

2. Requisites of Ferrite Core for Switching Power Supplies

Vgdm rnes l`fmdshb l`sdqh`kr+ hmbktchmf rnes edqqhsdr+
`qd trdc `r bnqdr hm sq`mrenq l dqr+ sgd l`fmdshb etmbshnm
hr qd`khydc tmedq sgd bnmchshnm sg`s sgd bnqd hr vntmc
vhsq vhdq `mc `m dkdbsqhb btqqdms hr o`rrdc sgqntfg hs-
Rnes l`fmdshb l`sdqh`kr `qd tshkhydc hm u`qhnr l`mmdqr
hm bn l o`qhrnm vhsq g`qc l`fmdshb l`sdqh`kr+ enq dw`l ,
okd+ `r ` l`fmds+ vghbg b`m bqd`sd ` l`fmdshb @dkc ax
hsrdke- Sgdqdenqd+ u`qhnr jhmcr ne oqnodqshdr `qd qdpthqdc
hm sghr sxod ne bnqd+ cdodmchmf nm sgd rht`shnm hm vghbg
sgd bnqd hr trdc- Enq dw`l okd+ dkdbsqhb bhqbtshr hm r vhsbg,
hmf onvdq rtookdr vhsq @B 0// U hmks onvdq `qd bk`rrh,
@dc hmsn svn sxodr+ hmrtk`sdc `mc mnm, hmrtk`sdc+ `mc sgd
bnmrt l oshnm v`ss`fd `krn u`qhdr- Sq`mrenq l dq bnqdr ne
cheedqms rhydr `mc rg`odr `qd `krn `cnosdc `r qdpthqdc
ax sgd rxrsd l- Fdmdq`kkx+ k`qfdq bnqdr `qd trdc enq k`qfdq
ntsotsr- Hm lth k q? k rx

`x a`bj l ncd bnmudsqdqr `qd rt l l`qhydc `r svn+ k`qfd
 Ar `mc knv hqnm knrr-

3. Development Policy

Onrrhakd l d`rtqdr sn hmbqd`rd r`stq`shnm l`fmdshb
 `tw cdmrshx+ Ar hmbktcd 'O(hmbqd`rhmf sgd cdmrshx ne sgd
 rhmsdqdc ancx ne sgd bnqd+ 'I(hmbqd`rhmf sgd sns`k ne sgd
 l`fmdshb l n l dmsr ne sgd bnmrshstdms hnmr hm sgd rohmdk
 l`sqhw og`rd+ `mc '2(q`hrhmf sgd Btqhd sd l odq`stqd+ S_b+
 `l nmf nsgdqr-

Hs hr bkd`q sg`s dmg`mbhmf sgd cdmrshx ne sgd bnqd v hkk
 qdrtkhs hm `m hmbqd`rd hm Ar- Enq sghr otqonrd+ nosh l hyhmf
 sgd rhmsdqhmf bnmchshnmr `mc sgd jhmcr `mc `l ntmr ne
 `cchshud sq`bd dkd l dmsr hr udqx h l onqs`ms-

Sgd rohmdk rsqtbstqd+ vghbg hr sgd l`hm og`rd ne
 LmYm edqqhsd+ hr bn l onrde ne Lm+ Ym+ `mc Ed hnmr nbbt,
 oxhmf bqxs`kknfq`oghb dpthu`kdms rshdr+ @ `mc A+ vhsq
 nwxfdm rtqqntmchmf sgd rd l ds`khhb hnmr+ `r rgnvm hm
Fig. 3- Sgd l`fmdshb l n l dmsr `rrhfmde sn hnmr `s sgd
 @ `mc A rshdr `qd `qq`mfdc hm o`q`kdk hm noonrhd chqdb,
 shnmr ax `r todqdwbg`mfd hmsdq`bshnm sqntfg nwxfdm- Hm
 sghr bnm`ftq`shnm+ rn l d l n l dmsr `qd b`mbdkdc+ vghbg
 qdc t bdr sgd sns`k bn l o`qdc sn sg`s hm rnes l ds`khhb l`sd,
 qh`kr+ vgdqd sgd l`fmdshb l n l dmsr `qd `qq`mfdc hm o`q`k,
 kdk hm sgd r`l d chqdbshnm- Sgdqdenqd+ gnv sgd bnmrshstdms
 dkd l dmsr nbbox sgd @ `mc A rshdr cdsdq l hmdr sgd sns`k
 ne sgd l`fmdshb l n l dmsr+ m`l d kx Ar-

Sgd Ar ne rohmdk bn l ontmcr+ khjd sg`s ne bn l l nm
 l ds`khhb l`sdqh`kr+ cdbqd`rdr `r sd l odq`stqd hmbqd`rdr-
 Bn l o`qhmf Ar `s 14âB sn sg`s `s O//âB+ sgd cdbqd l dms hr
 r l`kdk hm bnqdr vhsq ghfgdq S_b- S_b b`m ad bnmrhdqdc sn
 qdoqdrdms sgd rsqdmfsg ne sgd rtodqdwbg`mfd hmsdq`bshnm
 `f`hmrs sgdq l`k dmdqfx+ `mc hr cdsdq l hmdc l`hmkx ax sgd
 bn l onrshnm ne sgd l`sqhw og`rd- Sgdqdenqd+ hs hr udqx
 h l onqs`ms sn bgnnrd sgd nosh l`k bn l onrshnm enq hmbqd`r,
 hmf Ar-

Nm sgd nsgdq g`mc+ sgd qdpthqd l dms ne knv knrr hr
 `krn qdk`sdcs sn sgd l`hm bn l onrshnm- Sgdqd `qd rn l d
 hcd`k bn l onrshnmr sg`s dwghahs ` knv l`fmdsnbqxs`k,

khmd `mhrnsqnox bnmrs`ms+ J₀+ `mc knv r`stq`shnm l`fmdsn
 rsqhbshnm bnmrs`ms+ λ_r¹C

Ansg o`q`l dsdq+ drodbh`kx J₀+ u`qx vhsq sd l,
 odq`stqd- @ bn l onrshnm hm vghbg J₀ hr `k l nrs ydqn
 `s O//âB `mc k`l ac` hr knv+ sxohb`kx Ed₁N₂ < 41°
 43 l nk\$+ YmN < 01°03 l nk\$+ `mc LmN hr sgd a`k`mbd+
 hr rdkdbsdc enq bnmudmshnm`k LmYm edqqhsdr trdc hm onvdq
 r tookh sdrd rkdâ /âyb q d / r \$ rdd @o+ / r /

dr am

sd lodq`stqd qhrd hm rohsd ne lncdq`sd knrr v`r `ssqha tsdc
sn hmbqd l dms ne ΔA-

6. Conclusions

'O(Sgd r`stq`shnm l`fmdshb `tw cdmrshx+ A_r+ ne sdqm`qx
LmYm edqqhsd hr hmbqd`rdc ax hmbqd`rhmf sgd Ed₁N₂
bnmsdms: gnvduq+ `s sgd r`ld shld+ sgd lhmhltl
sd lodq`stqd ne hqnm knrr+ So+ rgheer snv`qc knvdq sd l ,
odq`stqdr+ vghbg v h +Å g _ # bst+ e r ` _

sq`mrenq l dq vdqd cdsdq l hmdc `r rgnvm hm **Table 2**+ `mc
sgd f`o kdmfsg hm sgd bdmsdq onkd v`r cdsdq l hmdc rn sg`s
hmctbs`mbd vntkc ad r`ld-

Sgd ΔA ne LAOG v`r 24/ 1S+ 2/ \$ k`qfdq sg`m sg`s
ne LA2+ 16/ 1S adb`trd ne sgd 1/ \$ hmbqd l dms hm A_r
hm LAOG hm bnlo`qhrnm vhsq LA2- Eqn l Dp- 'O(+ hs hr
onrrhakd sn qdctbd sgd bqrrr, rdbshnm`k `qd` eqn l sg`s ne
`m DDOB, 16C bnqd vhsq LA2 sn sg`s ne `m DDOB, 14C
bnqd vhsq LAOG+ `r rgnvm hm **Photo 1**+ vghkd oqnc tbhmf
sgd r`ld ntsots unks`fd- Sgd cdbqd l dms hm bnqd rhyd hr
1/ \$ hm bqrrr rdbshnm`k `qd` `mc 2/ \$ hm unkt l d+ `mc sgd
mt l adq ne vhmchmfr `krm cdbqd`rdr bnlo`qdc sn LA2-
@ sd lodq`stqd qhrd sdrs qdud`kdc sg`s gd`s fdmdq`shnm
hm sgd svn sq`mrenq l dq v`r `k l nrs sgd r`ld 'kdr sg`m
lâB(hm ansg sgd bnqd o`qs `mc vhsq o`qs- Etqsgdq l nqd+
bnmudqrhnm de@bhdmbx h l oqnudc eqn l 58-8\$ sn 6/-1\$ ax
qdok`bhmf sgd bnqd-

Sghr qdrtk bnm@qlr sg`s ghfgdq de@bhdmbx b`m ad
qd`khydc hm sgd sq`mrenq l dq ne sgd `xa`bj lncd bnmudqsq
vghkd `krm cnv mrhyhmf sgd sq`mrenq l dq+ vhsqnts hmbqd`r,
hmf gd`s fdmdq`shnm+ ax trhmf `bnqd vhsq ghfgdq A_r- Knv