Peak Input Current
Current limit = 0.075V/0.003ohm = 25A
Inrush limit = 0.110V/0.003ohm = 36.7A
Circuit breaker = 0.160V/0.003ohm = 53.3A

Inrush Limiting
T=333μF×6V×36.7A×78μA
Check MOSFET SOA curve for 10V, 40A, 100μs

Snubber Power Dissipation
P=(12°C)Vp/Vn×1/2×Fsw
Where Vp and Vn are the positive and negative voltage spikes across the snubber resistor
Use Vp=Vn=Vin as initial approximation.
P=330μF×6V×2×300kHz×7.32mW

12Vout @ 3A, 6A Peak for 10ms

300kHz Fsw
Fsw=P×10³/30V×300kHz=750μs

Voltage spikes across the snubber resistor.
Where Vp and Vn are the positive and negative

\[ P = \frac{1}{2} C (V_p^2 + V_n^2) \times F_{sw} \]

Use Vp=Vn=Vin as initial approximation.

\[ P = \frac{1}{2} \times 330 \mu F \times 6 V \times 2 \times 300 kHz \times 7.32 mW \]

\[ 12V_{out} \]
Assembly Note

These assemblies are ESD sensitive. ESD precautions shall be observed.

Assembly Note

These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.

Assembly Note

These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.
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