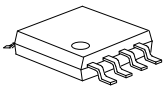
PLC ANALOG LOW NOISE AMPLIFIER



MSOP-8

■ 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}=5.0Vdc
* Low Number of External Parts Required
* Operating Frequency Up to 60MHz

■ ORDERING INFORMATION

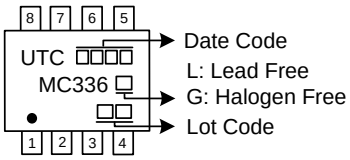
Ordering Number		Package	Packing
Lead Free	Halogen Free		
MC336L-SM1-R	MC336G-SM1-R	MSOP-8	Tape Reel

MC336G-SM1-R

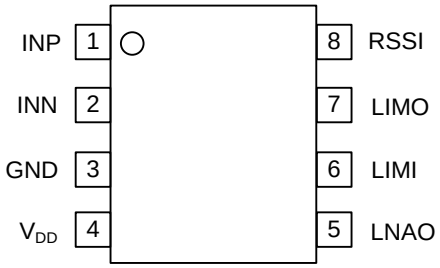
(1)Packing Type
(2)Package Type
(3)Green Package

(1) R: Tape Reel
(2) SM1: MSOP-8
(3) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING



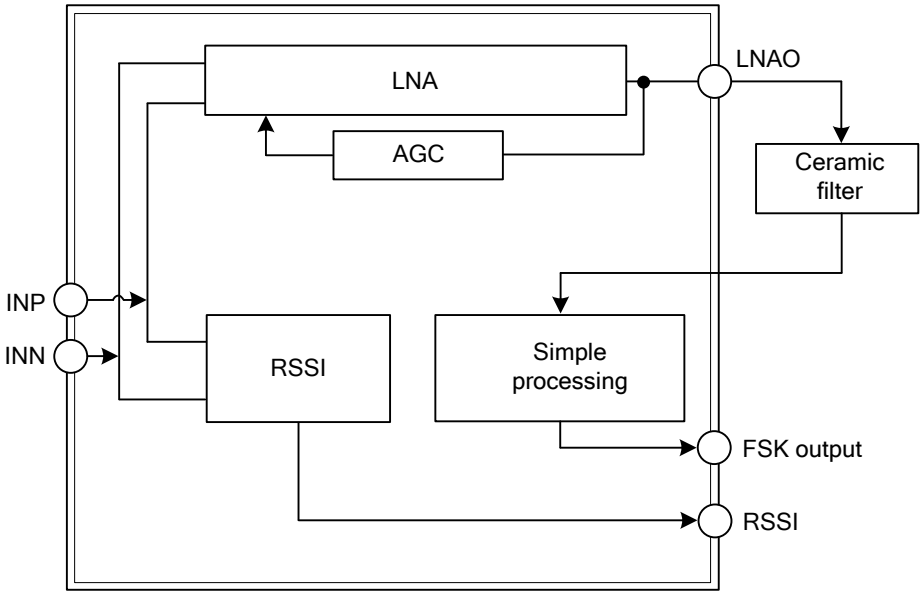
■ PIN CONFIGURATION



■ PIN DESCRIPTION

PIN NO.	PIN NAME	DESCRIPTION
1	INP	Signal no-inverting input
2	INN	Signal inverting input
3	GND	Ground
4	V_{DD}	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=1kΩ)		120	mV
Output Load	R_L	1 ~ 1.5	KΩ
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°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=1kΩ			120	mV
Output Load			1		1.5	KΩ
Input Sensitivity	V_{SENS}			20		uV
AGC Response Time	A_{GC_SET}			50	100	uS
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