

## TUNING PROCESSOR MAB 8441P T137

| PIN | NAME   | FUNCTION                     | PIN | NAME  | FUNCTION                            |
|-----|--------|------------------------------|-----|-------|-------------------------------------|
| 1   | P22    | DLEN line for the opex       | 15  | XTAL1 | 4MHz oscillator                     |
| 2   | SDA    | IIC bus data line            | 16  | XTAL2 | 4MHz oscillator                     |
| 3   | SCL    | IIC bus clock line           | 17  | RESET | Power on reset input                |
| 4   | P00    | Keyboard scan line A         | 18  | P10   | Power switch on/off                 |
| 5   | P01    | Keyboard scan line B         | 19  | P11   |                                     |
| 6   | P02    | Keyboard scan line C         | 20  | P12   | Tuning mode select                  |
| 7   | P03    | Keyboard scan line D         | 21  | P13   |                                     |
| 8   | P04    | Keyboard scan line E         | 22  | P14   |                                     |
| 9   | P05    | Keyboard scan line F         | 23  | P15   | VCR switch output                   |
| 10  | P06    | Keyboard scan line G         | 24  | P16   | List option select                  |
| 11  | P07    | Keyboard scan line H         | 25  | P17   | Message received/standby LED output |
| 12  | INT/TO | Input from infra red pre amp | 26  | P20   |                                     |
| 13  | T1     |                              | 27  | P21   |                                     |
| 14  | VSS    | Ground                       | 28  | VCC   | Standby supply                      |

## ECCT SAA5243 (ENHANCED COMPUTER CONTROLLED TELETEXT CIRCUIT)

| PIN    | NAME                             | FUNCTION                | PIN      | NAME                            | FUNCTION                                 |
|--------|----------------------------------|-------------------------|----------|---------------------------------|--|
| 1      | VDD                              | Power supply            | 12       | $\overline{TCS}/\overline{SCS}$ | Text composite sync /scan composite sync |
| 2,3,40 | A10,A11,A12                      | Chapter address         | 13,14,15 | R.G.B                           | Red, Green, Blue                         |
| 4      | OE                               | Output enable           | 16       | COR                             | Contrast reduction                       |
| 5      | WE                               | Write enable            | 17       | BLN                             | Blanking                                 |
| 6      | TTD                              | Teletext data           | 18       | Y                               | Character foreground                     |
| 7      | TTC                              | Teletext clock          | 19       | SCL                             | Serial clock                             |
| 8      | $\overline{ODD}/\overline{EVEN}$ | ODD/EVEN                | 20       | SDA                             | Serial data                              |
| 9      | F6                               | Character display clock | 21       | VSS                             | Ground                                   |
| 10     | VCS                              | Video composite sync    | 22 - 29  | DO - D7                         | 8 RAM data lines                         |
| 11     | SAND                             | Sandcastle              | 30 - 39  | AO - A9                         | RAM address                              |

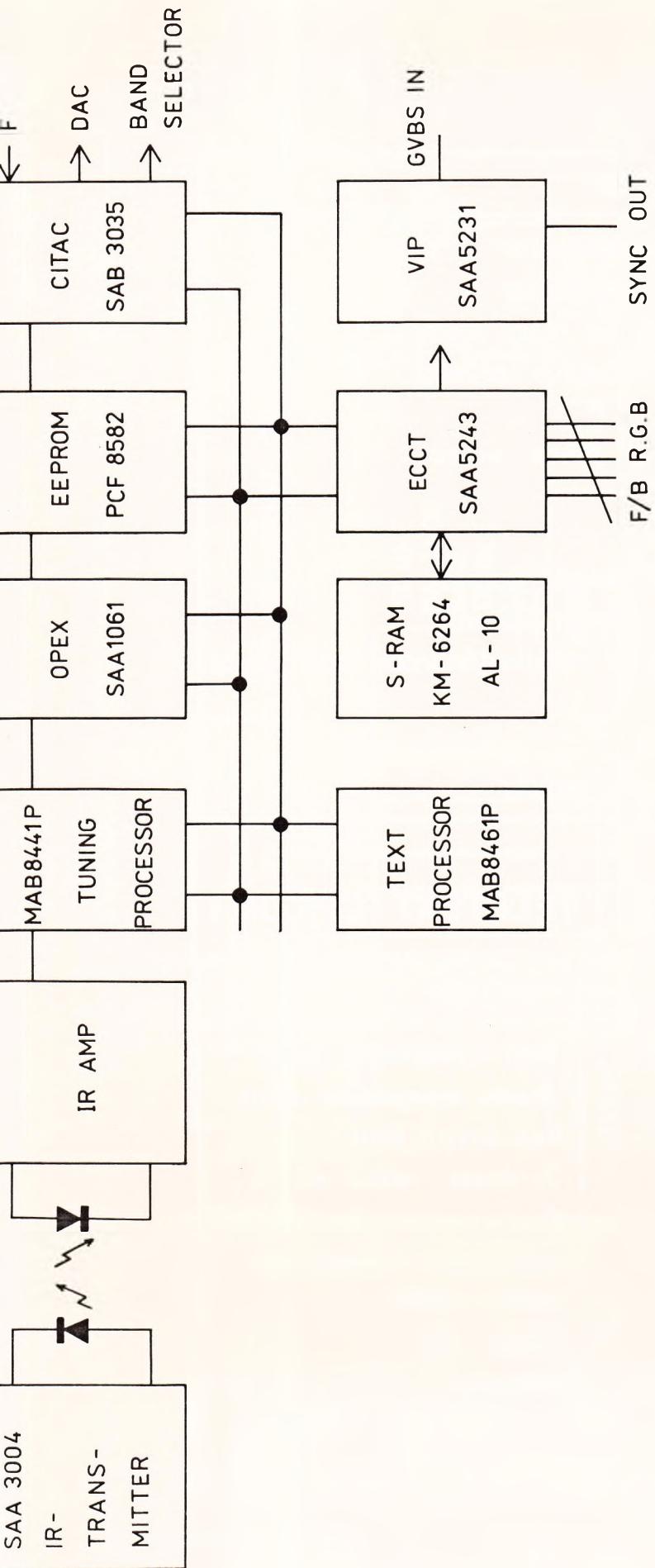
## VIP SAA5231 (TELETEXT VIDEO PROCESSOR)

| PIN | FUNCTION                 | PIN | FUNCTION   |
|-----|--------------------------|-----|--|
| 1   | Sync output              | 15  | Data output (TTD)  |
| 2   | Video input level select | 16  | Supply   |
| 3   | HF filter                | 17  | 6MHz output  |
| 4   | Store HF                 | 18  | Oscillator output  |
| 5   | Store amplitude          | 19  | Filter 2   |
| 6   | Store zero level         | 20  | Oscillator input   |
| 7   | External data input      | 21  | Filter 1   |
| 8   | Data timing              | 22  | Sandcastle input pulse ( $\overline{PL}/\overline{CBB}$ )  |
| 9   | Store phase              | 23  | Pulse timing resistor  |
| 10  | $\overline{VCR}$         | 24  | Pulse timing capacitor   |
| 11  | Crystal                  | 25  | Video composite sync output (VCS)  |
| 12  | Clock filter             | 26  | Black level  |
| 13  | Ground                   | 27  | Composite video input  |
| 14  | Clock output (TTC)       | 28  | Text composite sync input ( $\overline{TCS}$ ) or Scan composite sync input ( $\overline{SCS}$ ) |

# SAMSUNG



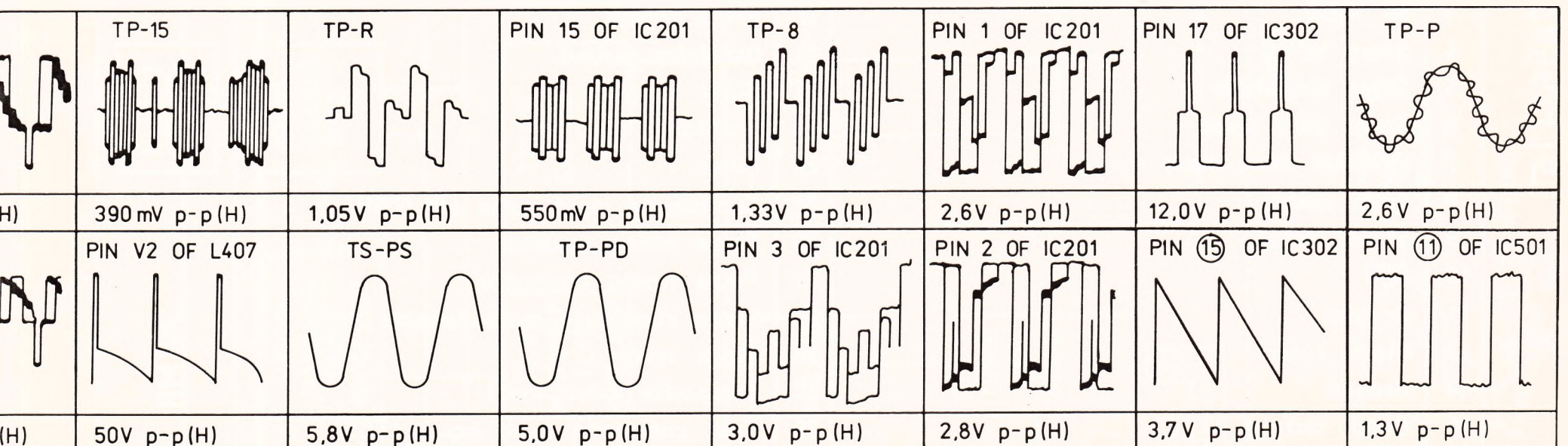
## LIST OF DIODES AND TRANSISTORS



| TYPE        | SHORT DESCRIPTION; DATA                                      | EQUIVALENTS |
|-------------|--|-------------|
| 1N4148      | Si, FAST SWITCH; 100 V; 0.2 A; <4 ns;                        |             |
| 1N4003      | Si, RECT; Uni; 200 V; 1 A;                                   |             |
| 1S1888      | Si, RECT; 600 V; 1 A;  | BY 133      |
| EQA02-12A   | ZENER DIODE; 12 V; 0.5 W; 5%;                                |             |
| ERB12-06    | Si, Uni; 600 V; 1 A;   |             |
| ERB43-04    | Si, Uni; RECT; FAST RECOVERY; 600 V; 1 A; 200 ns;            |             |
| ERC24-06    |  |             |
| DZ 6.0      | ZENER DIODE; 6 V; 0.5 W;                                     |             |
| KA33V       | VOLTAGE REGULATOR; 33 V;                                     |             |
| TRANSISTORS |  |             |
| BF423       | Si, PNP; Vid; 250 V; 0.5 A; 0.8 W;                           | BF 421      |
| BF871       | Si, NPN; Vid-L; 300 V; 0.05 A; 5 W; >60 MHz;                 | BF 759      |
| BU508AF     | Si, NPN; CTV-HA; 1500/700 V; 8 A; 125 W; INSULATED;          | S2000AF     |
| KSC815      | Si, NPN; Uni; 60 V; 0.2 A; 0.25 W; 200 MHz;                  | BC546       |
| KSC539-Y    | Si, NPN; 25 V; 0.05 A; 0.3 W; 150 MHz; LOW NOISE             | BC550       |
| KSC2330     | Si, NPN; VHF-L; 38 V; 6 A; 70 W;                             |             |
| KSC2331     | Si, NPN; NF/S-L; 200 V; 2 A; 15 W;                           | 2SD1138     |
| KSC2310     | Si, NPN; Uni; 55 V; 0.1 A; 0.2 W; 230 MHz; B>100; LOW NOISE; | BC 550      |
| 2SC388A     | Si, NPN; TV-ZF; 400 MHz;                                     | BF 199      |
| 2SD1651     | Si, NPN+Di; TV-HA; 1500/800 V; 5 A; 60 W;                    | S2055AF     |
| 2SD1555     | Si, NPN+Di; TV-HA; 1500 V; 5 A; 50 W;                        | S2055AF     |

### ABBREVIATIONS :

Uni-general purpose; +Di - damper diode;  
 NF/S-audio frequency/switch; B-Dc forward current gain;  
 L-power; ZF - intermediate frequency;  
 HA - TV horizontal deflection;



TEXT PROCESSOR MAB 8461P W115

| PIN | NAME   | FUNCTION        | PIN | NAME  | FUNCTION                            |
|-----|--------|-----------------|-----|-------|-------------------------------------|
| 1   | P22    | Not used        | 15  | XTAL1 | 6MHz oscillator                     |
| 2   | SDA    | IIC data line   | 16  | XTAL2 | 6MHz oscillator                     |
| 3   | SCL    | IIC clock line  | 17  | RESET | Power on reset                      |
| 4   | P00    |                 | 18  | P10   | FLOF/LIST mode selected at power on |
| 5   | P01    |                 | 19  | P11   | English/european symbols            |
| 6   | P02    |                 | 20  | P12   |                                     |
| 7   | P03    | Pon-output      | 21  | P13   |                                     |
| 8   | P04    |                 | 22  | P14   |                                     |
| 9   | P05    |                 | 23  | P15   |                                     |
| 10  | P06    |                 | 24  | P16   |                                     |
| 11  | P07    |                 | 25  | P17   |                                     |
| 12  | INT/TO |                 | 26  | P20   | Select 128/256 byte NVRAM           |
| 13  | T1     | PL signal input | 27  | P21   |                                     |
| 14  | VSS    | Ground          | 28  | VCC   | Supply                              |

CITAC SAB3035 (COMPUTER INTERFACE FOR TUNING AND CONTROL)

| PIN | NAME | FUNCTION                           | PIN | NAME | FUNCTION  |
|-----|------|------------------------------------|-----|------|---|
| 1   | DAC4 | Outputs of statics DAC             | 15  | TUN  | Tuning voltage amplifier output                                 |
| 2   | DAC5 | Outputs of statics DAC             | 16  | VP1  | +12V supply voltage   |
| 3   | DAC6 | Outputs of statics DAC             | 17  | VP3  | 32V supply for tuning voltage amplifier                         |
| 4   | DAC7 | Outputs of statics DAC             | 18  | P10  | High-current band selection output ports                        |
| 5   | SDA  | Serial data line (IIC bus)         | 19  | P11  | High-current band selection output ports                        |
| 6   | SCL  | Serial clock line (IIC bus)        | 20  | P12  | High-current band selection output ports                        |
| 7   | P20  | General purpose in/output port     | 21  | P13  | High-current band selection output ports                        |
| 8   | P21  | General purpose in/output port     | 22  | VP2  | Positive supply for high current band Selection output circuits |
| 9   | P22  | General purpose in/output port     | 23  | FIDV | Input from prescaler  |
| 10  | P23  | General purpose in/output port     | 24  | OSC  | Crystal oscillator input  |
| 11  | AFC+ | AFC Input                          | 25  | DAC0 | Output of static DAC  |
| 12  | AFC- | AFC Input                          | 26  | DAC1 | Output of static DAC  |
| 13  | T1   | Tuning voltage amplifier inverting | 27  | DAC2 | Output of static DAC  |
| 14  | GND  | Ground                             | 28  | DAC3 | Output of static DAC  |

OPEX SAA1061 (OUTPUT PORT EXPANDER)

| PIN | NAME | FUNCTION                          | PIN | NAME | FUNCTION                    |
|-----|------|-----------------------------------|-----|------|-----------------------------|
| 1   | A0   | Address input or test mode select | 15  | SDA  | Serial data (I C bus line)  |
| 2   | A1   | Address input or test mode select | 16  | SCL  | Serial clock (I C bus line) |
| 3   | A2   | Address input or test mode select | 17  | RC   | Input for timer constant    |
| 4   | VSS  | Ground                            | 18  | VDD  | Supply                      |

MTTS2(RM104) BLOCK DIAGRAM

