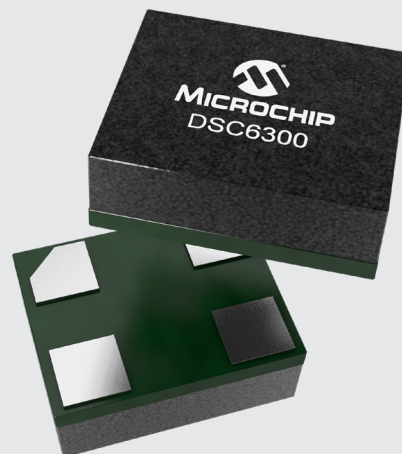


DSC6300

Industry's Smallest and Lowest-Power Spread-Spectrum MEMS Oscillators

Summary

The DSC6300 is the industry's smallest and lowest-power spread-spectrum MEMS oscillator. Available in ultra-miniature 1.6 x 1.2 mm package with a supply current as low as 3 mA. The devices support up to $\pm 2.5\%$ or -3% spread spectrum that can achieve up to 15 dB Electro-Magnetic Interference (EMI) reduction. Microchip also offers industry-standard packages with pin-to-pin compatibility allowing you to solve last-minute EMI problems on your current design.

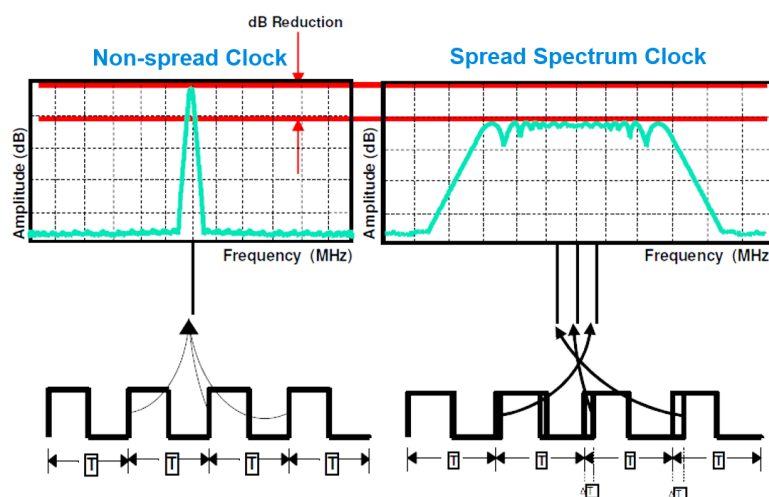


Key Attributes

- Output frequency: 1–100 MHz LVCMOS
- Spread spectrum options:
 - Center spread: $\pm 0.25\%$, $\pm 0.5\%$, $\pm 1.0\%$, $\pm 1.5\%$, $\pm 2.0\%$, $\pm 2.5\%$
 - Down spread: -0.25% , -0.5% , -1.0% , -1.5% , -2.0% , -3.0%
- Ultra-low power consumption: 3 mA (active), 10 μ A standby
- Wide supply voltage range: 1.71V–3.63V V_{DD}
- Ultra-small package size: 1.6 x 1.2 mm, 2.0 x 1.6 mm, 2.5 x 2.0 mm, 3.2 x 2.5 mm
- Support industrial temperature range: -40 to $+85^{\circ}\text{C}$
- Excellent shock and vibration immunity
- High reliability
- RoHS compliant

Target Applications

- Flat-panel display/monitor
- Multi-function printer
- Consumer electronics
- Automotive (infotainment, ADAS)



Configure and Sample

With ClockWorks® Configurator online tool, you can customize the DSC63xx instantly, and receive datasheets and samples within a few days. Go to www.clockworks.microchip.com/timing and order samples now.



Product Variants

Product	Output Frequency Min. (MHz)	Output Frequency Max (MHz)	Output Logic	Frequency Stability (ppm)	Temp. Range (°C)	Supply Voltage (V)	Current (Typ) (mA)	Period Jitter (ps RMS)	# of Outputs	Dimensions	Output Drive Strength (pF)
DSC6301	1	100	LVC MOS	±25, ±50	–40 to 85	1.71–3.63	3	11	1	1.6 x 1.2 mm 4-pin 2.0 x 1.6 mm 4-pin 2.5 x 2.0 mm 4-pin 3.2 x 2.5 mm 4-pin	15
DSC6311	1	100	LVC MOS	±25, ±50	–40 to 85	1.71–3.63	3	11	1		15
DSC6331	1	100	LVC MOS	±25, ±50	–40 to 85	1.71–3.63	3	11	1		15
DSC6302	1	100	LVC MOS	±25, ±50	–40 to 85	1.71–3.63	3	11	1		25
DSC6312	1	100	LVC MOS	±25, ±50	–40 to 85	1.71–3.63	3	11	1		25
DSC6332	1	100	LVC MOS	±25, ±50	–40 to 85	1.71–3.63	3	11	1		25

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

Useful Links

- **Product page** – www.microchip.com/wwwproducts/en/dsc6300
- **Datasheet** – www.microchip.com/downloads/en/DeviceDoc/20005808A.pdf
- **Samples** – www.clockworks.microchip.com/timing/

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