero failure*	• TSMC: 0.13um/0.18um/ 0.25um BCD • VIS: 0.11um/0.16um/ 0.18um HV

*Depends on different foundry and process node.