AN5512

TV Vertical Deflection Output Circuit

Description

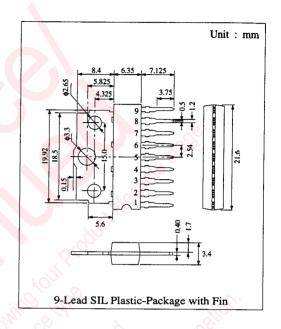
The AN5512 is an integrated circuit designed for TV vertical deflection output circuit.

■ Features

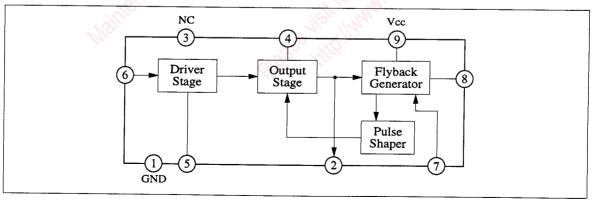
- Low power consumption
- Direct deflection coil driving capability (Flyback voltage two times as high as supply voltage is supplied during flyback period only)
- High breakdown voltage: 60V

Pin Descriptions

Pin No.	Pin Name
1	GND
2	Output
3	NC
4	Supply Voltage for Output
5	Drive Tr. Collector
6	Input
7	Trigger Pulse Input
8	Pulse Amp. Output
9	Vcc



■ Block Diagram



■ Absolute Maximum Ratings (Ta=25°C)

Item		Symbol	Rating		Unit	
Voltage	Supply Voltage	Vcc	27.6		V	
	Circuit Voltage	V ₂₋₁	0	60	V	
		V ₄₋₁	0	60	V	
		V ₆₋₁	0	2.5	V	
		V ₇₋₁	0	1.3	V	
Current	Supply Current	Icc	250		mA	
		I ₂	-1000	1000	mA _{O-P}	
	Circuit Current	I ₈	-1000	1000	mA _{O-P}	
Power Dissipation		PD	6.66		W	
Operating Ambient Temperature		Topr	-20 ~ +70		°C	
Storage Temperature		Tstg	-55 ~ +150		°C	

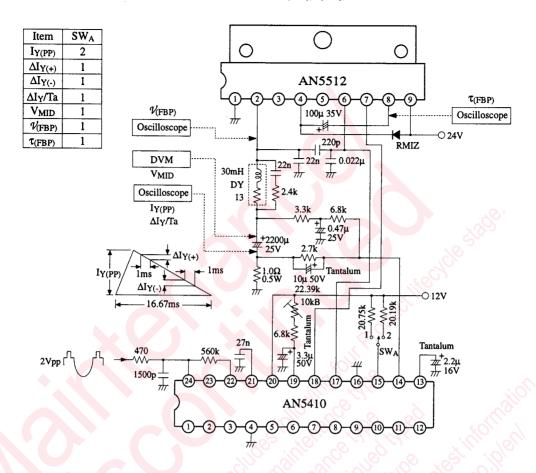
[⊕] refer to current flowing into IC, where as ⊙ refers to current flowing out of it.

■ Electrical Characteristics (Ta=25°C)

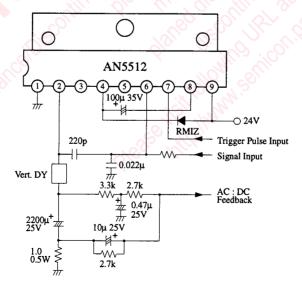
Item	Symbol	Test Circuit	Condition	min.	typ.	max.	Unit
Deflection Current (Peak Value)	I _Y (PP)	1		860	930	1000	mApp
Deflection Current Linearity	ΔI _{Y(+)}	1		25		75	mApp
	ΔΙ _{Υ(-)}	1	40,08	22		85	mApp
Deflection Current Change with Ambient Temp.*	ΔΙγ/Τα	1	Ta = -20 ~ +70°C	-1.5		1.5	%
Mid-point Voltage	V _{MID}	1	10/10 1/00 100 100	12.1	12.6	13.1	V
Flyback Pulse Amplitude	$ u_{(\text{FBP})} $	1	162 76 C 141 7.41	47		16/1	V
Flyback Pulse Width	τ _(FBP)	1	The dall sall into all	850	920	980	μs
Static Circuit Current	Icq	20/	$V_{4-1} = 24V$ $V_{9-1} = 24V$ $V_{7-1} = 0$ $12k$ $7.5k$ $7.5k$ 910	75	13	22	mA
Output Tr. Saturation Voltage	V ₄₋₂		$V_{4-1} = V_{9-1} = 24V$, Pin 2 - Pin 1 = 56Ω $V_{6-1} = 0.3V$, $V_{7-1} = 0$		2.7	3.7	v
Output Tr. Saturation Voltage	V ₂₋₁		$V_{4-1} = V_{9-1} = 24V$, Pin 2 - Pin 4 = 56Ω $V_{6-1} = 1.3V$, $V_{7-1} = 0$		0.6	1	v
Q ₂₁ Saturation Voltage	V ₈₋₁		$V_{9-1} = 24V$, Pin 9 - Pin 8 = 1.2k Ω V ₇₋₁ = 0V			0.5	v
Thermal Resistance	R _{th(j-c)}		112, 1144			12	°C/W

^{*} Design reference value

 $Test\ Circuit\ 1\quad (I_{Y(PP)},\ \Delta I_{Y(+)},\ \Delta I_{Y(-)},\ \Delta I_{Y}/Ta,\ V_{MID},\ \mathcal{U}_{(FBP)},\ \tau_{(FBP)})$



Application Circuit



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