2010－11－15

Norman Day

IGBT

IGBT

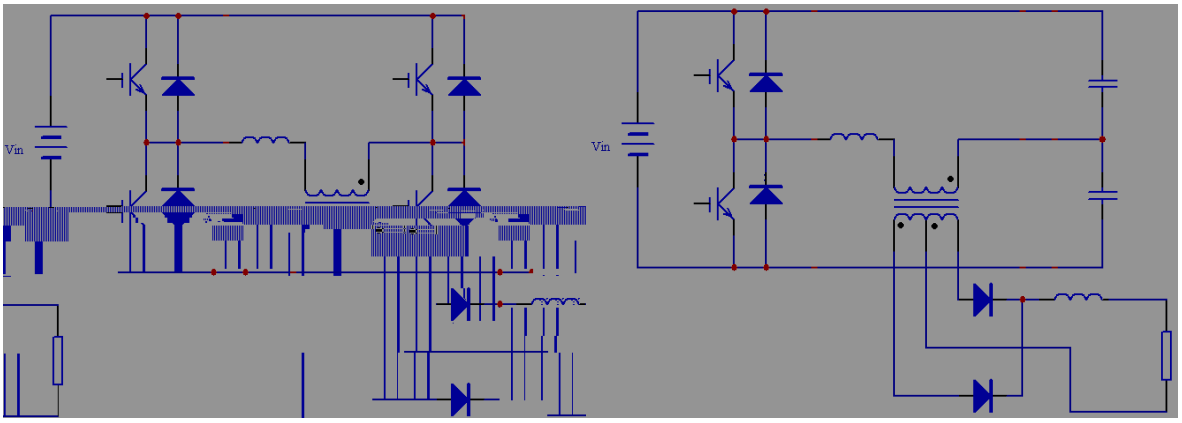
,

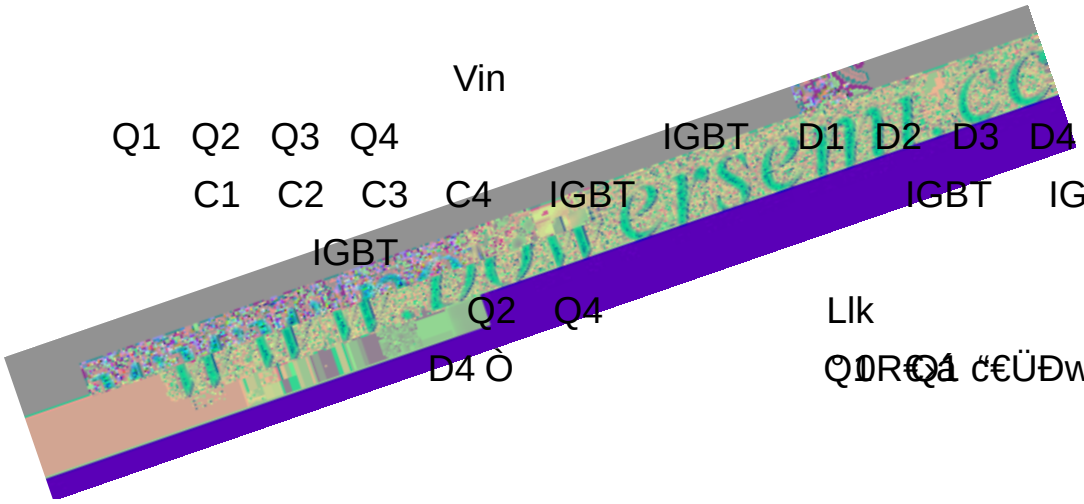
PWM

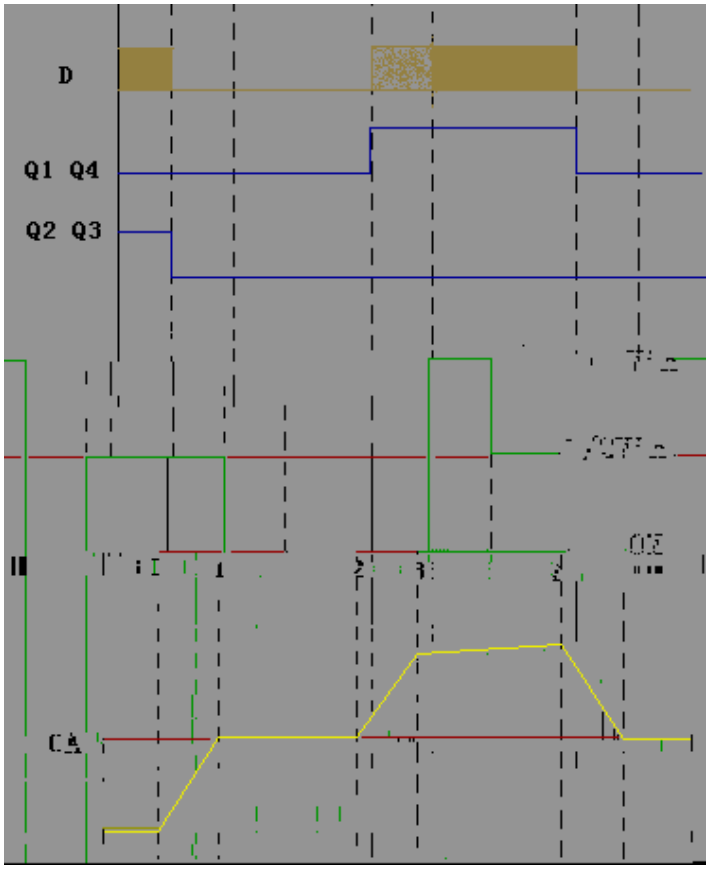
4

IGBT

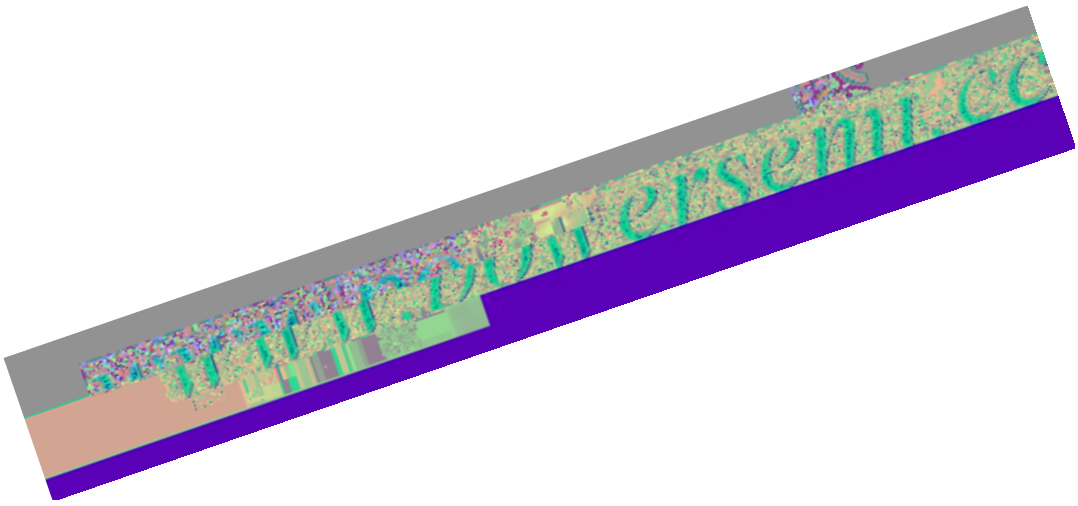
IGBT




Vin
Q1 Q2 Q3 Q4
IGBT D1 D2 D3 D4 IGBT
C1 C2 C3 C4 IGBT
IGBT IGBT IGBT
Q1
Q3
Q2 Q4
Llk
D4 Ò



IGBT Q1 —

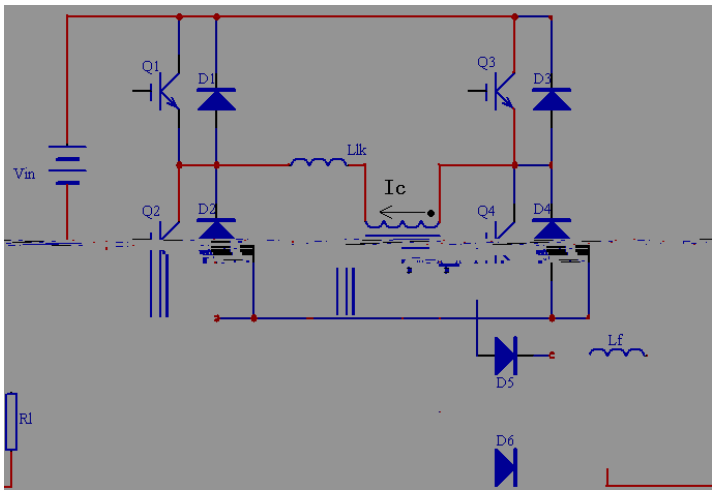


If D5 D6

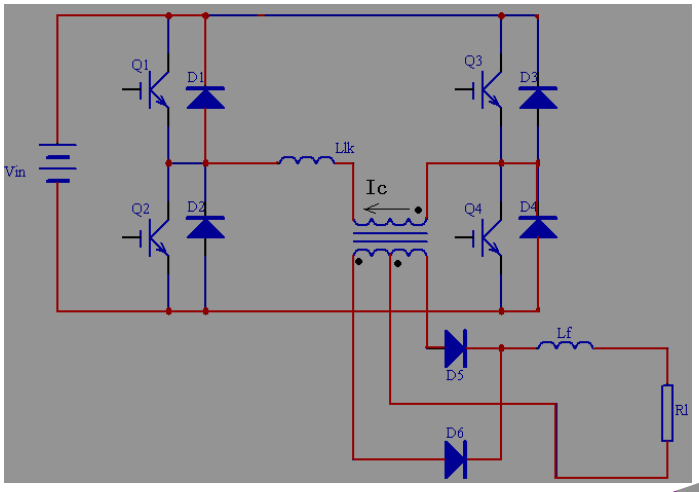
D5

Llk D1 Q1

Ic $\frac{di}{dt} = \frac{Vin}{Llk}$



t0



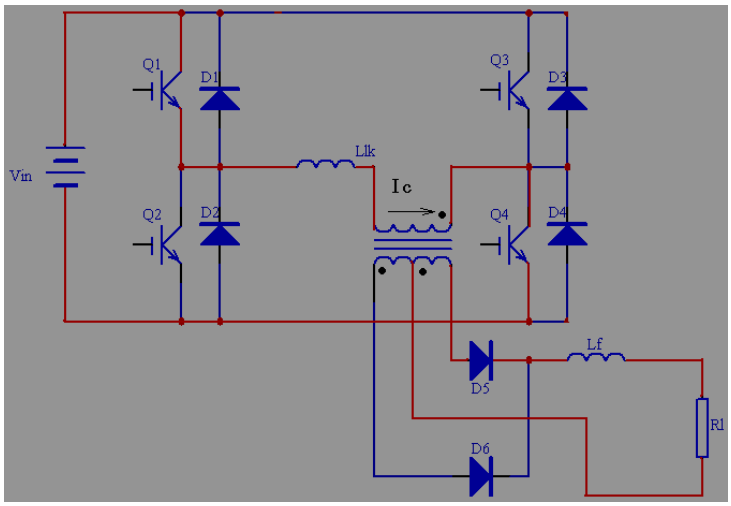
t0—t1

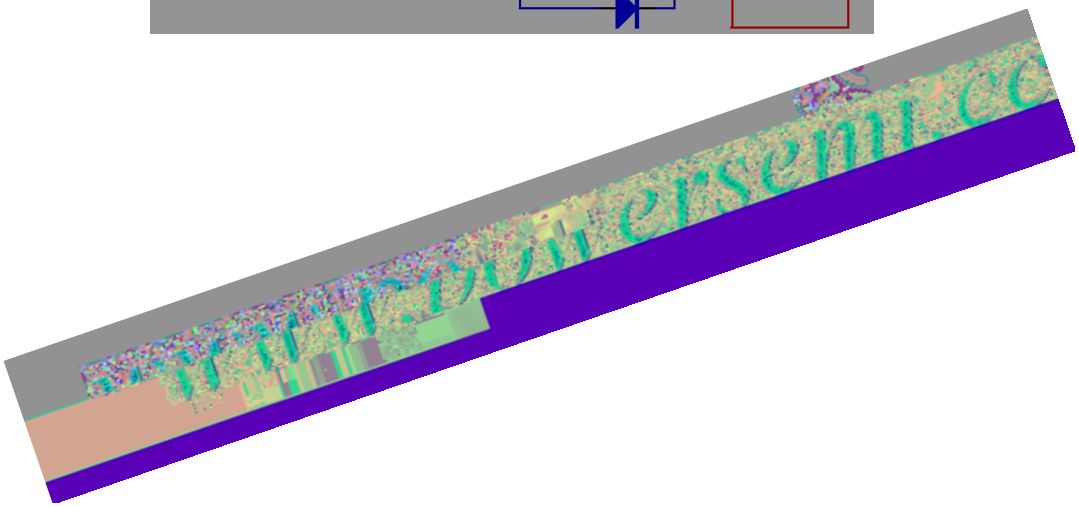
t1—t2

t1 D1 D4 Llk

Q1 Q2 Q3 Q4 D1 D2 D3 D4 Q1 Q2

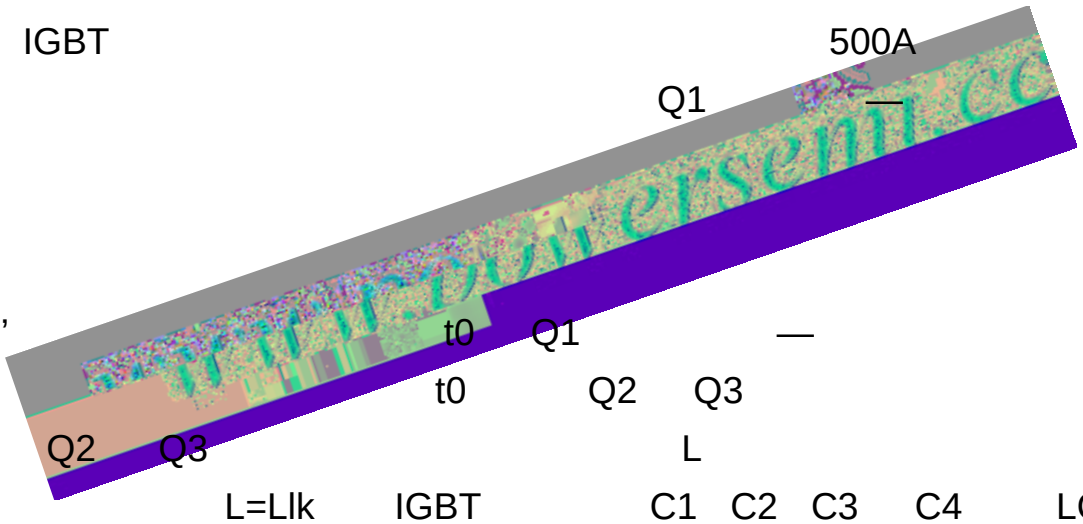
Q1 1/2Vin Ic


Q1
D1
Q3
D3
Vin
Llk
Ic
Q2
D2
Q4
D4
Lf
D5
R1
D6



IGBT 500A

Q1 —



t0—t1’

t0—t1’ t0 Q1 —

t1’ t0 Q2 Q3

t0—t1’ Q2 Q3 L

Llk L=Llk IGBT C1 C2 C3 C4 LC

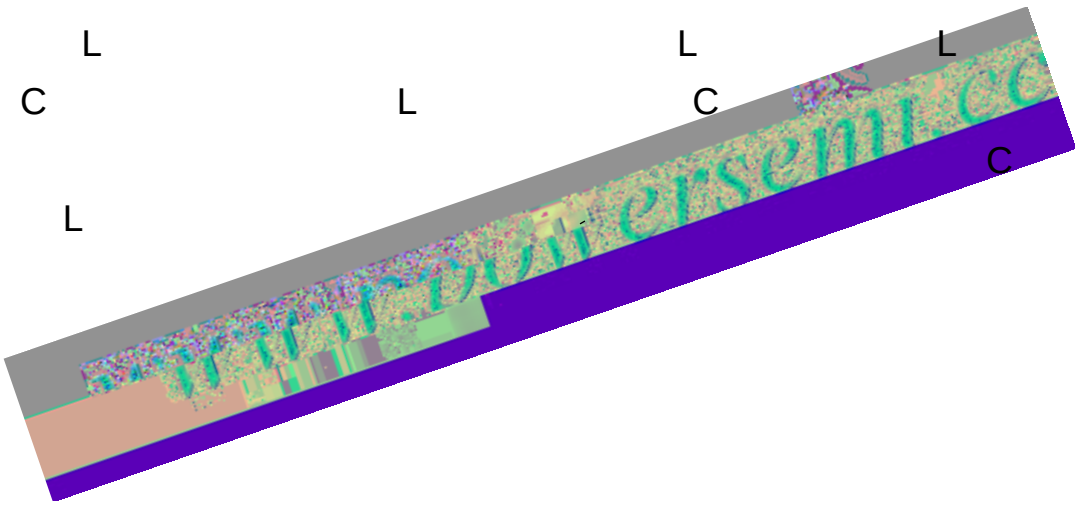
LC L C

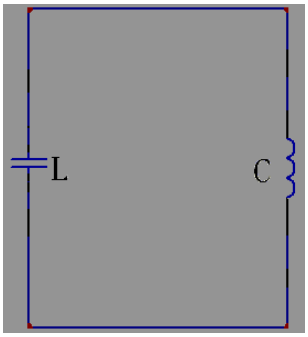
C , L L L

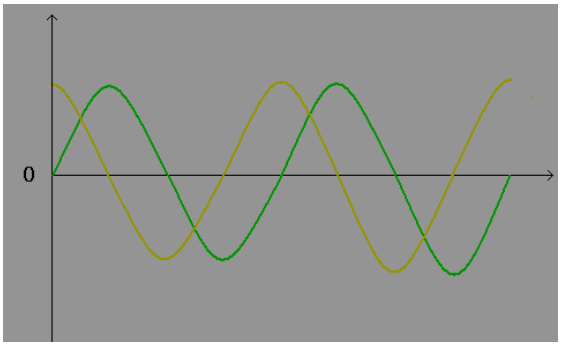
C L C

LC C

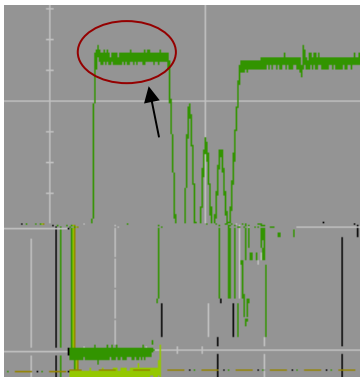
L

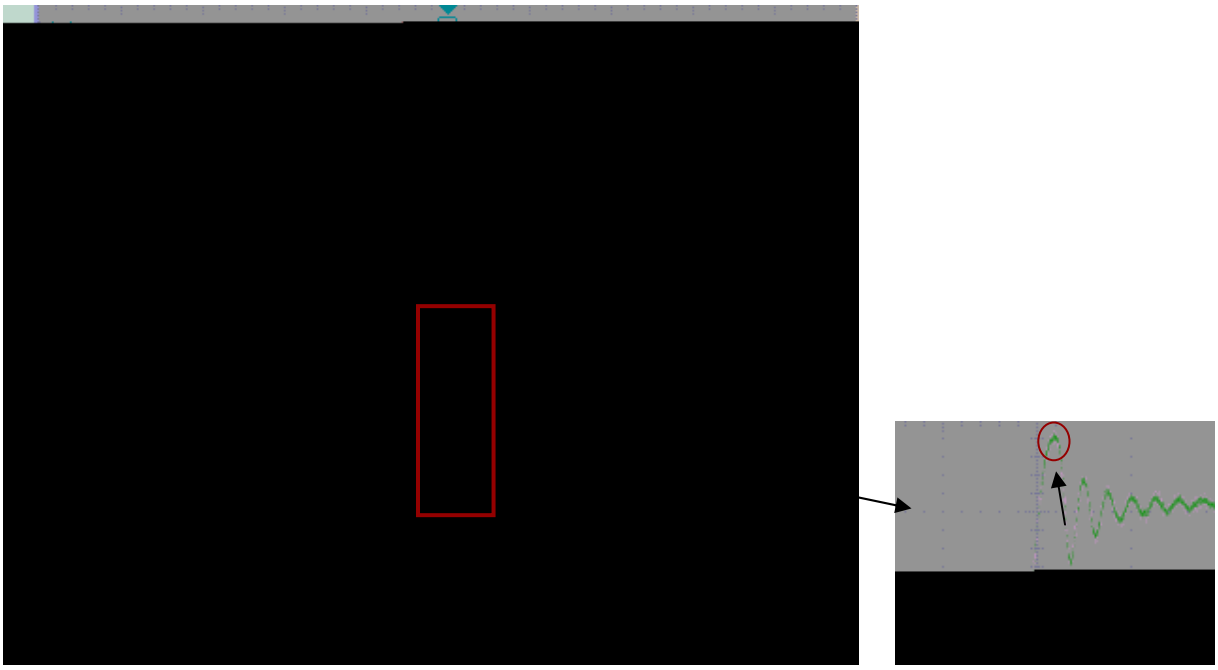






LC







1.IGBT

EMI

EMI

2.IGBT

IGBT

IGBT

3. IGBT IGBT

IGBT IGBT

IGBT

4.

PWM IGBT

IGBT

5.

SOA

6.

PWM

IGBT

IGBT