

78XX IC Family, Voltage Regulator

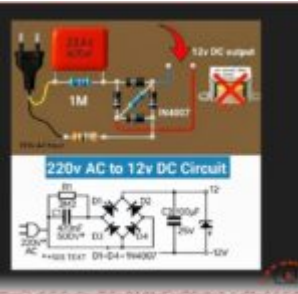
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The 78XX series is the industry-standard family of linear voltage regulators, providing fixed regulated output from 5V to 24V at up to 1.5A. This comprehensive guide covers the 7805, 7812, 7815, and 7824 variants, their specifications, internal architecture, thermal design, practical circuit applications, and professional troubleshooting tips for reliable power supply design.

220V AC to 12V DC Bridge Rectifier Circuit

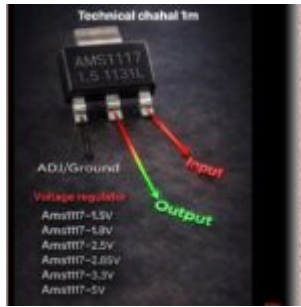
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The bridge rectifier circuit represents the most efficient topology for converting 220V AC mains voltage to stable 12V DC output using four 1N4007 diodes in diamond configuration. This comprehensive guide explores circuit design, capacitor filter selection, voltage calculations, diode specifications, troubleshooting methods, and safety considerations for reliable power supply implementation across industrial and consumer applications worldwide

AMS1117 Voltage Regulator

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AMS1117 voltage regulator pinout input output ground fixed versions 1.5V 1.8V 2.5V 2.85V 3.3V 5V applications