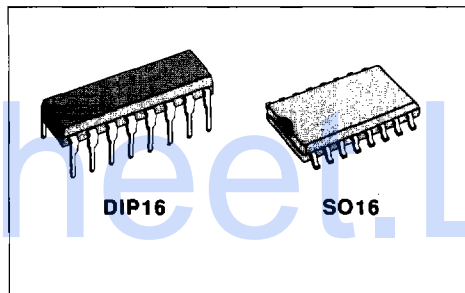


REGULATING PULSE WIDTH MODULATORS

For complete specification refer to "Linear & Switching Voltage Regulators Appl. Manual". (Order Code AMLISVOREST/1)

- 8 TO 35 V OPERATION
- 5.1 V REFERENCE TRIMMED TO $\pm 1\%$
- 100 Hz TO 500 KHz OSCILLATOR RANGE
- SEPARATE OSCILLATOR SYNC TERMINAL
- ADJUSTABLE DEADTIME CONTROL
- INTERNAL SOFT-START
- PULSE-BY-PULSE SHUTDOWN
- INPUT UNDERVOLTAGE LOCKOUT WITH HYSTERESIS
- LATCHING PWM TO PREVENT MULTIPLE PULSES
- DUAL SOURCE/SINK OUTPUT DRIVERS



DESCRIPTION

The SG3525A/3527A series of pulse width modulator integrated circuits are designed to offer improved performance and lowered external parts count when used in designing all types of switching power supplies. The on-chip + 5.1 V reference is trimmed to $\pm 1\%$ and the input common-mode range of the error amplifier includes the reference voltage eliminating external resistors. A sync input to the oscillator allows multiple units to be slaved or a single unit to be synchronized to an external system clock. A single resistor between the C_T and the discharge terminals provide a wide range of dead time adjustment. These devices also feature built-in soft-start circuitry with only an external timing capacitor required. A shutdown terminal controls both the soft-start circuitry and the output stages, providing instantaneous turn off through the PWM latch with pulsed

shutdown, as well as soft-start recycle with longer shutdown commands. These functions are also controlled by an undervoltage lockout which keeps the outputs off and the soft-start capacitor discharged for sub-normal input voltages. This lockout circuitry includes approximately 500 mV of hysteresis for jitter-free operation. Another feature of these PWM circuits is a latch following the comparator. Once a PWM pulses has been terminated for any reason, the outputs will remain off for the duration of the period. The latch is reset with each clock pulse. The output stages are totem-pole designs capable of sourcing or sinking in excess of 200 mA. The SG3525A output stage features NOR logic, giving a LOW output for an OFF state. The SG3527A utilizes OR logic which results in a HIGH output level when OFF.

PIN CONNECTIONS AND ORDERING NUMBERS (top view)

