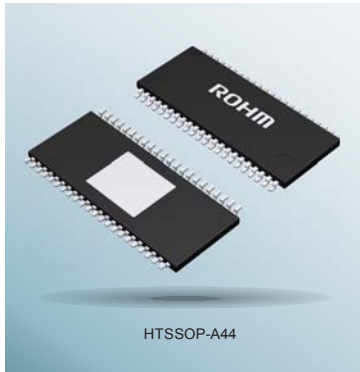


# System Power Supply IC for Car Audio

BD49101AEFS-M



## New power supply IC supports large current requirements for next-generation car audio systems

### Product Outline

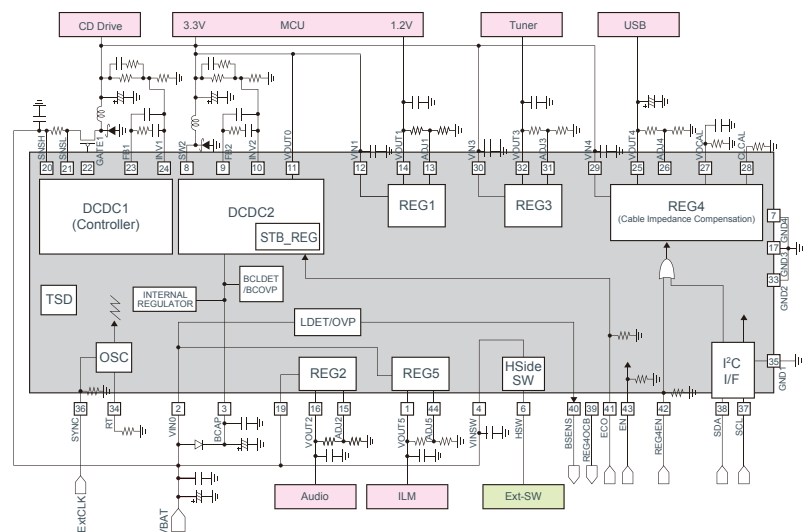
The BD49101AEFS system power supply IC incorporates the multiple power supplies required for car audio systems. A 2ch DCDC converter, 5ch linear regulator, and high side switch are built in, making it possible to power an MCU, CD, tuner, USB, lighting, audio, and more using just a single IC. The optimized design, based on the high efficiency DCDC converter, minimizes heat generation and makes it possible to adopt a surface mount package without requiring thermal countermeasures. In addition, low current consumption mode switching and power supply control functions are included, improving efficiency and reducing dark current while simplifying power supply design.

### ■ Integrated power supply design ideal for car audio

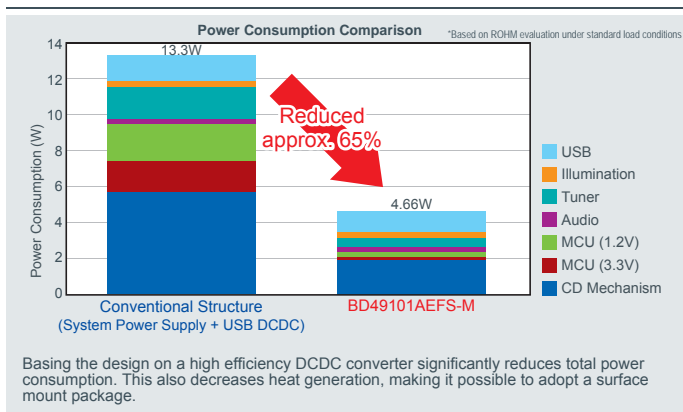
#### Features

- AEC-Q100 qualified
- 7 power supply systems built in for car audio  
DCDC x 2 (1 controller type)  
REG x 5
- Integrated high side switch (SW1)
- MCU power supply (DCDC2) incorporates a standby mode regulator switching function (STBREG)
- Cable impedance compensation function built into the USB power supply (REG4)
- I<sup>2</sup>C I/F
- Oscillator frequency set via external resistance
- External synchronization function
- Power supply control function (power ON/OFF sequencer)
- Error flag function for USB power supply overcurrent detection and battery voltage monitoring
- Multiple protection functions (Overvoltage, overcurrent, thermal shutdown)

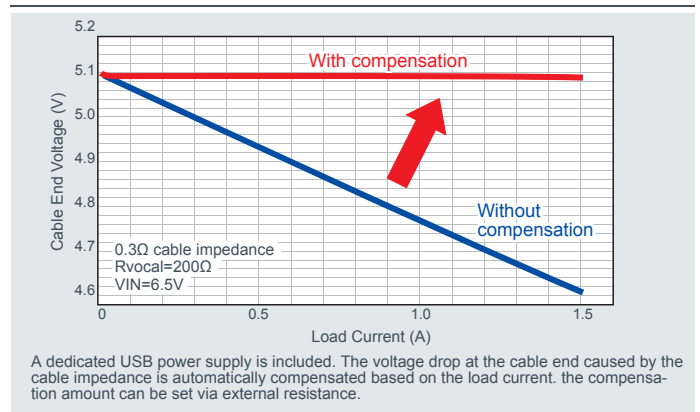
#### Block Diagram (Power Supply Circuit Example)



### ■ Significantly reduced power consumption



### ■ USB cable impedance compensation



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