

AN5791

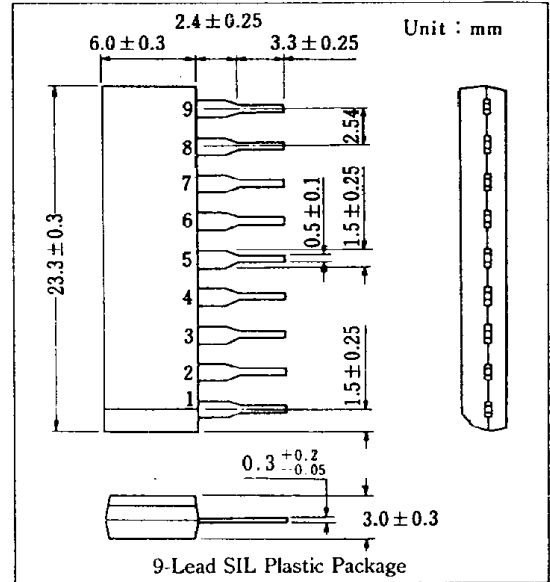
Phase Shift Circuit for CRT Displays

■ Outline

The AN5791 is an integrated circuit designed for phase shift circuit for CRT display.

■ Features

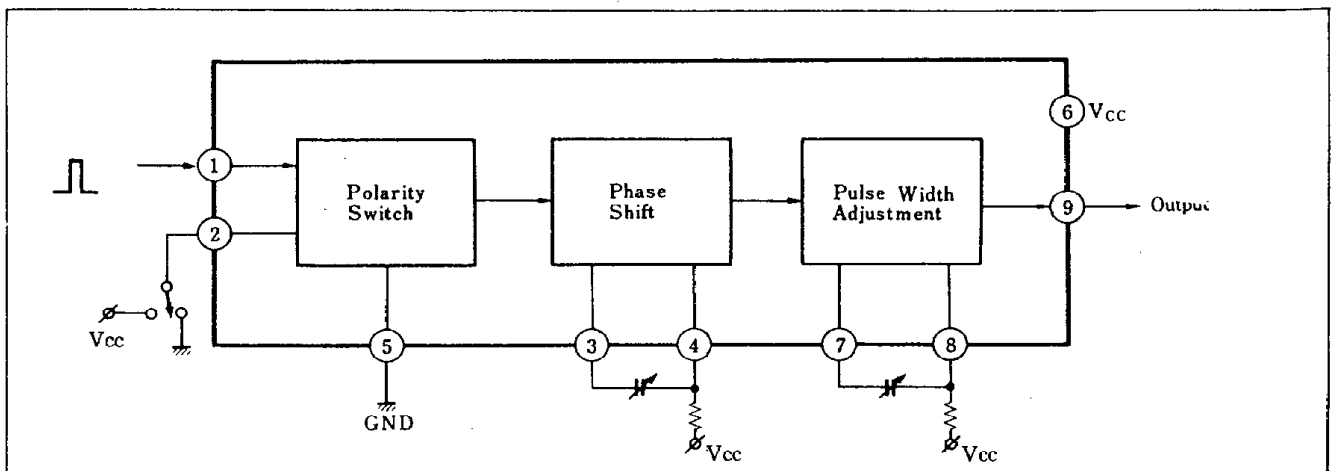
- Processing for both negative and positive sync. signals
- Wide range of possible phase shift ($1\mu s \sim 40\mu s$)
- Possible output pulse width $2\mu s \sim 40\mu s$



■ Pin

Pin No.	Pin Name	Pin No.	Pin Name
1	H. Sync. Input	6	Vcc
2	Polarity Switch	7	Trigger for Pulse Width
3	Trigger for Phase Shift	8	Pulse Width Adj.
4	Phase Shift Adj.	9	Output
5	GND	-	-

■ Block Diagram



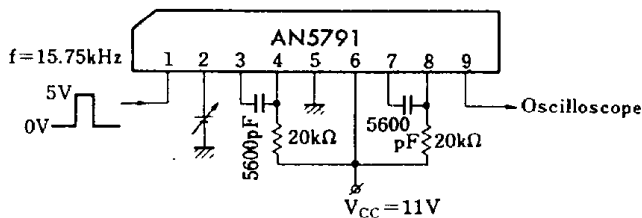
■ Absolute Maximum Ratings(Ta=25°C)

Item		Symbol	Rating	Unit
Supply Voltage		V _{CC}	13.2	V
Power Dissipation		P _D	640	mW
Temperature	Operating Ambient Temperature	T _{opr}	-20~+70	°C
	Storage Temperature	T _{stg}	-40~+150	°C

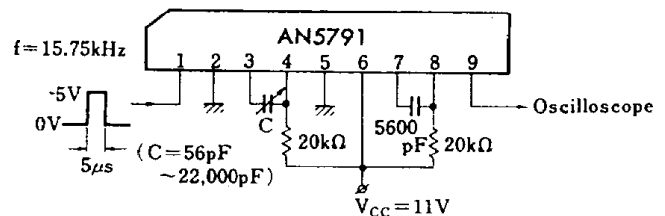
■ Electrical Characteristics(Ta=25°C)

Item	Symbol	Test Circuit	Condition	min.	typ.	max.	Unit
Circuit Current	I ₆		V _{CC} =11V	18	25	32	mA
Circuit Voltage(1)	V ₃₋₅		V _{CC} =11V	1.3	1.6	1.9	V
Circuit Voltage(2)	V ₇₋₅		V _{CC} =11V	1.3	1.6	1.9	V
Polarity Changeover Voltage(1)	V ₂₋₅	1	Positive Polarity Signal Input	0		0.4	V
Polarity Changeover Voltage(2)	V ₂₋₅	1	Negative Polarity Signal Input	2.5		5.5	V
Phase Shift Time	t ₍₁₎	2	V _{CC} =11V	4.5	5.0	5.5	μs
Enable Pulse Shift Time	t ₍₂₎	2	V _{CC} =11V	1		40	μs
Change with Supply Voltage for Phase Modulation Time	Δt ₍₁₎ /V _{CC}	3	V _{CC} =9.9V~12.1V			5	%
Change with Ambient Temperature for Phase Modulation Time	Δt ₍₁₎ /Ta	3	V _{CC} =11V, Ta=-20°C~60°C			5	%
Output Pulse Width	τ _(HD1)	4	V _{CC} =11V	4.4	4.9	5.4	μs
Enable Output Pulse Width	τ _(HD2)	4	V _{CC} =11V	2		40	μs
Change with Supply Voltage for Output Pulse Width	Δτ _(HD1) /V _{CC}	3	V _{CC} =9.9V~12.1V			5	%
Change with Ambient Temperature for Output Pulse Width	Δτ _(HD1) /Ta	3	V _{CC} =11V, Ta=-20°C~60°C			5	%

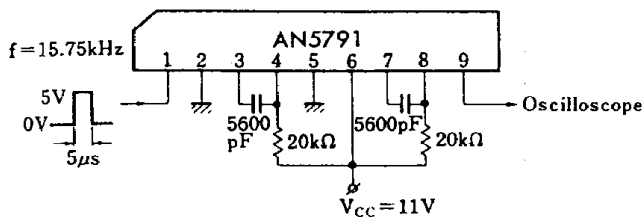
Test Circuit 1 (V₂₋₅)



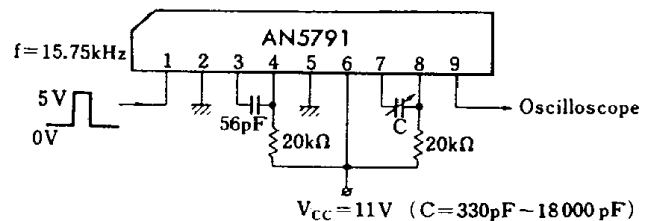
Test Circuit 2 (t₍₁₎, t₍₂₎)



Test Circuit 3 (Δt₍₁₎/V_{CC}, Δt₍₁₎/Ta, Δτ_(HD1)/V_{CC}, Δτ_(HD1)/Ta)



Test Circuit 4 (τ_(HD1), τ_(HD2))



■ Application Circuit

