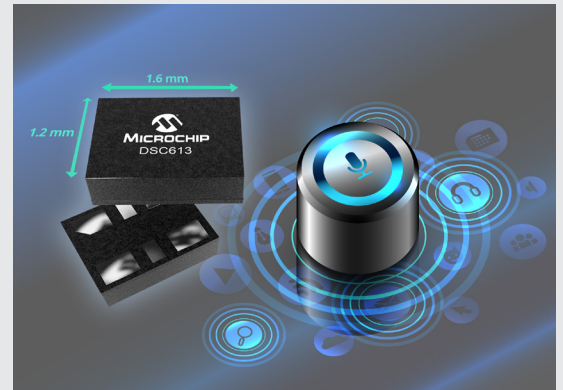


DSC612/613

Industry's Smallest MEMS Clock Generator With up to 3 Outputs

Summary

The DSC612/613 family of devices is the industry's smallest MEMS clock generator that can replace up to three crystals and oscillators on a board, reducing timing component board space by up to 80 percent. The clock generator eliminates the need for an external crystal by integrating the low-power and high-stability Micro-Electro-Mechanical Systems (MEMS) resonators. The family includes two low-power fractional PLLs that provide leading frequency flexibility and robust jitter performance. You can configure output frequency and control pin function, package size, PPM accuracy and temperature range. Up to three output drive strengths are available based on the custom board loading condition. Spread-spectrum clocks are also available for EMI reduction.



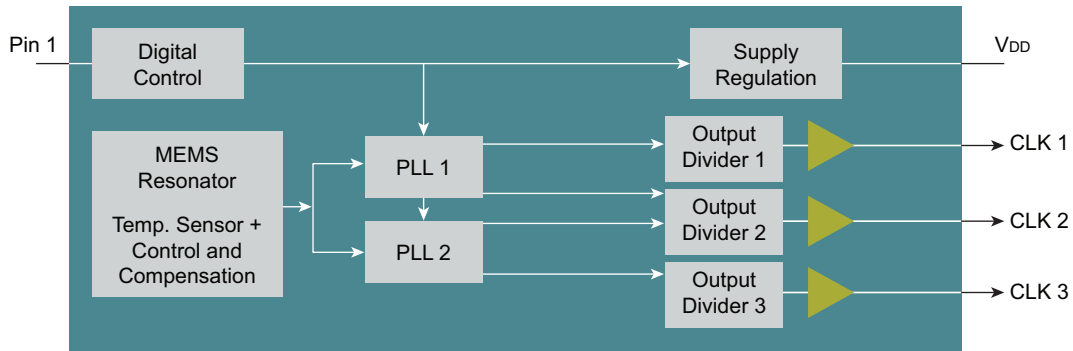
Key Features

- Multi-output with no need for an external crystal
 - DSC612: 2 LVCMOS out 2 Control in
 - DSC613: 3 LVCMOS out 1 Control in
- Wide frequency range
 - 2 kHz–100 MHz
- Low power consumption
 - 5 mA (active), 1 μ A standby
- Wide supply voltage range
 - 1.71V–3.63V V_{DD}
- Ultra-small footprint
 - 1.6 \times 1.2 mm, 2.0 \times 1.6 mm, 2.5 \times 2.0 mm
- Wide temperature range
 - -40 to +125°C
- Highly flexible
 - Control: O/E, Standby, SLEEP, F/S, spread spectrum
 - Supports 3 output drive strengths
- Excellent shock and vibration immunity
- AEC-Q100 automotive grade available

Target Applications

- IoT gateways/smart speakers
- Digital cameras, camcorders
- Smart TVs
- VR/AR glasses
- POS systems
- Drones
- Automotive and industrial applications





Product	Number of Output	Output Frequency (MHz)	Output Format	Control Pin Function	Spread Spectrum Percentage (%)	Temperature Range (°C)	Supply Voltage (V)	Package (mm)
DSC612	2	0.002–100	LVC MOS	2 pins: OE, Stdb y, SLEEP, FS, SS_EN	±0.25 to ±2.5 -0.5 to -3.0	-20 to 70 -40 to 85 -40 to 105 -40 to 125	1.71–3.63	6-pin 2.5 × 2.0 2.0 × 1.6 1.6 × 1.2
DSC613	3	0.002–100	LVC MOS	1 pin: OE, Stdb y, SLEEP, FS, SS_EN				

To order samples and create an orderable part number, go to clockworks.microchip.com/timing/

ClockWorks® Configurator and Sampling Tool

ClockWorks Configurator is an online, easy-to-use configuration tool that lets you customize oscillators and clock generators to fit your application needs. With just a few clicks, you can program parts to any combination of frequency, temperature, ppm and package size and order custom samples with a 48-hour turnaround.

Tool Capabilities

- Create your own oscillator and clock generator
- Manage existing designs and track samples
- Download a customized datasheet
- Order samples by part number

