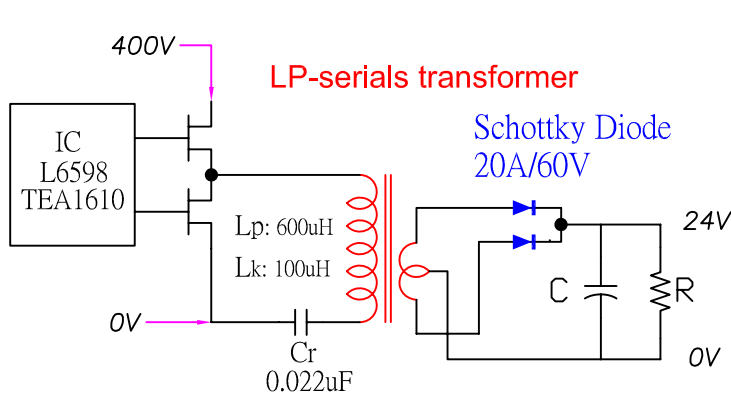
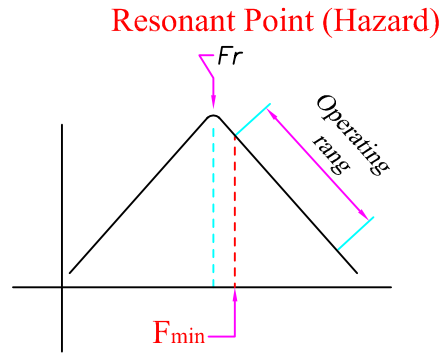


Half Bridge Resonant Circuit 半橋共振電路 (Hidden LC)



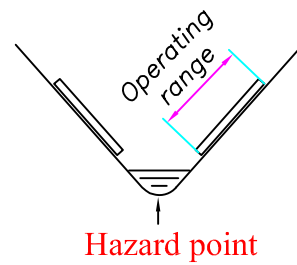
L_k : Leakage Inductance
 C_r : Capacitance for Resonant



F_r : Resonant Frequency
 F_{min} : Lowest Operating Frequency

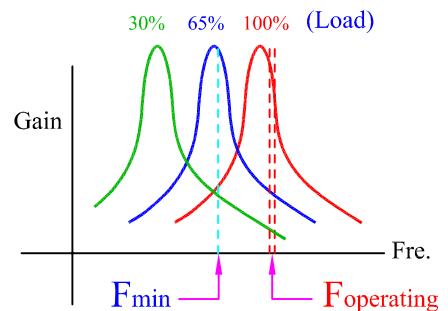
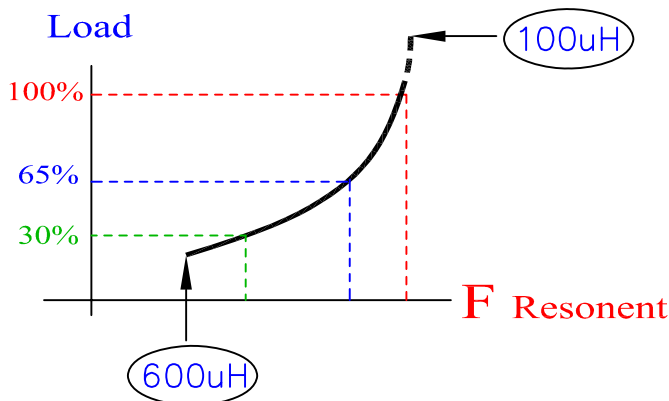
「共振」即非「共振」
是名「共振」

鼎邊趨



Varied Load VS. Varied Resonant Frequency (Simulation)

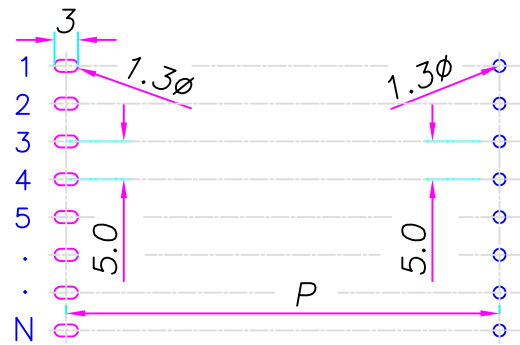
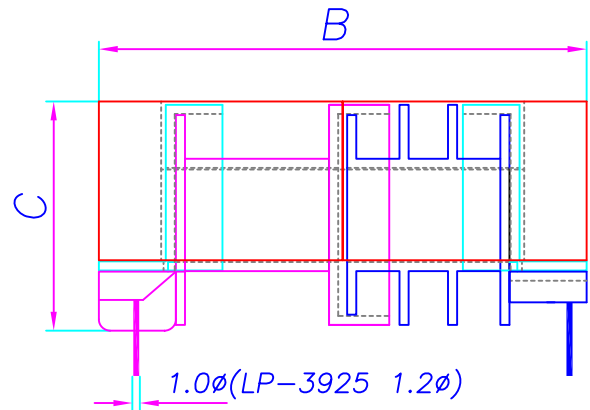
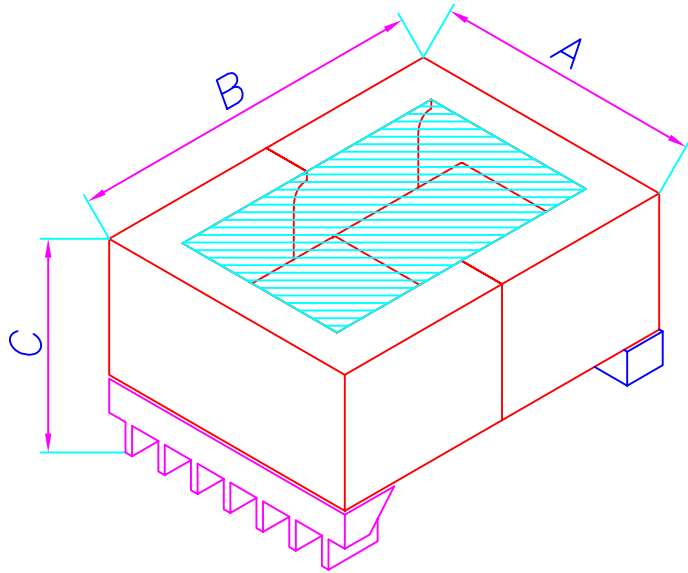
Physical Domain >> Electrical Domain



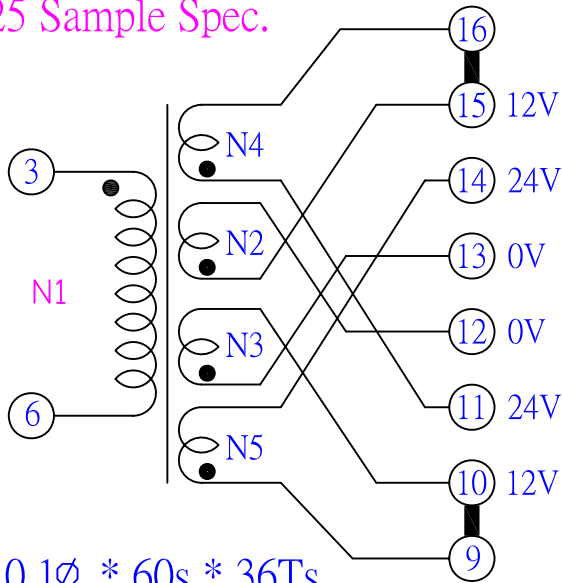
Inductor can be an active components

電感器不只是被動零件

Low Profile structure & Detachable Bobbin for Lk adjustment



LP-3925 Sample Spec.



N1: 0.1φ * 60s * 36Ts
 N2: 0.1φ * 270s * 2Ts
 N3: 0.1φ * 270s * 2Ts
 N4: 0.1φ * 240s * 2Ts
 N5: 0.1φ * 240s * 2Ts

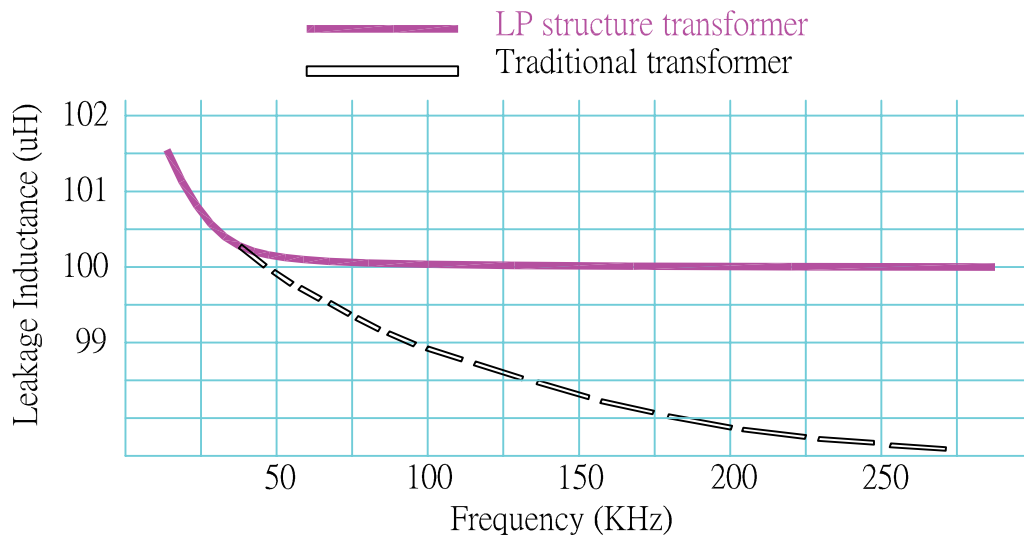
***N2,N3 Bifilar Winding
 ***N4,N5 Bifilar Winding

LN1: 600uH
 Lk : 100uH

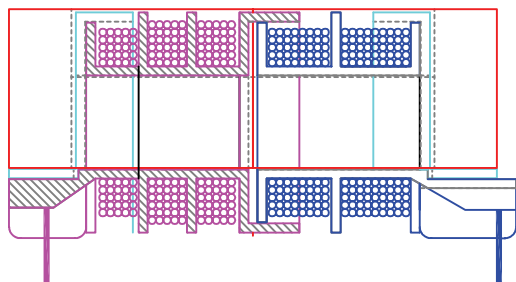
UNIT: mm

Model	LP-2920	LP-3320	LP-3920	LP-3925
A	29.0	33.0	40.0	40.0
B	39.0	47.0	47.0	48.0
C	20.0	20.0	22.0	25.0
N	6	7	8	8
P	33.0	37.0	39.5	41.0
CORE Ae mm ²	117	133	142	173

The Key Point of Resonant Transformer 不隨頻率起舞的漏電感



LP transformer is best structure for resonant



P1 : 0.2 ϕ x8sx36Ts
S1 : 0.2 ϕ x20sx4Ts (Bifila Winding)
S2 : 0.2 ϕ x20sx4Ts
Lp : 600uH
Lk : 100uH (20KHz~200KHz)

- ** The best solution = Section bobbin and Litz wire winding **
- ** M & M = Multi strand and Multi groove **

The Weakpoint of Resonant Circuit

- ** Very poor Line Regulation **
- ** Pair with PFC to hide its shame **

QP + LP makes Resonant Circuit Perfect