

6 B). Inverter –MODULE Spec &Trouble Shooting Chart

In LM500 model , we use 3 kind of panel, each panel have their own inverter spec,therefore following spec is Hannstar-panel Inverter, LG-panel Inverter,CPT-panel Inverter offer from SAMPO-CORPORATION

I.) TROUBLE SHOOTING OF HANNSTAR-INVERTER (part no : 79AL15-6-S) TYPE: L0048 FOR HANNSTAR 15" PANEL

SAMPO CORPORATION

TROUBLE SHOOTING OF HANNSTAR-INVERTER (DIVTL0048-D21- -)

1.SAMPO PART NO .: L0048 ,AOC PART NO.: 79AL15-6-S

2.SCOPE : this is to specify the requirements of the subject parts used in HANNSTAR(HSD150MX41) 15 inch (2 C.C.F.L.) LCD monitor.

3.CONNECTOR PIN ASSIGMENT:

4-1. CON1: INPUT

MODEL NO. : S5B-PH-SM3-TB

| PIN | SYMBOL | DESCRIPTION |
|-----|---------|--------------------------|
| 1 | Vin | Input voltage: 12V |
| 2 | GND | GND |
| 3 | ON/OFF | ON: 3V OFF:0V |
| 4 | Dimming | Dimming range (0V~+5.0V) |
| 5 | Dimming | Dimming range (0V~+5.0V) |

4-2. CON2,CON3 : OUTPUT

MODEL NO. : SM04(4.0)B-BHS-1-TB

| PIN | SYMBOL | DESCRIPTION |
|-----|-----------|--------------------|
| 1 | HV OUTPUT | Input H.V to lamps |
| 2 | RETURN | Return to control |

SAMPO CORPORATION

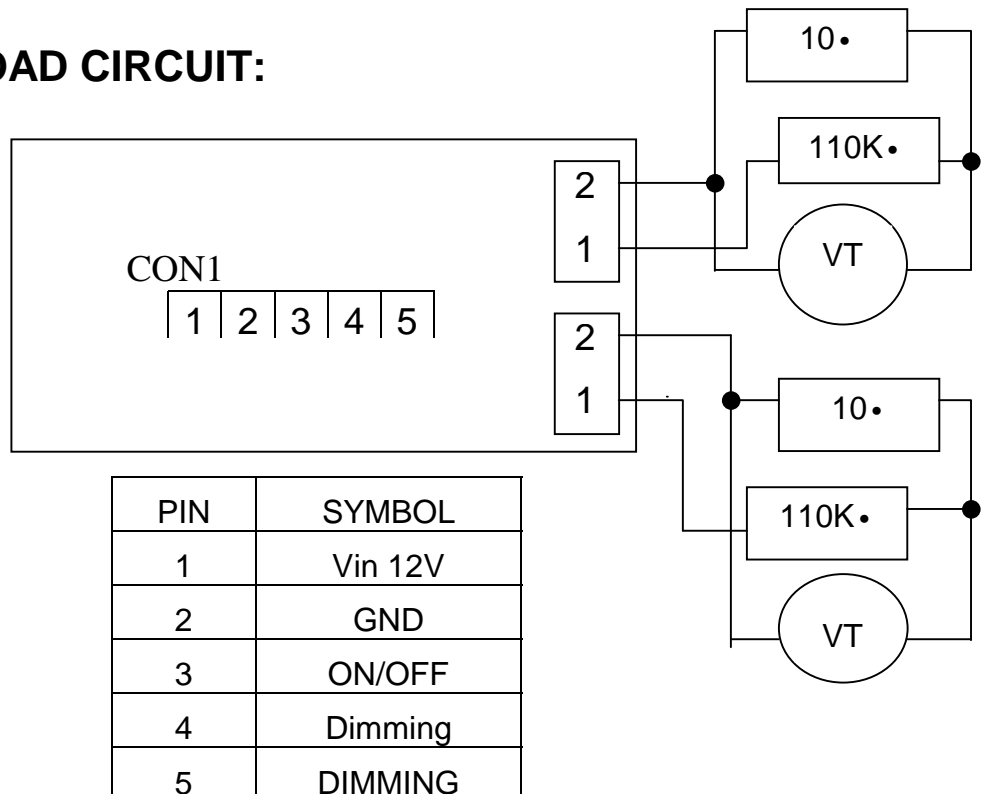
TROUBLE SHOOTING OF HANNSTAR- INVERTER (DIVTL0048-D21- -)

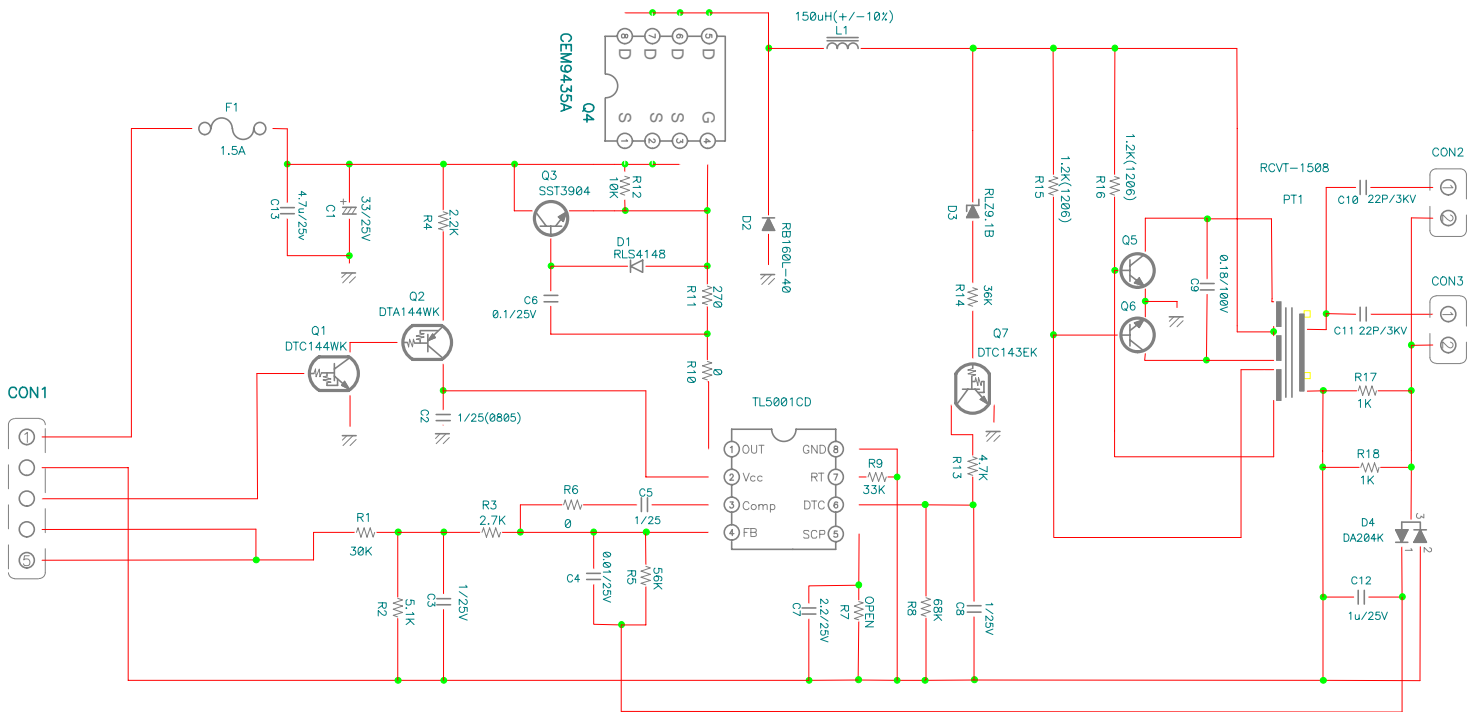
5. FUNCTION SPECIFICATIONS:

The data test with the set of SAMPO, and the test circuit is as below.

| ITEM | SYMBOL | MIN. | TYP. | MAX. | UNIT | REMARK |
|----------------------------------|---------------------------|------|------|------|------------------|--------------------------|
| Input voltage | V _{in} | 10.8 | 12 | 13.2 | V | |
| Input current | I _{in} | -- | 800 | 1300 | mA | |
| output current adj.:0v(min.) | I _{out} (min) | 1.7 | 2.2 | 2.7 | mA | FOR 1 CCFL LOAD:110K• |
| Output current adj.:5 v(max.) | I _{out} (max) | 5.8 | 6.2 | 6.7 | mA | FOR 1 CCFL LOAD:100K• |
| Frequency | F | 40 | 50 | 60 | KHZ | |
| H.V open | V _{open} | 1250 | 1400 | 1550 | V _{rms} | NO LOAD |
| H.V Load | V _{load} | 580 | 680 | 780 | V _{rms} | RL=110K• |

6. FUNCTION LOAD CIRCUIT:





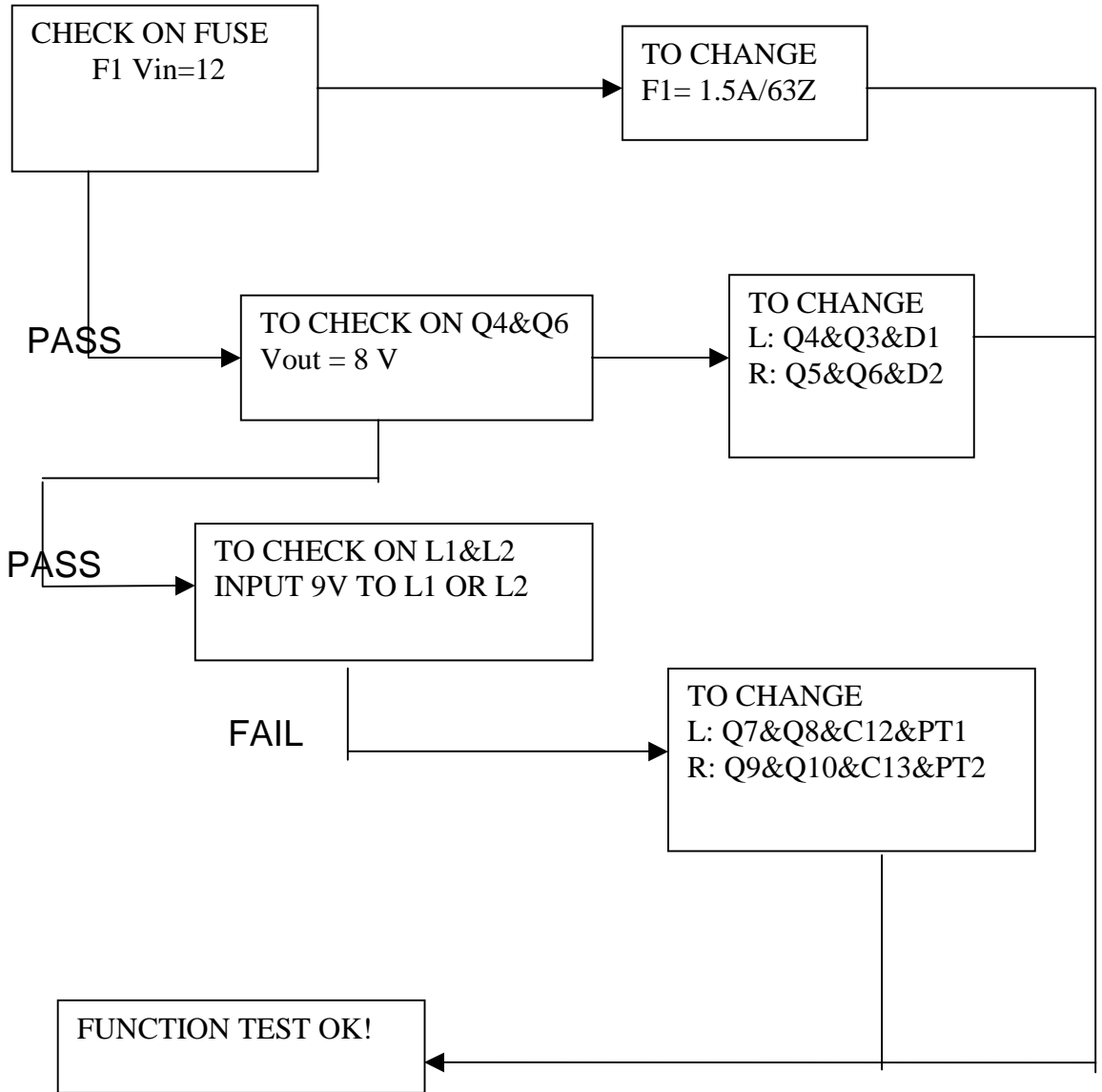
8.PART LIST

8-1 COMPONENTS LIST:

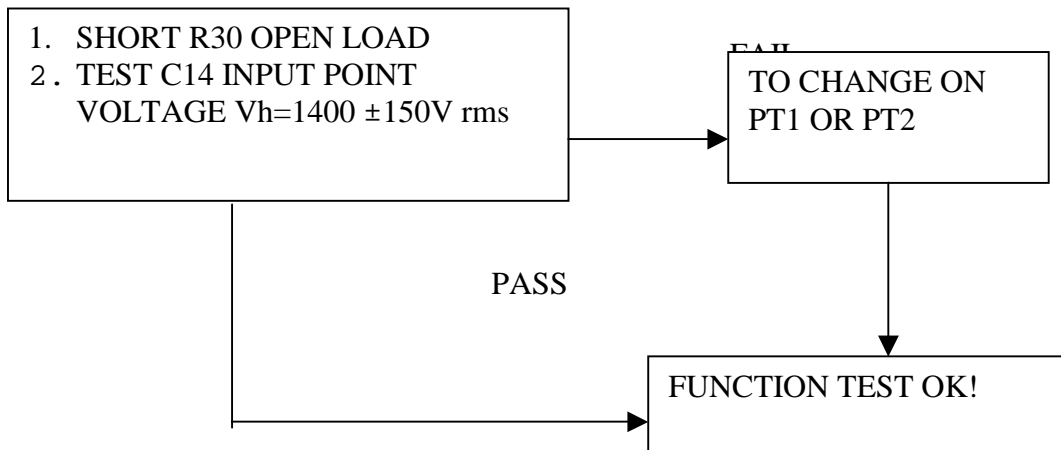
| NO. | REF. | PART NAME | PART NUMBER | QTY | DESCRIPTION | SUPPLIER | REMARK |
|-----|--------|------------|--------------------------------------|-----|---------------------------------|------------------|--------|
| 1. | CON1 | CONNECTOR | VCNCP0015-EJSTA | 1 | S5B-PH-SM3-TB | JST | |
| 2. | CON2,3 | • | VCNCP0012-ZJSTA | 2 | SM02(8.0)B.BHS-1-TB | JST | |
| | | | VCNCP0012-ZGLEA | 2 | GL SM02(8.0)-WH2 | GEAN-LEA | |
| 3. | R1 | RESISTOR | VRMHNVA--303J-A | 1 | SMD 0603 30K• 5% | YAGEO | |
| 4. | R2 | • | VRMHNVA--512J-A | 1 | SMD 0603 5.1K• 5% | YAGEO | |
| 5. | R3 | • | VRMHNVA--272J-A | 1 | SMD 0603 2.7K• 5% | YAGEO | |
| 6. | R4 | • | VRMHNVA--222J-A | 1 | SMD 0603 2.2K• 5% | YAGEO | |
| 7. | R5 | • | VRMHNVA--563J-A | 1 | SMD 0603 56K• 5% | YAGEO | |
| 8. | R6,10 | • | VRMHNVA--R00J-A | 2 | SMD 0603 0• 5% | YAGEO | |
| 9. | R8 | • | VRMHNVA--683J-A | 1 | SMD 0603 68K• 5% | YAGEO | |
| 10. | R9 | • | VRMHNVA--333J-A | 1 | SMD 0603 33K• 5% | YAGEO | |
| 11. | R11 | • | VRMHNVA--271J-A | 1 | SMD 0603 270• 5% | YAGEO | |
| 12. | R12 | • | VRMHNVA--103J-A | 1 | SMD 0603 10K• 5% | YAGEO | |
| 13. | R13 | • | VRMHNVA--472J-A | 1 | SMD 0603 4.7K• 5% | YAGEO | |
| 14. | R14 | • | VRMHNVA--363J-A | 1 | SMD 0603 36K• 5% | YAGEO | |
| 15. | R15,16 | • | VRMHNVA--122F-A | 2 | SMD 1206 1.2K• 1% | YAGEO | |
| 16. | R17,18 | • | VRMCNV8--102F-A | 2 | SMD 0805 1K• 1% | YAGEO | |
| 17. | Q1 | TRANSISTOR | VSTDTC144WKA--A | 1 | SMD DTC144WKA | ROHM | |
| 18. | Q2 | • | VSTDTA144WKA--A | 1 | SMD DTA144WKA | ROHM | |
| 19. | Q3 | • | VSTSST3904----A VSTMMBT3904-A | 1 | SMD SST3904T116 SMD MMBT3904 | ROHM MOTOROLA | |
| 20. | Q4 | • | VSTCEM9435A-----A VSTSI9435DY---A | 1 | SMD CEM9435A SMD SI9435DY | CEM VISHAY | |
| 21. | Q5,6 | • | VST2SD2150----A | 2 | SMD 2SD2150 | ROHM | |
| | Q7 | TRANSISTOR | VSTDTC143EKA--A | 1 | SMD DTC143EKA | ROHM | |
| 22. | C1 | CAPACITOR | VCEATU1EC336M-- | 1 | DIP UGX 33 μF/25V | SANYO | |
| | | | VCEATU1VC476M-- | 1 | DIP UGX 47μF/35V | SANYO | |
| | | | VCEBCU1EC107M-- | 1 | DIP NK-CON 100μF/25V | NK-CON | |
| 23. | C6 | • | VCLRCN1EB104K-A | 1 | SMD 0805 0.1 μF/25V | TDK | |

9. TROUBLE SHOOTING

9-1 NO POWER:

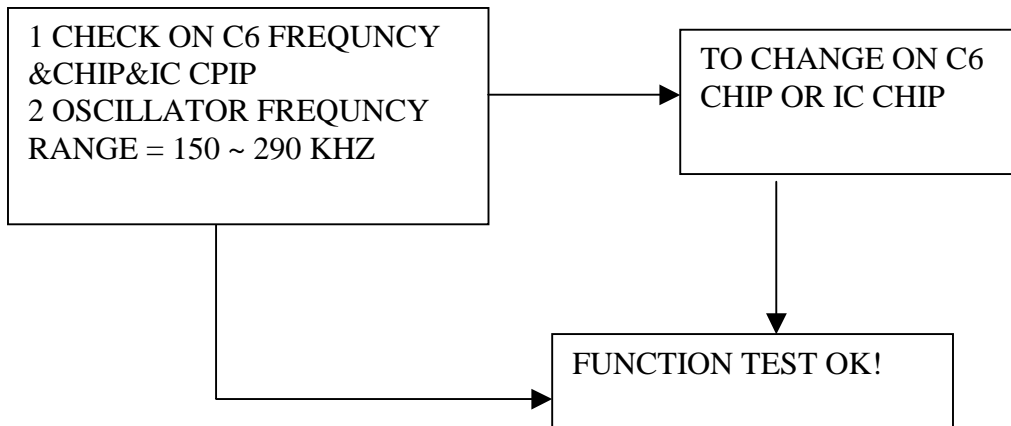


9-2 HIGHT VOLTAGE PROTECTION:

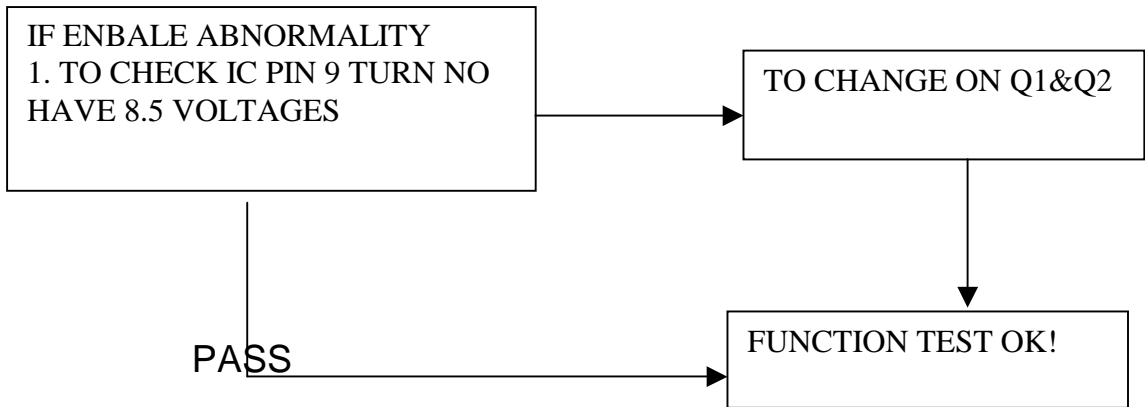


9-3 OUTPUT CURRENT ABNORMALITY:

FAIL



9-4. ENBALE ABNORMALITY:



9-5 DIMMING CONTROL ABNORMALITY:

