

AN2516S

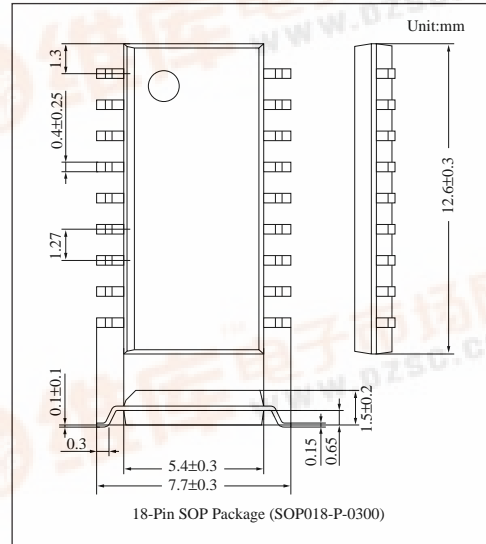
Electronic View-Finder Driving IC with Character Input

Overview

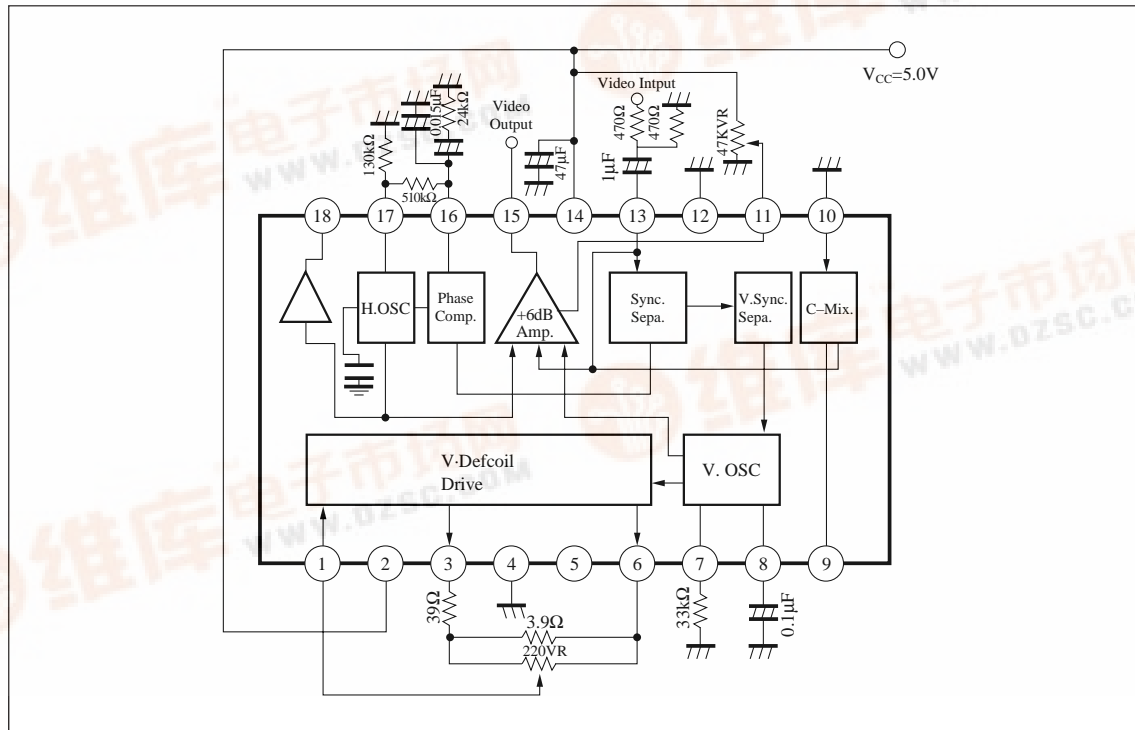
The AN2516S is a drive IC for an electronic monochrome view-finder of a video camera. The AN2516S has all the functions of the AN2515S except HD and VD output, and has attached γ -correction (which compensates luminance characteristics). It is easy to make up a 0.5-inch electronic view-finder with minimal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

Features

- Built-in video amplifier, synchronous signal separation, horizontal vertical oscillator, AFC, γ 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 _{CC}	5.5	V
Supply current	I _{CC}	47	mA
Power dissipation ^{Note 2)}	P _D	190	mW
Operating ambient temperature ^{Note 1)}	T _{opr}	-20 to +75	°C
Storage temperature ^{Note 1)}	T _{stg}	-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 _{CC}	4.5V to 5.3V

■ Electrical Characteristics (V_{CC}=5V, Ta=25±2°C)

Parameter	Symbol	Condition	min	typ	max	Unit	Note
Supply current (1)	I ₂		2.35	7.5	13.0	mA	at no-load
Supply current (2)	I ₁₄		5.5	10.0	14.0	mA	at no-load
Video amp. gain (1)	G _{V1}		10.5	11.5	12.5	dB	—
Video amp. gain (2)	G _{V2}		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 _{Hout}		7.0	8.0	9.0	μs	—
AFC output HD width	τ _{AFCHD}		9.5	10.5	11.5	μs	—
Horizontal free oscillation freq.	f _{Hfree}		14.25	15.75	17.25	kHz	—
AFC loop gain	f _{AFC}		15.25	15.75	16.25	kHz	—
Control sensitivity	β		840	960	1080	Hz/μA	—
Vertical separation time	T _{VSEP}		8	16	24	μs	—
Video signal HD width	τ _{VOUT}		1.1	1.3	1.5	ms	—
Vertical free-oscillation freq.	f _{Vfree}		45	49	53	Hz	—
Vertical deflection output amplitude (1)	V _{VDEF1}		1.3	1.6	1.9	V	—
Vertical deflection output amplitude (2)	V _{VDEF2}		1.3	1.6	1.9	V	—
Vertical deflection output dynamic range (1)	DR _{VDEF1}		2.0	2.4	2.8	V	—
Vertical deflection output dynamic range (2)	DR _{VDEF2}		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 _{3.4}		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