

AN5422K

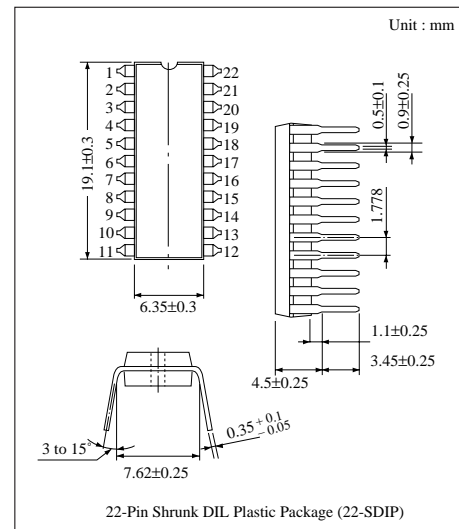
Deflection-Signal-Processing IC for TV/Display

Overview

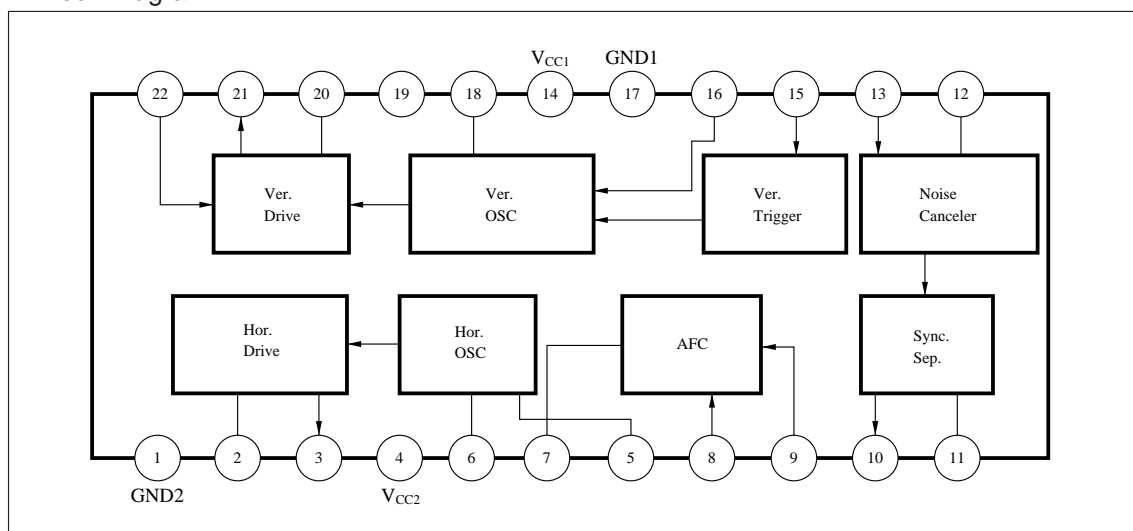
The AN5422K is an integrated circuit for TV/display deflection-signal-processing circuit. Horizontal oscillation frequency is up to 120kHz. The duty of a horizontal output pulse can be changed by the external bias so that the display is designed easily.

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 _{CC}	(V ₁₄₋₁₇) 14.4	V
Supply current	I _{CC}	(I ₁₄) 30	mA
		(I ₄) 40	
Power dissipation (Ta=70°C)	P _D	1290	mW
Operating ambient temperature	T _{opr}	− 20 to + 70	°C
Storage temperature	T _{stg}	− 55 to +150	°C

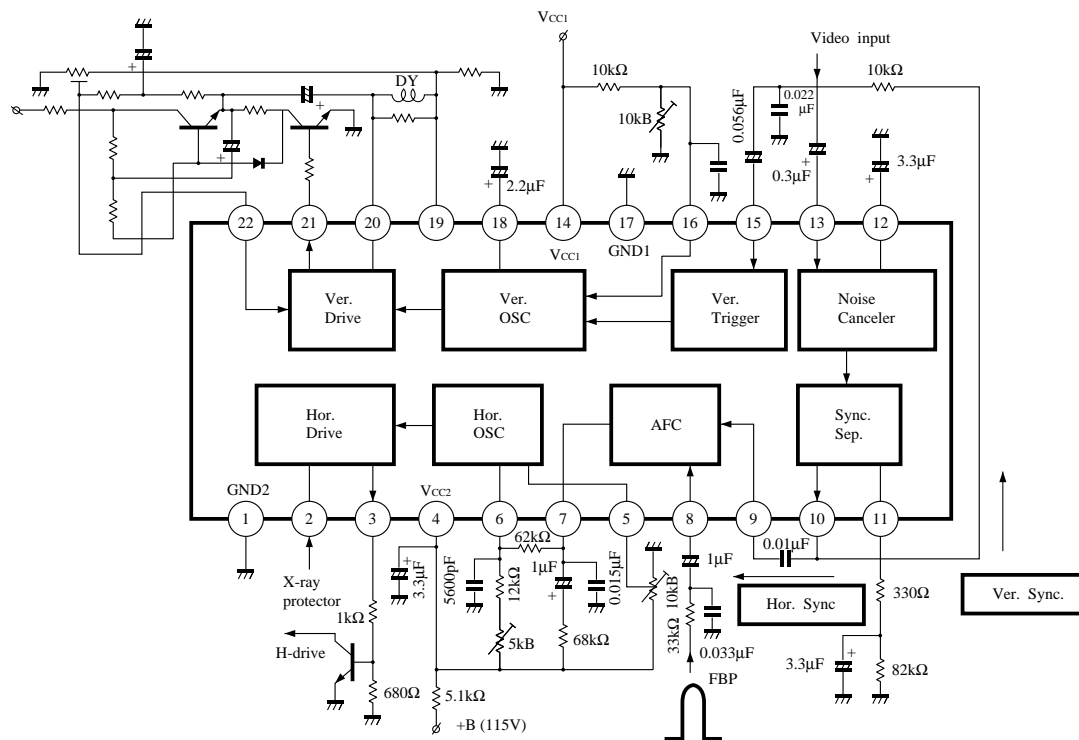
■ Recommended Operating Range (Ta=25°C)

Parameter	Symbol	Range
Operating supply voltage range	V _{CC}	9.6V to 14.4V

■ Electrical Characteristics (Ta= 25°C)

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

■ Application Circuit



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