Au9574

LOW COST Foward Synchronous rectifier driver

Description

The Au9573 is designed for Synchronous rectifier (SR) driver control in Forward switching power. It has good performance especially coordinating with wide voltage-input power with PFC single voltage-input power . Espeacially, it has excellent dynamic performance.

With its outstanding "RTTWT"(Real Time True Wave Tracking) , "SFTO"(Super Fast Turn Off) , "NVTO"(Negative voltage turn off) and "SDTA"(Smart dead time adjustment) tech--nologies, 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" "NVTO","SDTA" technologies, it can reduce SR mosfet reverse recovery Vdspeak voltage, avoid cross conduction and achieve maximum efficiency at the same time .

Features

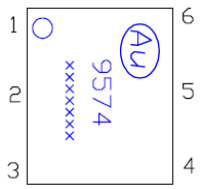
* *Operating frequence up to 2MHz.*
* *Drive all power mosfet,no special requirements.*
* *High efficiency*
* *simplifying the external circuit design*
* *Excellent Dynamic performance*

Applications

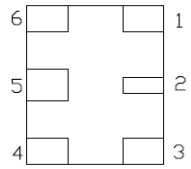
* *PC & sever powers*
* *Adaptor*
* *Charger*
* *LCD & LED TV*
* *LED Lighting*
* *DC-DC moudle*
* *Industrial power*

Pin configuration

Front



Back

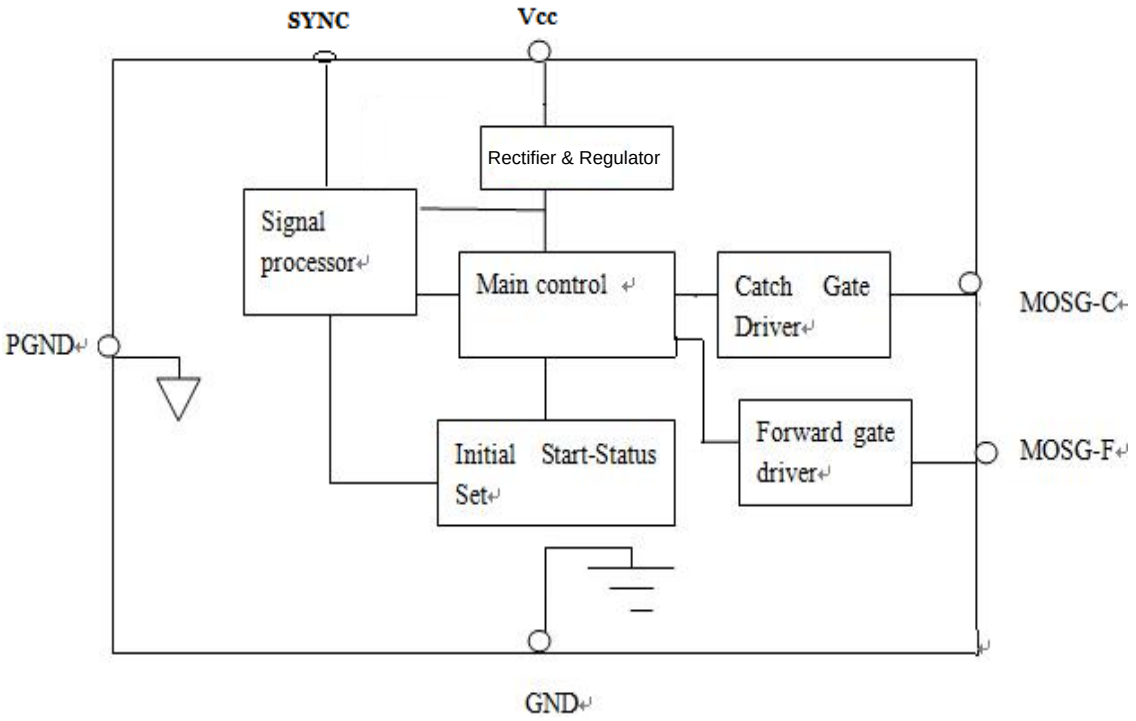


* package DFN5x6

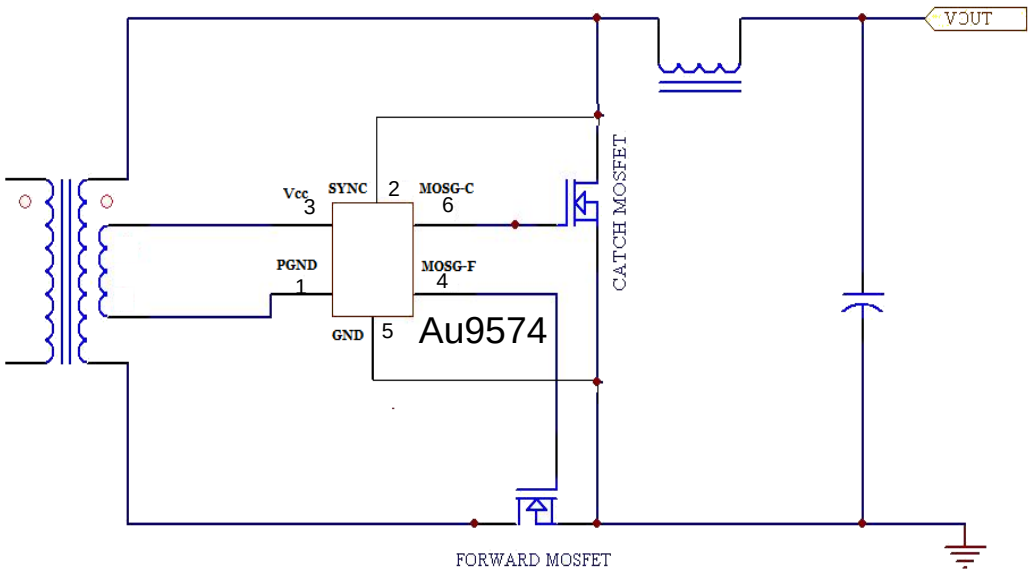
Pin description

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

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

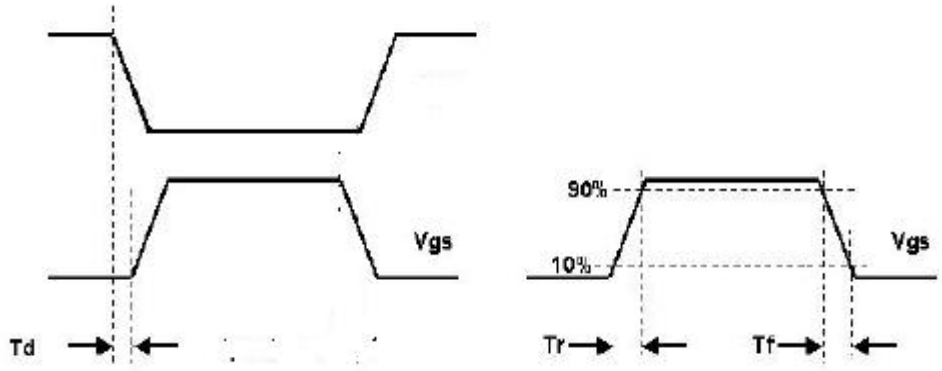
Symbol	parameter	Value	Unit
Vcc	Pusle- voltage supply voltage	36	V
Vsync	Sync pin voltage	300	V
Iout	peak source current (pulsed)	1.5	A
	peak sink current (pulsed)	2.5	A
PD	Power dissipation @Ta=85℃	3	W
Tj	operating temperature range	-40 to 125	℃
Tstg	Storage Temperation range	-40 to 130	℃
Tlead	Lead soldering Temperature for 5 sec	245	℃

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

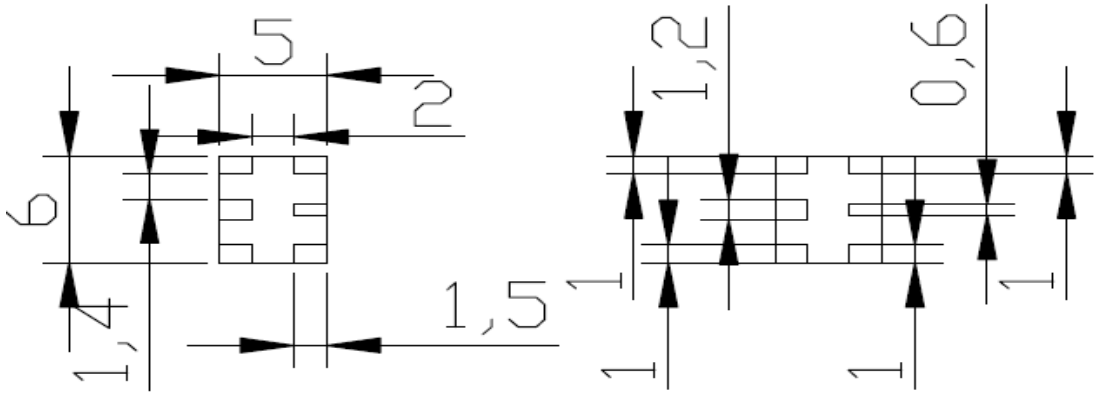
Waveform Definitions



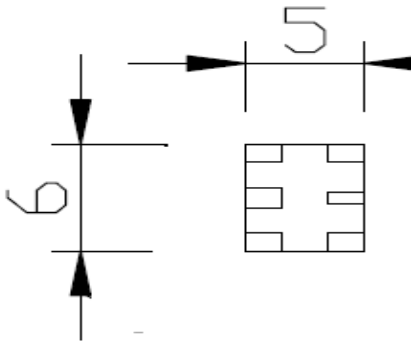
DIMENSION INFORMATION(mm)

DFN5x6

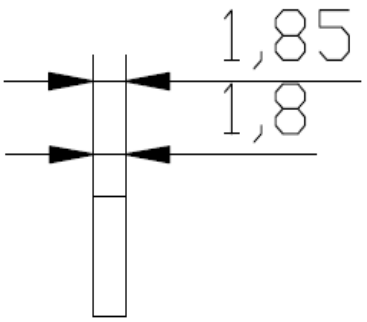
BOTTOM



TOP



END



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