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MOSFET Output Capacitance

2.2.12 Power Losses and Efficiency of Buck Converter for CCM 2.2.13 DC Voltage Transfer Function of Lossy Converter for CCM; 2.2.14 MOSFET Gate-Drive Power; 2.2.15 Gate Driver; 2.2.16 Design of Buck Converter for CCM; 2.3 DC Analysis of PWM Buck Converter for DCM; 2.3.1 Time Interval: $0 < t \leq DT$; 2.3.2 Time Interval: $DT < t \leq (D + D1)T$; 2.3.3 Time Interval: $(D + D1)T < t \leq T$; 2.3.4 Device Stresses for DCM; 2.3.5 DC Voltage Transfer Function for DCM; 2.3.6 Maximum Inductance for DCM; 2.3.7 Power Losses and Efficiency of Buck Converter for DCM; 2.3.8 Design of Buck Converter for DCM

2.4 Buck Converter with Input Filter 2.5 Buck Converter with Synchronous Rectifier; 2.6 Buck Converter with Positive Common Rail; 2.7 Quadratic Buck Converter; 2.8 Tapped-Inductor Buck Converters; 2.8.1 Tapped-Inductor Common-Diode Buck Converter; 2.8.2 Tapped-Inductor Common-Transistor Buck Converter; 2.8.3 Watkins-Johnson Converter; 2.9 Multiphase Buck Converter; 2.10 Switched-Inductor Buck Converter; 2.11 Layout; 2.12 Summary; References; Review Questions; Problems; 3 Boost PWM DC-DC Converter; 3.1 Introduction; 3.2 DC Analysis of PWM Boost Converter for CCM; 3.2.1 Circuit Description 3.2.2 Assumptions 3.2.3 Time Interval: $0 < t \leq DT$; 3.2.4 Time Interval: $DT < t \leq T$; 3.2.5 DC Voltage Transfer Function for CCM; 3.2.6 Boundary Between CCM and DCM; 3.2.7 Ripple Voltage in Boost Converter for CCM; 3.2.8 Power Losses and Efficiency of Boost Converter for CCM; 3.2.9 DC Voltage Transfer Function of Lossy Boost Converter for CCM; 3.2.10 Design of Boost Converter for CCM; 3.3 DC Analysis of PWM Boost Converter for DCM; 3.3.1 Time Interval: $0 < t \leq DT$; 3.3.2 Time Interval: $DT < t \leq (D + D1)T$; 3.3.3 Time Interval: $(D + D1)T < t \leq T$; 3.3.4 Device Stresses for DCM

3.3.5 DC Voltage Transfer Function for DCM

Sommario/riassunto

PWM DC-DC power converter technology underpins many energy conversion systems including renewable energy circuits, active power factor correctors, battery chargers, portable devices and LED drivers. Following the success of Pulse-Width Modulated DC-DC Power Converters this second edition has been thoroughly revised and expanded to cover the latest challenges and advances in the field. Key features of 2nd edition: Four new chapters, detailing the latest advances in power conversion, focus on: small-signal model and dynamic characteristics of the buck converter in continuous conduction
