

## FEATURES

- 3.3V supply voltage
- Configurable phase multiplier as either doubler or quad from a single PWM input
- Capable of generating high output switching frequencies from 200k-800kHz
- Tri-state PWM input and outputs for power stage shutdown
- IR3599A is configured to accept IR's patented Active Tri-Level (ATL) PWM signals while IR3599 accepts industry's standard tri-state PWM signals
- VCC Power-on-reset
- Dual Flat No-Lead (DFN) Package
- Lead free RoHS compliant package

## APPLICATIONS

- Servers and Desktop Computers
- High Phase Count and Phase Shedding Applications
- High Frequency and High Efficiency VRM

## DESCRIPTION

IR3599/IR3599A is a phase multiplier which is designed to double or quadruple the effective maximum phase count from the controller, enabling a well-controlled, high phase count voltage regulator.

Each IR3599/IR3599A is able to drive up to four independent power stages from one PWM input. The IR3599/IR3599A can be configured as DOUBLER logic where one PWM signal is internally split to drive the two power stages 180° out of phase, each at half of the PWM input frequency. The IR3599/IR3599A can also be configured as QUAD logic where one PWM signal is internally split at 0°, 90°, 180°, and 270° respectively, and each at 1/4 of the PWM input frequency.

IR3599A features the patented IR Active Tri-Level (ATL) PWM input and output, designed to work with IR digital multi-phase controller and IR PowIRstage. The unique doubler/quad mode ATL tri-state timing allows the VR to transition into tri-state faster during load releases. IR3599 features industry's standard tri-state PWM input and output interfaces, designed to work with general multi-phase controllers, drivers or power stages.

IR3599/IR3599A also incorporates a power-on reset feature, which ensures the device is active only after the supply voltage exceeds a certain minimum operating threshold.

## ORDERING INFORMATION

Base Part Number	Package Type	Standard Pack		Orderable Part Number
		Form	Quantity	
IR3599	DFN 2 mm x 2 mm	Tape and Reel	3000	IR3599MTRPBF
IR3599A	DFN 2 mm x 2 mm	Tape and Reel	3000	IR3599AMTRPBF
IR3599	DFN 2 mm x 2 mm	Tape and Reel	100	IR3599MTRPBF
IR3599A	DFN 2 mm x 2 mm	Tape and Reel	100	IR3599AMTRPBF