

Description

Au9679-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, and it can support burst mode under no load or light load.

And also, it can used in flyback topology with parallel connection output by two windings.

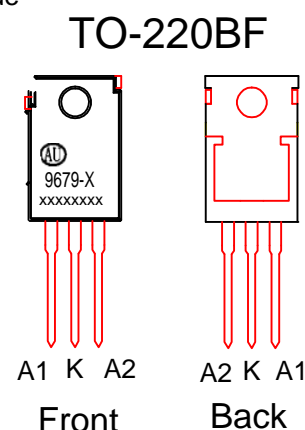
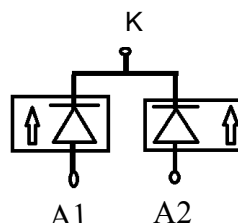
Especially, it can replace TO220/F Schottky Diodes and SR mosfets directly in second side with two channels in one for higher efficiency.

Features

- *Operating frequency up to 300KHz.
- *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	A1	main current input Pin A1
2	A2	main current input Pin A2
3	K	Current output

Maximum Ratings and Electrical Characteristics

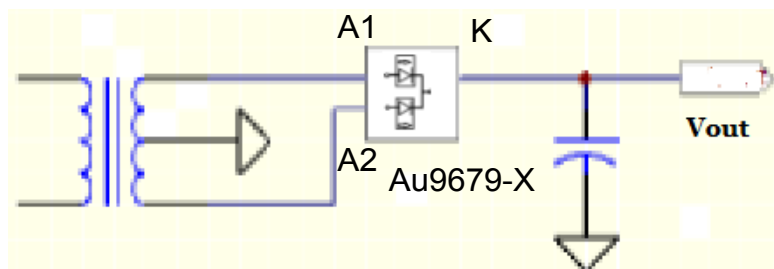
Rating at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%

P/N	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 I _F =5A T _a =25°C V _{out} =12V	Maximum DC blocking voltage	Maximum average forward rectifier current T _c =100°C	Peak repetitive forward current	Suggested Power output current	Max power dissipation	Storage temperature range
AU9679-J	6	30	120	480	30	40	-40 to +125
AU9679-L	40	40	60	240	8	40	-40 to +125
AU9679-F	24	40	80	320	10	40	-40 to +125
AU9679-A	18	40	150	480	18	40	-40 to +125
Au9679-G	10	40	200	600	30	40	-40 to +125
AU9679-H	80	60	80	320	12	40	-40 to +125
AU9679-K	12	60	120	600	20	40	-40 to +125
AU9679-B	45	100	40	160	8	40	-40 to +125
AU9679-C	30	100	80	320	18	40	-40 to +125
AU9679-D	25	100	100	380	20	40	-40 to +125
Au9679-E	80	150	50	130	8	40	-40 to +125
Au9679-N	50	150	50	130	15	40	-40 to +125

Noted: all must be used under good heat-sink condition.

Application

Application note: 1) Better please insert the pin deeply into the PCB for decreasing the power loss of pin's impedance if possible.

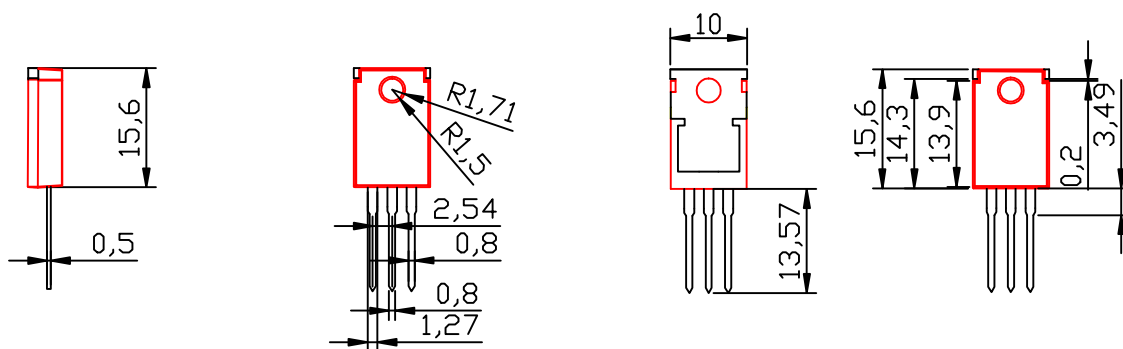
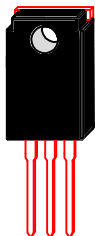


Application Note :

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.

DIMENSION INFORMATION (mm)

Package TO-220BF



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