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MOTOROLA

MC34163
MC33163

Power Switching Regulators

The MC34163 series are monolithic power switching regulators that contain the primary functions required for dc–to–dc converters. This series is specifically designed to be incorporated in step–up, step–down, and voltage–inverting applications with a minimum number of external components.

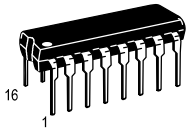
These devices consist of two high gain voltage feedback comparators, temperature compensated reference, controlled duty cycle oscillator, driver with bootstrap capability for increased efficiency, and a high current output switch. Protective features consist of cycle–by–cycle current limiting, and internal thermal shutdown. Also included is a low voltage indicator output designed to interface with microprocessor based systems.

These devices are contained in a 16 pin dual–in–line heat tab plastic package for improved thermal conduction.

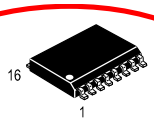
- Output Switch Current in Excess of 3.0 A
- Operation from 2.5 V to 40 V Input
- Low Standby Current
- Precision 2% Reference
- Controlled Duty Cycle Oscillator
- Driver with Bootstrap Capability for Increased Efficiency
- Cycle–by–Cycle Current Limiting
- Internal Thermal Shutdown Protection
- Low Voltage Indicator Output for Direct Microprocessor Interface
- Heat Tab Power Package

POWER SWITCHING REGULATORS

SEMICONDUCTOR TECHNICAL DATA

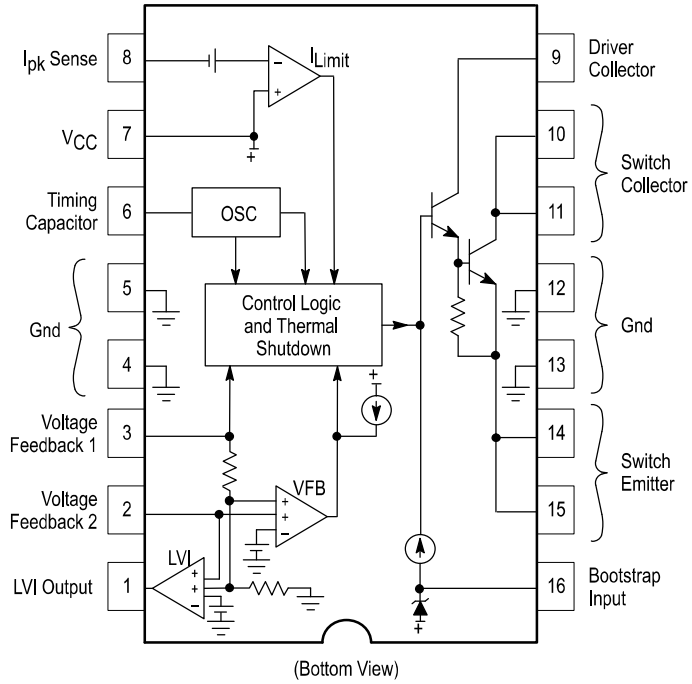


P SUFFIX
PLASTIC PACKAGE
CASE 648C
(DIP–16)



DW SUFFIX
PLASTIC PACKAGE
CASE 751G
(SOP–16L)

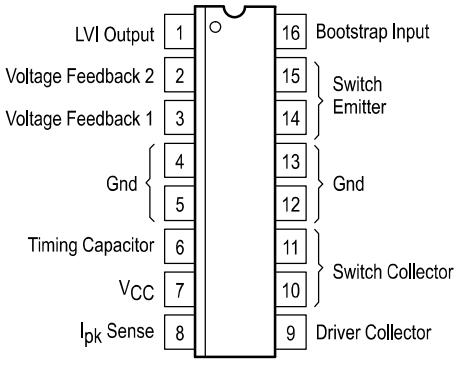
Representative Block Diagram



(Bottom View)

This device contains 114 active transistors.

PIN CONNECTIONS



(Top View)

ORDERING INFORMATION

Device	Operating Temperature Range	Package
MC34163DW	T_A = 0° to +70°C	SOP–16L
MC34163P		DIP–16
MC33163DW	T_A = – 40° to +85°C	SOP–16L
MC33163P		DIP–16