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 °C; F6 = 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
Input 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 (SOT-117)

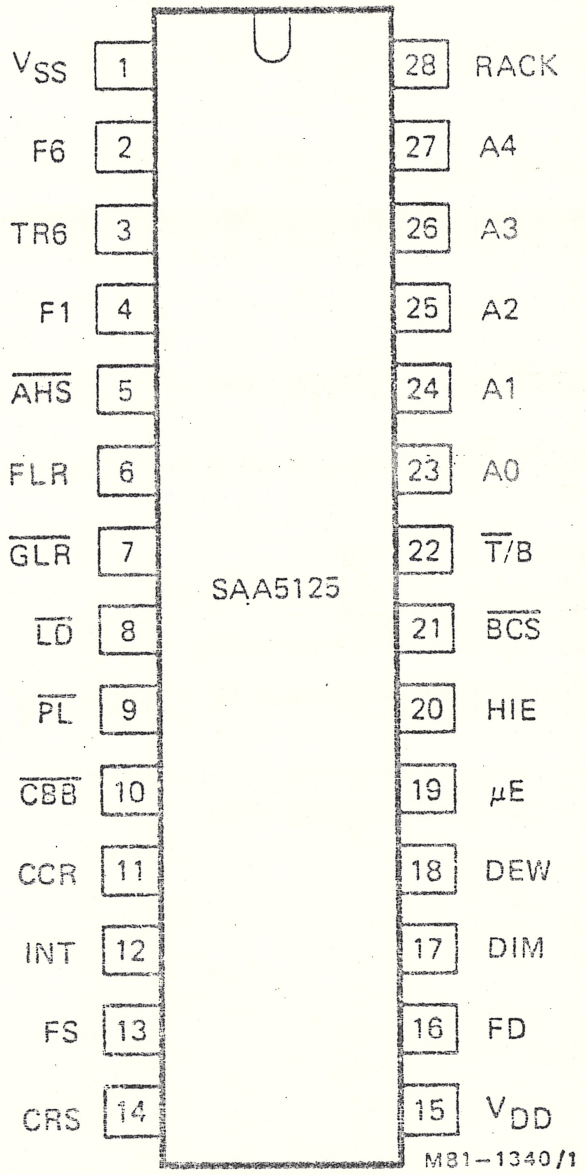


Fig.1 Pinning diagram

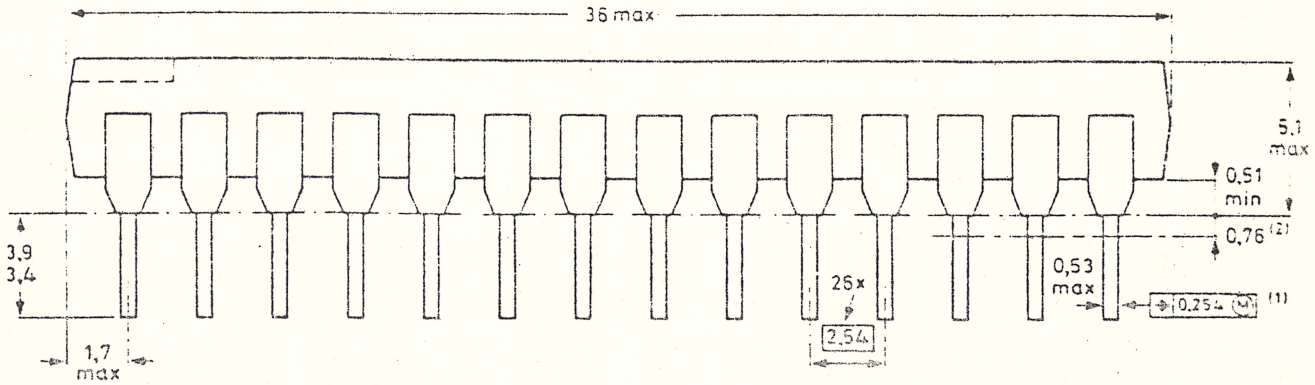
PIN DESCRIPTION

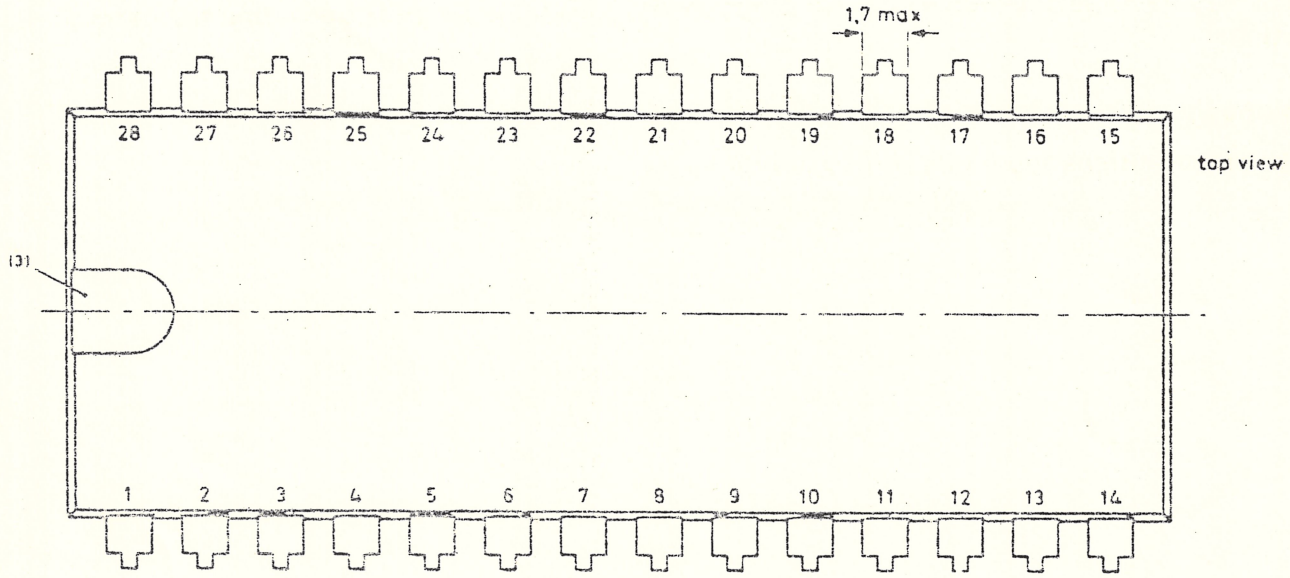
Pin number

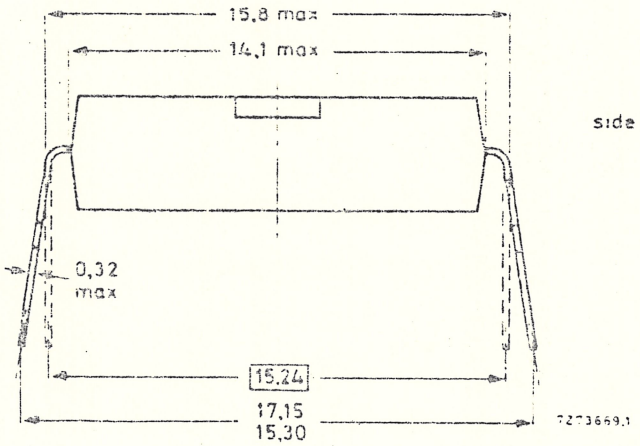
1. V_{SS} Ground (0 V)
2. F6 6.0419 MHz input
3. TR6 6.0419 MHz push-pull clock output ($-I_{OH}$ = 100 µA; I_{OL} = 100 µA)
4. F1 1.007 MHz push-pull clock output ($-I_{OH}$ = 200 µA; I_{OL} = 200 µA)
5. $\overline{AHS}$ After hours sync push-pull output ($-I_{OH}$ = 200 µA; I_{OL} = 1.6 mA)
6. FLR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

10. $\overline{CBB}$ Colour burst blanking open drain output (I_{OL} = 2 mA)
11. CCR Column counter reset push-pull output ($-I_{OH}$ = 200 μA; I_{OL} = 1.6 mA)
12. INT Interlace mode input
13. FS Field sync input
14. CRS Character rounding select push-pull output ($-I_{OH}$ = 200 μA; I_{OL} = 1.6 mA)
15. V_{DD} Supply voltage
16. FD Field drive open drain output (I_{OL} = 1.6 mA)
17. DIM Displaying memory push-pull output ($-I_{OH}$ = 100 μA; I_{OL} = 1.6 mA)
18. DEW Data entry window push-pull output ($-I_{OH}$ = 200 μA; I_{OL} = 1.6 mA)
19. μE Microprocessor enable push-pull output ($-I_{OH}$ = 100 μA; I_{OL} = 1 mA)
20. HIE High impedance enable input
21. $\overline{BCS}$ Big character select input
22. $\overline{T/B}$ Top/Bottom input
23 to 27. A0 to A4 Three state outputs: memory row address ($-I_{OH}$ = 200 μA; I_{OL} = 1.6 mA)
28. RACK Read address clock push-pull output ($-I_{OH}$ = 100 μA; I_{OL} = 1.6 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 ±0,127 mm of the nominal position shown; in the worst case, the spacing between any two leads may deviate from nominal by ±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.