

Legacy Device: Motorola MC12079

The ML12079 is a single modulus divide by 64, 128, 256 prescaler for low power frequency division of a 2.8 GHz (typical) high frequency input signal. Divide ratio control inputs SW1 and SW2 select the required divide ratio of ÷64, ÷128, or ÷256.

An external load resistor is required to terminate the output. A 1.2 kΩ resistor is recommended to achieve a 1.6 V<sub>pp</sub> output swing, when dividing a 1.1 GHz input signal by the minimum divide ratio of 64, assuming a 12 pF load. Output current can be minimized dependent on conditions such as output frequency, capacitive load being driven, and output voltage swing required. Typical values for load resistors are included in the V<sub>Out</sub> specification for various divide ratios at 2.8 GHz input frequency.

- 2.8 GHz Toggle Frequency
- Supply Voltage 4.5 to 5.5 V
- Low Supply Current 9mA Typical at V<sub>CC</sub> = 5.0 V
- Operating Temperature Range of T<sub>A</sub> = -40 to 85°C


#### FUNCTIONAL TABLE

SW1	SW2	Divide Ratio
H	H	64
H	L	128
L	H	128
L	L	256

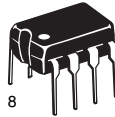
NOTE: SW1 & SW2: H = V<sub>CC</sub>, L = Open.

#### MAXIMUM RATINGS

Characteristic	Symbol	Range	Unit
Power Supply Voltage, Pin 2	V <sub>CC</sub>	-0.5 to 7.0	Vdc
Operating Temperature Range	T <sub>A</sub>	-40 to 85	°C
Storage Temperature Range	T <sub>stg</sub>	-65 to 150	°C
Maximum Output Current, Pin 4	I <sub>O</sub>	4.0	mA



**SO 8 = 5P**  
PLASTIC PACKAGE  
CASE 751



**P DIP 8 = PP**  
PLASTIC PACKAGE  
CASE 626

**CROSS REFERENCE/ORDERING INFORMATION**

PACKAGE	MOTOROLA	LANSDALE
P DIP 8	MC12079P	ML12079PP
SO 8	MC12079D	ML12079-5P

**Note:** Lansdale lead free (Pb) product, as it becomes available, will be identified by a part number prefix change from ML to MLE.

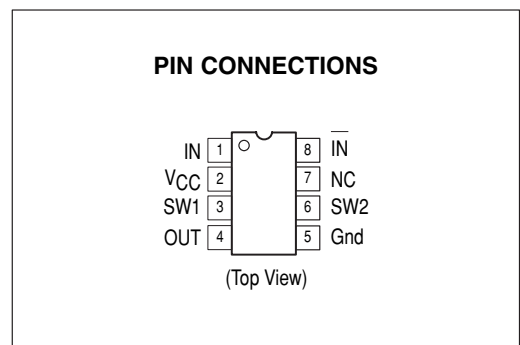
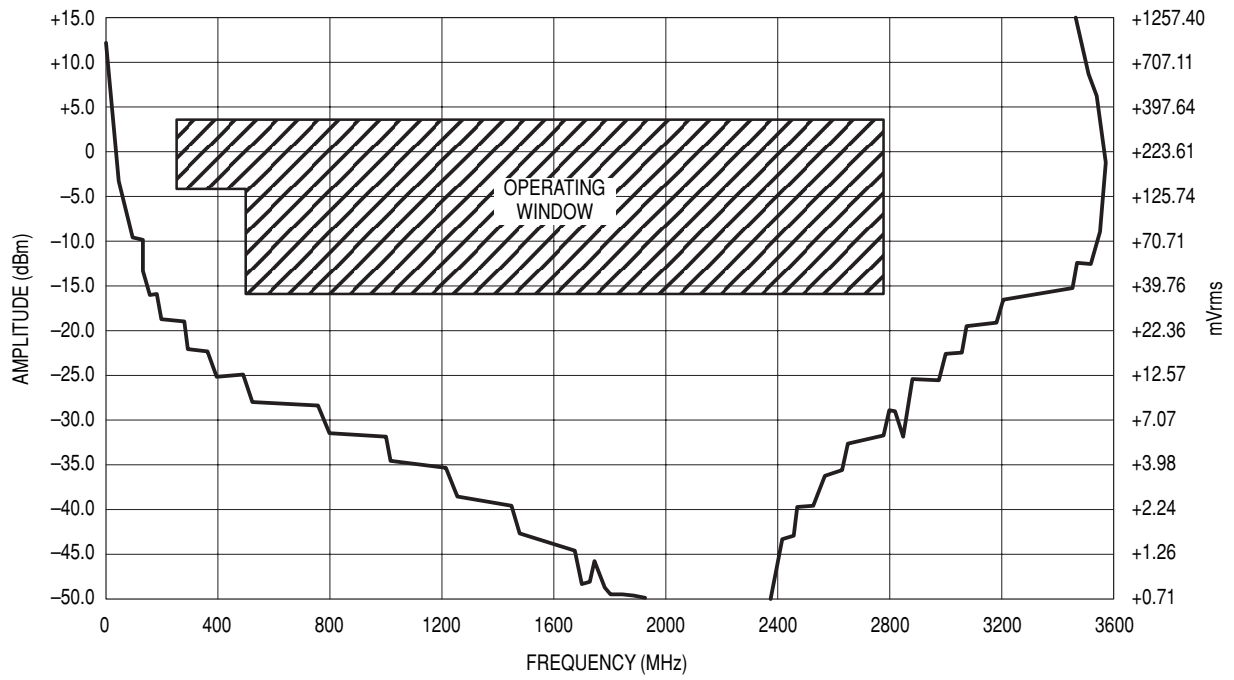


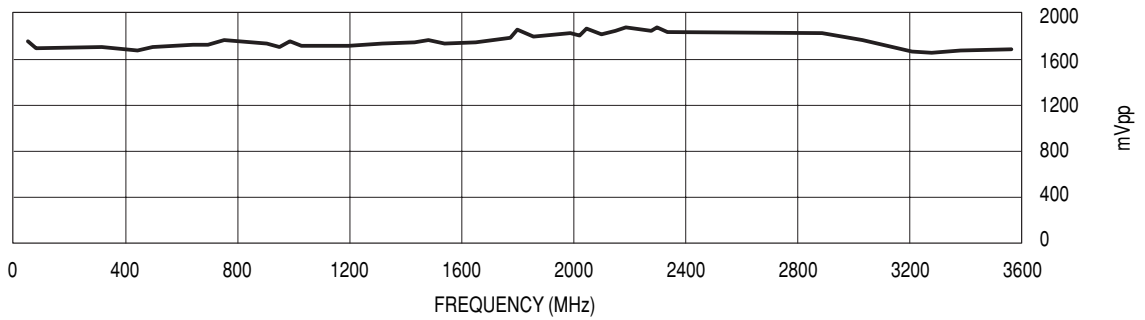


Figure 3. Input Signal Amplitude versus Input Frequency

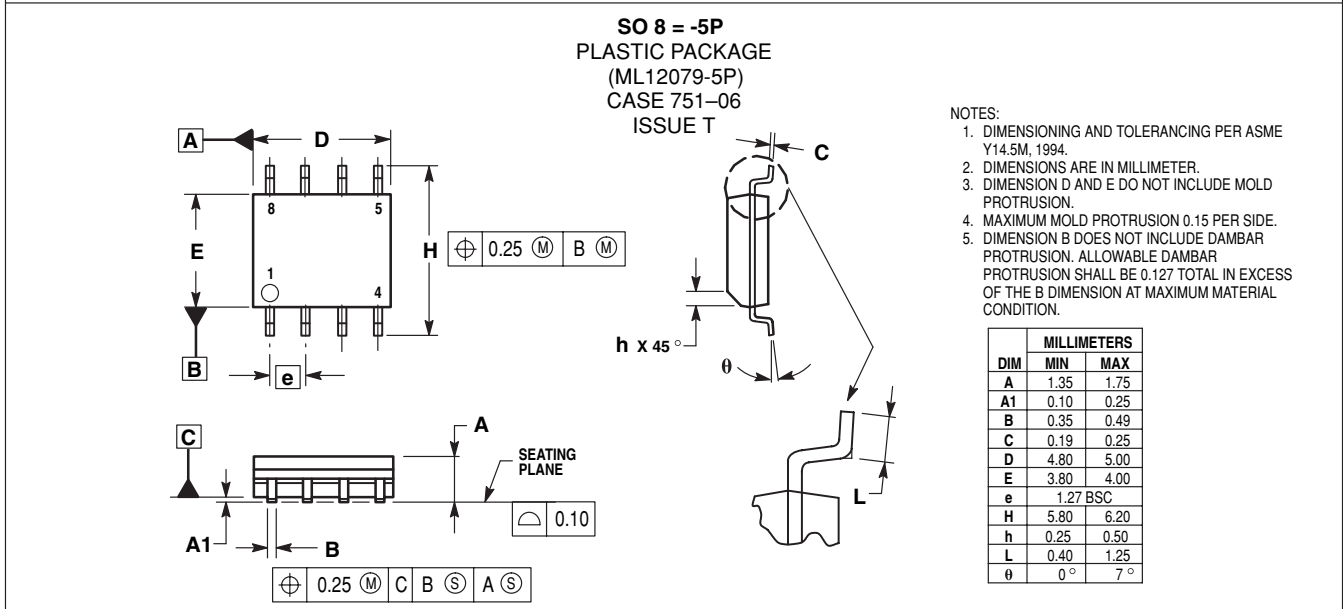
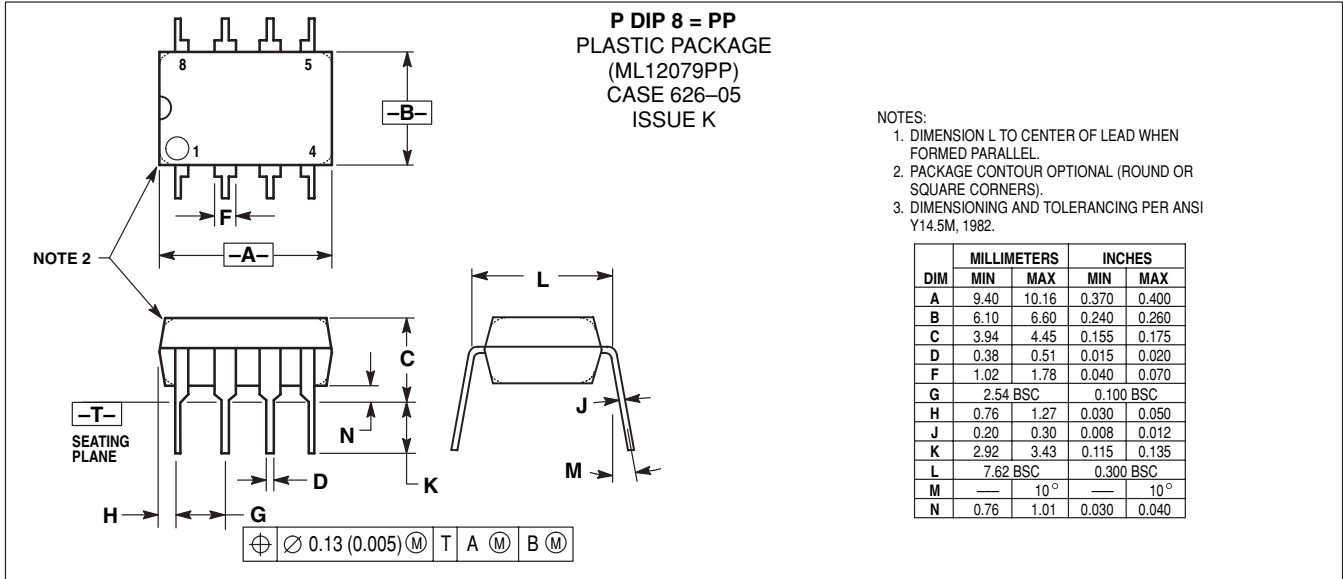


Divide Ratio = 64; V<sub>CC</sub> = 5.0 V; T<sub>A</sub> = 25°C

Figure 4. Output Amplitude versus Input Frequency



OUTLINE DIMENSIONS



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