

Description

The module Au9527 is designed for Synchronous rectifier (SR) driver control in switching power. With its outstanding technology principle of operation different from ZVS and ZCS, it is capable to work in CCM, DCM, CRM, used in flyback, QR and forward, LLC topology directly with no more added adjustments. In ordinary course, it can work with SR mosfet only, with no schottky diode cooperated to grasp lower total BOM cost and maintains the SR mosfet's body diode conduction at minimum level.

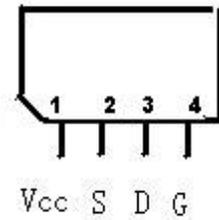
Features

- * Operating frequency up to 350KHz.
- * Drive all power mosfet, no special requirements.
- * High efficiency
- * simplifying the external circuit design
- * Capable to close output when no load with special Vcc design to reduce standby power loss.

Applications

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

Pin configuration



Part marking



AAA:deadtime code
BBB:Adj code
CCC: remark code
FFF:Signal code
EE:C code
DDMMYY:Date code

Pin description

pin	Symbol	Description
1	Vcc	DC supply voltage
2	S	catch SR mosfet source
3	D	catch SR mosfet Drain
4	G	catch SR mosfet gate drive

Ordering information

Device	package	remark
AU9527B	upright	AAABBBCCCFEE
AU9527BL	recumbent	AAABBBCCCFEE

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

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

Symbol	parameter	Value	Unit
Vcc	DC supply voltage	35	V
Iout	peak source current (pulsed)	2	A
	peak sink current (pulsed)	2	A
Tj	operating temperature range	-40 to 125	C
Tstg	Storage Temperature range	-40 to 130	C
Tlead	Lead soldering Temperature for 5 sec	260	C

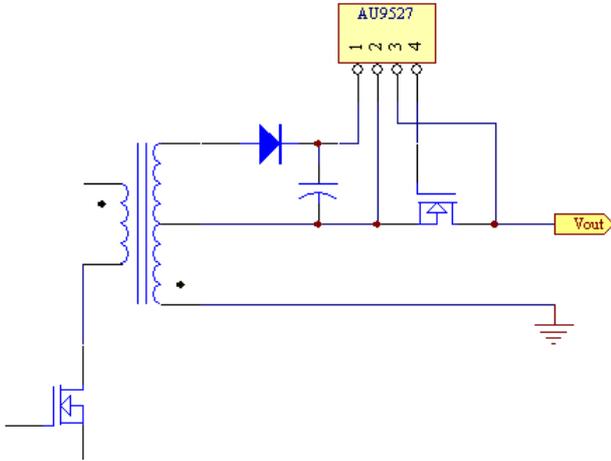
Electrical characteristics

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

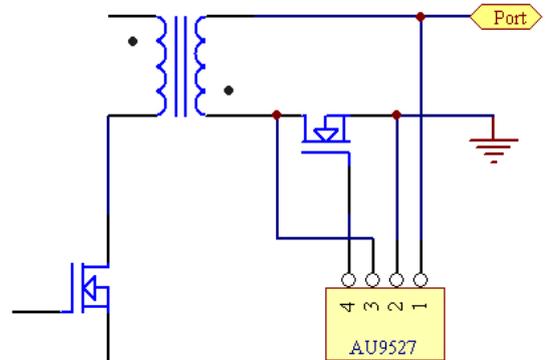
Symbol	parameter	condition	Min	Typ.	Max.	Unit
On time duty setup (pin4)						
Ton-time				19	20	us
Mosfet gate driver (pin4)						
Voh	output high voltage	Io=-200mA	10	11		
Vol	output low voltage	Io=200mA		0.5	0.8	
Td	Propagation delay	No load	50	80		ns
Tr	Rise time	Load=1nF		10	25	ns
Tf	fall time	Load=1nF		10	25	ns
Supply Input						
Idd	Supply current	No load		5	8	mA
Vcc	supply voltage	Idd peak<2A	12		35	V
Vcc on	Enable voltage		10	10.6	11.1	V
Dynamic protect						
Ton-min	pin 4 on time	PWM adjusts time>Dt		1		us

Typical Application

SR mosfet in high side for low standby and more Vout powers



SR mosfet in low side for Vout >= 12V powers

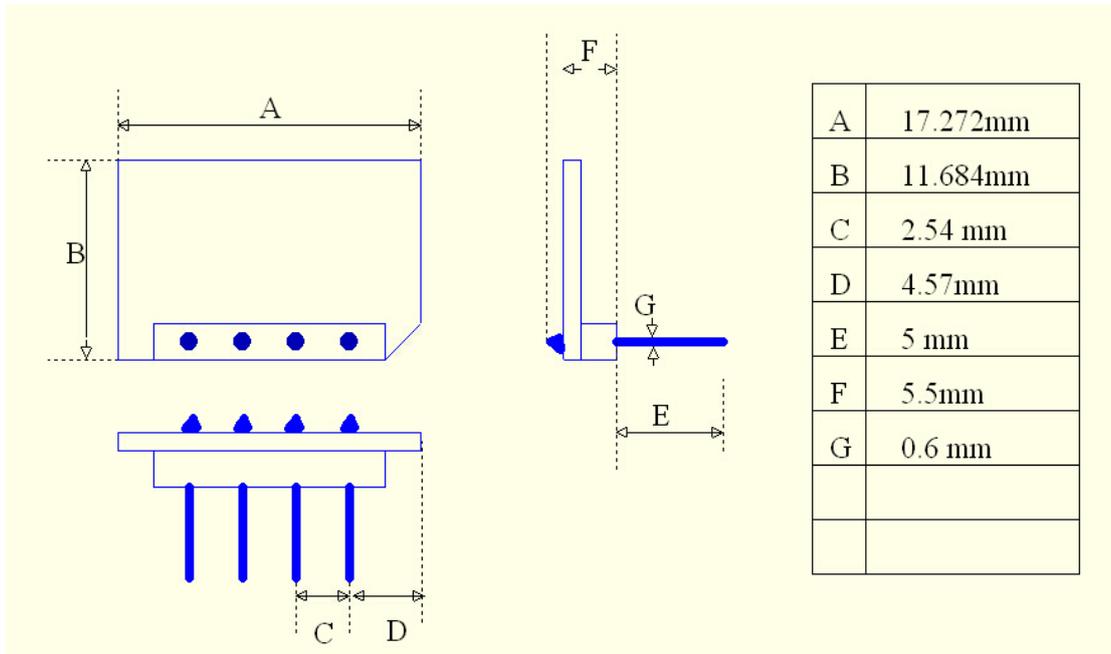


DIMENSION INFORMATION

Au9527B

A	17.272mm
B	11.684mm
C	2.54 mm
D	4.57 mm
E	5 mm
F	5.5mm
G	0.6 mm

AU9527BL



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