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(54) **TEST GENERATOR FOR LOW POWER
BUILT-IN SELF-TEST**

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See application file for complete search history.

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(57) **ABSTRACT**

Aspects of the invention relate to low power BIST-based
testing. A low power test generator may comprise a pseudo-
random pattern generator unit, a toggle control unit config-
ured to generate toggle control data based on bit sequence
data generated by the pseudo-random pattern generator unit,
and a hold register unit configured to generate low power test
pattern data by replacing, based on the toggle control data
received from the toggle control unit, data from some or all of
outputs of the pseudo-random pattern generator unit with
constant values during various time periods. The low power
test generator may further comprise a phase shifter config-
ured to combine bits of the low power test pattern data for
driving scan chains.

20 Claims, 15 Drawing Sheets

