

Description

Au9686-X series is designed for high efficient and Low power consumption rectifier in switching power second side. it is capable to work in CCM, DCM, CRM, used in Half-bridge topology power including LLC or hard-switching mode with no added adjustments

Especially, it can replace TO220/F Schottky Diodes and SR mosfets directly in second side.

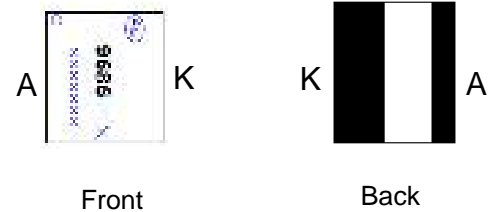
Features

- *Operating frequency up to 250KHz.
- *Low power loss,high efficiency,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.

APPLICATIONS

- Switching Mode Power Supply
- Storage area network power supplies
- Telecommunication converters
- Embedded systems
- Industrial & commercial systems using high current processors

DFN8*9



PIN DESCRIPTION

Pin	Symbol	Description
1	A1	assistant current input.
2	A2	main current input.
3	K	Current output

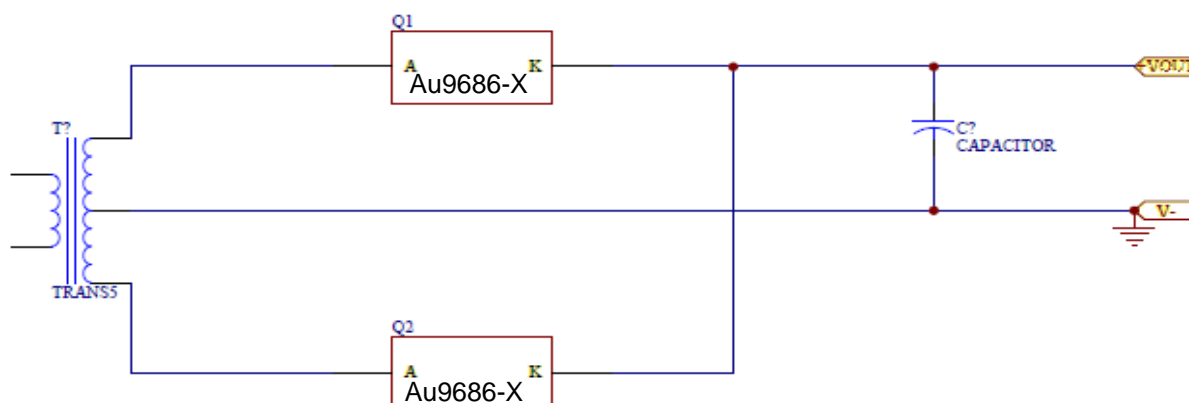
Maximum Ratings and Electrical Characteristics

Rating at 25 °C 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)	Vdc (V)	IF (av.) (A)	IFRM (A)	Iout(A)	Pd (W)	Tstg (°C)
	Typical forward voltage IF=5A Ta=25 °C Vout=12V	Maximum DC blocking voltage	Maximum average forward rectifier current Tc=100°C	Peak repetitive forward current	Suggested Load current	Max power dissipation	Storage temperature range
AU9686-L	6	30	120	480	30	45	-40 to +125
AU9686-F	24	40	80	320	10	45	-40 to +125
AU9686-A	15	40	120	480	15	45	-40 to +125
Au9686-G	10	40	200	600	20	45	-40 to +125
AU9686-C	60	60	80	320	8	45	-40 to +125
AU9686-D	12	60	150	600	15	45	-40 to +125
AU9686-J	14	85	130	390	12	45	-40 to +125
AU9686-E	40	100	50	160	7	45	-40 to +125
AU9686-F	30	100	80	320	10	45	-40 to +125
AU9686-H	25	100	100	380	12	45	-40 to +125
AU9686-M	10	100	140	420	25	45	-40 to +125
AU9686-F	30	120	100	300	10	45	-40 to +125
Au9686-K	100	150	50	130	6	45	-40 to +125
AU9686-V	35	150	80	300	15	45	-40 to +125

Application

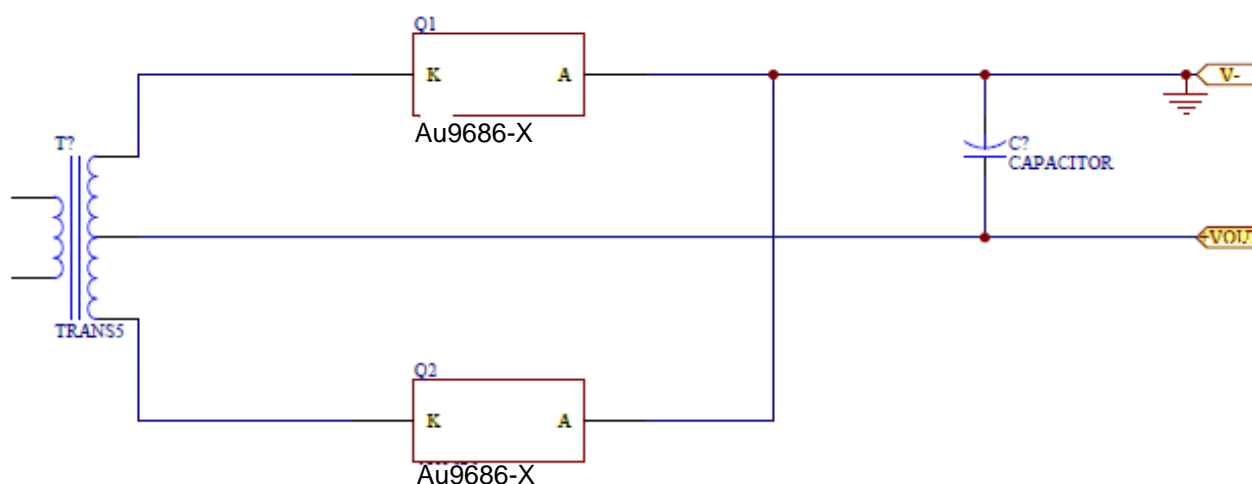
a.



Application Note :

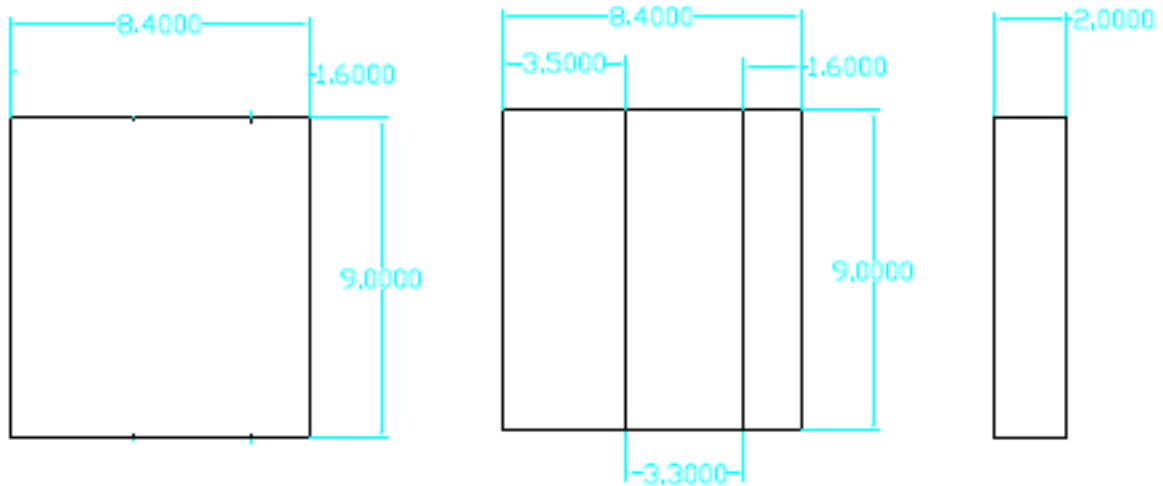
If possible, it is a good way connecting heat sink to output capacitor cathode directly without insulating collidal particle and heat conductive gasket between the smart rectifier and the heat sink, that could save the cost and improve EMI performance , and decrease the leakage current between the smart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

b.

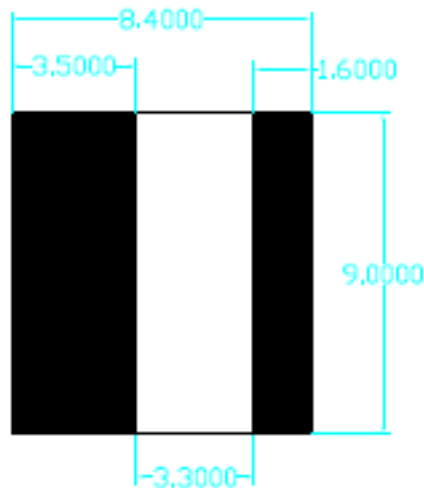


DIMENSION INFORMATION (mm)

Package DFN8*9



FOOTPRINT



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