**Products** 

**Applications** 

> Home > Products > Power > DC-DC Converters > Integrated Smart Power Stages > TDA21570

Design Support

Community About Infineon

Careers

Newsletter Contact Where to Buy English ▼ 🆀 myInfineon ▼ 🃜 Cart

Follow

(infineon + Scypress Strengthening the link between the real and the digital world

# TDA21570

Overview

**Documents** 

Order

**Parametrics** 

High-efficiency OptiMOS<sup>™</sup> 70 A integrated power stage with internal current sense

efficiency at lower output voltages required by cutting edge CPU, GPU and DDR memory designs.

Infineon's TDA21570, 70 A integrated power stage, contains a low quiescent current synchronous buck gatedriver IC. In addition, the TDA21570 combines control and synchronous MOSFETs along with an active diode structure that achieves low V<sub>SD</sub> similar to a Schottky Diode with very little reverse recovery charge. The package is optimized for PCB lavout. heat transfer. driver/MOSFET control timing, and minimal switch node ringing when layout guidelines are followed. The paired gate driver and MOSFET combination enables higher

Operation of up to 1.5 MHz switching frequency enables high performance transient response, allowing miniaturization of output inductors, as well as input and output capacitors while maintaining industry leading

efficiency.

### Integrated driver, active diode, control MOSFET Q1

shutdown

μA typ)

**Summary of Features** 

- and synchronous MOSFET Q2 • On-chip MOSFET current sensing and reporting at 5
- $\mu A/A$ Input voltage (V<sub>IN</sub>) range of 4.25 V to 16 V
- Output current capability of 70 A
- Enhanced Fault reporting and identification Over temperature protection and thermal
- Auto-replenishment on bootstrap capacitor
- Compatible with 3.3 V tri-state PWM Input • DEEP SLEEP mode for power saving via EN= low (32
- Small 5 mm x 6 mm x 0.9 mm PQFN package
- **Potential Applications**

# • High frequency, low profile DC-DC converters

- Voltage regulators for CPUs, GPUs and DDR memory arrays
- Telecom controlled and uncontrolled

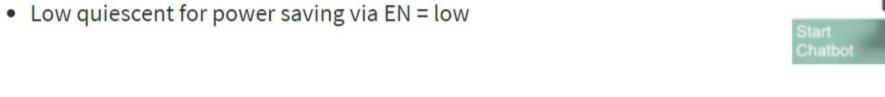
## High efficiency

**Benefits** 

Industry best current sense accuracy

shutdown

- Enhance fault identification and reporting
- Advanced protection features like high-side MOSFET short detection, over temp and thermal





**Download Data Sheet** 



Parametrics

Parametrics	TDA21570
Features	3% current and temperature telemetry
I <sub>out</sub>	70 A
Input Voltage min max	4.25 V 16 V
Moisture Sensitivity Level	MSL 2
Output Voltage min max	0.225 V 5.5 V
Package	PQFN 5 x 6
Qualification	Industrial
Switching Frequency max	1500 kHz
Technology	OPTIMOS 6
Туре	Powerstage

# > Login to myInfineon to see all documents available

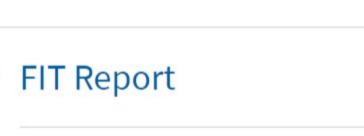
Documents

Collapse all

TDA21570 → EN < Share

### **Data Sheets**

# 02\_00 | 2021-06-03 | pdf | 1.1 MB





01\_00 | 2021-06-23 | pdf | 95 KB

FIT Report - TDA21570 D > EN Share

01\_00 | 2022-03-11 | pdf | 95 KB

Power and Sensing Selection Guide 2022 

> EN Share

TDA21570

TDA21570AUMA1

Infineon-MA005272956-MaterialContentSheet-v01\_00-EN > EN < Share



# 01\_00 | 2021-08-11 | pdf | 94 KB Infineon-MA005430689-MaterialContentSheet-v01\_00-EN > EN < Share

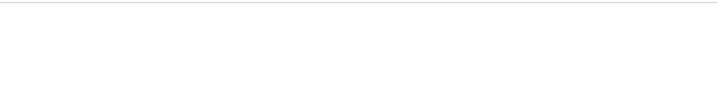
# 00\_00 | 2022-05-07 | pdf | 42.2 MB

Order

**Sales Product Name** 

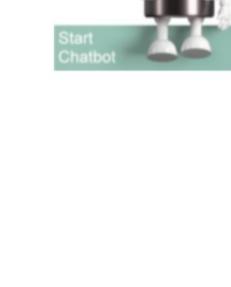
OPN • Info

**Product Selection Guide** 



Product Status active and preferred	
Infineon Package name PG-IQFN-39	
Standard Package name	
Order online	
Completely lead free no	
Halogen free yes	
RoHS compliant yes	
Packing Size 5000	
Packing Type TAPE & REEL Start	
	44
Moisture Packing DRY	
Complementary Products	





# Top 6 FAQs. Use the search bar above to show more!

Technical Support The best way to reach out to our

Applications Engineers is through our

**Developer Community** 

https://community.infineon.com Our Applications Engineers moderate th... + Read more

Notes on processing

Information regarding reflow profile,

soldering temperature, soldering profile

and further processing notes for most of the discrete products are mentioned in

+ Read more

our semiconductor device solutions to accelerate your development efforts and time to market. You can find them here:...

Partner Finder for support, software,

Infineon's global network of partners offer

products and services that complement

hardware, dev tools, services

+ Read more Design-in support

You can use our Infineon Solution Finder:

https://www.infineon.com/solutionFind

We offer design-in support for your

divided into the subcategories "Leaded and through-hole", "Surface Mounted Devices" and "Special Packages" + Read more Simulation Parameters/SPICE models

Please select "Simulation Models (SPICE,

S-parameters, SABER)"...

The package information is available of

our homepage. Please note, that they a

Package information

Please visit our Simulation Model Finder on the internet at https://www.infineon.com/simulation

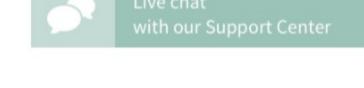
+ Read more

Ask for technical support

© 1999 - 2022 Infineon Technologies AG

the Application Note....





+ Read more



application.

er...