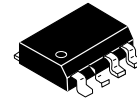


# mW Sa e<sup>®</sup> S nch ono Rec ifica ion Con olle fo Fl back and Fo ad F ee heeling Rec ifica ion **FAN6204A**

## Description

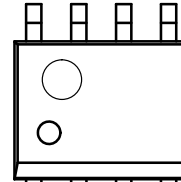
FAN6204A is a secondary side synchronous rectification (SR) controller to drive SR MOSFET for improving efficiency. The IC is suitable for flyback converters and forward free wheeling rectification.

FLow Green Mode Operating Current Sense Windowing Voltage Flyback Converter In QR, DCM, and CCM Operation  
 Detection



SOIC8  
 CASE 751EB

## MARKING DIAGRAM



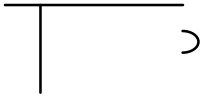
## ORDERING INFORMATION

- Ultra Low  $V_{DD}$  Operating Voltage for Various Output Voltage Applications (5 V~24 V)
- $V_{DD}$  Pin Over Voltage Protection (OVP)
- 12 V (Typical) Gate Driver Clamp
- 8 Pin SOP Package
- This is a Pb Free Device

## Applications

- AC/DC NB Adapters
- Open Frame SMPS
- Battery Charger

APPLICATION DIAGRAMS



# FAN6204A

## PIN CONFIGURATION

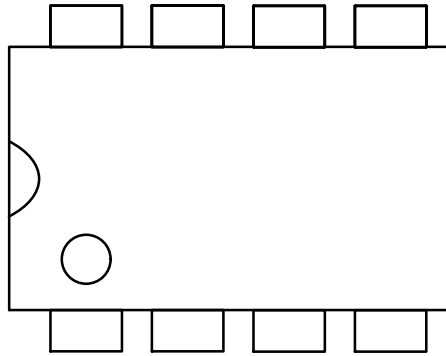


Figure 4. Pin Assignments

## PIN DESCRIPTION

Pin No.	Name	Description
---------	------	-------------

**FAN6204A**

# FAN6204A

## ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Test Condition	Min	Typ	Max	Unit
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### RES SECTION

-						
-			-			μ
-	-					

TYPICAL PERFORMANCE CHARACTERISTICS

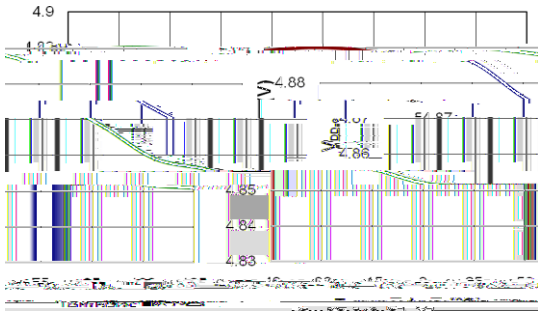


Figure 5. Turn-On Threshold Voltage

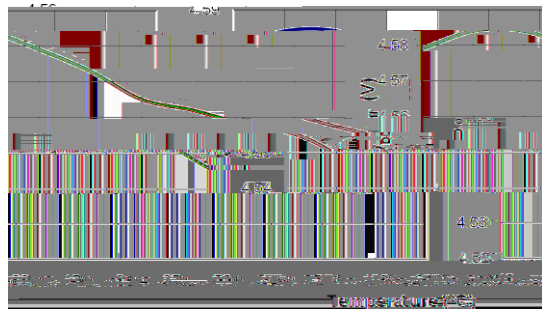


Figure 6. Turn-Off Threshold Voltage

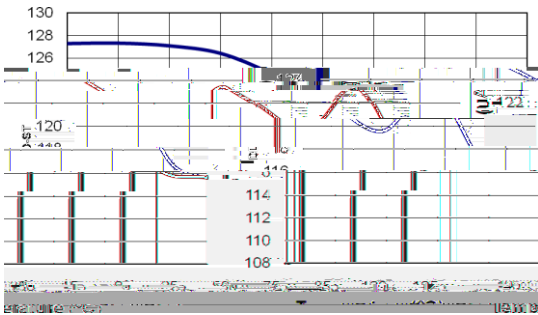


Figure 7. Startup Current

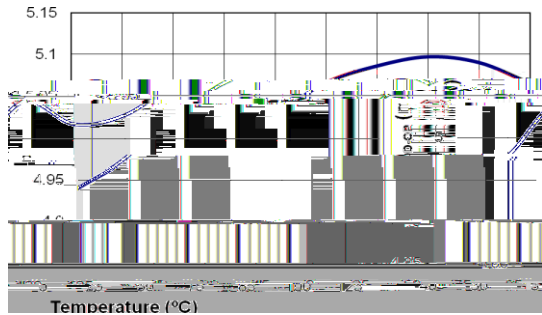


Figure 8. Operating Current

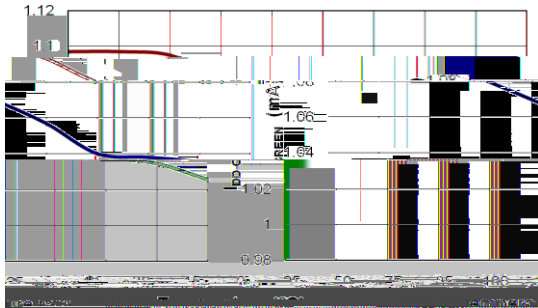


Figure 9. Operating Current in Green Mode

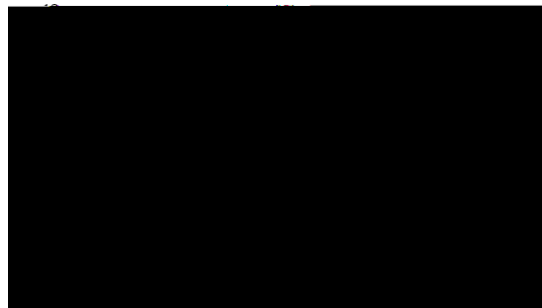


Figure 10. Gate Output Clamping Voltage

# FAN6204A

## TYPICAL PERFORMANCE CHARACTERISTICS

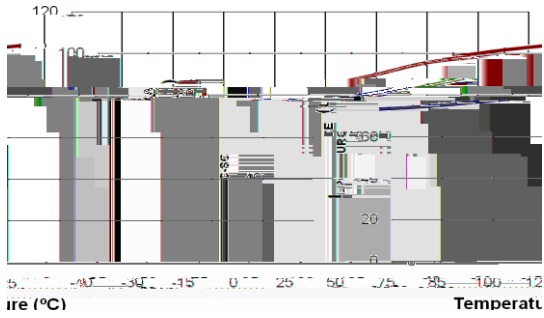


Figure 11. LPC Source Current



Figure 12. LPC Lower Clamp Voltage

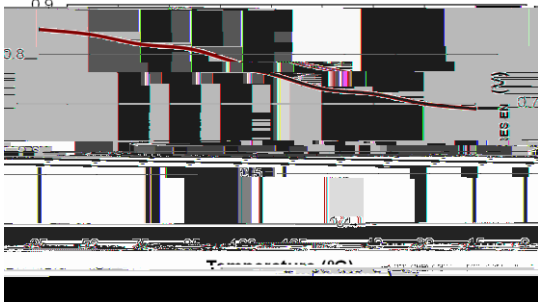


Figure 13. Threshold Voltage of VRES

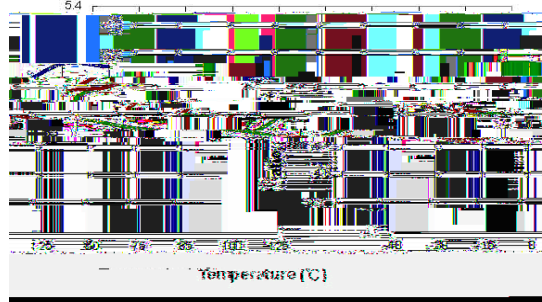


Figure 14. Ratio between LPC and RES

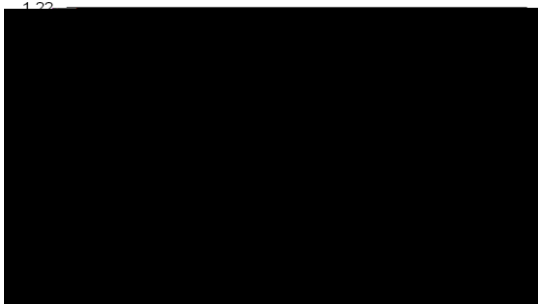


Figure 15. Minimum LPC Enable Time

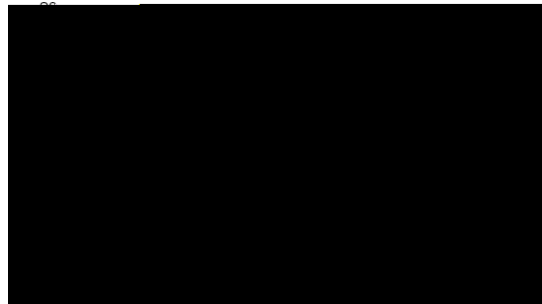
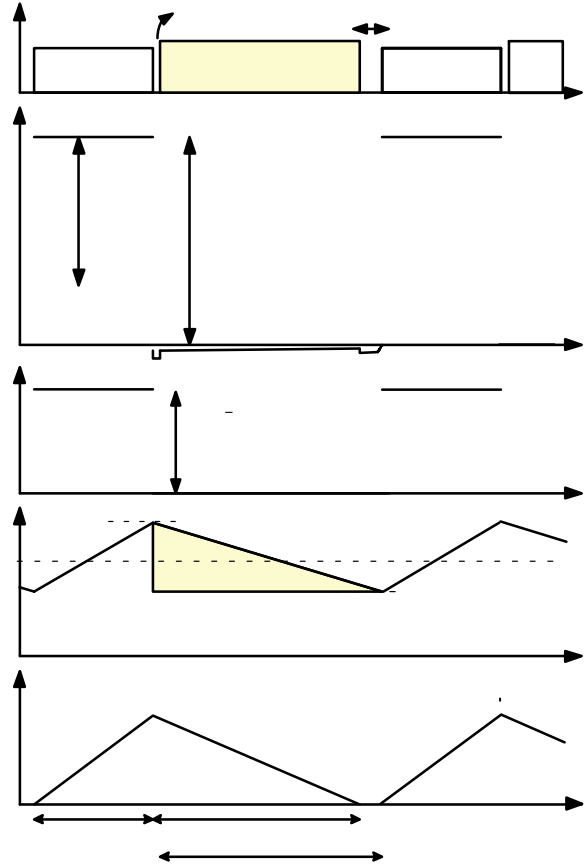


Figure 16. Maximum Period between LPC Rising Edge to Gate Falling Edge

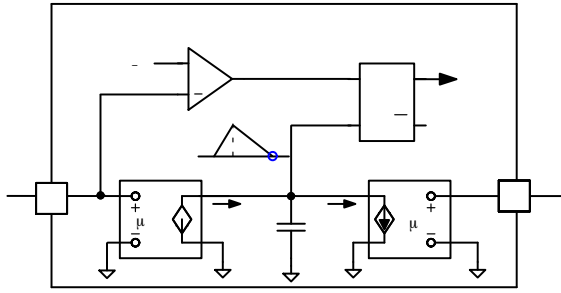
# FAN6204A

## FUNCTIONAL DESCRIPTION





# FAN6204A



When the discharge time of the internal capacitor is longer than  $t_{\text{GREEN OFF}}$  (around  $5.35 \mu\text{s}$ ) for more than seven cycles, the SR circuit is enabled and resumes the normal operation, as shown in Figure 20.

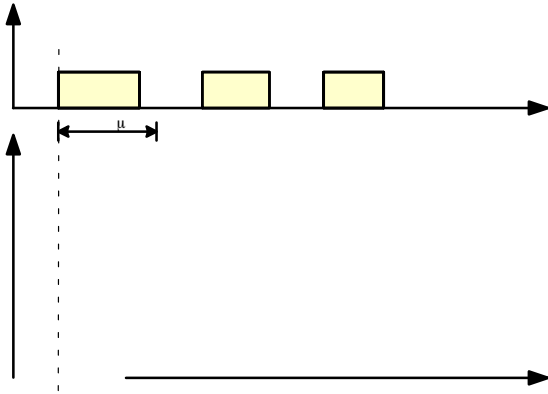
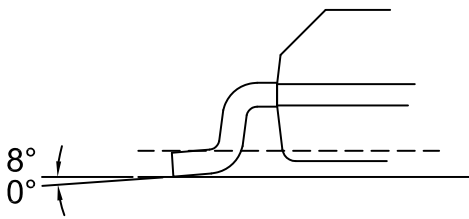
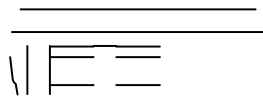


Figure 19. Entering Green Mode



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