

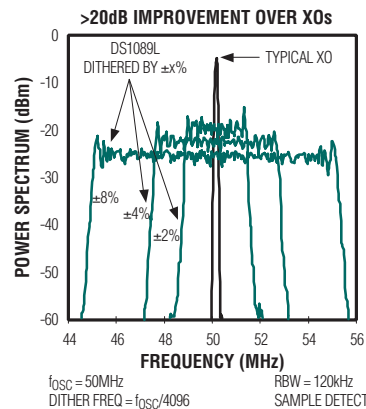
# SPREAD-SPECTRUM OSCILLATORS REDUCE PEAK EMI BY OVER 20dB

## Factory-Trimmed Frequency and Dither Settings Reduce Time to Market

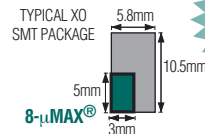
Most applications must meet stringent, radiated-emission compliance standards regulated by government agencies. But most crystal oscillators (XOs) offer no inherent EMI-reduction, forcing the designer to use expensive shielding, filtering, or special PC-board layout techniques to be compliant. Dallas Semiconductor's spread-spectrum silicon oscillators solve this problem by spreading radiated emissions over a narrow spectrum, thus reducing peak energy at any one frequency. The DS108x family is ideal for use as a frequency source for microprocessors in applications with **RS-232**, **USB**, **CAN**, or **LIN** peripherals including **automotive infotainment/GPS**, **POS terminals**, and **office equipment**.

### DS108x Key Benefits

- ◆ Reduce Peak EMI by Over 20dB
- ◆ 75% Smaller than Typical SMT XOs
- ◆ Lower Active and Standby Power than Typical XOs
- ◆ Fast, Reliable Startup
- ◆ Less Sensitive to Shock/Vibration than XOs
- ◆ Wider Temperature Range than Typical XOs
- ◆ No Price Premium for Higher Frequency Selections
- ◆ Factory Trimmed, No Programming Required
- ◆ No External Timing Components Required



For Additional  
EMI-Reducing Solutions, Visit  
[www.maxim-ic.com/spread\\_spectrum](http://www.maxim-ic.com/spread_spectrum)



DS108x  
SAVES  
75% SPACE

Part	Min Output Freq (kHz)	Max Output Freq (MHz)	Spread Spectrum	Dither Mag Range (%)	Dither Freq Range ( $f_{osc}/x$ )	Power Supply (V)	Package	Temp Range (°C)	Price <sup>†</sup> (\$)
DS1086	260	133	Down	0 to -4	4096	5.0, $\pm 5\%$	8-SO	0 to +70	0.90
DS1086L	130	66.6	Down	0 to -8	2048 to 8192	2.7 to 3.6	8- $\mu$ MAX	-40 to +85	0.90
DS1087L	130	66.6	Down	0 to -4	4096	2.7 to 3.6	8- $\mu$ MAX	-40 to +85	0.85
DS1089L	130	66.6	Centered	0 to $\pm 8$	2048 to 8142	2.7 to 3.6	8- $\mu$ MAX	-40 to +85	0.85
DS1090	125	8	Centered	0 to $\pm 4$	512 to 4096	2.7 to 5.5	8- $\mu$ MAX	-40 to +85	0.68
DS1094L	31.25	2	Down	0 to -8	128 to 1024	3.0 to 3.6	8- $\mu$ MAX	-40 to +85	1.93

$\mu$ MAX is a registered trademark of Maxim Integrated Products, Inc.

<sup>†</sup>1000-up recommended resale. Prices provided are for design guidance and are FOB USA. International prices will differ due to local duties, taxes, and exchange rates. Not all packages are offered in 1k increments, and some may require minimum order quantities.



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