

# AN5422K

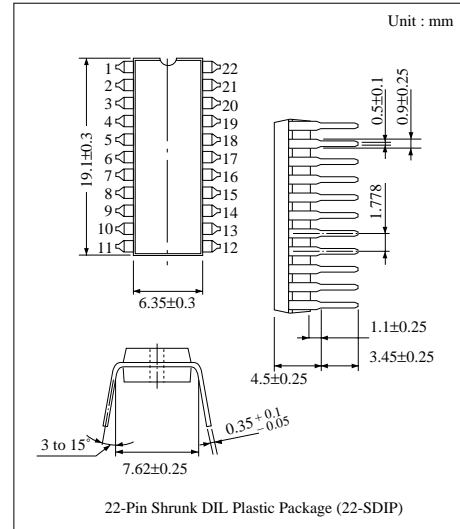
## Deflection-Signal-Processing IC for TV/Display

### ■ Overview

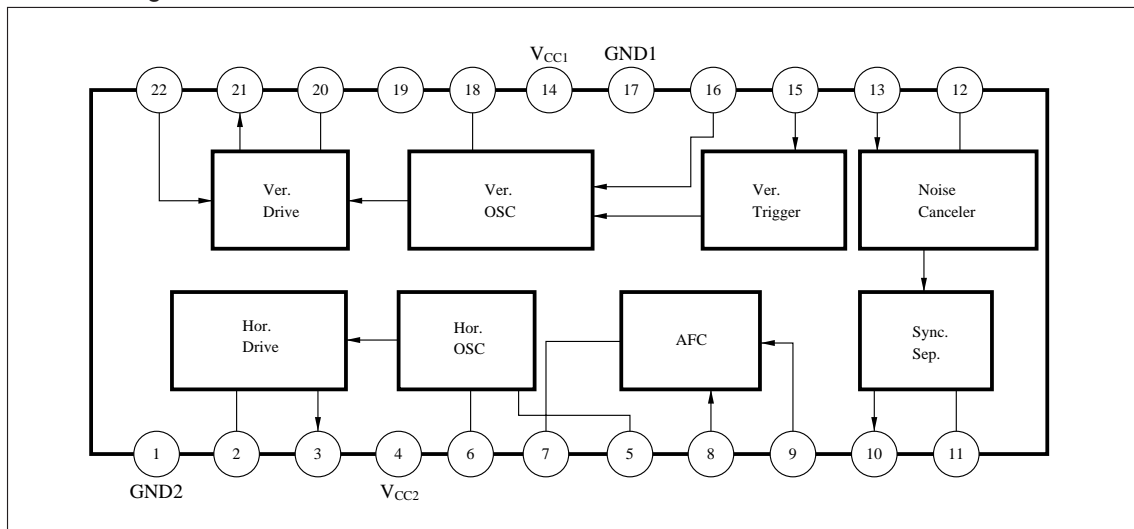
The AN5422K is an integrated circuit for TV/display deflection-signal-processing circuit. Horizontal oscillation frequency is up to 120kHz. The duty of a horizontal output pulse can be changed by the external bias so that the display is designed easily.

### ■ Features

- Noise canceller circuit built-in (with lock-out preventive circuit)
- The duty of a horizontal output pulse can be changed by the external bias.
- Horizontal oscillation frequency : max. 120kHz
- X-ray protector built-in (shutdown)
- Vertical drive circuit built-in



### ■ Block Diagram



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

Parameter	Symbol	Rating	Unit
Supply voltage	V <sub>CC</sub>	(V <sub>14-17</sub> ) 14.4	V
Supply current	I <sub>CC</sub>	(I <sub>14</sub> ) 30	mA
		(I <sub>4</sub> ) 40	
Power dissipation (Ta=70°C)	P <sub>D</sub>	1290	mW
Operating ambient temperature	T <sub>opr</sub>	- 20 to + 70	°C
Storage temperature	T <sub>stg</sub>	- 55 to +150	°C

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

Parameter	Symbol	Range
Operating supply voltage range	V <sub>CC</sub>	9.6V to 14.4V

### ■ Electrical Characteristics (Ta= 25°C)

Parameter	Symbol	Condition	min	typ	max	Unit
Overvoltage-protective-circuit operation-input voltage	V <sub>2-1</sub>		0.65	0.71	0.76	V
SYNC.SEP horizontal synchronous pulse width	τ <sub>sync (1)</sub>	Video input 1.4V <sub>P-P</sub> , V <sub>CC1</sub> =12V	4.4	4.8	5.2	μs
Horizontal AFC horizontal synchronous pulse width	τ <sub>sync (2)</sub>	Video input 1.4V <sub>P-P</sub> , V <sub>CC1</sub> =12V	4.5	4.9	5.3	μs
Noise detection sensitivity (1)	e <sub>n1</sub>	f= 60Hz, 4μs, 0.7V <sub>PP</sub>	10.5	—	—	V <sub>PP</sub>
Noise detection sensitivity (2)	e <sub>n2</sub>	f= 3.58MHz, 1.2V <sub>PP</sub>	—	—	0.5	V <sub>PP</sub>
Vertical oscillation frequency	f <sub>VO</sub>	V <sub>CC1</sub> =12V	51	55	59	Hz
Vertical output pulse width	τ <sub>VO</sub>	Free running f <sub>VO</sub> = 55Hz, V <sub>CC1</sub> =12V	750	950	1150	μs
Vertical pull-in range	f <sub>pv</sub>	Input 0.7V <sub>P-P</sub> , 60Hz, pulse width 200μs	—	35	37	Hz
Horizontal oscillation frequency	f <sub>HO</sub>	Adjust to f <sub>HO</sub> =15.75kHz by typical sample	15	15.75	16.5	kHz
Horizontal oscillatin pulse duty	τ <sub>HO</sub>	Adjust to f <sub>HO</sub> =15.75kHz by typical sample	30	35	39	%
Horizontal oscillation control sensitivity	β	Change in oscillation frequency when ΔI=±25μA	130	160	190	$\frac{\text{Hz}}{\mu\text{A}}$
Phase detection sensitivity	μ	V <sub>CC1</sub> =12V	13	19	25	$\frac{\mu\text{A}}{\mu\text{s}}$
Horizontal oscillation output pin voltage (H)	V <sub>3-1 (H)</sub>		4.1	5.1	6.2	V
Horizontal oscillation output pin voltage (L)	V <sub>3-1 (L)</sub>		-1.4	-0.7	0.3	V



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