



FUEL THE DIGITAL WORLD

Electromagnetic Interference (EMI) Reduction Solutions

[Low EMI OSCILLATOR]

LOW EMI OSC (CMOS OSCILLATOR)



	QTM252E	QTM216E
Frequency	24MHz, 25MHz, 27MHz	24MHz, 25MHz, 27MHz
Supply Voltage	1.8V ~ 3.3V	1.8V ~ 3.3V
Stability	+/-30ppm (-40~85C) +/-50ppm (-40~105C)	+/-30ppm (-40~85C) +/-50ppm (-40~105C)
Phase Jitter	0.7pS	0.7pS
Deviation	±0.3% ~ ±0.6%	±0.3% ~ ±0.6%
Package Size	2.5x2.0mm	2.0x1.6mm
Output	CMOS	CMOS
Oscillator integrated with EMI circuits and Non-PLL based technology		

IMAGING APPLICATIONS



**QST Low EMI OSC
(QTM252E/QTM216E)**

Pin-to-Pin with common
CMOS Oscillator

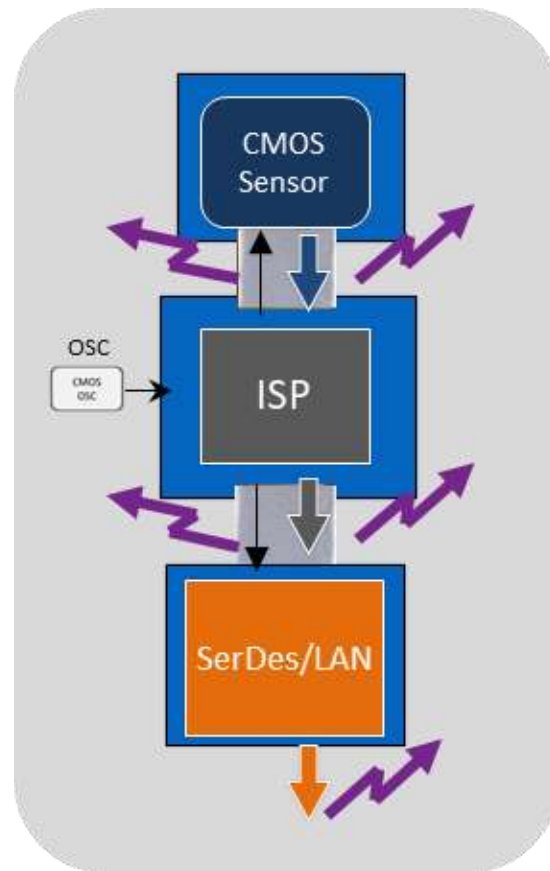


SMART WAY OF SOLVING EMI

Common EMI Solution

Time consuming and costly

- Add EMI Filter/IC
- Add Spread Spectrum OSC
- Add Shielded Flex Cable
- Add Metal Case
- Modify Design Layout

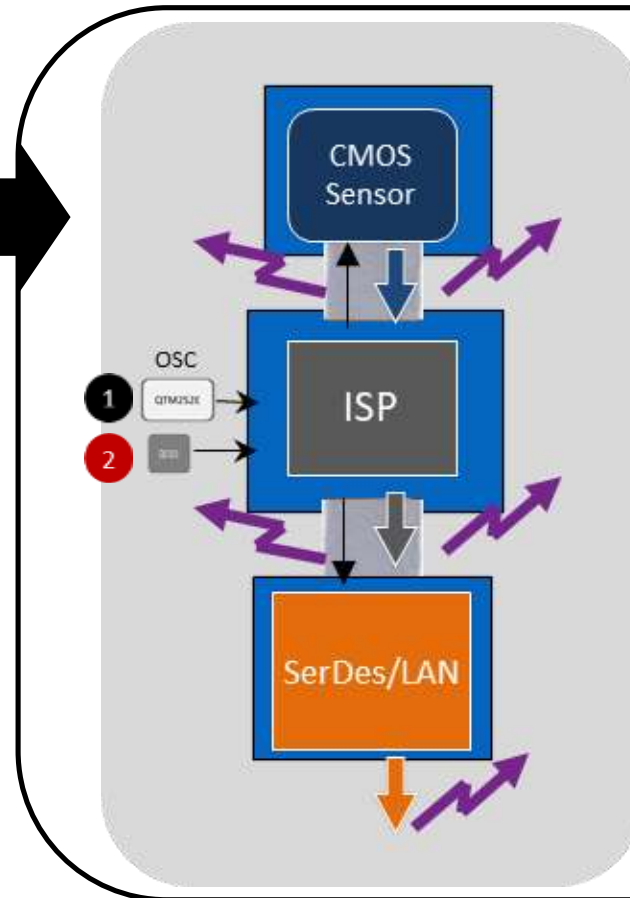


Smart Way

Active EMI Solution

Total time and cost saving

- 1 Replace with QST Low EMI OSC (QTM252E or QTM216E)
- 2 Replace with QST Low EMI IC (QE101 or QE202)



BENCHMARK – LOW EMI OSC & COMMON OSC

QST Low EMI OSC

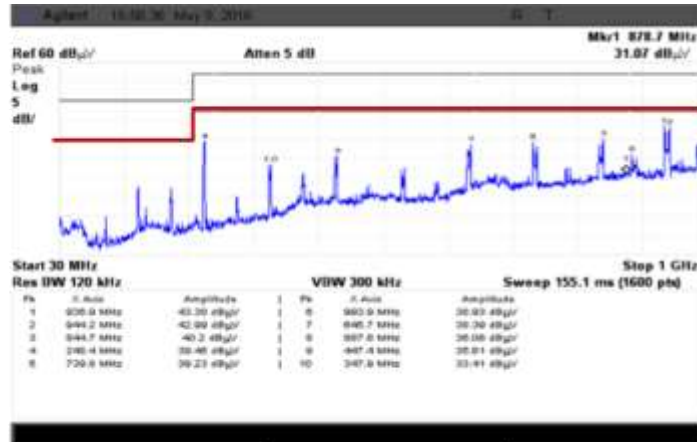
Minimized EMI level within the limits

Common OSC

EMI level exceeded the limits

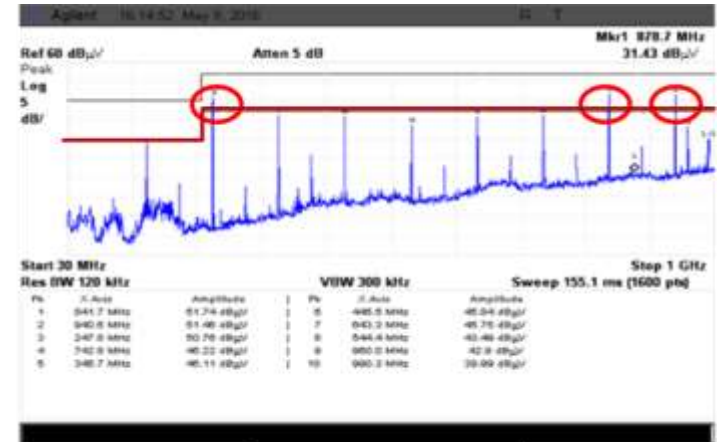
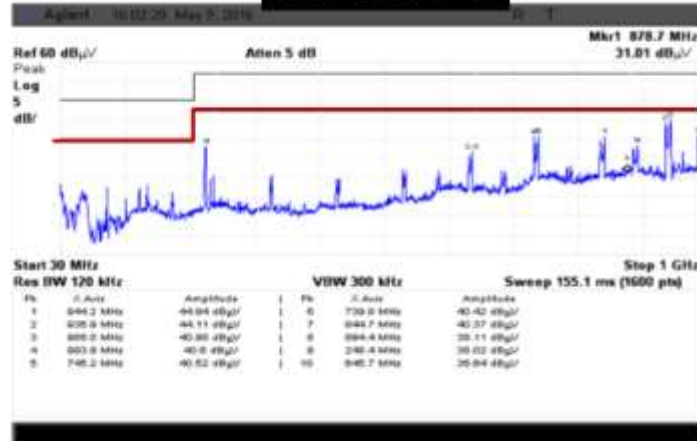


Horizontal

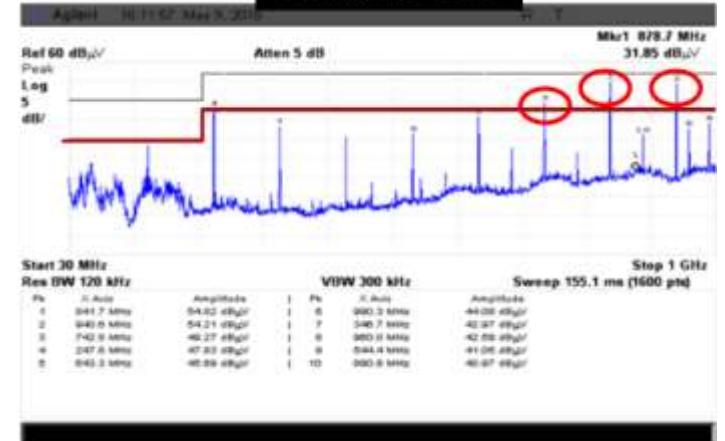


Low EMI OSC

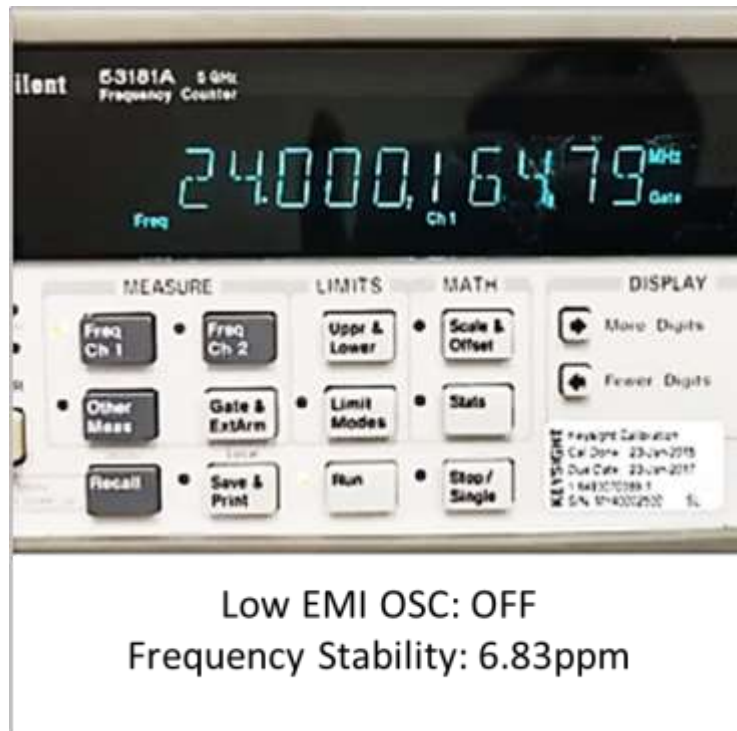
Vertical



Common OSC



BENCHMARK – FREQUENCY SHIFT DEVIATION LOW EMI OSC



Frequency Shift Deviation = Relatively Low ($\pm 0.6\%$)

BENCHMARK – FREQUENCY SHIFT DEVIATION COMMON OSC (SPREAD SPECTRUM)



Common OSC (Spread Spectrum): OFF
Frequency Stability: 5.44ppm



Common OSC (Spread Spectrum): ON
Frequency Stability: 5005.44ppm

Frequency Shift Deviation = Huge