



## MC336

Advance

CMOS IC

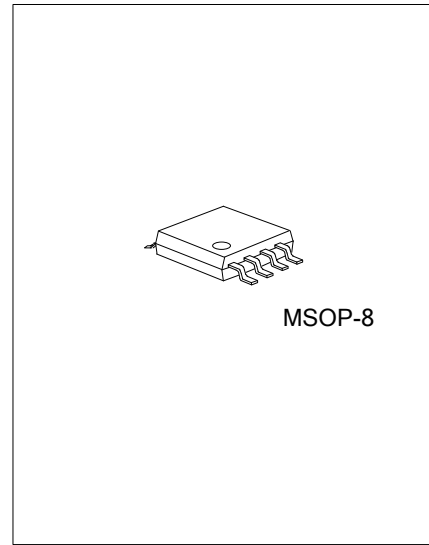
### PLC ANALOG LOW NOISE AMPLIFIER

#### DESCRIPTION

The UTC **MC336** includes LNA, RSSI, AGC and some else. This device is designed for use in FM dual conversion communications equipment.

#### FEATURES

- \* Operates from 2.5V to 6.0V Supply
- \* Low Drain Current 1.3mA Typical @  $V_{DD}=5.0V_{dc}$
- \* Low Number of External Parts Required
- \* Operating Frequency Up to 60MHz

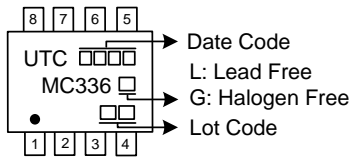


#### ORDERING INFORMATION

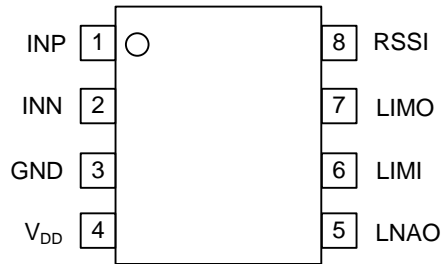
Ordering Number		Package	Packing
Lead Free	Halogen Free		
MC336L-SM1-R	MC336G-SM1-R	MSOP-8	Tape Reel

<p>MC336G-SM1-R</p> <ul style="list-style-type: none"> <li>(1) Packing Type</li> <li>(2) Package Type</li> <li>(3) Green Package</li> </ul>	<ul style="list-style-type: none"> <li>(1) R: Tape Reel</li> <li>(2) SM1: MSOP-8</li> <li>(3) G: Halogen Free and Lead Free, L: Lead Free</li> </ul>
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#### MARKING



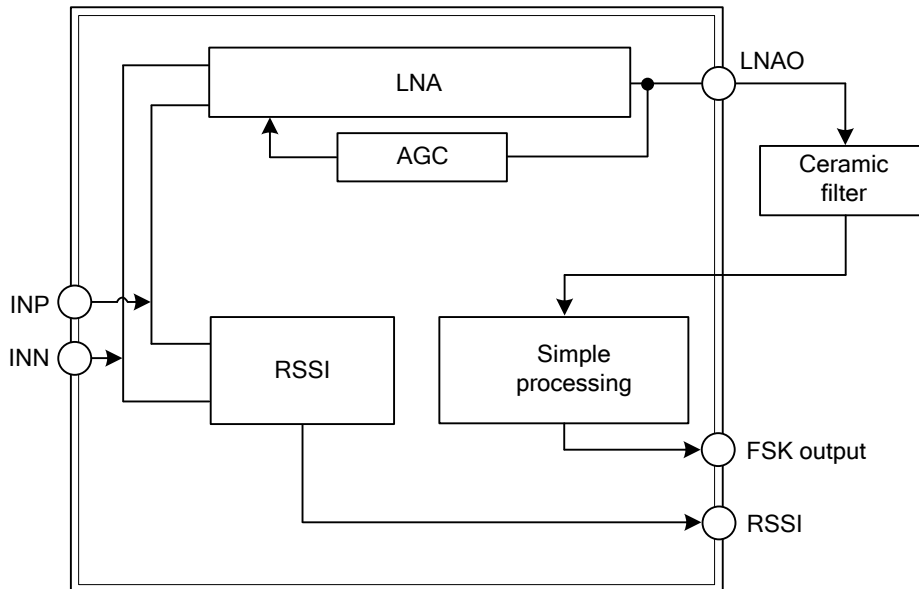
■ PIN CONFIGURATION



■ PIN DESCRIPTION

PIN NO.	PIN NAME	DESCRIPTION
1	INP	Signal no-inverting input
2	INN	Signal inverting input
3	GND	Ground
4	V <sub>DD</sub>	Power supply
5	LNAO	Low noise amplifier output
6	LIMI	Limited amplification input
7	LIMO	Limited amplification output
8	RSSI	Received signal strength indicator

■ BLOCK DIAGRAM



### ■ ABSOLUTE MAXIMUM RATING

PARAMETER	SYMBOL	RATINGS	UNIT
Power Supply Voltage	$V_{DD(max)}$	6	V
Operating Supply Voltage Range	$V_{DD}$	2.5 ~ 6	V
$V_{OUT}$ Swing ( $R_L=1k\Omega$ )		120	mV
Output Load	$R_L$	1 ~ 1.5	K $\Omega$
ESD	HBM	4k	V
RSSI_SW		3 ~ 300	mV
RSSI_AC		25	%

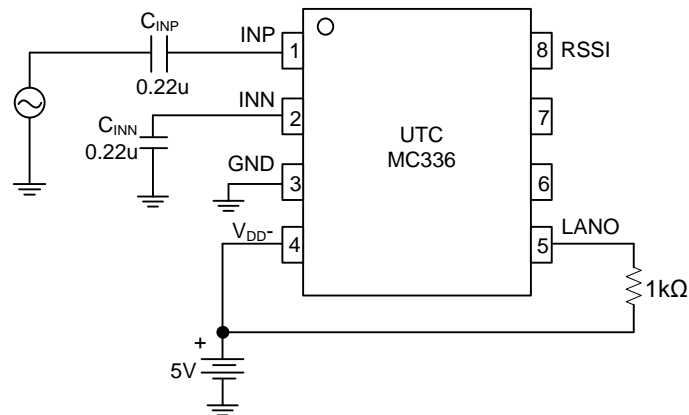
Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

### ■ ELECTRICAL CHARACTERISTICS

$V_{DD}=5V$ ,  $T_A=25^\circ C$ , Unless Otherwise Specified

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Power Supply	$V_{DD}$		2.5	5	6	V
Supply Current	$I_{DD}$	$V_{DD}=5V$	1	1.3	1.5	mA
Gain	GAIN		20	30	40	dB
Output Swing	$V_{OUT\_SEING}$	$R_L=1k\Omega$			120	mV
Output Load			1		1.5	K $\Omega$
Input Sensitivity	$V_{SENS}$			20		$\mu V$
AGC Response Time	$A_{GC\_SET}$			50	100	$\mu S$
Maximum Amplitude of Input Signal with AGC	$V_{INMAX\_AGC}$			100		mV
HBM	ESD		4000			V
Signal Intensity Detection Range	$R_{SSI\_SW}$		3		300	mV
Accuracy of Signal Intensity Detection	$R_{SSI\_AC}$			25		%

### ■ TYPICAL APPLICATION CIRCUIT



UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. UTC reserves the right to make changes to information published in this document, including without limitation specifications and product descriptions, at any time and without notice. This document supersedes and replaces all information supplied prior to the publication hereof.