

# TA8136S

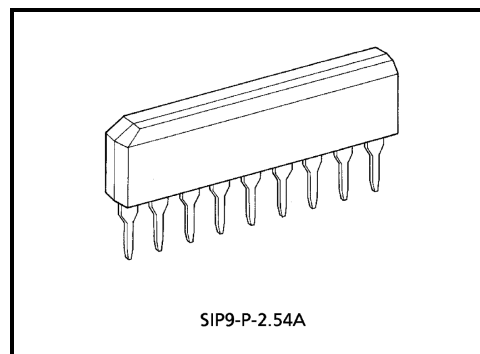
## Radio Control Transmitter IC

The TA8136S is designed for a 1 chip transmitter IC including pulse generator, duty control mixer, carrier oscillator, and RF power amplifier.

This IC has 7 control modes by combination of external switches (SW1 and SW2). A modulation frequency (pulse wave) is set arbitrarily by capacitance  $C_1$ , resistance  $R_1$  and  $R_2$ .

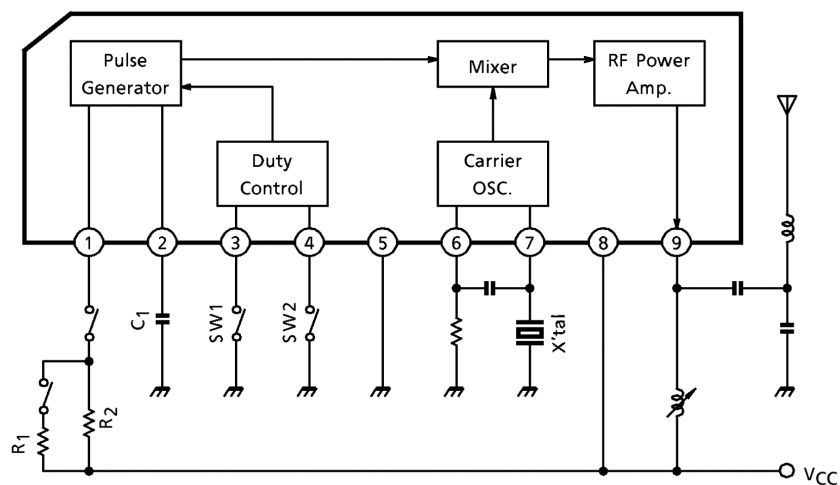
### Features

- Very few external parts
- Square wave frequency can be freely set.
- Square wave duty cycle can be controlled keeping fixed frequency.
- Wide supply voltage range:  $V_{CC} (opr) = 6 \sim 11V$  (recommended  $V_{CC} = 9V$ )



Weight: 0.92g (typ.)

### Block Diagram



## Maximum Ratings (Ta = 25°C)

Characteristic	Symbol	Rating	Unit
Supply voltage	V <sub>CC</sub>	12	V
Power dissipation	P <sub>D</sub> (Note)	600	mW
Operating temperature	T <sub>opr</sub>	-25~75	°C
Storage temperature	T <sub>stg</sub>	-55~150	°C

(Note) Derated above 25°C in the proportion of 4.8mW / °C.

## Electrical Characteristics

(unless otherwise specified, Ta = 25°C, V<sub>CC</sub> = 9V, f<sub>OSC</sub> = 27MHz)

Characteristic	Symbol	Test Cir-cuit	Test Condition	Min.	Typ.	Max.	Unit
Supply current	I <sub>CC</sub> (1)	1	A mode	—	20	27	mA
	I <sub>CC</sub> (2)		B mode	—	22	—	
	I <sub>CC</sub> (3)		C mode	—	18	—	
Transmitter output power	P <sub>O</sub> (1)	1	f <sub>OSC</sub> = 27MHz	16	30	—	mW
	P <sub>O</sub> (2)	2	f <sub>OSC</sub> = 40MkHz	—	30	—	
Modulation frequency	f <sub>m</sub>	3	A, B, C mode	—	2.3	—	kHz

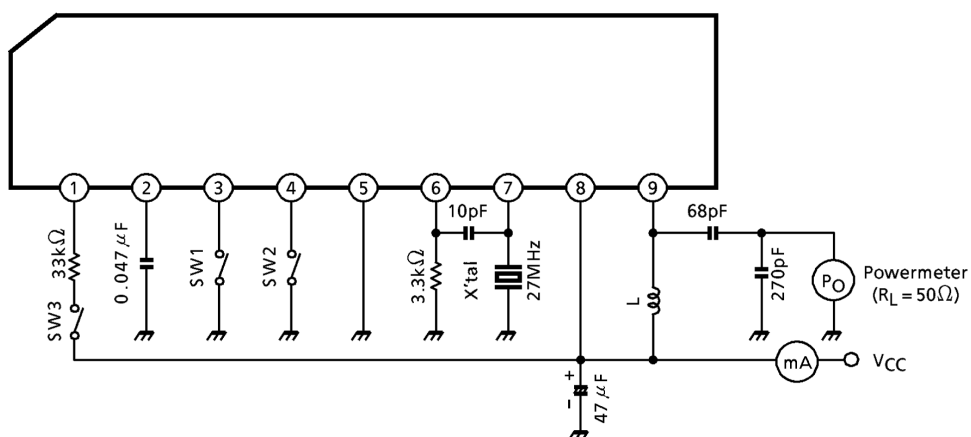
A mode→SW1, SW2: OFF

B mode→SW1: ON, SW2: ON

C mode→SW1: OFF, SW2: ON

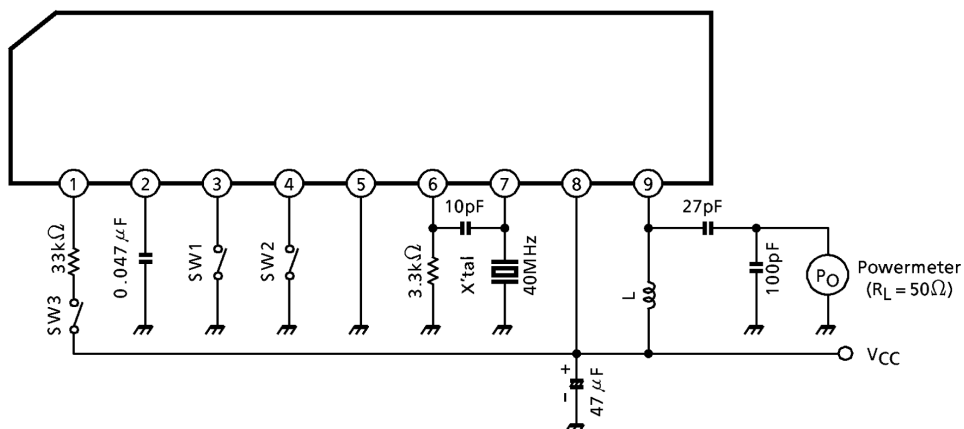
(Note) Non modulation mode

## Test Circuit 1



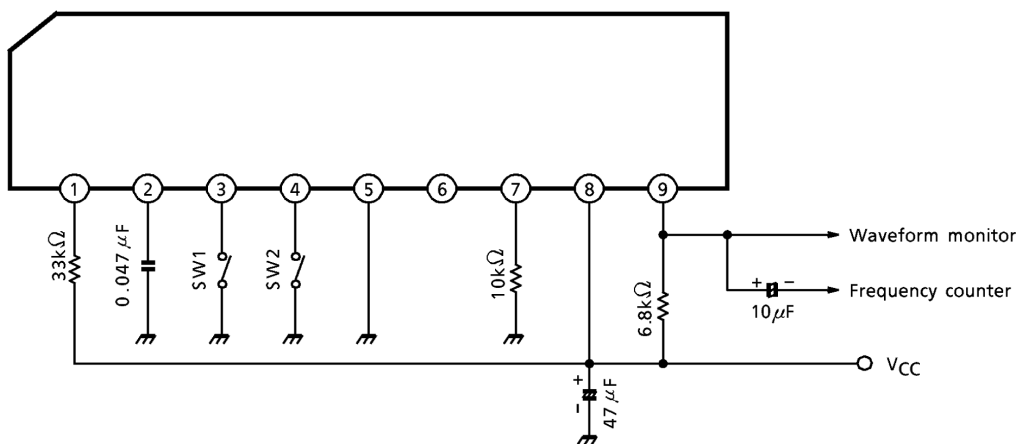
L : KY-6008 (Mitsumi)  
10 1/2T, φ0.5mm UEW  
Bobbin with Ferrite Core

## Test Circuit 2

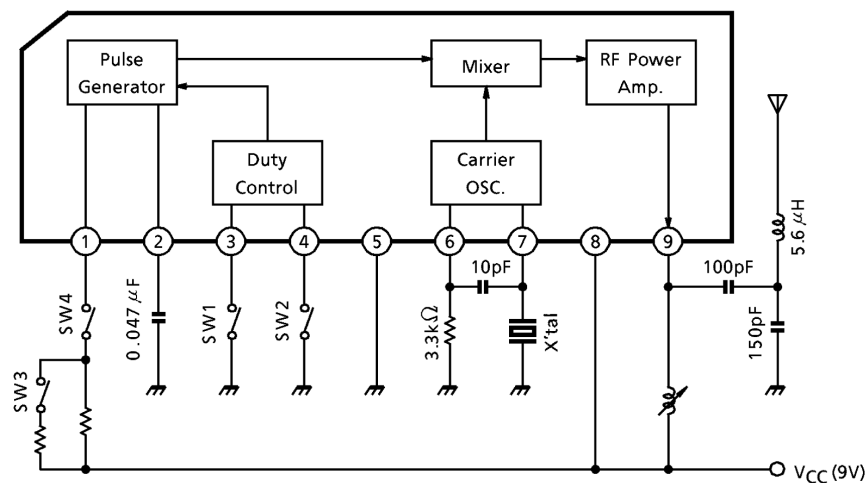


L : KY-6008 (Mitsumi)  
10 1/2T,  $\phi$ 0.5mm UEW  
Bobbin with Ferrite Core

## Test Circuit 3



27MHZ Application Circuit



Transmitter Output Wave Form

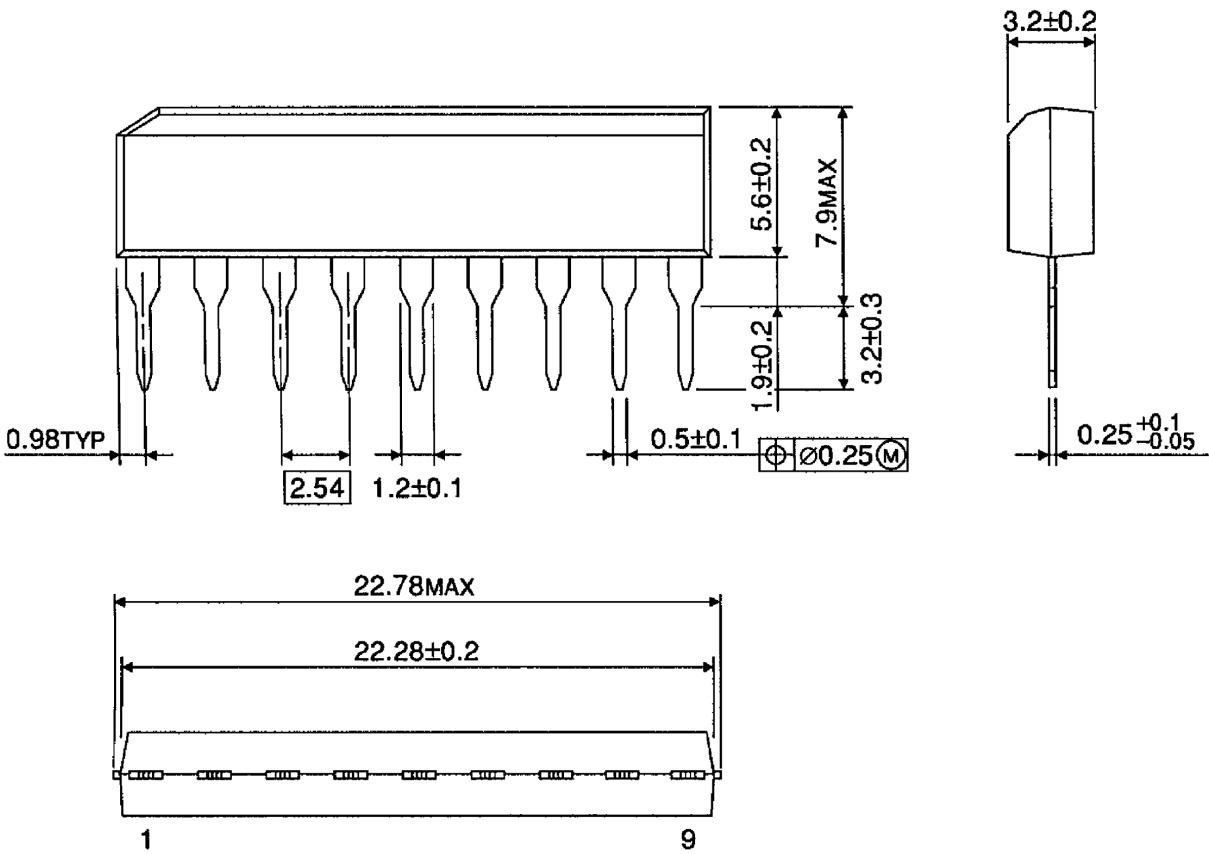
SW4	SW1	SW2	SW3 OFF	SW3 ON	Duty Cycle (%)
Off	—	—			Non-modulation mode
ON	OFF	OFF			50
	ON	OFF			75
	OFF	ON			25

(Freq.1 < Freq.2)

Package Dimensions

SIP9-P-2.54A

Unit : mm



Weight: 0.92g (typ.)

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