

HORIZONTAL AND VERTICAL SYNC. SIGNAL PROCESSOR WITH GEOMETRY COMPENSATION CIRCUIT FOR MultiSync™ DISPLAY

The μ PC1883 is a horizontal and vertical sync. signal processor with geometry compensation circuit for MultiSync display.

Horizontal and vertical sync. signal processing and geometry compensation for MultiSync Display are incorporated on one chip. These functions are controlled by DC voltage, so it's very easy to interface with microprocessor and D/A converter.

And components and peripheral circuits required for horizontal oscillator, horizontal delay circuit, vertical blanking and horizontal clamping circuits are incorporated. Therefore, application design is easy.

FEATURES

- Geometry compensation:
Geometry compensation circuit is incorporated on one chip (trapezoid, side pin, side pin corner, parallelogram and side pin balance correction). All functions are controlled by DC voltage.
- Horizontal and vertical input signal polarity normalization:
Both positive and negative polarity are acceptable.
- Horizontal position:
Built-in picture position control circuit is independent of horizontal frequency. Capacitor for position control circuit is incorporated.
- Horizontal oscillator:
Low jitter and low temperature coefficient realized. Capacitor for horizontal oscillator is incorporated.
 $f_{HOSC} = 22.5$ to 100 kHz.
- Horizontal output duty control: Duty is 33 to 55 % with DC voltage control.
- Clamp pulse output:
Clamp pulse width is approx. $0.8 \mu s$. This clamp pulse is mixed with vertical blanking pulse.
- Vertical oscillator: $f_V = 45$ to 160 Hz
- Vertical AGC:
The output voltage of vertical saw wave is controlled by DC voltage.
- Vertical linearity correction:
"S" and "C" curve linearity correction on vertical saw wave (DC voltage control).
- Vertical blanking pulse output: Capacitor for pulse generator is incorporated.
- Supply voltage: 9.0 V

ORDERING INFORMATION

Part Number	Package
μ PC1883CT	30-pin plastic shrink DIP (400 mil)

PIN CONFIGURATION (Top View)

PIKEOIVALENT CIRCUITS

• 30-pin plastic shrink DIP (400 mil)



ELECTRICAL CHARACTERISTICS

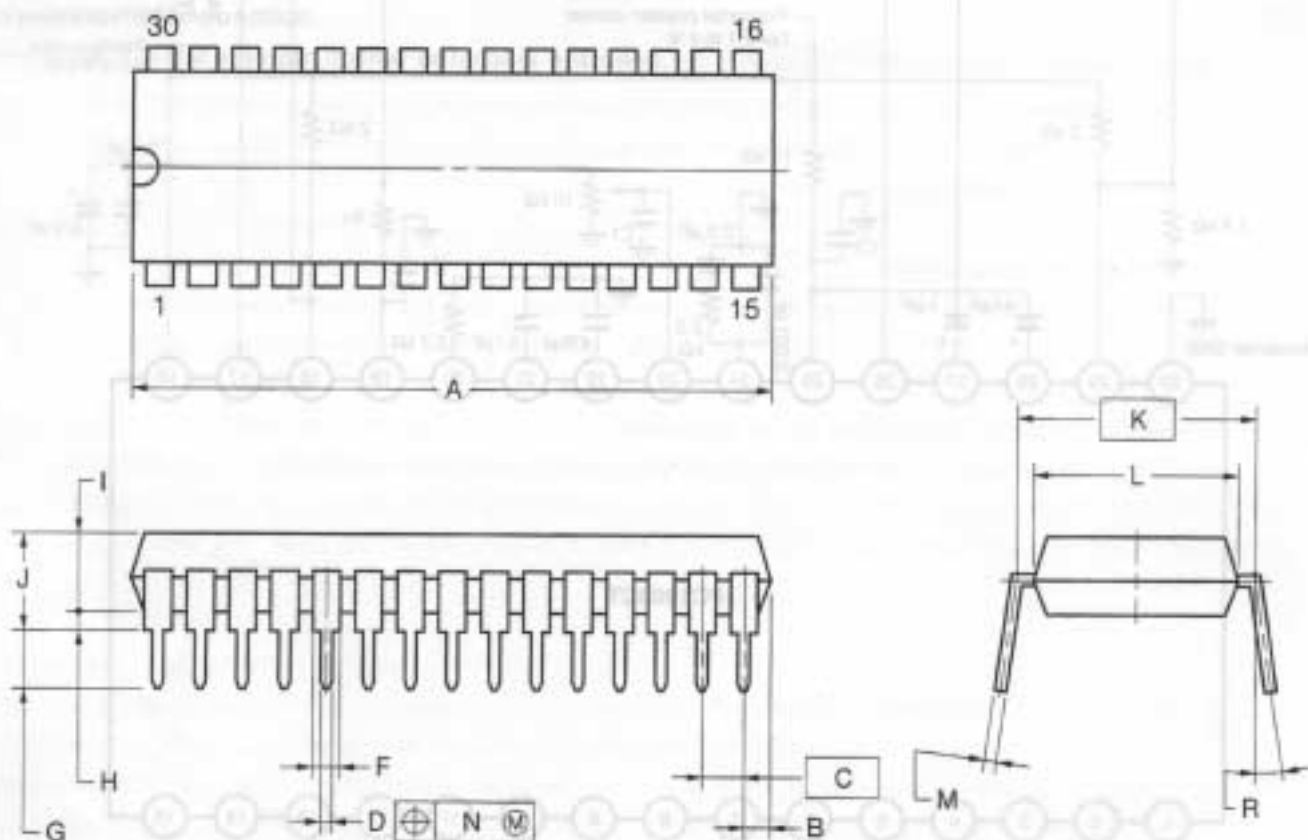
Absolute Maximum Ratings (Unless otherwise specified, T_A = +25 °C, V_{CC} = 9.0 V)

Parameter	Symbol	Condition	Rated	Unit
Power supply	V _{CC}		11	V
Horizontal sync. input signal voltage	V _{HIN}		0 to V _{CC}	V
Vertical sync. input signal voltage	V _{VIN}		0 to V _{CC}	V
Flyback pulse input voltage	V _{FSP}		0 to V _{CC}	V
Clamp pulse + vertical blanking pull-up voltage	V _{VCLP}	Pin 28	V _{CC}	V
Control pin input voltage	V _{CONT}	Pins 1, 2, 3, 4, 5, 8, 11, 12, 13, 19, 23 and 25	0 to V _{CC}	V
Horizontal output driving current	I _H	Pin 18	10	mA
Vertical, E/W and phase output source current	I _{SOMAX}	Pins 9, 10 and 28	10	mA
Vertical, E/W and phase output sink current	I _{SIMAX}		2	mA
Power dissipation	P _D	T _A = +75 °C	0.7	W
Operating ambient temperature	T _A		-10 to +75	°C
Storage temperature	T _{STG}		-40 to +125	°C

PACKAGE DRAWING

APPLICATION CIRCUIT EXAMPLE

30PIN PLASTIC SHRINK DIP (400 mil)



NOTES

- 1) Each lead centerline is located within 0.17 mm (0.007 inch) of its true position (T.P.) at maximum material condition.
- 2) Item "K" to center of leads when formed parallel.

ITEM	MILLIMETERS	INCHES
A	28.46 MAX.	1.121 MAX.
B	1.78 MAX.	0.070 MAX.
C	1.778 (T.P.)	0.070 (T.P.)
D	0.50±0.10	0.020 ^{+0.004} _{-0.005}
F	0.85 MIN.	0.033 MIN.
G	3.2±0.3	0.126±0.012
H	0.51 MIN.	0.020 MIN.
I	4.31 MAX.	0.170 MAX.
J	5.08 MAX.	0.200 MAX.
K	10.16 (T.P.)	0.400 (T.P.)
L	8.6	0.339
M	0.25 ^{+0.10} _{-0.05}	0.010 ^{+0.004} _{-0.003}
N	0.17	0.007
R	0-15°	0-15°

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