

## 38V Synchronous Buck Controller With 2CH CC/CV

### ❖ GENERAL DESCRIPTION

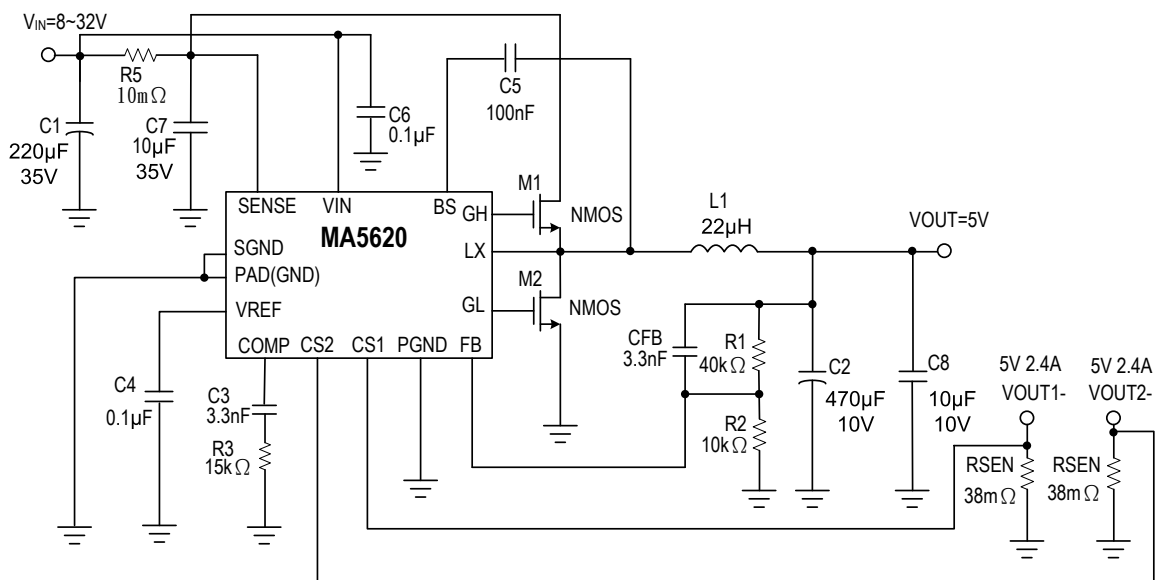
The MA5620 is a synchronous buck controller. The device need externals high side and external low side power MOSFETs, and provides 5A of continuous load current and a wide input voltage of 8V to 38V. Current mode control provides fast transient response and cycle-by-cycle current limit.

An internal soft-start prevents inrush current at turn-on, This device available in small TDFN-12L (3x3) package, provides a very compact solution with minimal external components.

### ❖ FEATURES

- Wide 8V to 38V Operating Input Range
- Externals high side and low side Power MOSFET Switches
- Output Adjustable from VFB(1.00V±2%) to 16V
- Up to 95% Efficiency
- Internal Soft-Start and Fixed 160KHz Frequency
- Duty on ratio : 0% to 91% PWM control
- Cycle-by-Cycle Over Current Protection
- Input Under/Over Voltage Lockout

### ❖ APPLICATION CIRCUIT



$$V_{OUT} = V_{FB} \times (1 + R1/R2), \quad V_{FB} = 1.00V, \quad R2 \text{ suggest } 1k \sim 30K\Omega$$

$$I_{SEN} = 2.63A \quad (I_{SEN} = V_{CS}(0.1V) / R_{SEN}(38m\Omega))$$