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## MSGEQ7 - Seven Band Graphic Equalizer Display Filter

### Description:

The seven band graphic equalizer IC is a CMOS chip that divides the audio spectrum into seven bands. 63Hz, 160Hz, 400Hz, 1kHz, 2.5kHz, 6.25kHz and 16kHz. The seven frequencies are peak detected and multiplexed to the output to provide a DC representation of the amplitude of each band. No external components are needed to select the filter responses. Only an off chip resistor and capacitor are needed to select the on chip clock oscillator frequency. The filter center frequencies track this frequency.

Other than coupling and decoupling capacitors, no other external components are needed. The chip supply can be between 2.7 and 5.5 volts with 5 volts providing the best performance. The device has very low quiescent current (less than 1ma typical) for portable audio devices. the multiplexor is controlled by a reset and a strobe, permitting multiplexor readout with only two pins. The multiplexor readout rate also controls the decay time (10% decay per read), so no external pins are needed for this function.

### Features:

- Low Power Consumption
- Only Two External Components
- On Chip Ground Reference
- Switched - Capacitor Filters
- 3.3 or 5 Volts Operation
- 20 dB of Gain
- On Chip Oscillator

- Output Multiplexor
- Variable Decay Time
- 8 Pin Package

## Applications:

- Portable Stereos
- Car Stereos
- Hi-Fi Stereos
- Spectrum Analyzers

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### Datasheet

[Click to Download \(/images/datasheets/MSGEQ7.pdf\)](#)



### Company Brochure

[Click to Download \(/images/datasheets/MSI%20Company%20Brochure.pdf\)](#)



### News Ticker

**MARKT & TECHNIK**  
In the November 12, 2014 issue of Markt & Technik's Official Electronica Show Daily magazine, MSI featured its Analog and Mixed Signal Filter Solutions with an Energy Harvesting application on page 38.

#### **MSI is on view in Electronica Day One Official Show Daily from Markt & Technik**

In the November 11, 2014 issue of Markt & Technik's Official Show Daily magazine, MSI is on view its Analog and Mixed Signal Filter Solutions with an Instrumentation application on page 38.

## **MSI Audio, Video and Telecom Filters exhibited in Electronic Design Europe**

In the November 2014 issue of Electronic Design Europe magazine, MSI's Audio, Video and Telecom Filters (</index.php/standard-products>) are exhibited on page 19.

## **MSLOSC noted in Electronics Design**

The MSLOSC 15 Hz to 64 KHZ All Silicon Source (</index.php/mslosc-15-hz-to-64-khz-all-silicon-sine-source>) is noted on page S31 of the Oct/Nov 2014 Defense Electronics supplement of Electronics Design magazine.