

# AN2516S

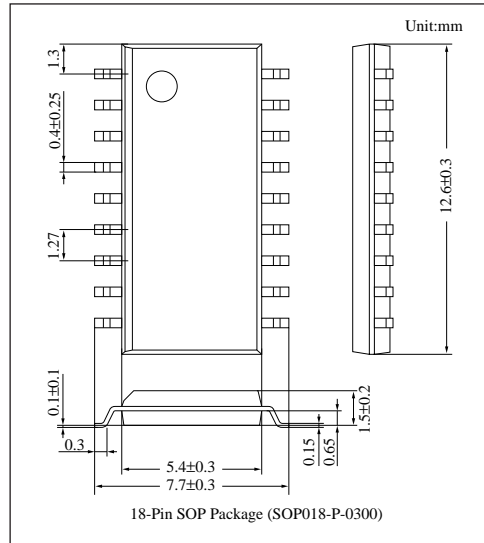
## Electronic View-Finder Driving IC with Character Input

### ■ Overview

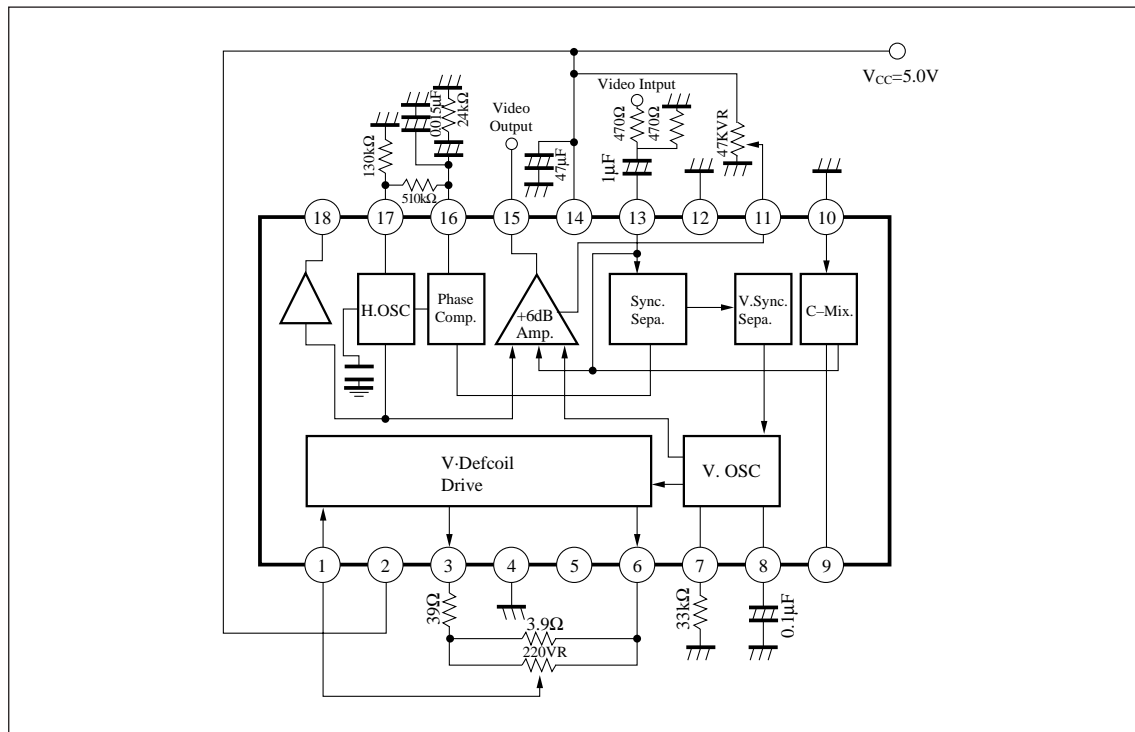
The AN2516S is a drive IC for an electronic monochrome view-finder of a video camera. The AN2516S has all the functions of the AN2515S except HD and VD output, and has attached  $\gamma$ -correction (which compensates luminance characteristics). It is easy to make up a 0.5-inch electronic view-finder with minimal external components.

### ■ Features

- Built-in video amplifier, synchronous signal separation, horizontal vertical oscillator, AFC,  $\gamma$  correction, character mixing, and vertical driver circuits.
- Direct drive of a vertical deflection coil available
- Built-in capacitor for vertical synchronous signal separation



### ■ Block Diagrams



## ■ Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Supply voltage	V <sub>CC</sub>	5.5	V
Supply current	I <sub>CC</sub>	47	mA
Power dissipation <sup>Note 2)</sup>	P <sub>D</sub>	190	mW
Operating ambient temperature <sup>Note 1)</sup>	T <sub>opr</sub>	-20 to +75	°C
Storage temperature <sup>Note 1)</sup>	T <sub>stg</sub>	-55 to +125	°C

Note 1) Ta=25°C except operating ambient temperature and storage temperatures unless otherwise specified.

Note 2) Allowable power dissipation of the package at Ta=70°C.

## ■ Recommended Operating Range (Ta=25°C)

Parameter	Symbol	Range
Operating supply voltage range	V <sub>CC</sub>	4.5V to 5.3V

## ■ Electrical Characteristics (V<sub>CC</sub>=5V, Ta=25±2°C)

Parameter	Symbol	Condition	min	typ	max	Unit	Note
Supply current (1)	I <sub>2</sub>		2.35	7.5	13.0	mA	at no-load
Supply current (2)	I <sub>14</sub>		5.5	10.0	14.0	mA	at no-load
Video amp. gain (1)	G <sub>V1</sub>		10.5	11.5	12.5	dB	—
Video amp. gain (2)	G <sub>V2</sub>		4.3	5.3	6.3	dB	—
Synchronous separating capability (1)	HSEP1		0.2	—	—	V	—
Synchronous separating capability (2)	HSEP2		—	—	1.3	V	—
Video signal HD width	τ <sub>Hout</sub>		7.0	8.0	9.0	μs	—
AFC output HD width	τ <sub>AFCHD</sub>		9.5	10.5	11.5	μs	—
Horizontal free oscillation freq.	f <sub>Hfree</sub>		14.25	15.75	17.25	kHz	—
AFC loop gain	f <sub>AFC</sub>		15.25	15.75	16.25	kHz	—
Control sensitivity	β		840	960	1080	Hz/μA	—
Vertical separation time	T <sub>VSEP</sub>		8	16	24	μs	—
Video signal HD width	τ <sub>VOUT</sub>		1.1	1.3	1.5	ms	—
Vertical free-oscillation freq.	f <sub>Vfree</sub>		45	49	53	Hz	—
Vertical deflection output amplitude (1)	V <sub>VDEF1</sub>		1.3	1.6	1.9	V	—
Vertical deflection output amplitude (2)	V <sub>VDEF2</sub>		1.3	1.6	1.9	V	—
Vertical deflection output dynamic range (1)	DR <sub>VDEF1</sub>		2.0	2.4	2.8	V	—
Vertical deflection output dynamic range (2)	DR <sub>VDEF2</sub>		2.0	2.4	2.8	V	—
Character-Black level	CBL		0.15	0.20	0.25	—	—
Character-White level	CWL		0.65	0.85	1.05	—	—
Vertical deflection output min. drive capability	V <sub>3-4</sub>		0.65	—	—	V	—

**■ Pin Descriptions**

Pin No.	Pin name	Pin No.	Pin name
1	Vertical size control input	10	Character input
2	Power supply input	11	Gamma control
3	Vertical deflection coil driver output (1)	12	GND
4	GND	13	Video input
5	N. C.	14	Power supply input
6	Vertical deflection coil driver output (2)	15	Video amplifier output
7	Vertical oscillation resistor pin	16	Phase comparator output
8	Vertical oscillation capacitor pin	17	Horizontal oscillation resistor pin
9	Character-level control	18	Horizontal AFC output

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