DC20v

Vin

FB

DRVcc

R3
300k

U3

R7
PWMdrive

EN/SHDN **LT** OUT

100

R4
45k

LTC4441-1

PWMin

IN

SGND

PGND

PWM

PULSE(0 2.5 0 0 0 7.5u 10u)

```
.MODEL R6009ENX NMOS
+ LEVEL=3
+ L=2.0000E-6
+ W=1
+ KP=15.407E-6
+ RS=10.000E-3
+ RD=0
+ VTO=4.5552
+ RDS=6.0000E6
+ TOX=2.0000E-6
+ CGSO=500p
+ CGDO=2p
+ CBD=0
+ RG=0
+ N=2
+ RB=1.0000E-3
+ GAMMA=2.5
+ ETA=0.00004
+ KAPPA=0
+ NFS=28G
```

DCin

L1
3.135m

Vin

D1
RFUS20TF6S

Vout

DCin

R1
2k

DC20v   PWMdrive

M1
R6009ENX

C3
0.47μ

C1
0.47μ

C2
0.47μ

RLoad1
247

100

R2
500

```
.tran 0 .02 0
.meas voutmax max v(vout)
.meas voutavg avg v(vout) FROM 0.015 TO 0.02
.meas ic_avg avg I(C1) FROM 0.015 TO 0.02
.meas iRload_avg avg I(RLoad) FROM 0.015 TO 0.02
.meas iL_avg avg I(L1) FROM 0.015 TO 0.02
```

```
.meas settle find V(Vout) when abs(v(Vout)- voutavg)/voutavg=0.05 fall=last
.meas rise time TRIG V(Vout)=(V(DCin)+0.1*(voutavg- V(DCin))) TD=0.2u RISE=1 TARG V(Vout)=(V(DCin)+0.9*(voutavg- V(DCin))) TD=0.2u RISE=1
.meas efficiency avg -V(Vout)*I(Rload)/V(DCin)/I(DCin) FROM 0.015 TO 0.02
```