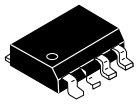
mWSa e ® S nch ono Rec ifica ion Con olle fo Fl back and Fo a d F ee heeling Rec ifica ion

FAN6204A



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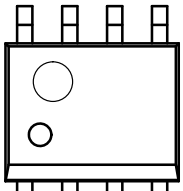
MARKING DIAGRAM



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 SR Control Voltage for Flyback Converter in QR, DCM, and CCM Operation Suited Detection

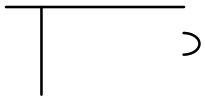
ORDERING INFORMATION

- 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



PIN CONFIGURATION

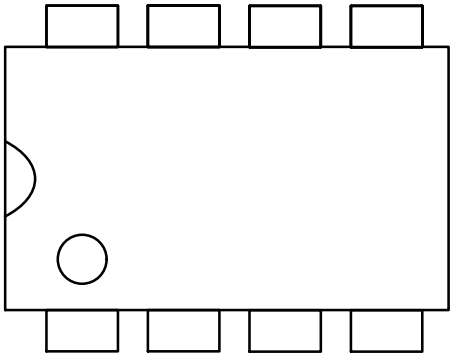


Figure 4. Pin Assignments

PIN DESCRIPTION

Pin No.	Name	Description

ELECTRICAL CHARACTERISTICS ◦

Symbol	Parameter	Test Condition	Min	Typ	Max	Unit
RES SECTION						
–						
–			–			µ
– –						

TYPICAL PERFORMANCE CHARACTERISTICS

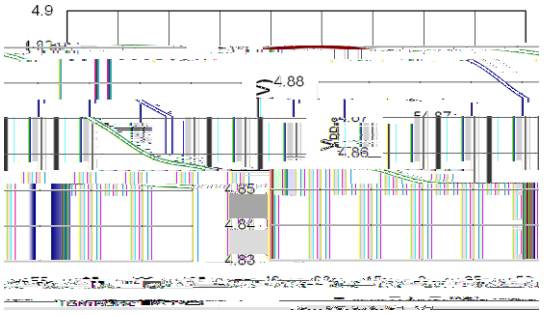


Figure 5. Turn−On Threshold Voltage

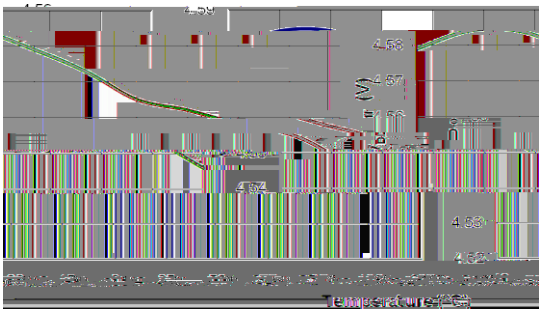


Figure 6. Turn−Off Threshold Voltage

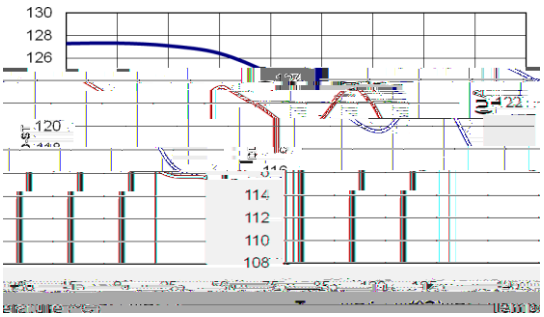


Figure 7. Startup Current

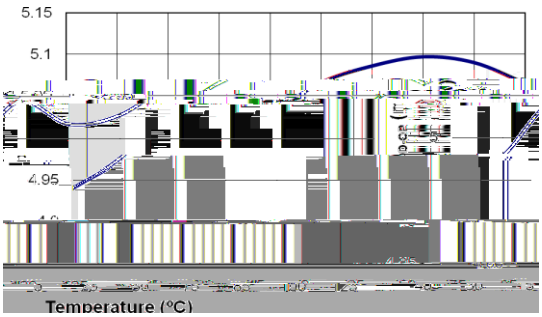


Figure 8. Operating Current

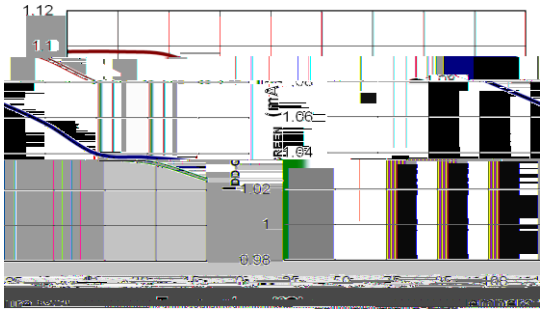


Figure 9. Operating Current in Green Mode

Figure 10. Gate Output Clamping Voltage

TYPICAL PERFORMANCE CHARACTERISTICS

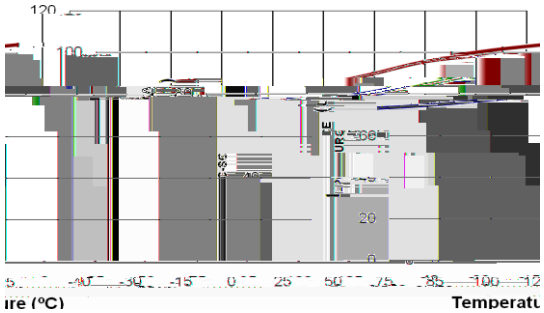


Figure 11. LPC Source Current

Figure 12. LPC Lower Clamp Voltage

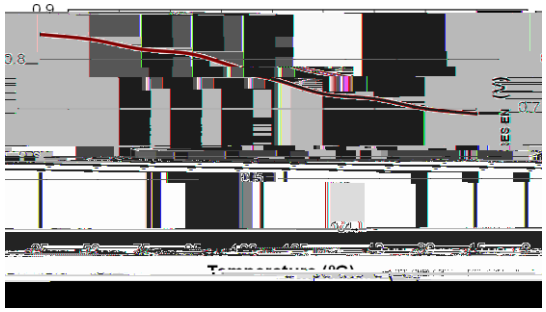


Figure 13. Threshold Voltage of V_{RES}

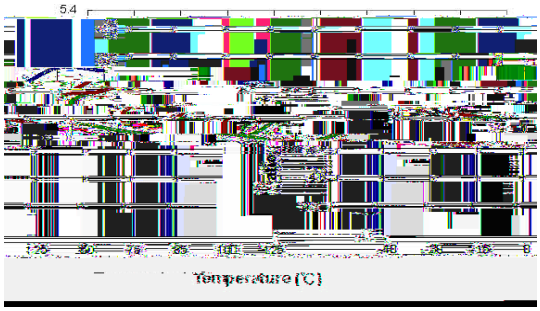
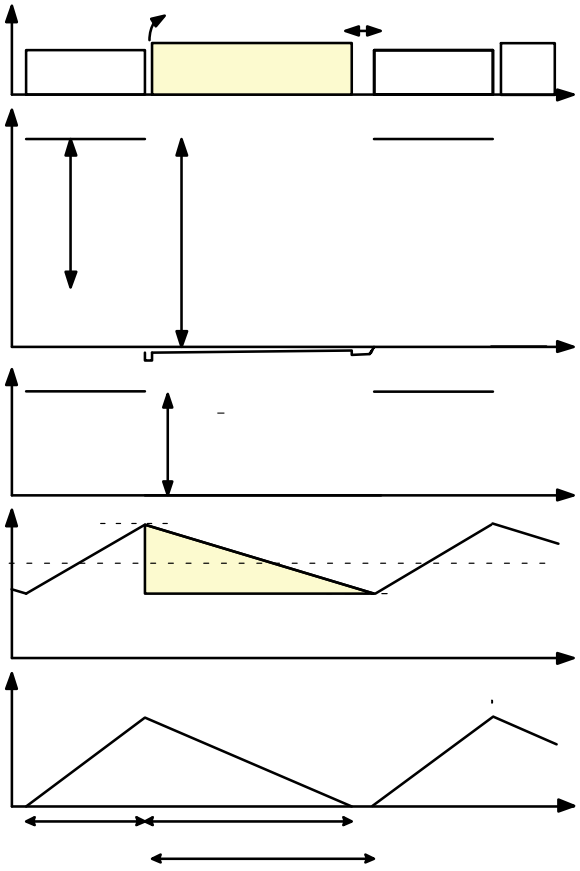


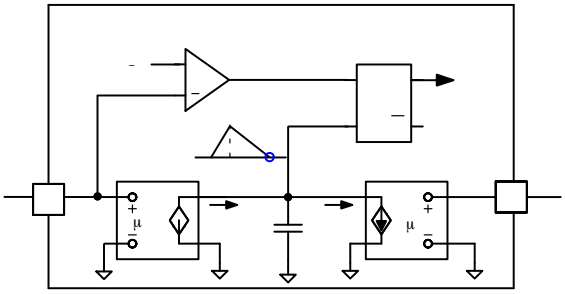
Figure 14. Ratio between LPC and RES

Figure 15. Minimum LPC Enable Time

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

FUNCTIONAL DESCRIPTION





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

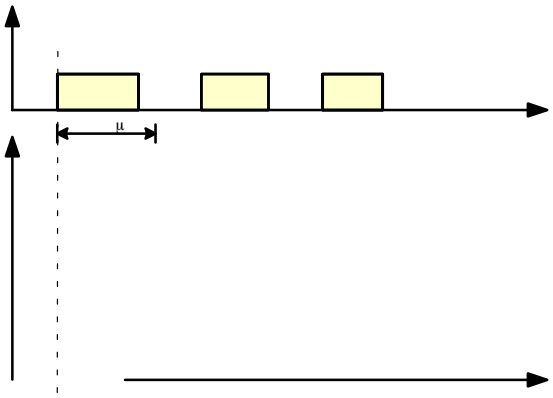


Figure 19. Entering Green Mode

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