

SGC21549\_IP007702\_GF\_22FDX

## RC OSCILLATOR WITH 64-BIT PUF

### Features

- Nano power RC-based 100kHz oscillator
- Fast start-up time
- 64-bit PUF based on current-mirror mismatch
- Embedded 128-bit register for PUF raw output

### General Description

SGC21549\_IP007702\_GF\_22FDX is a digitally controlled RC based oscillator with embedded Physically Unclonable Function (PUF) implementation. Optimized for systems with security features, it offers high temperature stability and ultra-low power consumption, making use of a RC dependent oscillator topology. Designed for 100kHz, it is the best solution for low-cost identification and secure authentication applications due to its 64-bit input PUF with 128-bit raw output. It is specified from  $T_j = -40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ .

### Applications

- IoT
- Secure System-On-Chip (SSoC)
- Battery powered stand-by devices

### Quick Reference

SYMBOL	DESCRIPTION	MIN	TYP	MAX	UNIT
$V_{DDDD}$	Digital Voltage	1.20	-	1.98	V
$F_{CLK}$	Clock Range	-	100	-	kHz
$DC_{CLK}$	Duty-Cycle	40	-	60	%