

## Features

- High speed:  $f_{CLK} = 100$  MHz typ.
- Low power dissipation: 2mW/Bit
- Full Passivation for Enhanced Reliability
- Die Size: 3.75mm×1.25mm×0.1mm

## Typical Applications

- Multifunction Module

## General Description

SAC7001 device is a high-speed GaAs 18-bit SIPO shift latch register fabricated with GaAs logic circuits technology.

The chip offers full passivation for increased reliability and moisture protection

## Electrical Performance

$T_A = 25^\circ\text{C}$ ,  $V_{DD1} = +1.25\text{V}$ ,  $V_{DD2} = +5\text{V}$

Parameter	Min.	Typ.	Max.	Units
$V_{IH}$ (High level input Voltage)	3	—	—	V
$V_{IL}$ (Low level input Voltage)	—	—	0.2	V
$V_{OH}$ (High level output voltage)	4.5	—	—	V
$V_{OL}$ (Low level output voltage)	—	—	0.5	V
$I_I$ (Input leakage current)	—	400	—	$\mu\text{A}$
$I_O$ (Output driving current)	—	400	—	$\mu\text{A}$
$I_{DD1}$ (Quiescent supply current for $V_{DD1}$ )	—	20	—	mA
$I_{DD2}$ (Quiescent supply current for $V_{DD2}$ )	—	4	—	mA
$V_{DD1}$ (Supply voltage $V_{DD1}$ )	—	1.25	—	V
$V_{DD2}$ (Supply voltage $V_{DD2}$ )	—	5	—	V

## Absolute Maximum Ratings

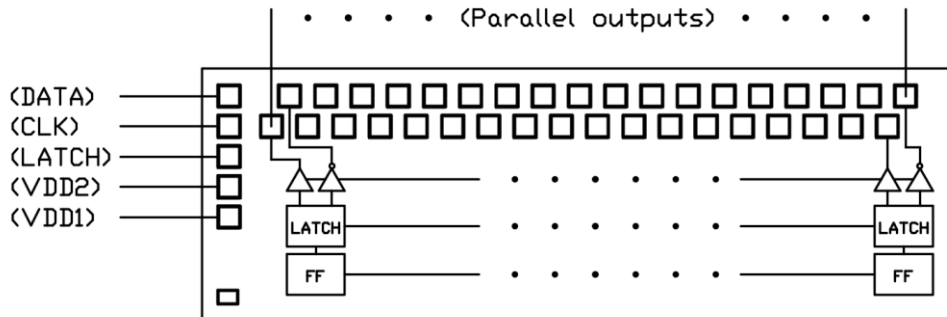
Supply voltage $V_{DD1}$	+1.5V	Supply voltage $V_{DD1}$	+5.25V
Storage temperature	+150°C	DC input voltage	+5.25V
Power dissipation	0.5W		

# SAC7001

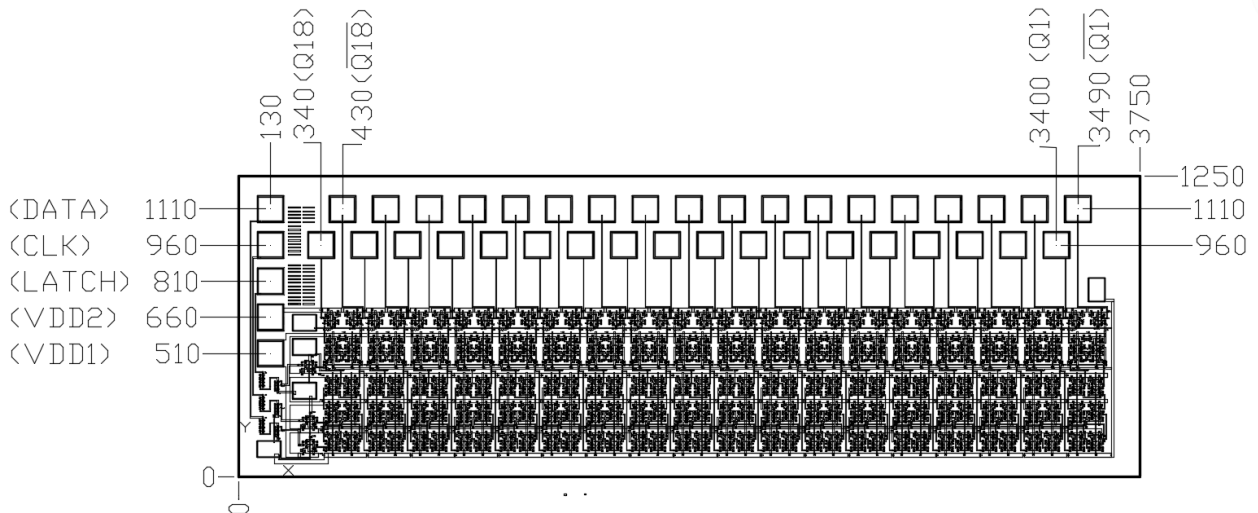
GaAs High Speed Logic Gate  
Serial-in Parallel-out Shift Register

Rev1.0

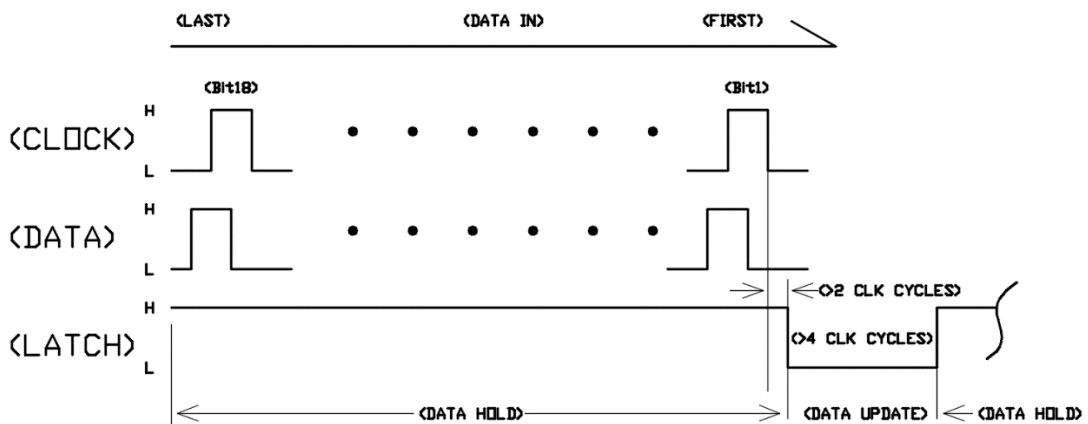
## Functional description



## Die Outline(μm)



## Timing chart



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# SAC7001



GaAs High Speed Logic Gate  
Serial-in Parallel-out Shift Register

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## Notes

1. The back of chip is DC ground.
2. GaAs MMIC devices are susceptible to damage from Electrostatic Discharge. Proper precautions should be observed during handling, assembly and test.

## Revision History

Revision	Date	Comment
1.0	Jul. 10 2022	First Release

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