

Description

Au9683-XH 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 Flyback or Half-bridge topology power including LLC or hard-switching mode with no added adjustments, and it can support burst mode under no load or light load.

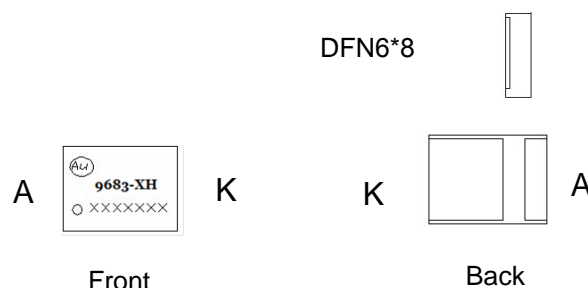
Especially, it can replace SMT Schottky Diodes and SR mosfets directly in second side. And based on our patented "quasi-GaN" technology with approaching-zero reverse-recovery time, it supports high-frequency operation or large dynamic-load change in switching power or others, reducing turn-off peak voltage very well

Features

- *Operating frequency up to 500KHz.
- *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



PIN DESCRIPTION

Pin	Symbol	Description
1	A	main current input.
2	K	Current output

Maximum Ratings and Electrical Characteristics

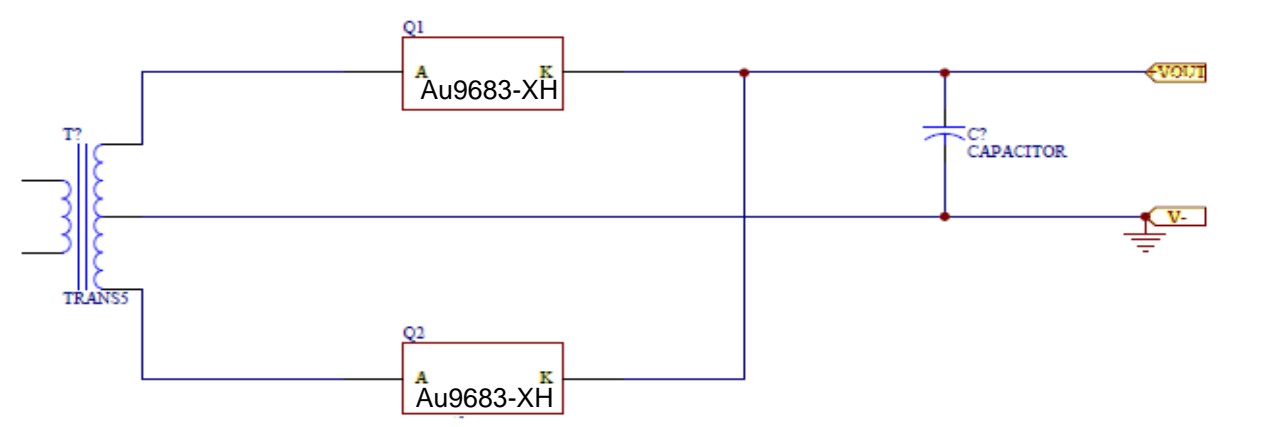
Rating at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%

P/N	V _F (mV)	V _{dc} (V)	I _F (av.) (A)	I _{FRM} (A)	I _{out} (A)	P _d (W)	T _{stg} (°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
AU9683-LH	6	30	120	480	30	45	-40 to +125
AU9683-BH	24	40	80	320	10	45	-40 to +125
AU9683-AH	15	40	120	480	15	45	-40 to +125
Au9683-GH	10	40	200	600	20	45	-40 to +125
AU9683-CH	60	60	80	320	8	45	-40 to +125
AU9683-DH	12	60	150	600	15	45	-40 to +125
AU9683-JH	14	85	130	390	12	45	-40 to +125
AU9683-EH	40	100	50	160	7	45	-40 to +125
AU9683-FH	30	100	80	320	10	45	-40 to +125
AU9683-HH	25	100	100	380	12	45	-40 to +125

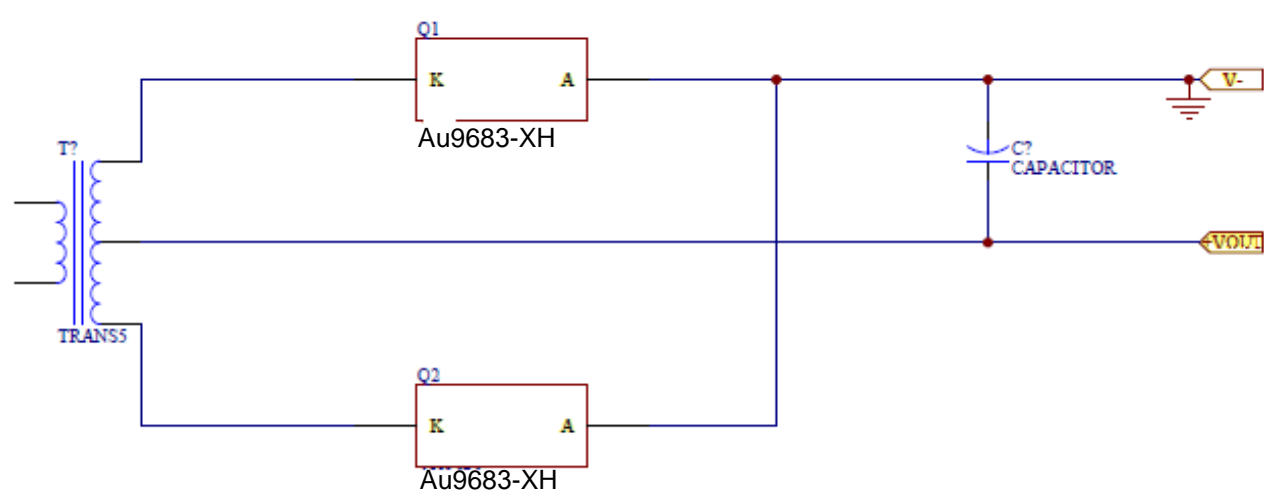
Noted: if Au9683-XH is used in flyback topology, suggested load current should better be reduced half Iout value in the sheet.

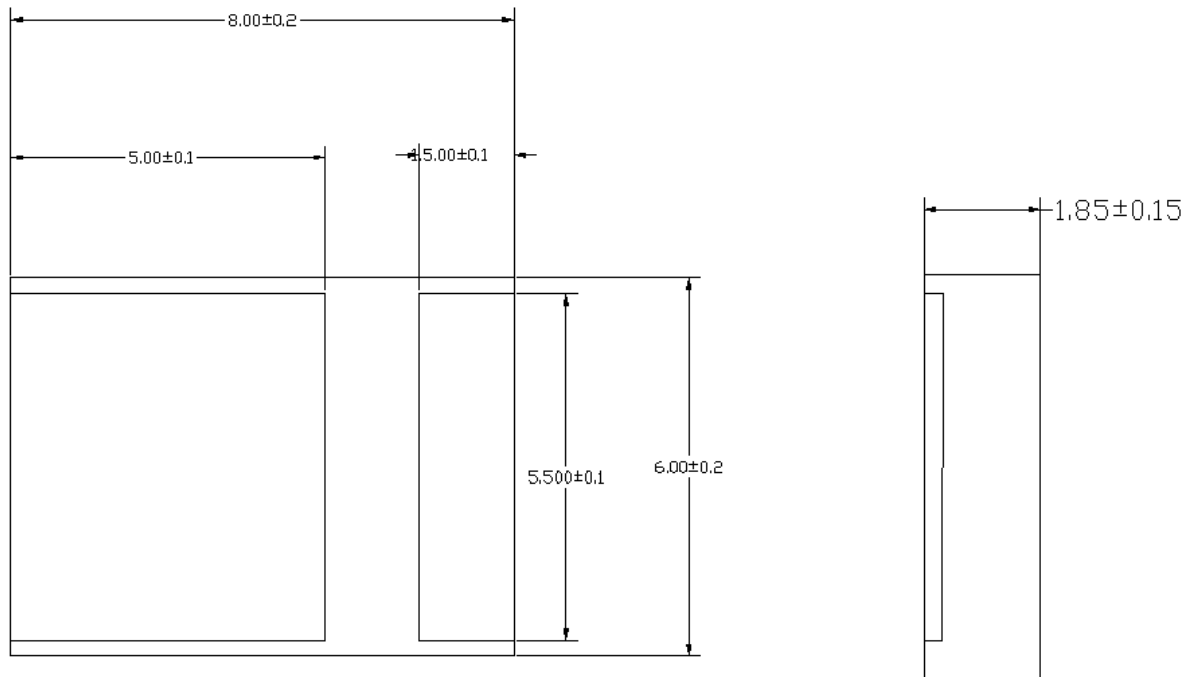
Application

a.



b.



DIMENSION INFORMATION (mm)**Package DFN6*8**

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