Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

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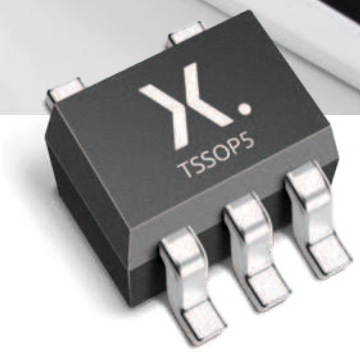
Low cost & small footprint alternative for single output applications

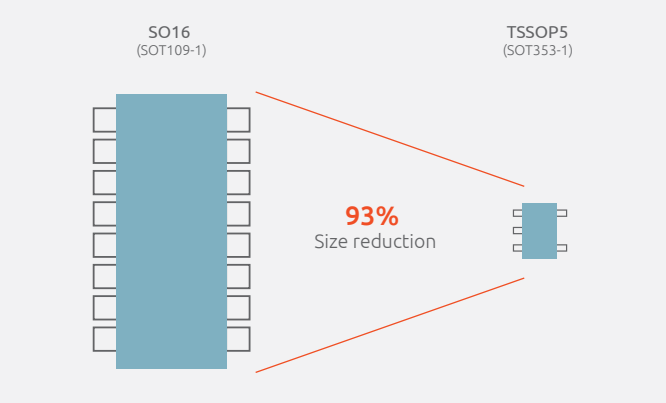
AHC Dividers with Oscillator

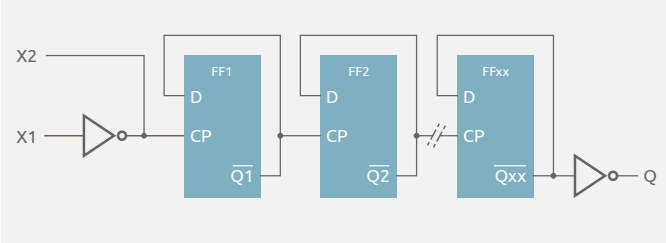


74AHC1G42xx is a xx-stage AHC divider with oscillator. Each flip-flop stage divides the frequency by two, consequently the 74AHC1G42xx counts to 2^{xx}. 74AHC1G42xx dividers exist in three variants: 10, 12 and 14-stage.

Standard logic dividers/counters (74HC4020, 74HC4040 and 74HC4060) are general purpose solutions with multiple outputs. In many applications, only a single frequency is required so only one output is used. The unused outputs result in many divider solutions being oversized.

To reduce the footprint of divider solutions, the 74AHC1G42xx range of dedicated single output Mini Logic dividers has been created. 74AHC1G42xx small footprint divider solutions offer specific 2^{xx} frequency division where xx = 01 to 16. The footprint is reduced substantially, from 59.4mm² to 4.4mm² (from SO16 to TSSOP5).





Benefits

- Wide supply voltage range from 2.0 V to 5.5V
- CMOS overvoltage tolerant (OVT) inputs support mixed-mode voltage operation
- Integrated oscillator for driving external resonator
- ESD – HBM exceeding 2000 V (ANSI/ESDA/JEDEC JS-001, Class 2)
- Low power dissipation

nexperia

EFFICIENCY WINS.

Applications

- Low-power operated applications
- Space-constrained applications
- Frequency division
- Clock management

Key markets

- Industrial
- Consumer
- Computing
- Automotive

Parametrics

V_{CC} Range	Output Drive	Prop Delay (t_{PD})	Temperature Range	Static Current (I_{CC})
2.0 – 5.5 V	+/-8 mA	24 ns	−40 °C ~ +125 °C	0.1 µA (typ.)

Available types

Type	
74AHC1G4210	10-stage divider and oscillator
74AHC1G4212	12-stage divider and oscillator
74AHC1G4214	14-stage divider and oscillator

Package

Suffix	Package version	Package name	Dimensions (L x W x H, pitch - in mm)	
GW	SOT353-1	TSSOP5	2.1 x 2.0 x 1.0, 0.65	

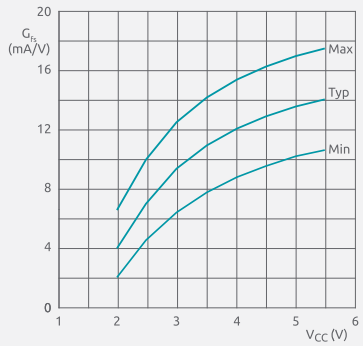
Types releasable upon request

74AHC1G4201, 74AHC1G4202, 74AHC1G4203, 74AHC1G4204, 74AHC1G4205, 74AHC1G4206, 74AHC1G4207, 74AHC1G4208, 74AHC1G4209, 74AHC1G4211, 74AHC1G4213, 74AHC1G4215, 74AHC1G4216.
Current function can be offered with master reset in equivalent 6-pin packages.

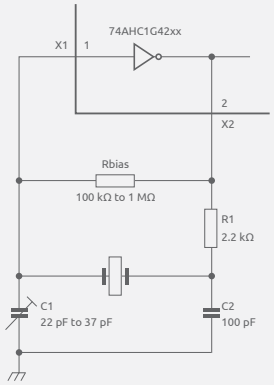
Typical crystal oscillator circuit

Used for generating clock pulses required for synchronization purposes

Forward transconductance as function of supply voltage (T_{amb} = 25°C)



External component connection for a crystal oscillator



Released products

74AHC1G4210 - 74AHC1G4212 - 74AHC1G4214

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