1.1GHz Prescaler

The MC12074 is a divide by 256 prescaler. Typical frequency synthesis applications include elctronically 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
VCC	Power Supply Voltage	7.0	Vdc
т _А	Operating Temperature Range	0 to +70	°C
T _{stg}	Storage Temperature Range	-65 to +175	°C

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

Symbol	Characteristic	Min	Тур*	Мах	Unit
f _{max} 1 f _{min}	Toggle Frequency (Sine Wave Input)	1.1	1.3	90	GHz MHz
ICC	Supply Current at 5.5V		23	30	mA
V _{out}	Output Voltage (Load =10pF)	0.8	1.2		V _{PP}
Vin 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°C, 5.0V

1. See Figure 1

MC12074

MECL PLL COMPONENTS

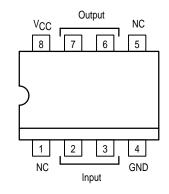
÷256 PRESCALER





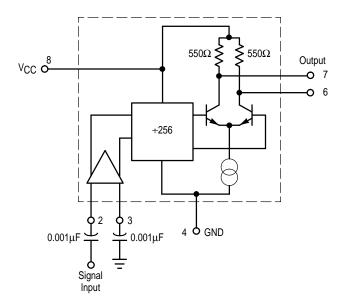
D SUFFIX 8–LEAD PLASTIC SOIC PACKAGE CASE 751–05

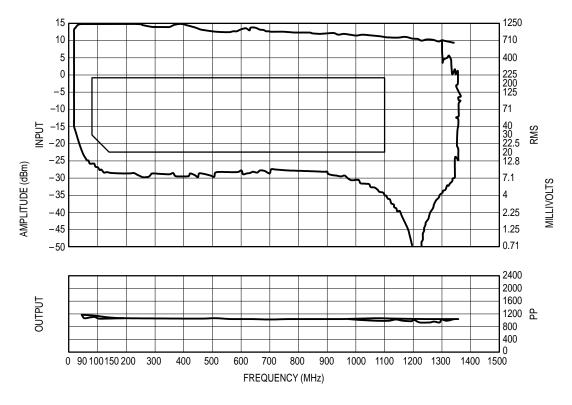
Pinout: 8-Lead Plastic (Top View)





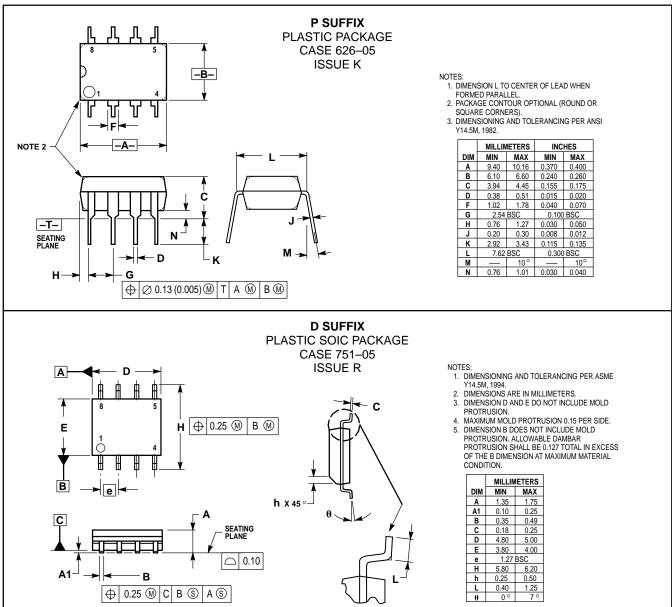
PRESCALER BLOCK DIAGRAM





 $\label{eq:Figure 1. Divide Ratio = 256} \\ (Maximum Toggle Frequency: Min = 1357, Mean = 1357, Max = 1357 \\ Temp = 25^{\circ}C, \ V_{CC} = 5.0V, \ Number \ of \ Devices = 1) \\ \end{cases}$

OUTLINE DIMENSIONS



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