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Efficiency Improvement for Switching Power Supply at Light Load Using DSP Control

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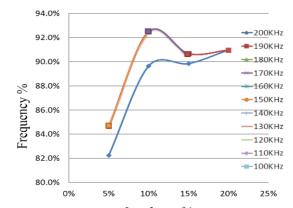
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High Link Voltage and High Fixed Switching Frequency in AC/DC and DC/DC circuits

Diode Loss PFC AC/DC DC/D **本**D1 **本**D2 Input Voltage AC Output Range: Voltage: AC 90-265V **DC 12V** IIQ1 Q2 Error PFC Amplification Control Un Control Unit Server Power Supply Circuit **MOSFET Loss** Link Voltage: $265*\sqrt{2} = 390V$

cause unnecessary power losses.



Load rate %
Optimization of PWM Frequency of BLPFC AC/DC
at a Load Rate of 5% to 20%

We find that **lowering link voltage** and **choose appropriate frequency** corresponding to each load range alleviate power losses.