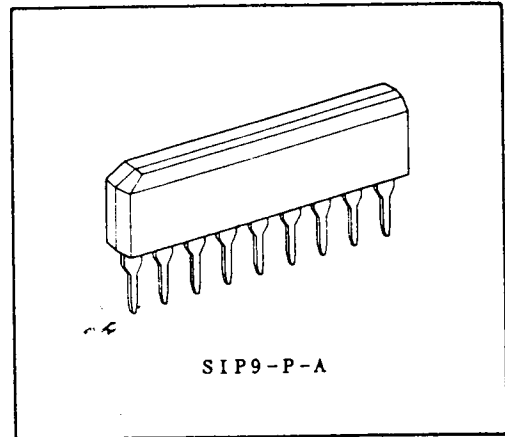


PROTECTION CIRCUIT FOR OCL POWER AMPLIFIER AND SPEAKER

- Over current detecting circuit
Operation at the time of over load, such as a speaker terminal short.
- DC voltage detecting circuit
Operation at the time when positive or negative DC voltage ($\pm 1.1V$ of detection level) has generated at output terminals.
- Muting circuit
Transient noise protection when power is ON-OFF.
- Relay driver circuit (Drive current of 130mA at Max.)
- Operation by dual power supply.



Weight: 0.9g(Typ.)

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V _{CC}	60	V
Relay Driver Output Current	I _{OUT}	130	mA
Power Dissipation	P _D	500	mW
Operating Temperature	T _{opr}	-20 ~ 75	°C
Storage Temperature	T _{stg}	-55 ~ 150	°C

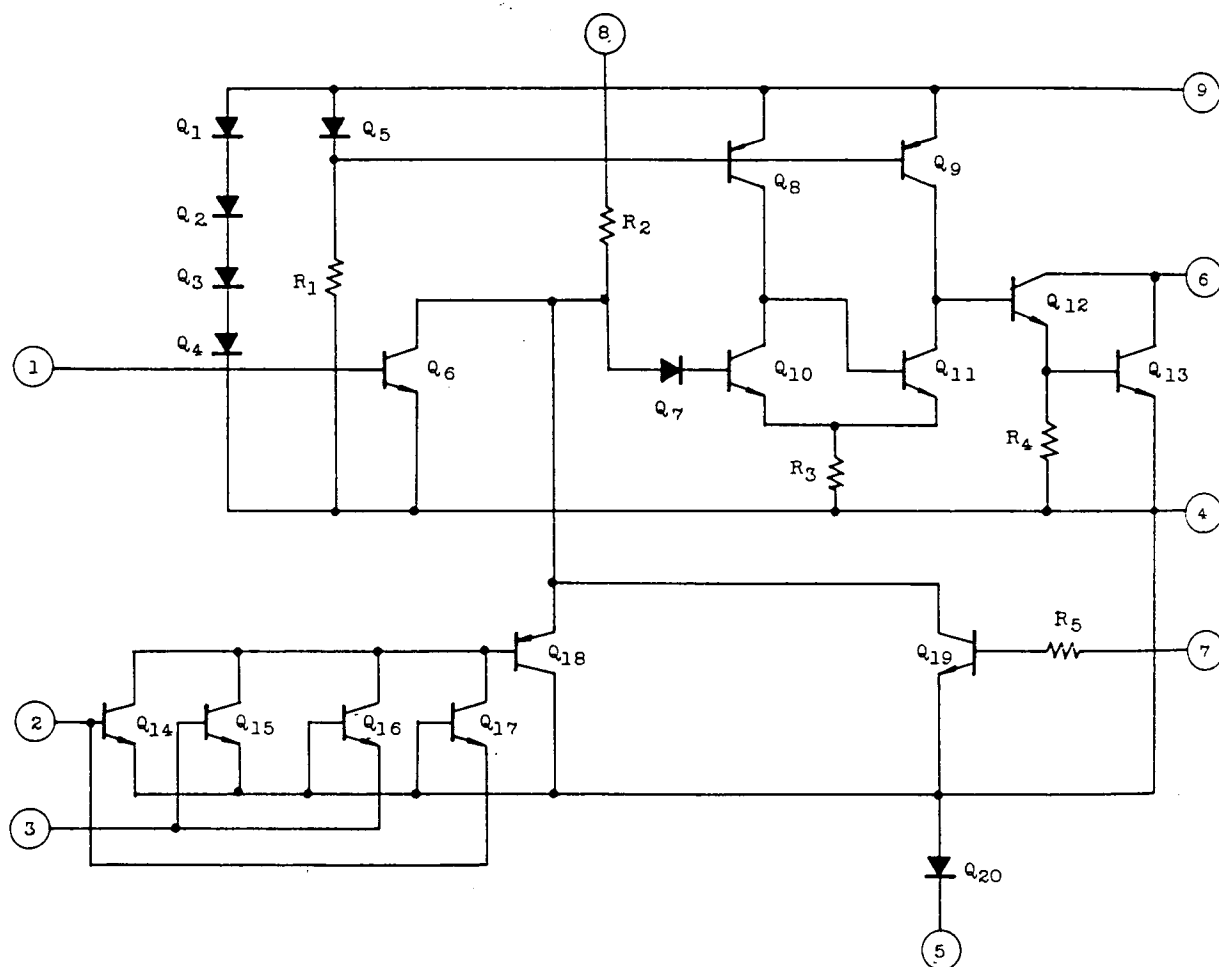
ELECTRICAL CHARACTERISTICS (V_{CC}=±50V, Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Current	I _{CC ON}	-	V _I IN=-5V, ±V _{DC} =0V, SW:OFF	-	54	-	mA
	I _{CC OFF}	-	V _I IN=0V, ±V _{DC} =0V, SW:OFF	1.5	2.4	4	
DC Detector Voltage	+V _{DC}	-	Note 1	0.9	1.1	1.3	V
	-V _{DC}	-	Note 1	-0.9	-1.1	-1.3	
Output Voltage	V _{OUT(ON)}	-	V _I IN=-5V, ±V _{DC} =0V, SW:OFF	-	1	2	V
	V _{OUT(OFF)}	-	V _I IN=0V, ±V _{DC} =0V, SW:OFF	-	50	-	
Muting Time at Power ON	M.T (V _{CC ON})	-	Note 2	-	4	-	sec
Muting Time with Load Shorted	M.T	-	Note 3	-	3.5	-	sec
Pin 8 Entering Current	I ₈	-	-	2	8	-	μA
Pin 9 Terminal Voltage	V ₉	-	-	-	3.1	-	V
Pin 1 Terminal Voltage	V ₁	-	-	-	0.75	-	V
Pin 5 Terminal Voltage	V ₅	-	-	-	-0.75	-	V

MAXIMUM INTO OR OUT CURRENT

CHARACTERISTIC	SYMBOL	RATING	UNIT
Pin 1 Current	I_1	± 1.0	mA
Pin 2 Current	I_2	± 1.0	mA
Pin 3 Current	I_3	± 1.0	mA
Pin 5 Current	I_5	-6.0	mA
Pin 7 Current	I_7	1.0	mA
Pin 9 Current	I_9	5.0	mA

EQUIVALENT CIRCUIT



CIRCUIT

The circuit diagram shows a pulse generator using a TA7317P IC. The IC is configured with various resistors and capacitors. The input is connected to a pulse oscillator (SW) through a 47kΩ resistor. The output is connected to a relay (500Ω/24V) through a 500Ω resistor. The circuit also includes an oscilloscope for monitoring the output. The power supply is V_{CC} (50V) and V_{EE} (-50V). The IC is labeled TA7317P.

- (Note) 1. The value of $\pm V_{DC}$ at the time when the relay is turned from ON to OFF in the condition of V_1 IN=-5V and SW-OFF.
2. The time required for the relay being turned from OFF to ON at $+V_{CC}$ ON in the condition of V_1 IN=-5V, $\pm V_{DC}=0V$, and SW-OFF.
3. The duration of the relay being able to keep OFF when SW is turned ON in the condition of V_1 IN=-5V and $\pm V_{DC}=0V$. At that time input pulse is 3ms, -3V.

