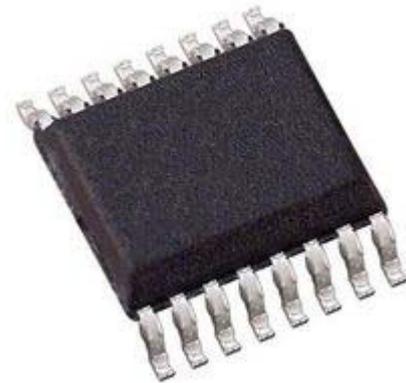




TPS54292PWP Dual Voltage Regulator

General Description:

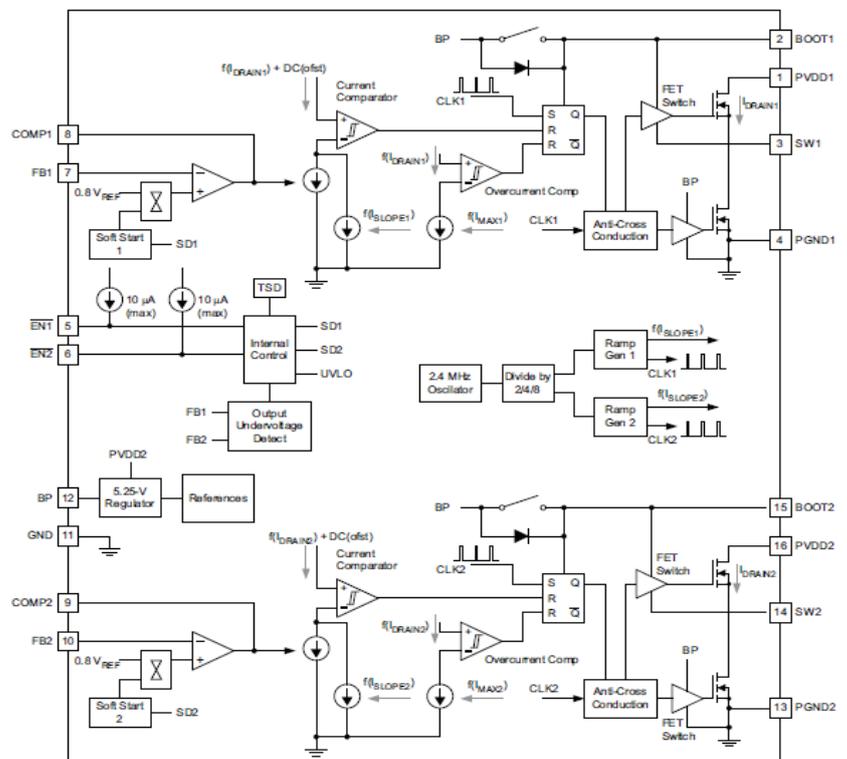
TPS54290/1/2 is a dual output fully synchronous buck converter capable of supporting applications with a minimal number of external components. It operates from a 4.5 V to 18 V input supply voltage, and supports output voltages as low as 0.8 V and as high as 90% of the input voltage. Both high-side and low-side MOSFETs are integrated to provide fully synchronous conversion with higher efficiency. Channel1 can provide up to 1.5 A of continuous current, meanwhile, Channel2 supports up to 2.5 A. Current mode control simplifies the compensation. The external compensation adds flexibility for the user to choose different type of output capacitors.



180° out-of-phase operation reduces the ripple current through the input capacitor, providing the benefit of reducing input capacitance, alleviating EMI and increasing capacitor life.

Key Features:

- 4.5 V to 18 V Input Range
- Output Voltage Range 0.8 V to $DMAX \times VIN$
- Fully Integrated Dual Buck, 1.5 A/2.5 A
- Three Fixed Switching Frequency Versions:
 - – TPS54290 – 300 kHz
 - – TPS54291 – 600 kHz
 - – TPS54292 – 1.2 MHz
- Integrated UVLO
- 0.8 VREF With 1% Accuracy (0°C to 85°C)
- Internal Soft-Start
 - – TPS54290 – 5.2 ms
 - – TPS54291 – 2.6 ms
 - – TPS54292 – 1.3 ms
- Dual PWM Outputs 180° Out-of-Phase
- Dedicated Enable for Each Channel



- Current Mode Control for Simplified
- Compensation
- External Compensation
- Pulse-by-Pulse Overcurrent Protection,
- 2.2 A/3.8 A Overcurrent Limit
- Integrated Bootstrap Switch
- Thermal Shutdown Protection at 145°C
- 16-Pin PowerPAD™ HTSSOP Package

Applications:

- Set Top Box
- Digital TV
- Power for DSP
- Consumer Electronics

Related Products Information:

Mfr Part #	Farnell #	Newark #	Description
TPS54292PWP	1782843	51R6145	Dual Voltage Regulator IC
TPS54290PWP	NA	55R7592	Dual Voltage Regulator IC
TPS54290PWPR	NA	55R7593	Dual Voltage Regulator IC
TPS54291PWP	NA	55R7594	Dual Voltage Regulator IC
TPS54291PWPR	NA	55R7595	Dual Voltage Regulator IC
TPS54292PWPR	NA	55R7596	Dual Voltage Regulator IC