

Description

The GM66500 series is 5.0A low-dropout linear voltage regulators that provide a low-voltage, high-current output with a minimum of external components.

The GM66500 series offers extremely low dropout (typically 400mV at 5.0A) and low ground current (typically 70mA at 5.0A). The GM66500 series is ideal for PC add-in cards that need to convert from standard 3.0V to 2.5V and 2.5V to 1.8V, down to new, lower core voltages. A guaranteed maximum dropout voltage of 500mV over all operating conditions allows the GM66500 series to provide 2.5V from a supply as low as 3V. The GM66500 series also has fast transient response for heavy switching applications. The device requires only 47 μ F of output capacitance to maintain stability and achieve fast transient response.

The GM66500 series is fully protected with over current limiting, thermal shutdown, reversed-battery protection, reversed-lead insertion protection, and reversed-leakage protection.

The GM66501 series offers a TTL-logic-compatible enable pin and an error flag that indicates under-voltage and over-current conditions. Offered in fixed voltages, 1.8V and 2.5V, the GM66500 series comes in the TO-220 and TO-263 packages and is an ideal upgrade to earlier, NPN- based linear voltage regulators.

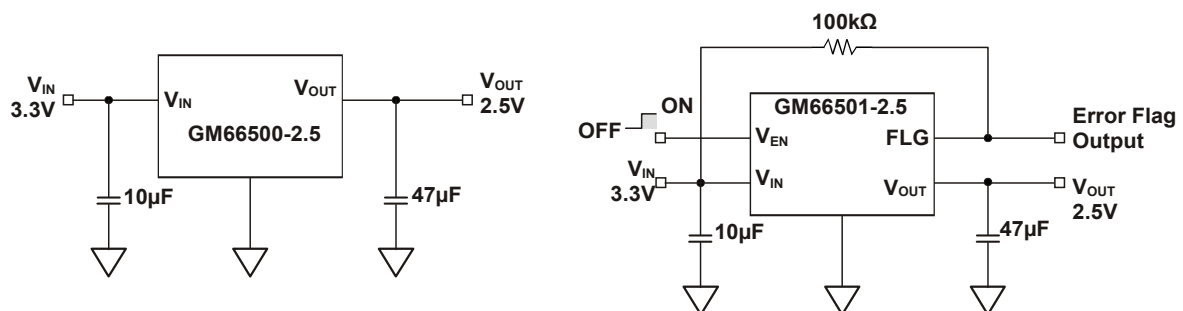
Features

- ◆ 5A minimum guaranteed output current
- ◆ Ultra Low Dropout Voltage of 400mV, designed for 3.0V to 2.5V and 2.5V to 1.8V conversions
- ◆ 1% Accurate Tolerance
- ◆ Fast Transient Response
- ◆ Reverse-battery and reverse lead insertion Protection
- ◆ TTL/CMOS compatible enable pin (GM66501 only)
- ◆ Error Flag output (GM66501 only)

Application

- Low Voltage Digital ICs
- LDO linear regulator for PC and add on cards
- High efficiency linear power suppliers
- SMPS post regulator
- Multimedia and PC processor suppliers
- Low voltage microprocessors
- Strong "ARM" processor supply
- SMPS post regulator

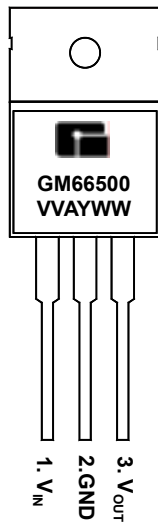
Typical Application Circuits



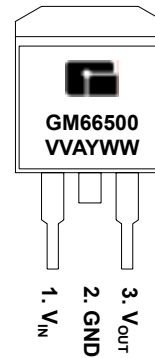
Marking Information and Pin Configurations (Top View)

GM66500 (Pb Free)

TO 220

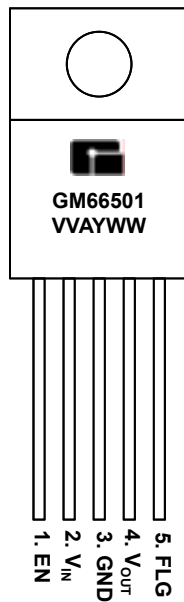


TO 263
(D²-PAK)

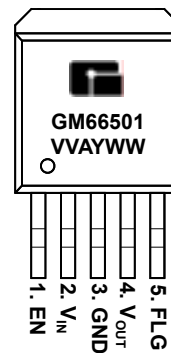


GM66501 (Pb Product)

5L-TO 220



5L-TO 263



VV: Voltage suffix (15 = 1.5V, 50 = 5.0V...A = Adj)
 A: Assembly / Test site code
 Y: Year
 WW: Week

Ordering Information – Pb Free

Ordering Number	Output Voltage	Package	Shipping
GM66500			
GM66500-1.8TA3T	1.8V	TO-263	50 Units/Tube
GM66500-1.8TA3R	1.8V	TO-263	800 Units / Reel
GM66500-1.8TB3T	1.8V	TO-220	50 Units/Tube
GM66500-2.5TA3T	2.5V	TO-263	50 Units/Tube
GM66500-2.5TA3R	2.5V	TO-263	800 Units / Reel
GM66500-2.5TB3T	2.5V	TO-220	50 Units/Tube
GM66500-3.3TA3T	3.3V	TO-263	50 Units/Tube
GM66500-3.3TA3R	3.3V	TO-263	800 Units / Reel
GM66500-3.3TB3T	3.3V	TO-220	50 Units/Tube
GM66500-5.0TA3T	5.0V	TO-263	50 Units/Tube
GM66500-5.0TA3R	5.0V	TO-263	800 Units / Reel
GM66500-5.0TB3T	5.0V	TO-220	50 Units/Tube
GM66500-5.0ST3T	5.0V	SOT-223	80 Units/Tube
GM66500-5.0ST3R	5.0V	SOT-223	2,500 Units / Tape & Reel
GM66501			
GM66501-1.8TA5T	1.8V	TO-263-5	50 Units/Tube
GM66501-1.8TA5R	1.8V	TO-263-5	800 Units / Reel
GM66501-1.8TB5T	1.8V	TO-220-5	50 Units/Tube
GM66501-2.5TA5T	2.5V	TO-263-5	50 Units/Tube
GM66501-2.5TA5R	2.5V	TO-263-5	800 Units / Reel
GM66501-2.5TB5T	2.5V	TO-220-5	50 Units/Tube