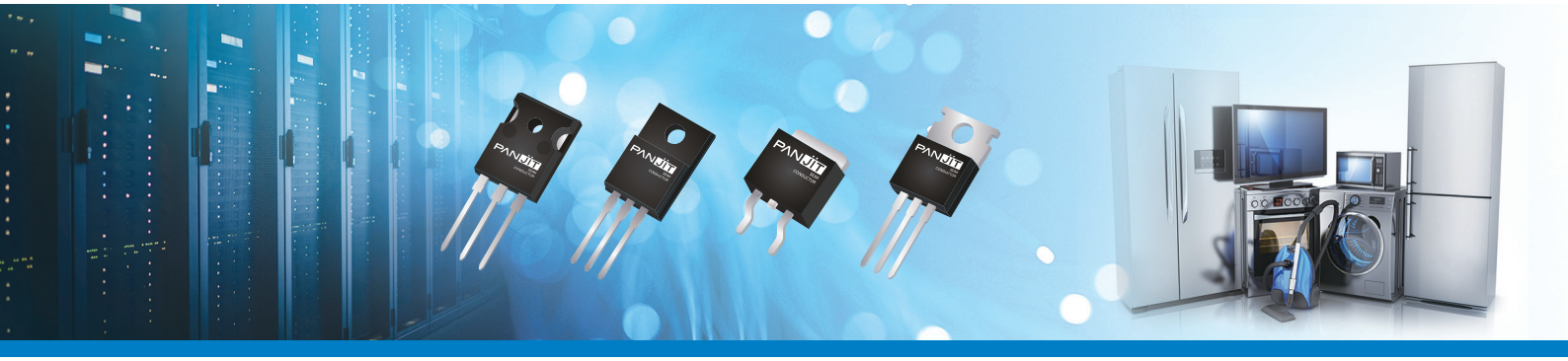
Power Supply Unit (PSU)

Super Junction MOSFETs Perform High Power System Efficiency and Outstanding Product Reliability



Power Supply Unit (PSU) is the power conversion system widely applied for commercial and industrial systems, such as AC-DC or DC-DC converter. With the features of enabling to provide easy and efficient design solution, PANJIT's first generation Super Junction (SJ) MOSFETs can be a better solution for such PSU systems and also for various topologies of DC-DC converter and Power Factor Correction (PFC) circuits. Moreover, one of the key features of PANJIT SJ MOSFETs is its excellent di/dt ruggedness of the body diode and optimized switching performance for achieving great EMI performance. Along with the outstanding performance, engineers or R&D developers can embrace advantages of a longer lifetime and easy-design for their systems with PANJIT SJ MOSFETs.

Features

- Robustness of Body Diode capability
- Low FOM
- High Efficiency
- High Quality
- Good EMI performance.

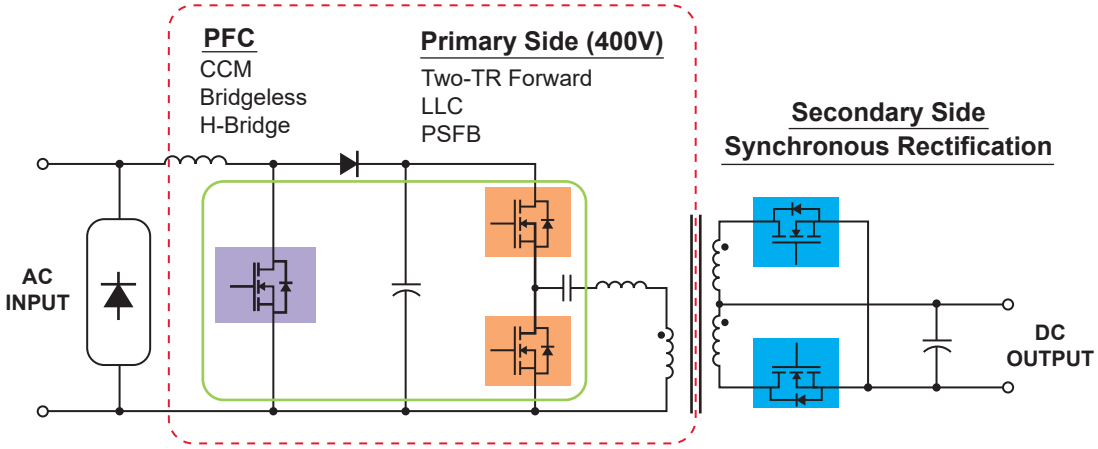
Target Application

- Telecommunications
- Server Data centers
- PC Power Supplier
- Home Appliance
- Gaming Adapters
- PD Charger

Super Junction for PSU Block Circuit

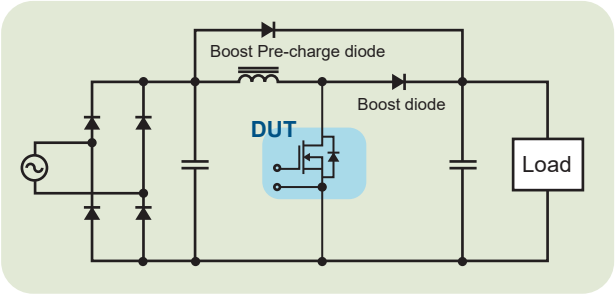
- PFC circuit for AC/DC converter
- Primary side switching for DC/DC converter

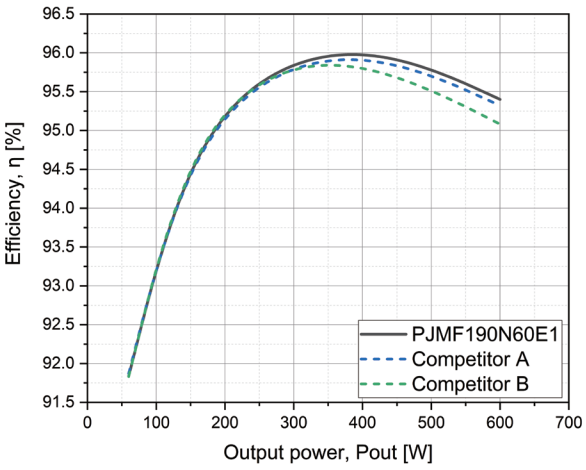
PSU Block Diagram

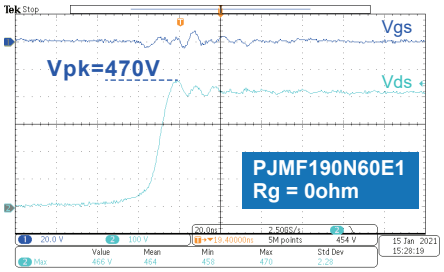


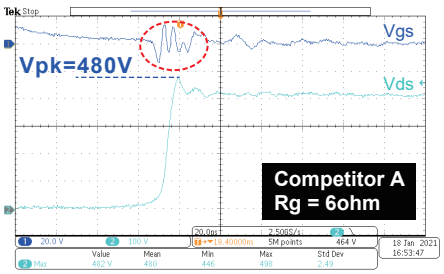
System Evaluation

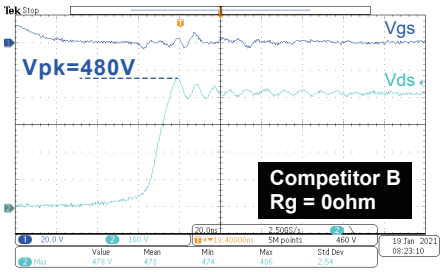
(600W CCM PFC, Vin = 110Vac/60Hz, Vout = 400V, Fsw = 65kHz with voltage spike < (BV*80%)











Robustness Capability of Body diode maximum di/dt

Body diode di/dt test @ IF = 10A

	500A/us	600A/us	700A/us	800A/us	900A/us	1000A/us
PJMF190N60E1	Pass	Pass	Pass	Pass	Pass	Pass
Competitor A	Pass	Fail	-	-	-	-
Competitor B	Pass	Pass	Pass	Pass	Pass	Pass

Super Junction MOSFET Devices Line-Up

Under Development

Series	BV (V)	$R_{DS(on)}$ (mΩ)	TO-247	ITO-220AB-F	TO-252AA	TO-220AB-L
SJ MOSFET 600V	600	40	PJMH040N60EC	-	-	-
		70	PJMH070N60EC	-	-	-
		99	PJMH099N60EC	-	-	-
		120	PJMH120N60EC	PJMF120N60EC	-	PJMP120N60EC
		190	PJMH190N60EC	PJMF190N60E1	-	-
		280	-	PJMF280N60E1	-	-
		360	-	PJMF360N60EC	PJMD360N60EC	PJMP360N60EC
		580	-	PJMF580N60E1	PJMD580N60E1	-
		900	-	PJMF900N60EC	PJMD900N60EC	PJMP900N60EC
SJ MOSFET 650V	650	130	-	PJMF130N65EC	-	PJMP130N65EC
		280	-	PJMF280N65E1	-	-
		390	-	PJMF390N65EC	PJMD390N65EC	PJMP390N65EC
		600	-	PJMF600N65E1	PJMD600N65E1	-
		990	-	PJMF990N65EC	PJMD990N65EC	PJMP990N65EC

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