

# 520MHz Dual Modulus Prescaler

The MC12025 is a dual modulus prescaler which divides by 64 and 65. Supply voltages of 4.75 to 5.25V may be connected to Pin 8.

- 520MHz Toggle Frequency
- Low-Power 9.5mA Typical
- Control Input Is Compatible With Standard CMOS and TTL
- Operating Supply Voltage of 5.0V ±0.25V
- Propagation Delay 30ns Typical

### MAXIMUM RATINGS

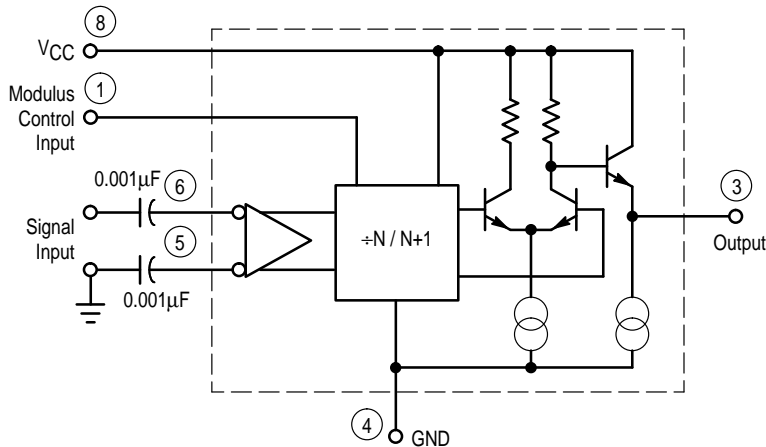
Symbol	Characteristic	Range	Unit
V <sub>CC</sub>	Power Supply Voltage, Pin 8	-0.5 to 7.0	Vdc
T <sub>A</sub>	Operating Temperature Range	-40 to +85	°C
T <sub>stg</sub>	Storage Temperature Range	-65 to +175	°C

### ELECTRICAL CHARACTERISTICS (V<sub>CC</sub> = 4.75 to 5.25V; T<sub>A</sub> = -40 to +85°C)

Symbol	Characteristic	Min	Typ	Max	Unit
f <sub>max</sub> f <sub>min</sub>	Toggle Frequency (Sine Wave Input)	520		30	MHz
I <sub>CC</sub>	Supply Current		9.5	13.5	mA
V <sub>IH</sub>	Control Input HIGH (+64)	2.0			V
V <sub>IH</sub>	Control Input LOW (+65)			0.8	V
V <sub>out</sub>	Output Voltage	0.8	1.2		V <sub>PP</sub>
V <sub>in</sub>	Input Voltage Sensitivity 30MHz 100-520MHz	400 100		800 800	mV <sub>PP</sub>
t <sub>PLL</sub>	PLL Response Time <sup>1</sup>			t <sub>out</sub> -42 <sup>2</sup>	ns

1. t<sub>PLL</sub> = The period of time the PLL has from the rising output transition to the Modulus Control input edge transition to ensure proper modulus selection
2. t<sub>out</sub> = Period of output waveform

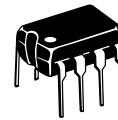
### PRESCALER BLOCK DIAGRAM



# MC12025

## MECL PLL COMPONENTS

### ÷64/65 DUAL MODULUS 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)

