

1.1GHz Prescaler

The MC12074 is a divide by 256 prescaler. Typical frequency synthesis applications include electronically tuned TV/CATV and communication systems as well as instrumentation.

An internal preamplifier is included which isolates the differential inputs and provides gain for the input signal. Differential PECL outputs are provided.

- 1.1GHz Toggle Frequency
- Operating Supply Voltage of 4.5 to 5.5V
- Low-Power 23mA Typical at $V_{CC} = 5.0V$
- High Input Sensitivity, $20mV_{rms}$ at $V_{CC} = 5.0 \pm 10\%$, $T_A = 0^\circ C$ to $+70^\circ C$
- 800mV Minimum Peak-to-Peak Output Swing
- Differential PECL Outputs

MAXIMUM RATINGS

Symbol	Characteristic	Range	Unit
V_{CC}	Power Supply Voltage	7.0	Vdc
T_A	Operating Temperature Range	0 to +70	$^\circ C$
T_{stg}	Storage Temperature Range	-65 to +175	$^\circ C$

ELECTRICAL CHARACTERISTICS ($V_{CC} = 4.5$ to $5.5V$; $T_A = 0$ to $+70^\circ C$)

Symbol	Characteristic	Min	Typ*	Max	Unit
f_{max} f_{min}	Toggle Frequency (Sine Wave Input)	1.1	1.3	90	GHz MHz
I_{CC}	Supply Current at 5.5V		23	30	mA
V_{out}	Output Voltage (Load = 10pF)	0.8	1.2		V_{PP}
$V_{in min}$	Input Voltage Sensitivity 150-1100MHz 90MHz		10	20 30	mV_{rms}
$V_{in max}$	Input Overload	200	400		mV_{rms}

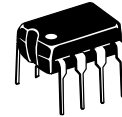
* Typical measured at $+25^\circ C$, 5.0V

1. See Figure 1

MC12074

MECL PLL COMPONENTS

$\div 256$
PRESCALER

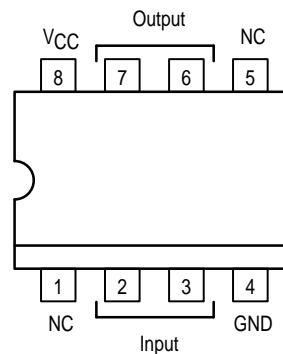


P SUFFIX
8-LEAD PLASTIC PACKAGE
CASE 626-05



D SUFFIX
8-LEAD PLASTIC SOIC PACKAGE
CASE 751-05

Pinout: 8-Lead Plastic (Top View)



PRESCALER BLOCK DIAGRAM

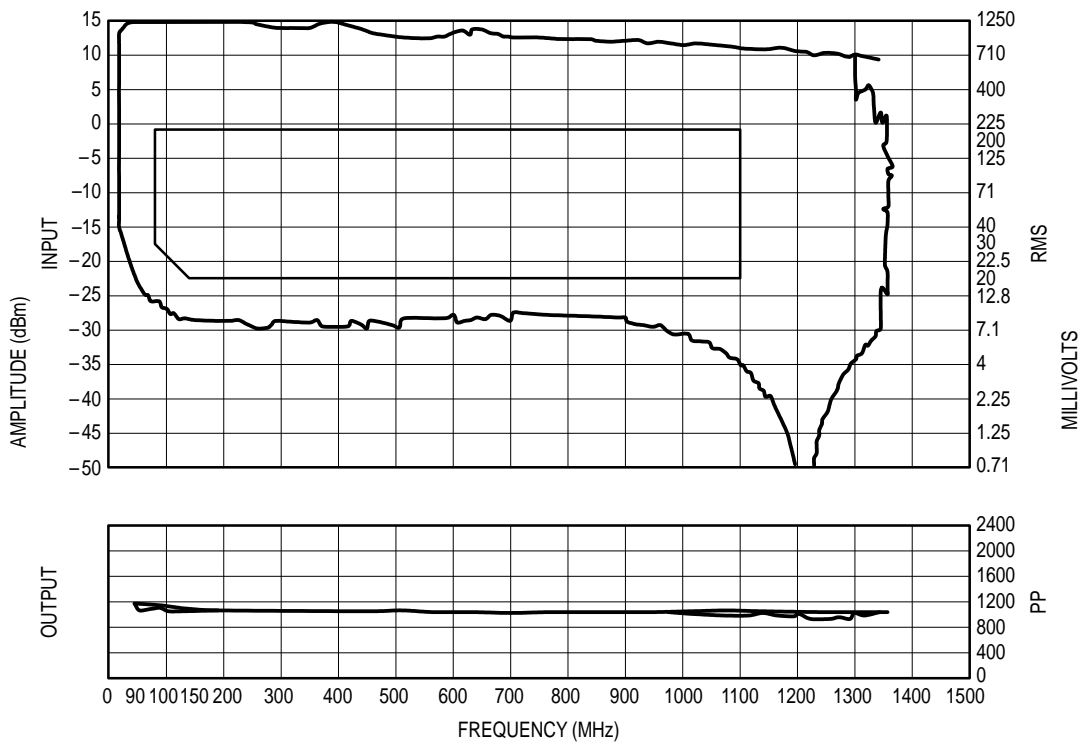
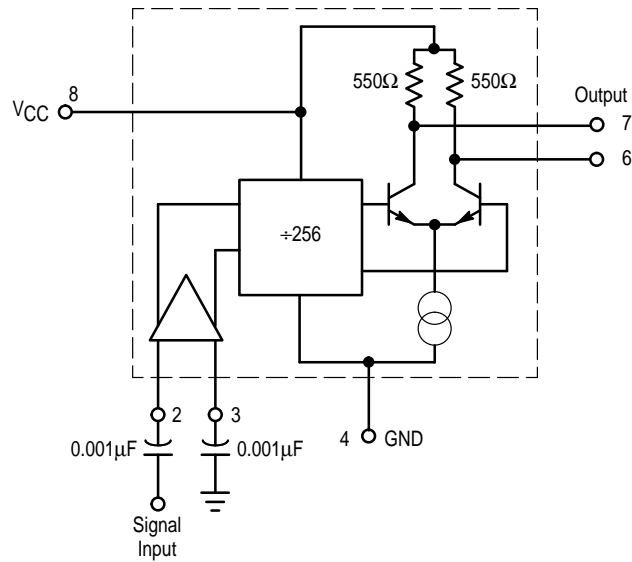


Figure 1. Divide Ratio = 256
 (Maximum Toggle Frequency: Min = 1357, Mean = 1357, Max = 1357
 Temp = 25°C, V_{CC} = 5.0V, Number of Devices = 1)

