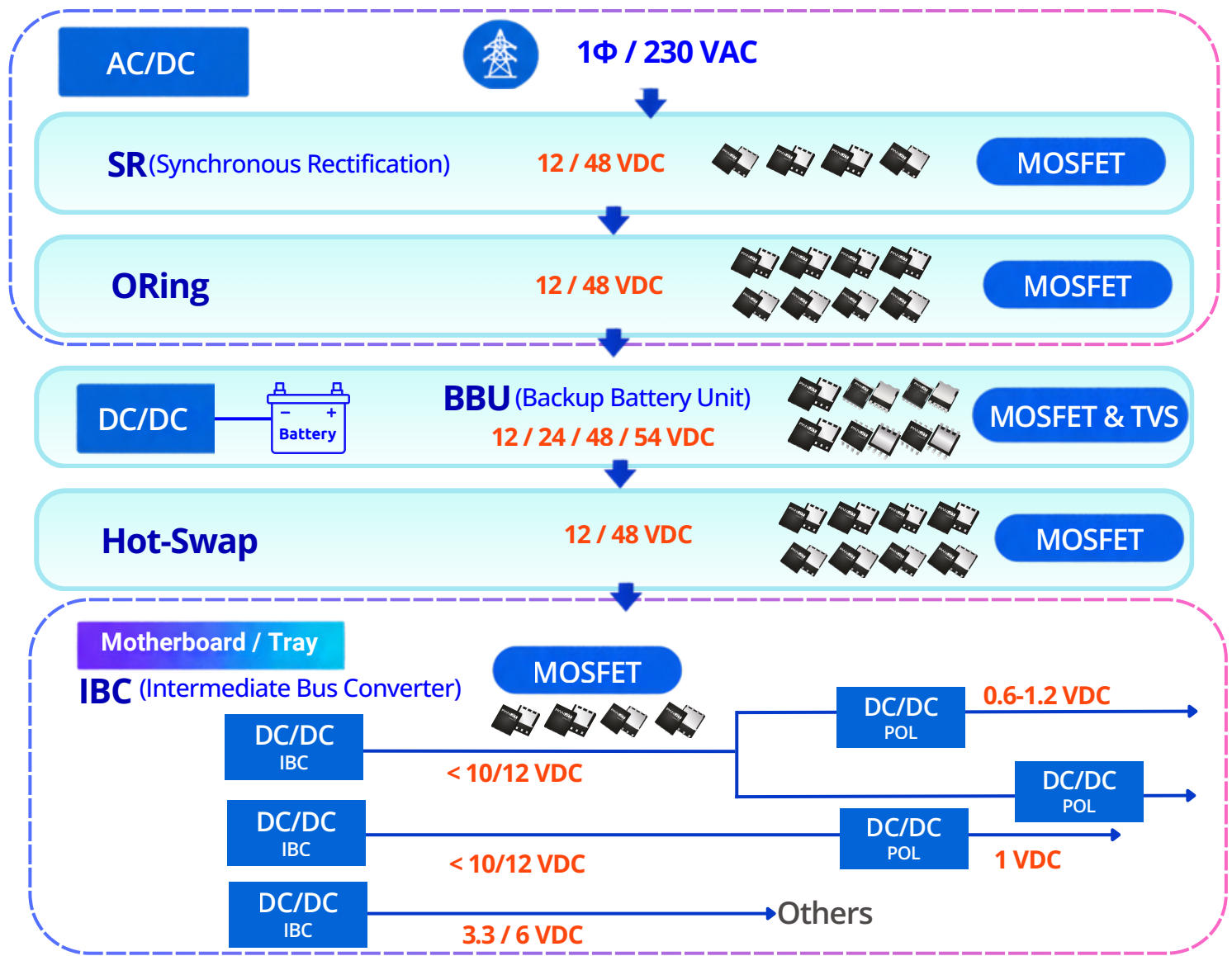


AI Server Rack Power Solutions

MOSFET and TVS for Efficient and Reliable Power Delivery



➤ Power Solutions from AC Input to AI Compute



➤ Recommended MOSFET Solutions

MOSFET Selection Guide

Select the MOSFET based on the system bus voltage and application. Low-FOM devices help minimize conduction and switching losses in synchronous rectification, ORing, BBU and IBC applications, while Wide-SOA devices are designed to withstand inrush current and linear-mode stress in hot-swap applications.

Application	Part Number	Bus /Rail	V _{DS}	R _{DS(on)} Typ.	Feature
		VDC	V	mΩ	
Synchronous Rectification	PSMWF005N04NS3-AU	12	40	0.47	Low FOM
Synchronous Rectification	PJQ55600C-AU*	12	60	1.10	Low FOM
Synchronous Rectification	PJQ55800C-AU	48	80	1.72	Low R _{DS(on)}
ORing	PJQ5512S6C-AU	12	25	0.47	Low R _{DS(on)}
ORing	PJQ5516S6C-AU	12	30	0.66	Low R _{DS(on)}
ORing	PJQ5514S6C-AU	12	30	0.51	Low R _{DS(on)}
ORing	PJQ55800C-AU	48	80	1.72	Low R _{DS(on)}
BBU	PSMJC011N04NS3-AU*	12	40	0.95	Low FOM
BBU	PSMM007N04NS3-AU*	12	40	0.55	Low FOM
Hot-Swap	PJQ54304UC-AU	12	30	0.73	Wide SOA
Hot-Swap	PJQ65702U3-AU	48	100	1.80	Wide SOA
IBC	PSMWF005N04NS3-AU	<10 / 12	40	0.47	Low FOM

➤ Recommended TVS Solutions

TVS Selection Guide

Select the TVS according to the maximum operating voltage of the protected bus and the required surge capability. Ensure that VRWM is above the maximum continuous bus voltage, while VC remains within the allowable voltage limit of downstream components. Choose between the 5 kW and 8 kW series based on the expected surge current and protection requirement.

Protection Application	Part Number	V _{RWM}	Power Rating	IPP	VC
		V	kW	A	V
Mainboard / PCIe / GPU Power Input	5KMC12AS	12	5	252	19.9
Mainboard / PCIe / GPU Power Input	8KHMC12A*	12	8	402.1	19.9
Edge AI / Control / Auxiliary Power	5KMC24AS	24	5	129	38.9
Edge AI / Control / Auxiliary Power	8KHMC24A*	24	8	205.7	38.9
Rack Bus / DC-DC Power Input	5KMC48AS	48	5	64.7	77.4
Rack Bus / DC-DC Power Input	8KHMC48A*	48	8	103.4	77.4
Rack Bus / DC-DC Power Input	5KMC54AS	54	5	57.5	87.1
Rack Bus / DC-DC Power Input	8KHMC54A*	54	8	92	87.1

*Under development with samples available
For detailed specifications, please refer to the datasheet