Au9674H-X(R)

Imitating Diode- Flyback Smart Rectifier

Description

Au9674H-X(R) series is designed for high efficient and Low power consumption rectifier in power second side. switching it is capable to work in not only CCM, DCM, CRM, used in common and QR isolated flyback power with no added adjustments,but also can work in single-stage PFC flyback power too.

Especially it could be used in Non-isolated power to replace fly-wheel diode to improve efficiency.

Features

*Operating frequence up to 250KHz.

*Low Standy power to meet DOE Lot6 requirement

*Low power loss,high efficience,offers efficiency improvement over Schottky Diode

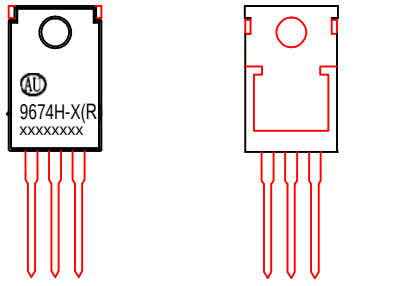
*simplifying the external circuit design

*No change on transformer , no Vcc auxiliary winding needed

* Work well both in high-side and low-side in isolated flyback power.

* Support working in some non-isolated DC-DC power.

TO-220BF



APPLICATIONS

- Switching Mode Power Supply (CCM&DCM&QR)
- Storage area network power supplies
- Telecommunication converters
- Embedded systems
- Industrial & commercial systems using high current processors
- Power converters to meet Lot 6 requirement

PIN DESCRIPTION

Pin	Symbol	Description
1	A1(NC)	Main current input in model Au9674H-XR series,must be connected
		Assistant current input in model Au9674H-X series,sometimes not connected
2	A2(NC)	Main current input in model Au9674H-X series,must be connected
		Assistant current input in model Au9674H-XR series,sometimes not connected
3	K	Current output

Maximum Ratings and Electrical Characteristics

Rating at 25 ℃ ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

P/N	VF (mV)	VF (mV)	Vdc(V)	IF(av.) (A)	IFRM(A)	Iout(A)	Pd (W)	Tstg (℃)
	Typical forward vlotage IF=5A Ta=25℃ Vout=12V	Typical forward vlotage IF=5A	Maximum DC blocking voltage	Maximum average forward rectifier current Tc=100℃	Peak repetitive forward current	Suggested Load current	Max power dissipation	Storage temperature range
AU9674H-L（R）	40	55	40	60	240	4	40	-25 to +150
AU9674H-O（R）	24	48	40	80	320	6	40	-25 to +150
AU9674H-W（R）	18	20	40	120	480	8	40	-25 to +150
AU9674H-S（R）	55	68	60	60	240	4	40	-25 to +150
AU9674H-H（R）	80	50	60	80	320	6	40	-25 to +150
AU9674H-Y（R）	12	16	60	150	600	12	40	-25 to +150
AU9674H-ML（R）	45		80	20	80	3	40	-25 to +150
AU9674H-D（R）	10		85	130	390	13	40	-25 to +150

* Tested under the condition IF=3A

AU9674H-M（R）	70		100	35	140	2.5	40	-25 to +150
AU9674H-J（R）	45		100	40	160	4	40	-25 to +150
AU9674H-N（R）	40		100	60	240	5	40	-25 to +150
AU9674H-A（R）	30		100	80	320	7	40	-25 to +150
AU9674H-E（R）	25		100	100	380	10	40	-25 to +150
AU9674H-T（R）	10		100	140	420	13	40	-25 to +150
AU9674H-F（R）	30		120	100	360	6	40	-25 to +150
AU9674H-B（R）	110		150	60	200	4	40	-25 to +150
AU9674H-K（R）	60		150	80	300	5	40	-25 to +150
AU9674H-G（R）	35		150	80	300	8	40	-25 to +150

Remark: The end (R) means using pin A1 and pin K as main current pins that must be connected .

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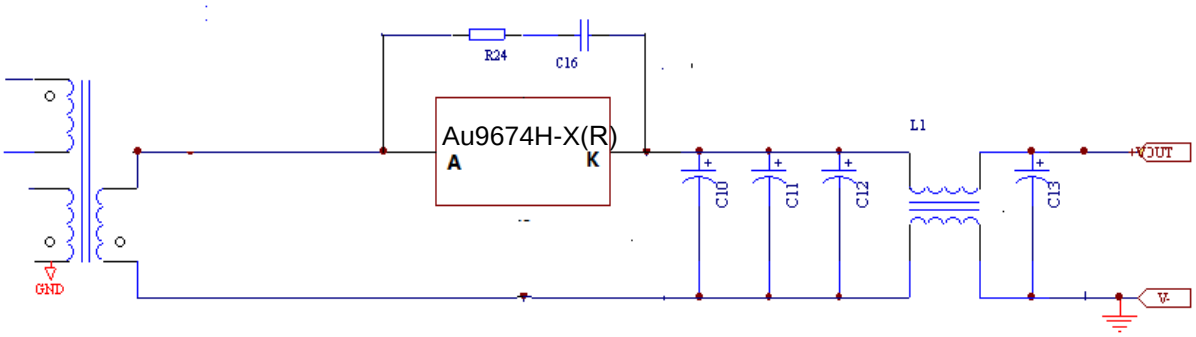
* Not suggested used in big dynamic load change power

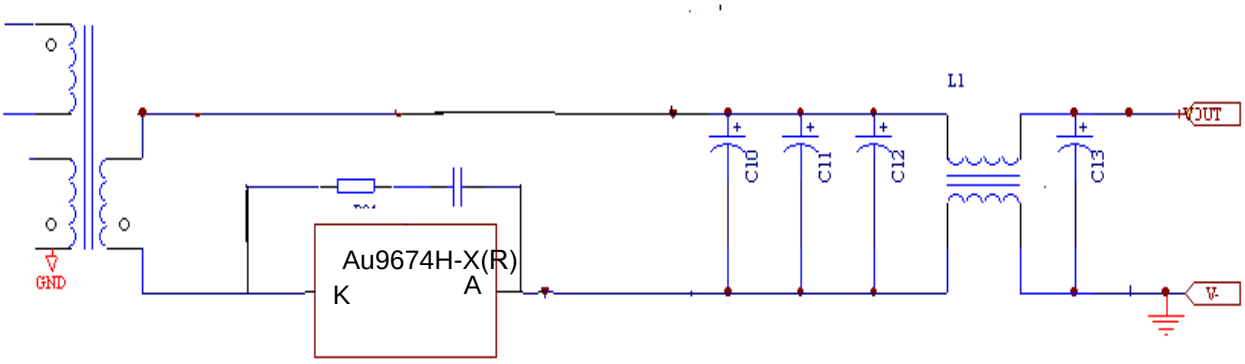
1.Application in flyback



Work in high side

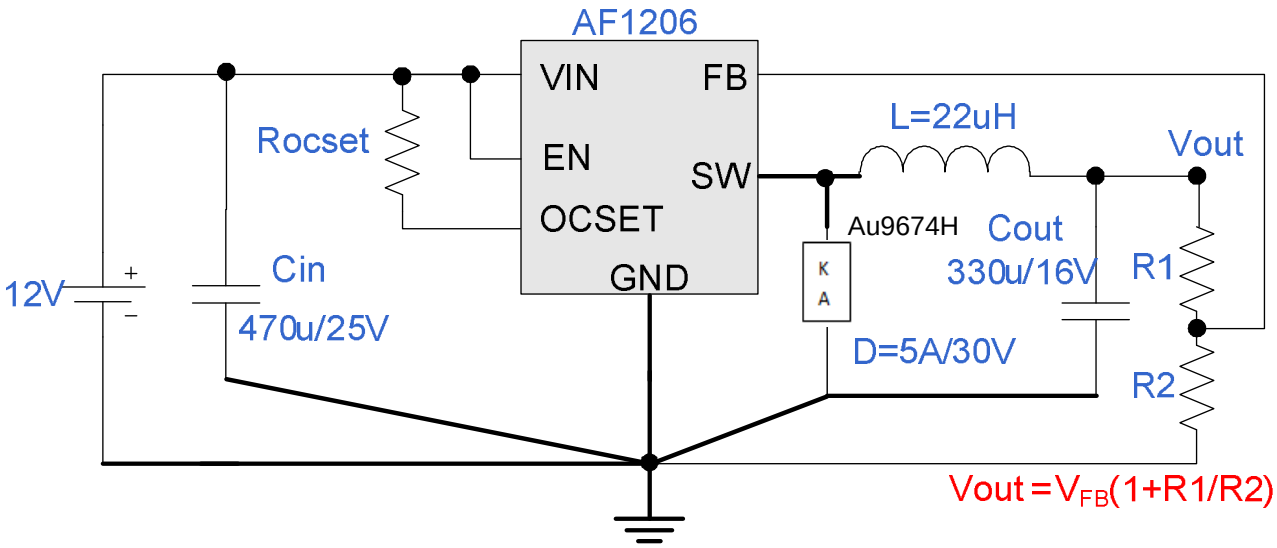
Application Note under working in high side:

If possible, it is a good way connecting heat sink to output capacitor anode directly without insulating collidal particle and heat conductive gasket between the smart rectifier and the heat sink, that could save the cost and improve EMI performance , and decrease the leakage current between the smart rectifier and heat sink to get higher efficiency and lower Vakpeak voltage too.



Work in low side

2. Application in DC-DC non-isolated power



DIMENSION INFORMATION (mm)

Package TO-220BF