

DEVELOPMENT SAMPLE DATA

Information is derived from development samples and is available for evaluation. It does not necessarily imply that the device will go into regular production.

ATIC

SAA5125

ANTIOPE TIMING CHAIN CIRCUIT FOR U.S.A. 525 LINE SYSTEM

The SAA5125 is an N-channel MOS integrated circuit which provides the necessary timing control signals for a full Antiope/Titan decoder system, in a 28-lead DIL encapsulation. The circuit controls the addressing of the page memory to produce a television display of 40 characters by 21 rows for the 525 line U.S.A. standard.

Features

- Fully functional operation over the supply voltage range of 4.5 to 5.5 V and ambient temperature range -20 to 70°C .
- Supply voltage pin (V_{DD}) and all input pins are rated to withstand voltages in the range -0.3 to 7.5 V (maximum).
- F6 input clamp available if a.c. coupling is used.
- Outputs in high impedance rated for -0.3 to 7.5 V (maximum).
- Open drain outputs rated for -0.3 to 13.2 V (maximum).
- Electrostatic protection on all inputs and outputs up to 1000 V.

QUICK REFERENCE DATA

$V_{DD} = 5$ V; $V_{SS} = 0$ V; $T_{amb} = 25^{\circ}\text{C}$; $F_6 = 6.0419$ MHz

		min.	typ.	max.	
Operating supply voltage	V_{DD}	4.5	—	5.5	V
Operating supply current	I_{DD}	—	25	—	mA
Input voltage LOW	V_{IL}	—	—	0.8	V
Input voltage LOW, F6 only (note 1)	V_{IL}	—	—	0.8	V
Input voltage HIGH	V_{IH}	2.0	—	5.5	V
Input voltage HIGH, F6 only	V_{IH}	2.7	—	6.5	V
Output leakage current	$\pm I_{IR}$	—	—	10	μA
F6 mark to space ratio		—	—	56:44	

Output currents are given with pin descriptions

note 1 Input voltage can be negative if a.c. coupling is used.

PACKAGE OUTLINE

28-lead DIL; plastic (SOF-117)

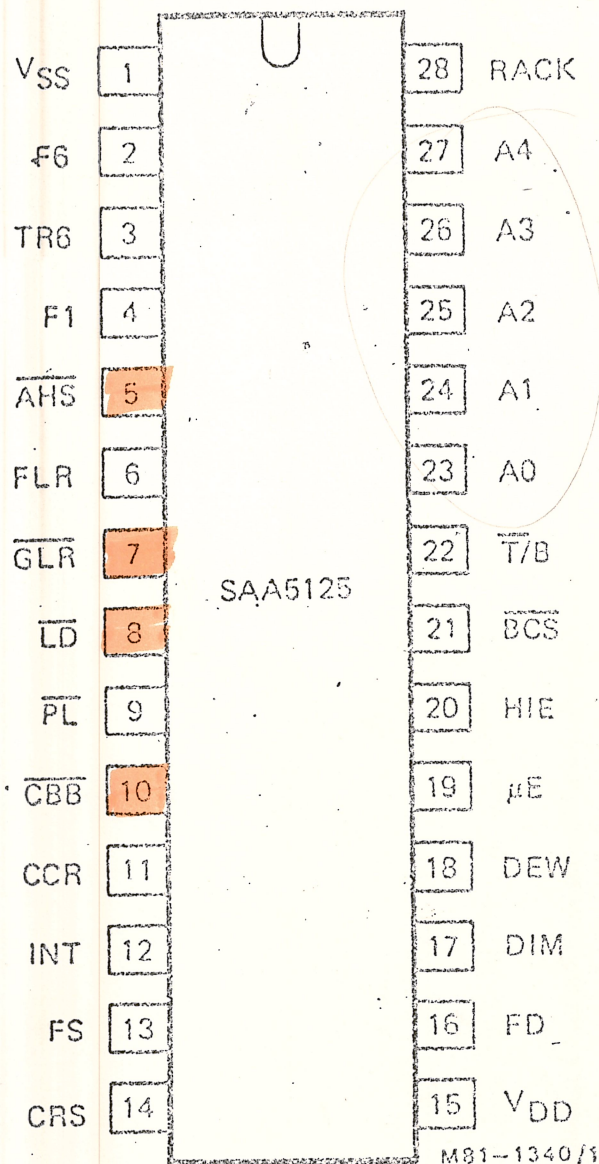


Fig.1 Pinning diagram

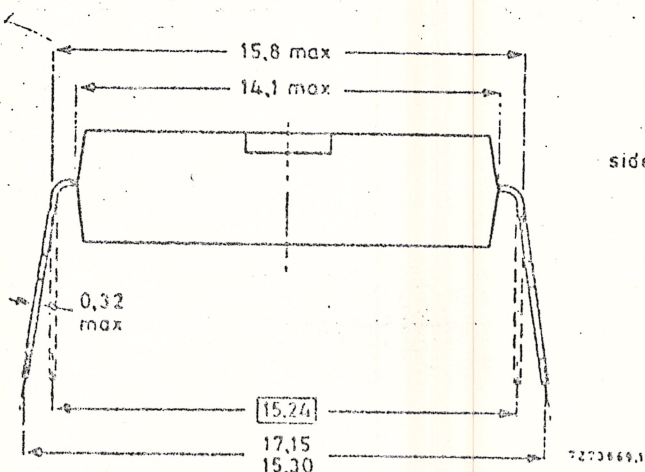
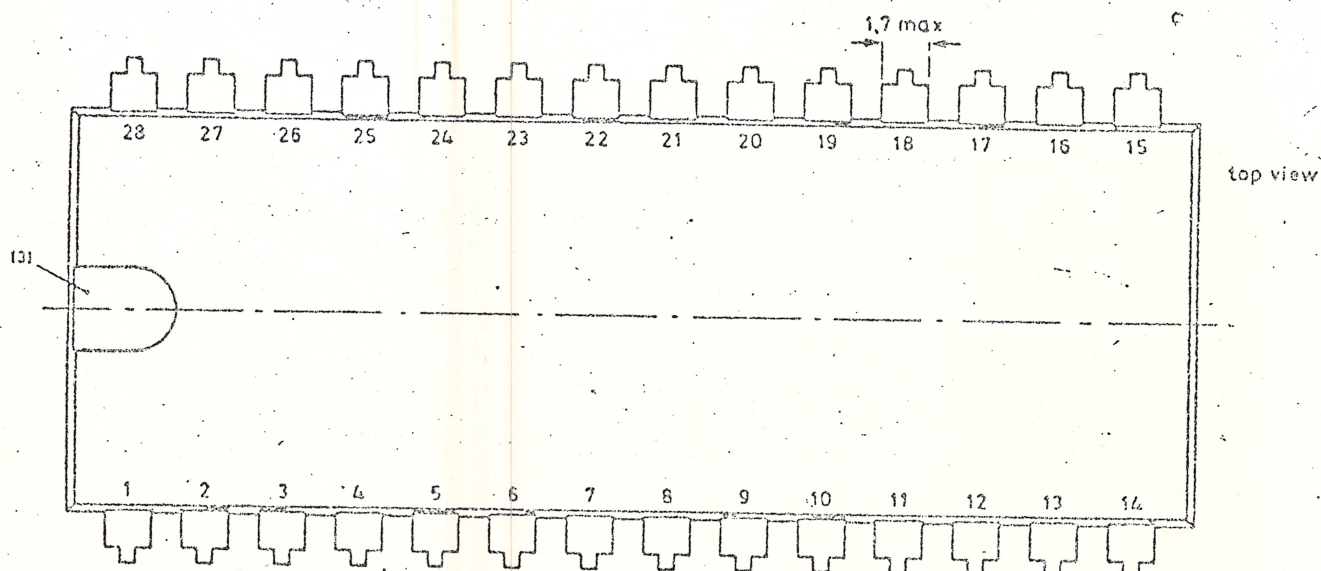
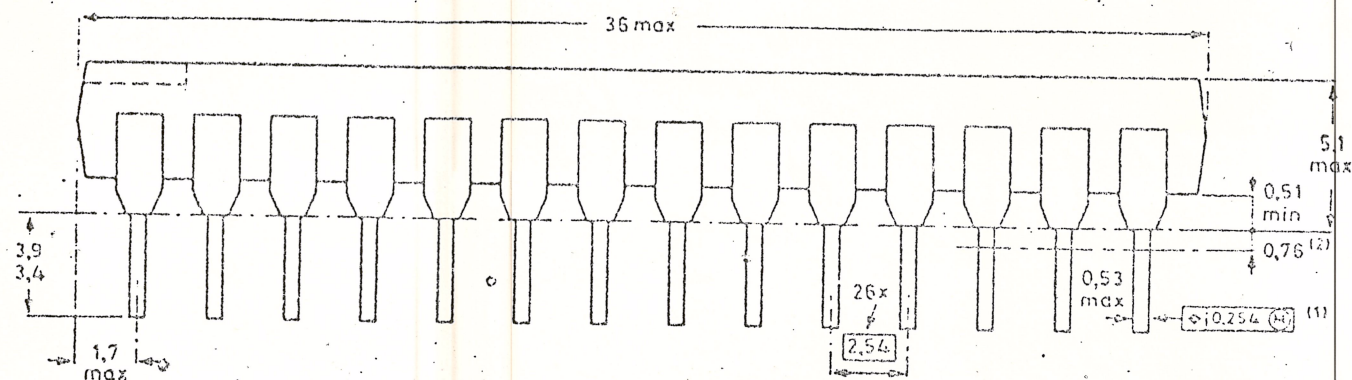
PIN DESCRIPTION

Pin number

1. V_{SS} Ground (0 V)
2. F6 6.0419 MHz input
3. TR6 6.0419 MHz push-pull clock output ($-I_{OH} = 100 \mu A$; $I_{OL} = 100 \mu A$)
4. F1 1.007 MHz push-pull clock output ($-I_{OH} = 200 \mu A$; $I_{OL} = 200 \mu A$)
5. AHS After hours sync push-pull output ($-I_{OH} = 200 \mu A$; $I_{OL} = 1.6 \text{ mA}$)
6. FLR Fast line reset input
7. GLR General line reset push-pull output ($-I_{OH} = 200 \mu A$; $I_{OL} = 1.6 \text{ mA}$)
8. LD Line drive open drain output ($I_{OL} = 1.6 \text{ mA}$)
9. PL Phase lock open drain output ($I_{OL} = 2 \text{ mA}$)

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- 10. CSB Colour burst blanking open drain output ($I_{OL} = 2 \text{ mA}$)
 - 11. CCR Column counter reset push-pull output ($-I_{OH} = 200 \mu\text{A}$; $I_{OL} = 1.6 \text{ mA}$)
 - 12. INT Interface mode input
 - 13. FS Field sync input
 - 14. CRS Character rounding select push-pull output ($-I_{OH} = 200 \mu\text{A}$; $I_{OL} = 1.6 \text{ mA}$)
 - 15. VDD Supply voltage
 - 16. FD Field drive open drain output ($I_{OL} = 1.6 \text{ mA}$)
 - 17. DIM Displaying memory push-pull output ($-I_{OH} = 100 \mu\text{A}$; $I_{OL} = 1.6 \text{ mA}$)
 - 18. DEW Data entry window push-pull output ($-I_{OH} = 200 \mu\text{A}$; $I_{OL} = 1.6 \text{ mA}$)
 - 19. μE Microprocessor enable push-pull output ($-I_{OH} = 100 \mu\text{A}$; $I_{OL} = 1 \text{ mA}$)
 - 20. HIE High impedance enable input
 - 21. SCS Big character select input
 - 22. T/B Top/Bottom input
 - 23. A0 to A4 Three state outputs: memory row address ($-I_{OH} = 200 \mu\text{A}$; $I_{OL} = 1.6 \text{ mA}$)
 - 27. RACK Read address clock push-pull output ($-I_{OH} = 100 \mu\text{A}$; $I_{OL} = 1.6 \text{ mA}$)

28-PIN DUAL IN-LINE; PLASTIC (SOT-117)



Dimensions in mm

- ⊕ Positional accuracy.
- Ⓜ Maximum Material Condition.

- (1) Centre-lines of all leads are within $\pm 0,127$ mm of the nominal position shown; in the worst case, the spacing between any two leads may deviate from nominal by $\pm 0,254$ mm.
- (2) Lead spacing tolerances apply from seating plane to the line indicated.
- (3) Index may be horizontal as shown, or vertical.

SOLDERING

1. By hand

Apply the soldering iron below the seating plane (or not more than 2 mm above it).

If its temperature is below 300 °C it must not be in contact for more than 10 seconds; if between 300 °C and 400 °C, for not more than 5 seconds.

2. By dip or wave

The maximum permissible temperature of the solder is 260 °C; this temperature must not be in contact with the joint for more than 5 seconds. The total contact time of successive solder waves must not exceed 5 seconds.

The device may be mounted up to the seating plane, but the temperature of the plastic body must not exceed the specified storage maximum. If the printed-circuit board has been pre-heated, forced cooling may be necessary immediately after soldering to keep the temperature within the permissible limit.

3. Repairing soldered joints

The same precautions and limits apply as in (1) above.