

ALIGNMENT INSTRUCTIONS

Microcontroller configuration : Service mode

To switch the TV set into service mode please see instruction below.

- 1 - Select pr. number 91
- 2 - Adjust sharpness to minimum and exit all menu.
- 3 - Quickly press the key sequence : RED - GREEN - menu

To exit SERVICE menu press menu key or Std By key.

In Service Mode press "OK" to stop the microcontroller i.e. the I2C bus is free and the set can be controlled by external equipment. Press "OK" again to allow the microcontroller to control the set again

Microcontroller configuration :

Tuner Option

Option	Tuner maker
DW	DAEWOO / SAMSUNG
PH1	PHILIPS (Video processor AGC)
PH2	PHILIPS (tuner internal AGC)

System Option

Option	System
TF	PAL – B/G
TK	PAL – SECAM B/G-D/K
TU	PAL I/I
TA	PAL – SECAM B/G-L/L'

TV set Alignment

- 1 - G2 alignment
 - Set TV in NORMAL I mode
 - TV in AV mode without video signal ? Black screen.
 - TV preset with WP Red, WP Green and WP Blue equal to 32.
 - TV preset with Black R, Black G equal to 8.
 - Adjust screen volume (on FBT) such that the highest cathode cut-off voltage measured on CRT board, is Vcut-off \pm 5V.

Screen size	Vcut-off
14"	115 V
20" & 21"	125 V

2 - White balance

- Select a dark picture and adjust Black G and Black R to the desired colour temperature.
- Select a bright picture and adjust WP Red, WP Green, WP Blue to the desired colour temperature.

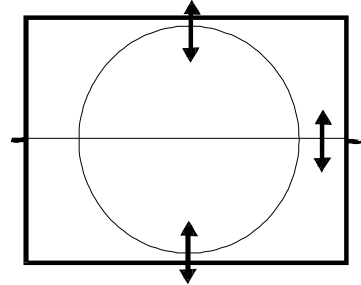
ALIGNMENT INSTRUCTIONS

3 - Focus

- Adjust the Focus volume (on FBT) to have the best resolution on screen.

4 - Vertical geometry

- Adjust the Vertical Amplitude, Shift, S-Correction and Slope to compensate for vertical distortion



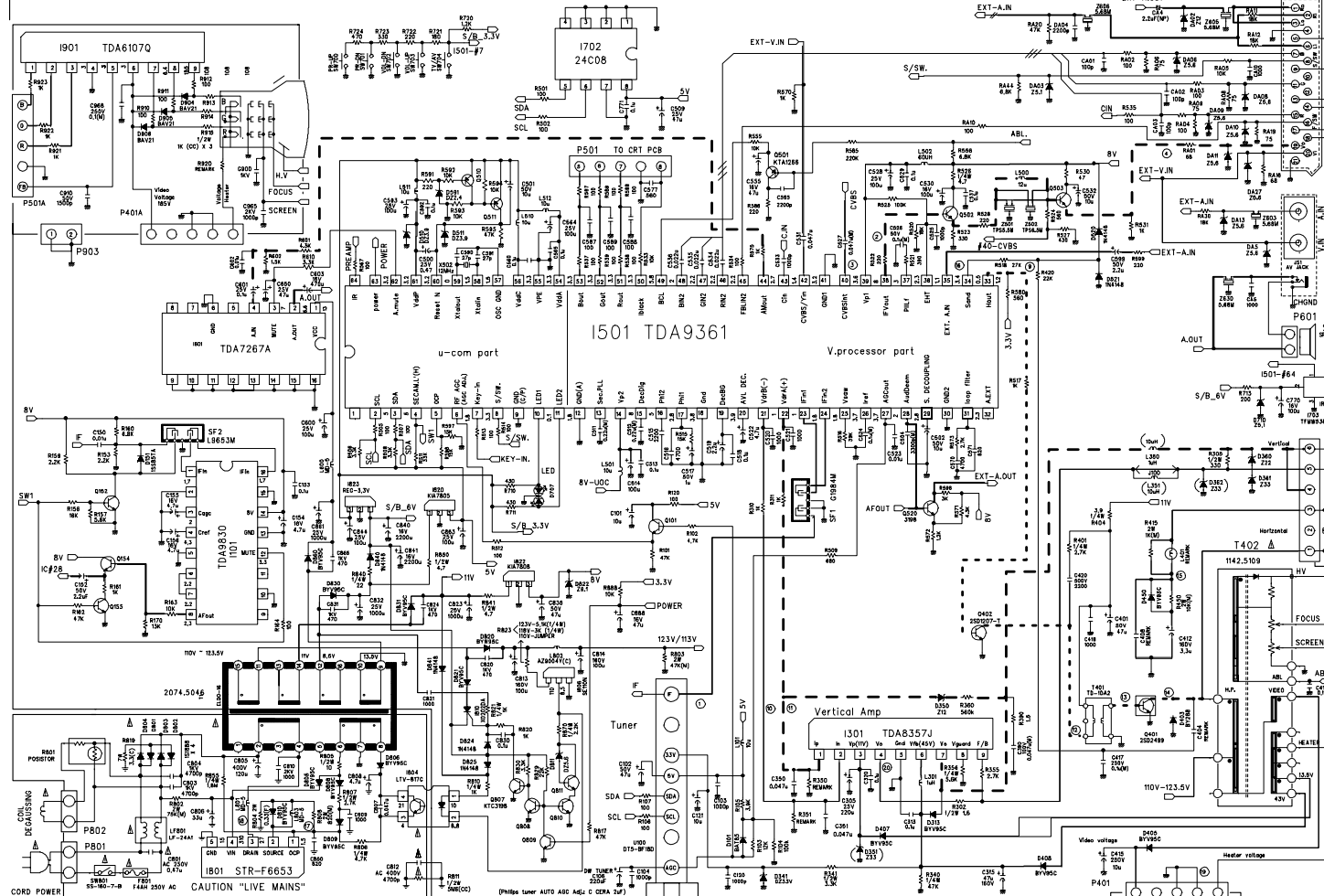
5 - Horizontal picture centering

- Adjust H Shift to have the picture in the center of the screen.

7 - AGC

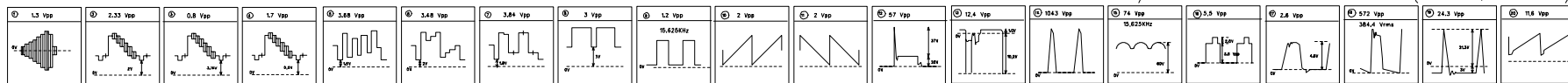
- Adjust the antenna signal level to $70 \text{ dB}\mu\text{V} \pm 2$ for Daewoo tuner ($62 \text{ dB}\mu\text{V} \pm 2$ for Philips tuner).
- Set RF AGC to 0.
- Increase RF AGC level and stop when the level on pin 6 of I501 goes below 2.5 Vdc

CP-185 SCHMETIC DIAGRAM



* WAVEFORMS

TEST CONDITIONS : PAL-B/G COLOR BAR (NOR.)



NOTE:

1. RESISTANCE IS SHOWN IN OHM. K=1000, M=1000000
2. UNLESS OTHERWISE NOTED IN SCHEMATIC ALL CAPACITOR VALUES ARE EXPRESSED IN μ F
3. VOLTAGES READ WITH "VTVM" FROM POINT INDICATED TO CHASSIS GROUND USING A COLOR BAR SIGNAL WITH ALL CONTROLS AT NORMAL LINE 230V AC VOLTAGE READINGS SHOWN ARE NORMAL VALUES AND MAY VARY $\pm 20\%$ EXCEPT H.V
4. THIS CIRCUIT DIAGRAM IS A STANDARD ONE CIRCUIT PRINTED MAY BE SUBJECT TO CHANGE FOR PRODUCT IMPROVEMENT WITHOUT PRIOR NOTICE

WARNING:

BEFORE SERVICING THE CHASSIS, READ "X-RAY RADIATION", "SAFETY PRECAUTION", AND "PRODUCT SAFETY NOTICE" IN SERVICE MANUAL

CAUTION TO SERVICE TECHNICIANS:

BEFORE RETURNING THE RECEIVER TO CUSTOMER, LEAKAGE CURRENT OR RESISTANCE MEASUREMENTS SHOULD BE PERFORMED TO DETERMINE THAT EXPOSED PARTS ARE PROPERLY INSULATED FROM THE SUPPLY CIRCUIT.

THE DIFFERENT PARTS FOR CRT

LOC.	21 INCH PHILIPS	21 INCH 1/P(M/K)	21 INCH 1/P	20 INCH 1/P	20 INCH D55A	14 INCH PHILIPS	14 INCH D55A
V801	ANALOG/VIDEO	AS1875R31X	AS1875R31X	AS1875R31X	AS1875R31X	AS1875R31X	AS1875R31X
B011	POWER-OSC	18V7 7500P	18V7 7500P	18V7 7500P	18V7 7500P	18V7 7500P	18V7 7500P
C104	18V7 7500P	18V7 7500P	18V7 7500P	18V7 7500P	18V7 7500P	18V7 7500P	18V7 7500P
C105	200V 0.3M (N)	200V 0.3M (N)	200V 0.3M (N)	200V 0.3M (N)	200V 0.3M (N)	200V 0.3M (N)	200V 0.3M (N)
L001	1.5M	1.5M	1.5M	1.5M	1.5M	1.5M	1.5M
R001	200K	200K	200K	200K	200K	200K	200K
R002	200K	200K	200K	200K	200K	200K	200K
R003	200K	200K	200K	200K	200K	200K	200K
R004	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K
R005	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K
R006	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K
R007	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K
R008	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K
R009	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K
R010	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K	1/4W 0.5K

THE DIFFERENT PARTS FOR SYSTEM

LOC.	NAME	TA	TF	TK	TU
SF01	SAW FILTER	D984W	D984W	D984W	D984W
SF02	SAW FILTER	D984W	D984W	D984W	D984W
PW01	POWER COR. ADJ.	CW432	CW432	CW432	CW432
Z001	CERAMIC FILTER	TP55.0MB	TP55.0MB	TP55.0MB	TP55.0MB
Z002	CERAMIC FILTER	TP55.0MB	TP55.0MB	TP55.0MB	TP55.0MB
C001	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C002	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C003	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C004	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C005	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C006	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C007	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C008	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C009	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C010	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C011	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C012	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C013	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C014	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C015	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C016	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C017	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C018	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C019	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C020	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C021	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C022	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C023	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C024	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C025	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C026	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C027	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C028	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C029	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C030	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C031	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C032	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C033	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C034	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C035	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C036	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C037	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C038	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C039	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C040	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C041	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C042	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C043	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C044	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C045	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C046	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C047	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C048	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C049	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C050	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C051	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C052	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C053	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C054	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C055	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C056	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C057	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C058	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C059	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C060	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C061	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C062	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C063	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C064	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C065	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C066	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C067	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C068	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C069	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C070	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C071	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C072	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C073	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C074	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C075	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C076	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C077	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C078	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C079	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C080	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C081	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C082	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C083	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C084	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C085	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C086	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C087	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C088	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C089	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C090	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C091	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C092	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C093	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C094	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C095	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C096	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C097	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K
C098	C LINE ADDRESS	AC 350V 0.47K	AC 350V 0.47K	AC 350V 0.47K	AC 35