

RC506C1

ULTRA HIGH FREQUENCY PRESCALER

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The RC506C1 is a high frequency, up to 500MHz, prescaler used with a frequency synthesizer to form a Phase Locked Loop (PLL). It will divide the input frequency by the modulus of 64, 128 or 256.

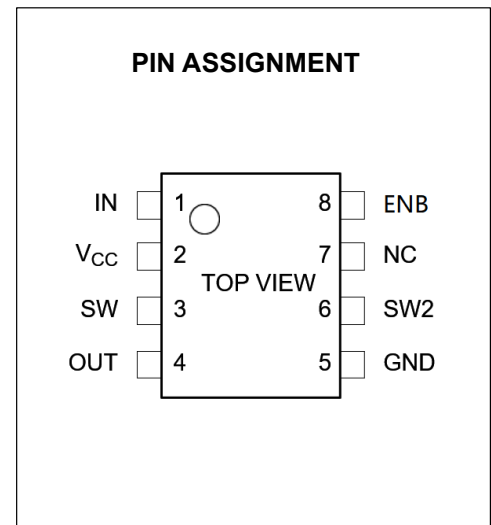
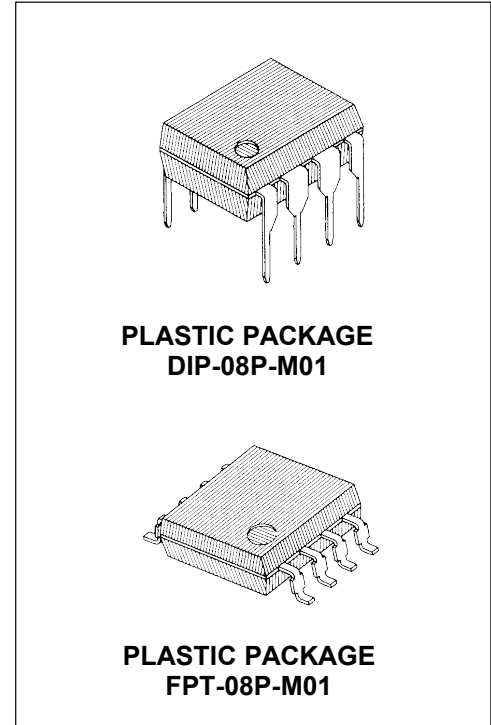
FEATURES

- High Frequency Operation 500MHz max.
- Power Dissipation 9mW typ.
- Wide Operation Temperature -40°C to +65°C
- Stable Output Amplitude Vss to Vdd
- Complete PLL synthesizer circuit with the Fujitsu MB87006A, PLL synthesizer IC
- Plastic 8-pin Standard Dual-In-Line Package or Flat Package

ABSOLUTE MAXIMUM RATINGS (See Note)

Rating	Symbol	Value	Unit
Supply Voltage	V_{CC}	-0.5 to +7.0	V
Input Voltage	V_{IN}	-0.5 to V_{CC}	V
Output Current	I_O	10	mA
Storage Temperature	T_{STG}	-55 to +125	°C

Note: Permanent device damage may occur if the above **Absolute Maximum Ratings** are exceeded. Functional operation should be restricted to the conditions as detailed in



This device contains circuitry to protect the inputs against damage due to high static voltages or electric fields. However, it is advised that normal precautions be taken to avoid application of any voltage higher than maximum rated voltages to this high impedance circuit.

RC506C1

the operational sections of this data sheet. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

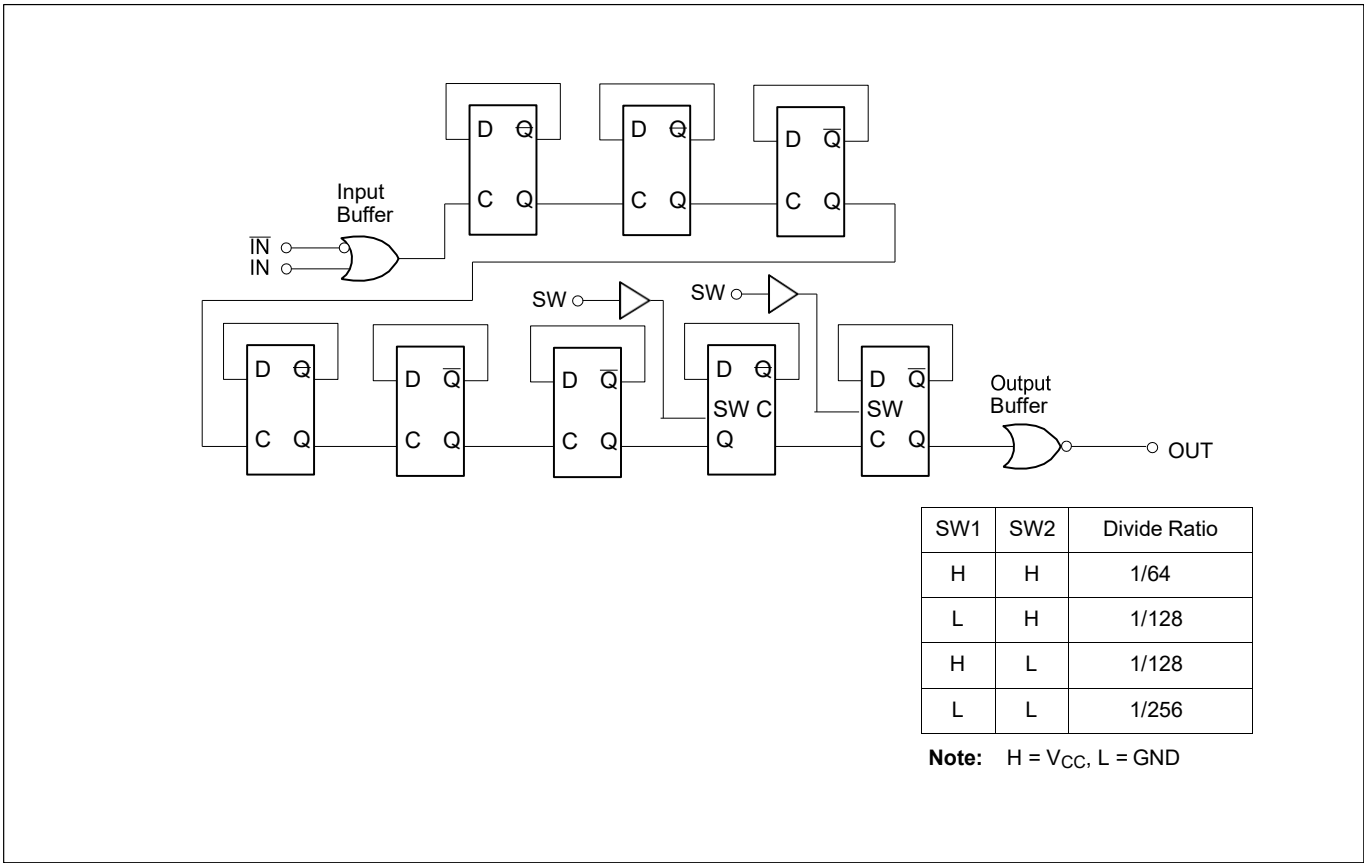


Figure 1. RC506C1 Block Diagram

PIN DESCRIPTION

Pin Number	Symbol	Function
1	IN	Input
2	V _{CC}	Power Supply Voltage
3	SW1	Divide Ratio Control Input Selecting Divide Ratio (See Divide Ratio Table)
4	OUT	Output
5	GND	Ground
6	SW2	Divide Ratio Control Input Selecting Divide Ratio (See Divide Ratio Table)
7	NC	No Connection
8	ENB	Enable

RECOMMENDED OPERATING CONDITIONS

Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
Supply Voltage 电源电压	V_{CC}	2.7	5.0	5.5	V
Output Current 输出电流	I_O		1.2		mA
Ambient Temperature 环境温度	T_A	-40		+65	°C
Load Capacitance 负载电容	C_L			12	pF

ELECTRICAL CHARACTERISTICS

(Recommended operating conditions unless otherwise noted.)

Parameter	Symbol	Conditions	Value			Unit
			Min.	Typ.	Max.	
Supply Current	I_{CC}			3		mA
Output Amplitude 电源电流输出振	V_O		V_{SS}		2.8	V
Input Frequency 输入频率	f_{IN}	with input coupling capacitor 1000pF $T_A = -40^\circ\text{C}$ to 65°C	100		500	MHz
Input Signal Amplitude 输入信号 振幅	f_{IN}		0.2		V_{DD}	V
High Level Input Voltage for SW	V_{IHS}^*		$V_{CC} - 0.1$	V_{CC}	$V_{CC} + 0.1$	V
Low Level Input Voltage for SW	V_{ILS}		Open			V

Note: *Design Guarantee

PACKAGE DIMENSIONS

