

# AN5521

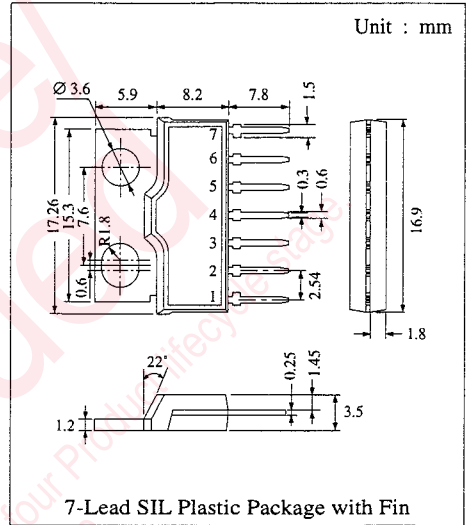
## TV Vertical Deflection Output Circuit

### ■ Description

The AN5521 is an integrated circuit designed for TV vertical deflection output circuit. Combining with the deflection signal processing IC can facilitate the vertical output circuit design.

### ■ Features

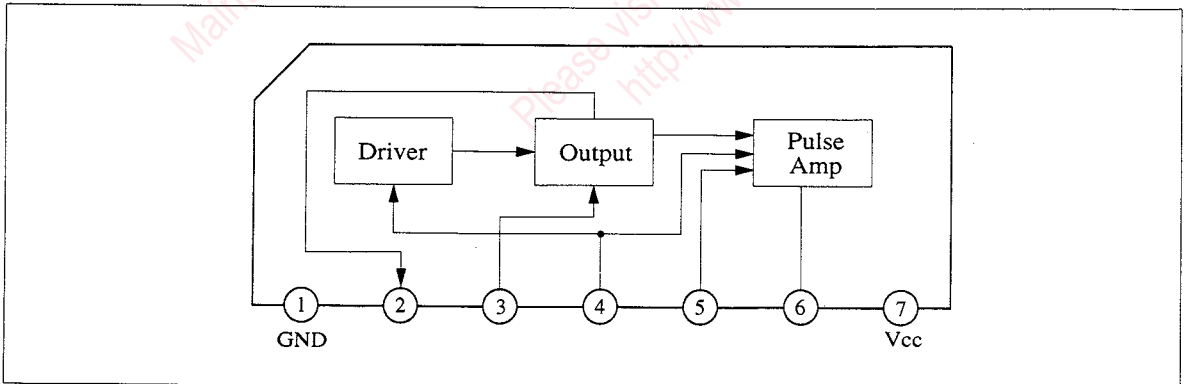
- Low power consumption
- Direct deflection coil driving capability (Flyback voltage two times as high as supply voltage is supplied during flyback period only)
- High breakdown voltage: 60V



### ■ Pin Descriptions

Pin No.	Pin Name
1	GND
2	Output
3	Supply Voltage for Output
4	Input
5	Trigger Pulse Input
6	Pulse Amp. Output
7	Vcc

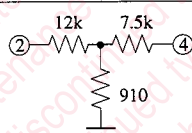
### ■ Block Diagram



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

Item		Symbol	Rating		Unit
Voltage	Supply Voltage	VCC	30		V
	Circuit Voltage	V <sub>2-1</sub>	0	60	V
		V <sub>3-1</sub>	0	60	V
		V <sub>4-1</sub>	-1	6	V
		V <sub>5-1</sub>	-1	3	V
Current	Supply Current	I <sub>CC</sub>	360		mA
	Circuit Current	I <sub>2</sub>	-1800	1800	mA <sub>O-P</sub>
		I <sub>6</sub>	-1800	1800	mA <sub>O-P</sub>
Power Dissipation (Ta = 70 °C)		P <sub>D</sub>	8		W
Operating Ambient Temperature		Topr	-20 ~ +70		°C
Storage Temperature		Tstg	-55 ~ +150		°C

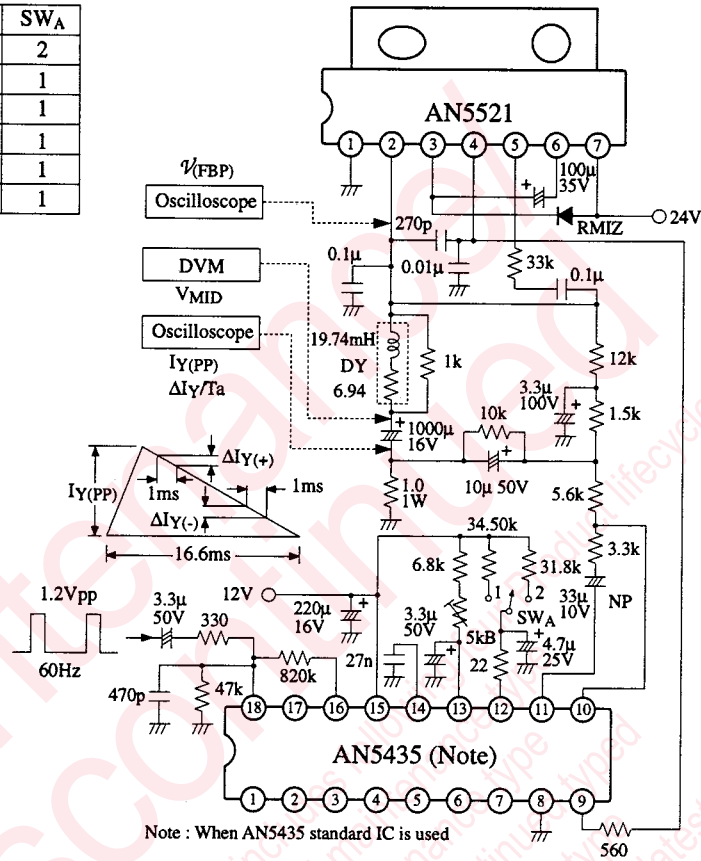
### ■ Electrical Characteristics (Ta=25°C)

Item	Symbol	Test Circuit	Condition	min.	typ.	max.	Unit		
Deflection Current (Peak Value)	I <sub>Y(PP)</sub>	1		1700	1800	1900	mApp		
Deflection Current Linearity	ΔI <sub>Y(+)</sub>	1		59		175	mApp		
	ΔI <sub>Y(-)</sub>	1		54		162	mApp		
Deflection Current Change with Ambient Temperature*	ΔI <sub>Y</sub> /Ta	1	Ta = -20 ~ +70°C	-1.5		1.5	%		
Center Voltage	V <sub>MID</sub>	1		13.2	13.8	14.4	V		
Flyback Pulse Amplitude	V <sub>(FBP)</sub>	1		47			V		
Static Circuit Current	I <sub>CQ</sub>		V <sub>3-1</sub> = 24V V <sub>7-1</sub> = 24V V <sub>5-1</sub> = 0			7	15	30	mA
Output Tr Saturation Voltage	V <sub>3-2</sub>		V <sub>3-1</sub> = V <sub>7-1</sub> = 24V, Pin 2 - Pin 1 = 33Ω V <sub>4-1</sub> = 0.3V, V <sub>5-1</sub> = 0		3.0	4.0	V		
Output Tr Saturation Voltage	V <sub>2-1</sub>		V <sub>3-1</sub> = V <sub>7-1</sub> = 24V, Pin 2 - Pin 3 = 33Ω V <sub>4-1</sub> = 1.3V, V <sub>5-1</sub> = 0		1.3	2.0	V		
Q <sub>21</sub> Saturation Voltage	V <sub>6-1</sub>		V <sub>7-1</sub> = 24V, Pin 7 - Pin 6 = 1.2kΩ, V <sub>5-1</sub> = 0			0.5	V		
Thermal Resistance	R <sub>th(j-c)</sub>					4	°C/W		

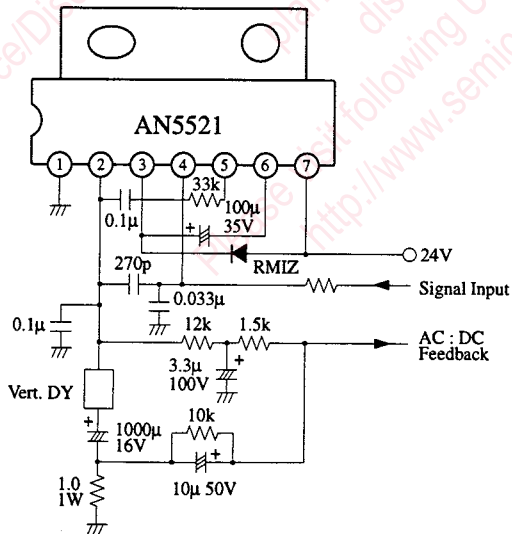
\* Design reference value

Test Circuit 1 ( $I_Y(PP)$ ,  $\Delta I_Y(+)$ ,  $\Delta I_Y(-)$ ,  $\Delta I_Y/Ta$ ,  $V_{MID}$ ,  $V_{(FBP)}$ )

Item	SW <sub>A</sub>
$I_Y(PP)$	2
$\Delta I_Y(+)$	1
$\Delta I_Y(-)$	1
$\Delta I_Y/Ta$	1
$V_{MID}$	1
$V_{(FBP)}$	1



Application Circuit



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