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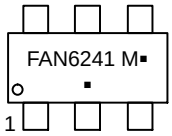
SOT 23, 6 Lead
CASE 527AJ

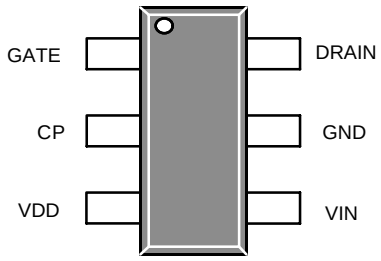
MARKING DIAGRAM



FAN6241	= Specific Device Code
M	= Date Code
▪	= Pb−Free Package

(Note: Microdot may be in either location)

PIN CONNECTIONS



ORDERING INFORMATION

See detailed ordering and shipping information on page 2 of this data sheet.

Features

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Typical Applications

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March, 2020 − Rev. 1

Multi−purpose supply allow FAN6241 MOX to be used for wide ranges of switched

ORDERING INFORMATION

Part Number	Operating Temperature	Package	Packing Method
FAN6241M6X	−40°C ~125°C	6−Lead, SOT23 (Pb−Free)	3000 / Tap & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

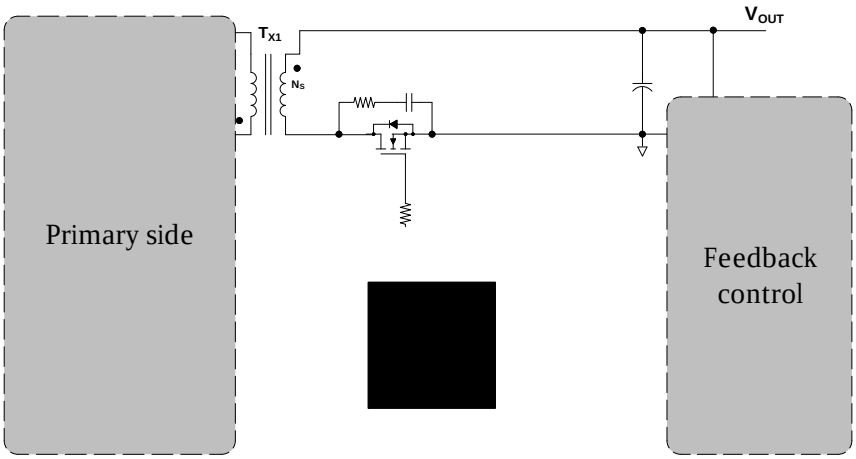

Figure 1. FAN6241M6X Typical Application Schematic

PIN FUNCTION DESCRIPTION

Pin #	Name	Description
1	GATE	Gate drive output pin
2	CP	SR gate charge pump. connect one 3.3 nF capacitor to GATE pin
3	VDD	Internal regulator 5 V output and gate drive power supply rail. Bypass with 1 μF capacitor to GND
4	VIN	LDO input, supports up to 26 V operation. An integrated 5 V LDO generates the internal VDD power supply rail for the low−voltage control circuitry
5	GND	Ground pin
6	DRAIN	Synchronous rectifier drain sense input

ABSOLUTE MAXIMUM RATINGS (Notes 1, 2, 3)

Parameter	Symbol	Min.	Max.	Unit
V_{IN}	Power Supply Input Pin Voltage	−0.3	26	V
V_{DD}	Internal Regulator Output Pin Voltage	−0.3	6.5 V	V
V_{DRAIN}	Drain Sense Input Pin Voltage	−1	120	V
V_{GATE}	Gate Drive Output Pin Voltage	−0.3	6.5 V	V
CP	Charge pump Pin Voltage			

RECOMMENDED OPERATING RANGES (Note 5)

Parameter	Symbol	Min.	Max.

TYPICAL PERFORMANCE CHARACTERISTICS

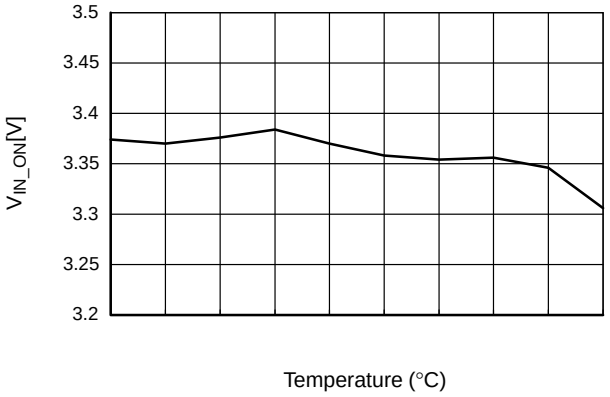

Figure 3. V_{IN_ON} vs. Temperature

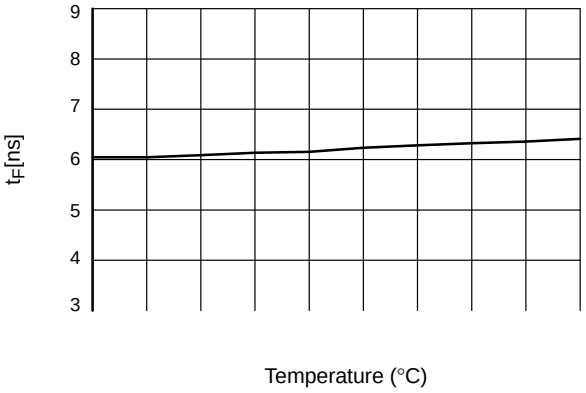

Figure 4. t_F vs. Temperature

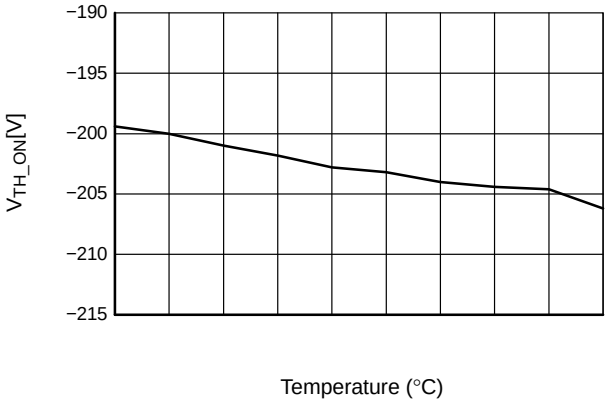

Figure 5. V_{TH_ON} vs. Temperature

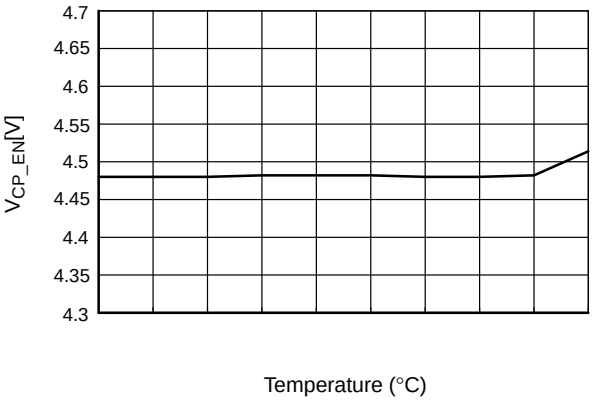

Figure 6. V_{CP_EN} vs. Temperature

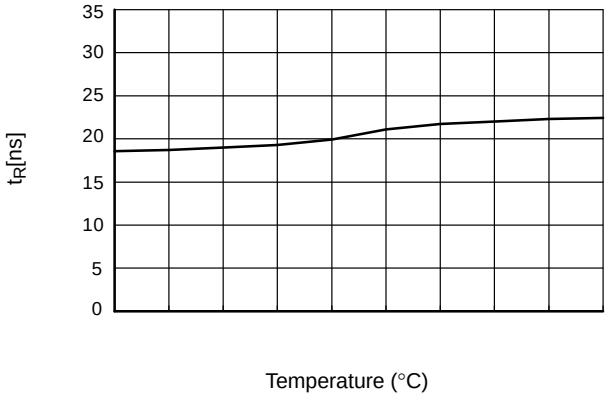

Figure 7. t_R vs. Temperature

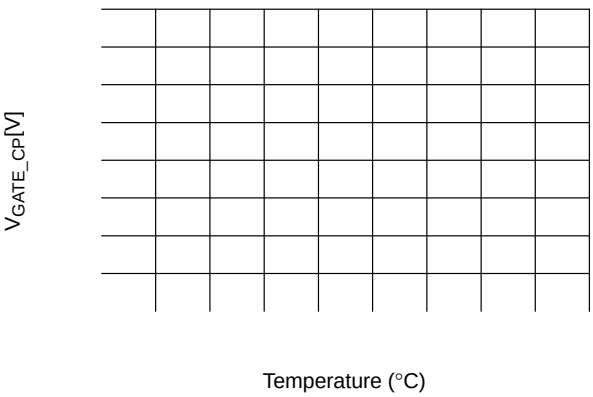

Figure 8. V_{GATE_CP} vs. Temperature

FUNCTIONAL DESCRIPTION

Theory of SR Control Operation

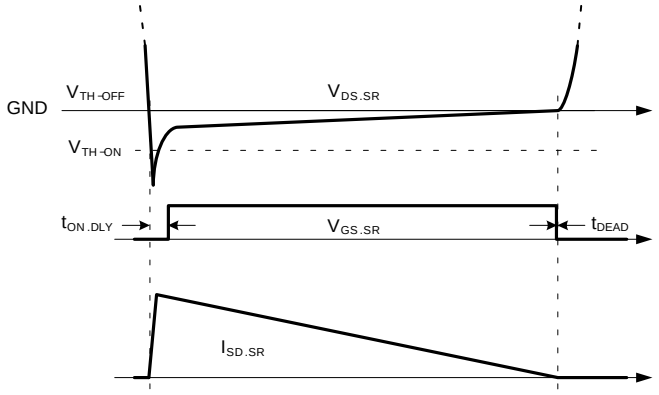

Figure 9. SR MOSFET Operation Waveforms (Ideal Case)

SR Turn On Algorithm

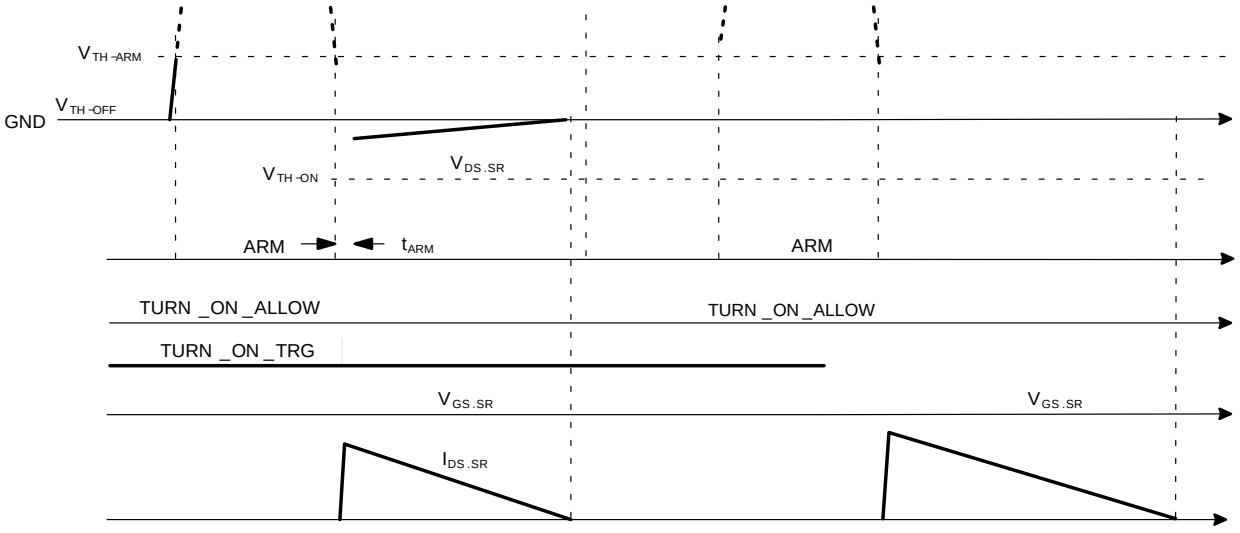

Figure 10. Turn On Algorithm

SR Turn Off Algorithm

PCB LAYOUT GUIDANCE

Printed Circuit Board (PCB) Layout

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IC Side:

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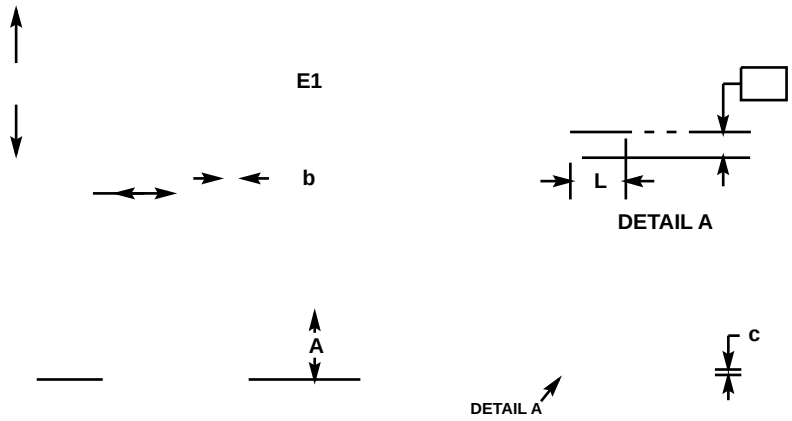
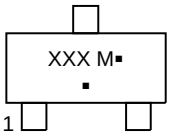
SOT−23, 6 Lead
CASE 527AJ

SCALE 2:1





XXX = Specific Device Code
M = Date Code
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*This information is generic. Please refer to device data sheet for actual part marking. Pb−Free indicator, “G” or microdot “