Au9570

Foward Synchronous rectifier driver

Description

The Au9570 is designed for Synchronous rectifier (SR) driver control in Forward switching power. It has good performance especially coordinating with wide voltage-input power with APFC or single voltage-input power .

With its outstanding "RTTWT"(Real Time True Wave Tracking) and "SFTO"(Super Fast Turn Off) Technology, it is capable to work in DCM,CRM and CCM,used in forward toplogy directly with no more added adjustments .

It is able to drive both catch mosfet and forward mosfet at the same time in the power.And by maintaining the SR mosfet's body diode conduction at minimun level and using "SFTO" technology,it can reduce SR mosfet reverse recovery Vdspeak voltage, avoid cross-conduction and achieve maximum efficiency at the same time .

By using the "RTTWT"and "SFTO" technology, it has excellent dynamic performance.

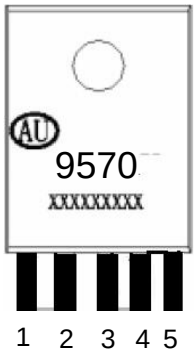
Features

* *Operating frequence up to 2MHz.*
* *Drive all power mosfet,no special requirements.*
* *High efficiency*
* *simplifying the external circuit design*
* *Excellent Dynamic performance*

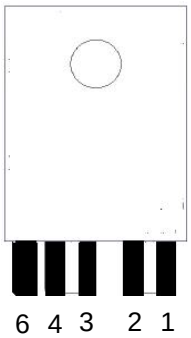
Applications

* *PC & sever powers*
* *Adaptor*
* *Charger*
* *LCD & LED TV*
* *LED Lighting*
* *DC-DC moudle*
* *Industrial power*

Pin configuration



Front

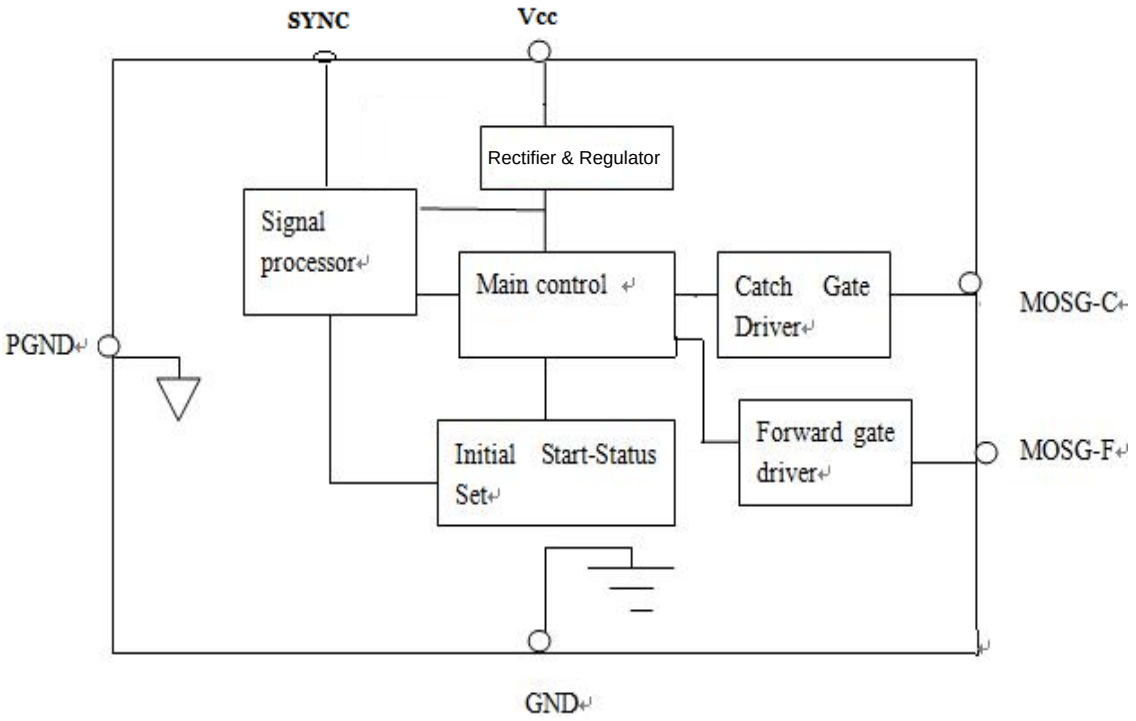


Back

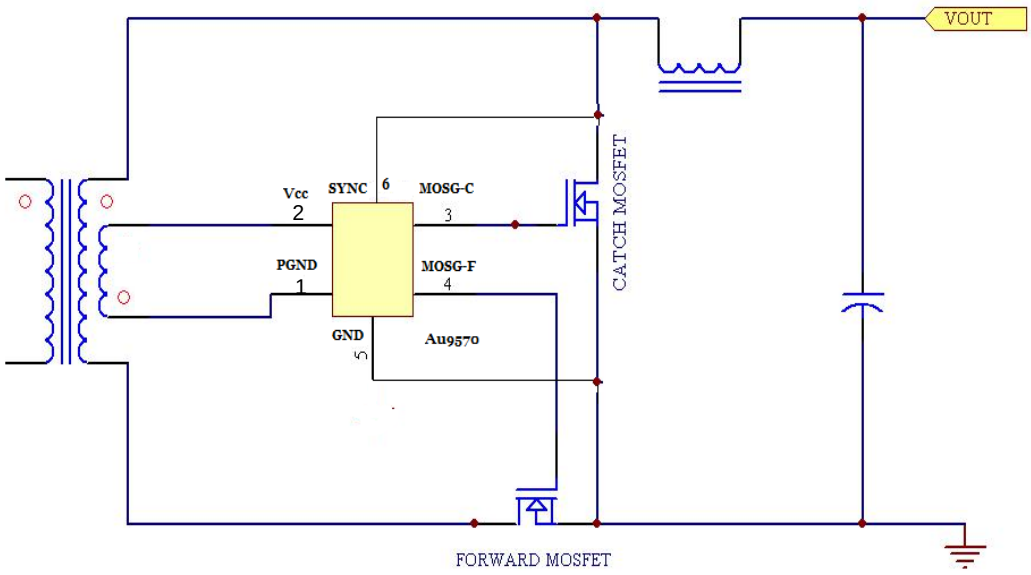
Pin description

pin	Symbol	Description
1	PGND	Ground Reference for Vcc
2	Vcc	supply voltage
3	MOSG-C	catch mosfet gate driver
4	MOSG-F	Forward mosfet gate driver
5	GND	Power Ground,connected to catch mosfet source
6	SYNC	Synchronous signal input

BLOCK DIAGRAM



Typical Application



Absolute maximum ratings (TA=25℃,unless otherwise specified)

The following ratings designate persistent limits beyond which damage to the moudle may occur

Symbol	*parameter*	*Value*	*Unit*
Vcc	*Pusle- voltage supply voltage*	*36*	*V*
Iout	*peak source current (pulsed)*	*2.5*	*A*
	peak sink current (pulsed)	*3*	*A*
PD	*Power dissipation @Ta=85℃*	*15*	*W*
Tj	*operating temperature range*	*-40 to 125*	*℃*
Tstg	*Storage Temperation range*	*-40 to 130*	*℃*
Tlead	*Lead soldering Temperature for 5 sec*	*260*	*℃*

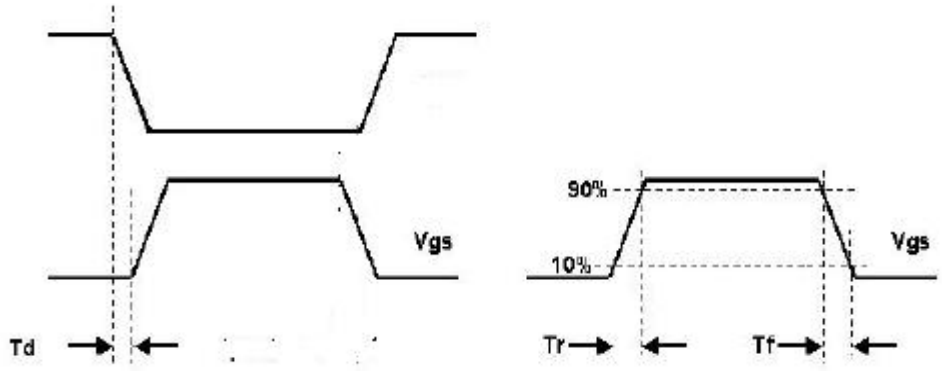
Electrical characteristics

Ta=25C,Freq.=50kHz,duty cycle=50%,Vcc=12V,unless otherwise specified)

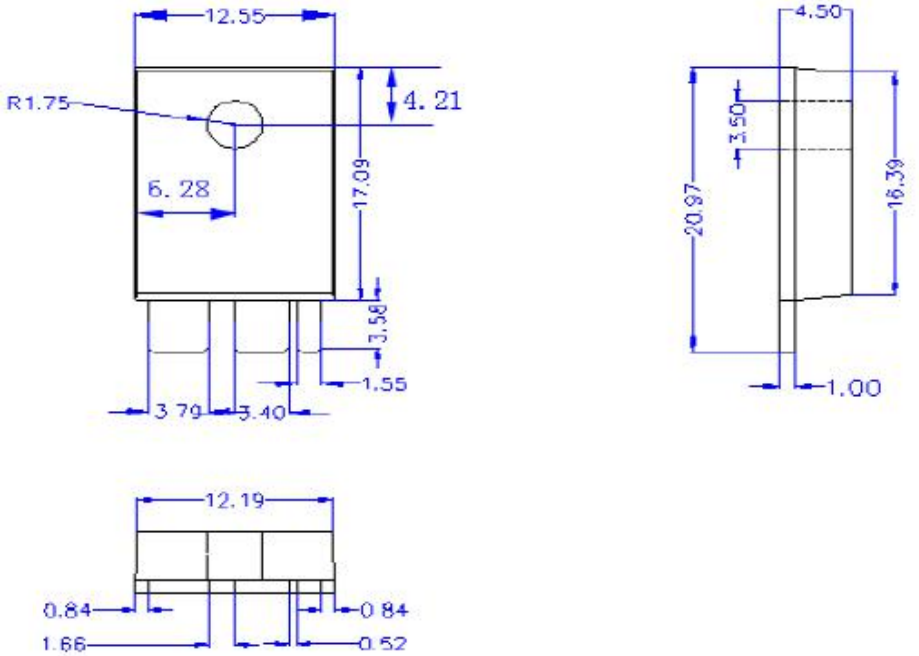
Symbol	*parameter*	*condition*	*Min*	*Typ.*	*Max.*	*Unit*
Mosfet gate driver (pin4 ,pin3)						
Voh	*output high voltage*	*Io=-200mA*			18	*V*
Vol	*output low voltage*	*Io=200mA*			-18	*V*
Td	*Propagation delay*	*No load*	*50*	*70*		*ns*
Tr	*Rise time*	*Load=1nF*		*10*	*25*	*ns*
Tf	*fall time*	*Load=1nF*		*10*	*25*	*ns*
Supply Input						
Idd	*Supply current*	*No load*		*1.5*		*mA*
Vonth	*Enable voltage*			*2.4*		*V*
Vccsug	*Suggested Vcc pusle*		*10*	*24*	*36*	*V*

Tr and Tf are measured among 10% and 90% of starting and final voltage

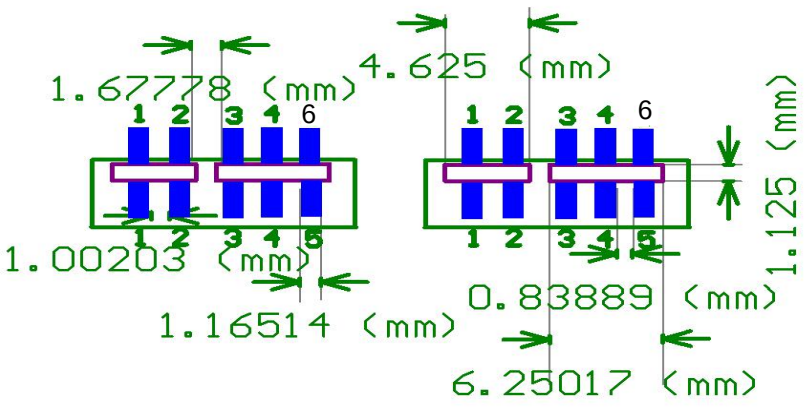
Waveform Definitions



DIMENSION INFORMATION(mm)



FOOTPRINT



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