

UTC M2136 LINEAR INTEGRATED CIRCUIT

ULTRA WIDE BAND,HIGH SLEW RATE SINGLE OPERATIONAL AMPLIFIER

DESCRIPTION

The UTC M2136 is an ultra wide band, high slew rate single operational amplifier operated from low voltage($\pm 1.35V$).

It can apply to active filter, high speed analog and digital signal processor, line driver. HDTV, industrial measurement equipment and others.

It can also apply to portable communication items because of low operating voltage and low operating current.

FEATURES

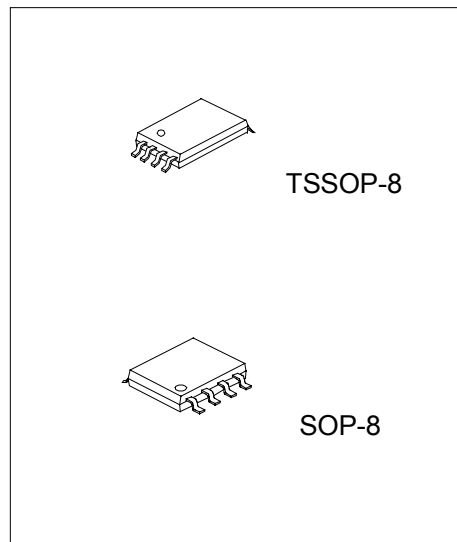
*Input Offset Voltage Balance

*Operating Voltage: $\pm 1.35V \sim \pm 6V$

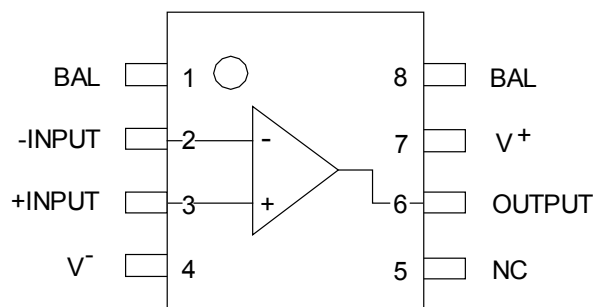
*Ultra Wide Band: 200MHz typ.

*High Slew Rate: $45V/\mu s$ typ.

*Low Operating Current: 0.63mA typ.

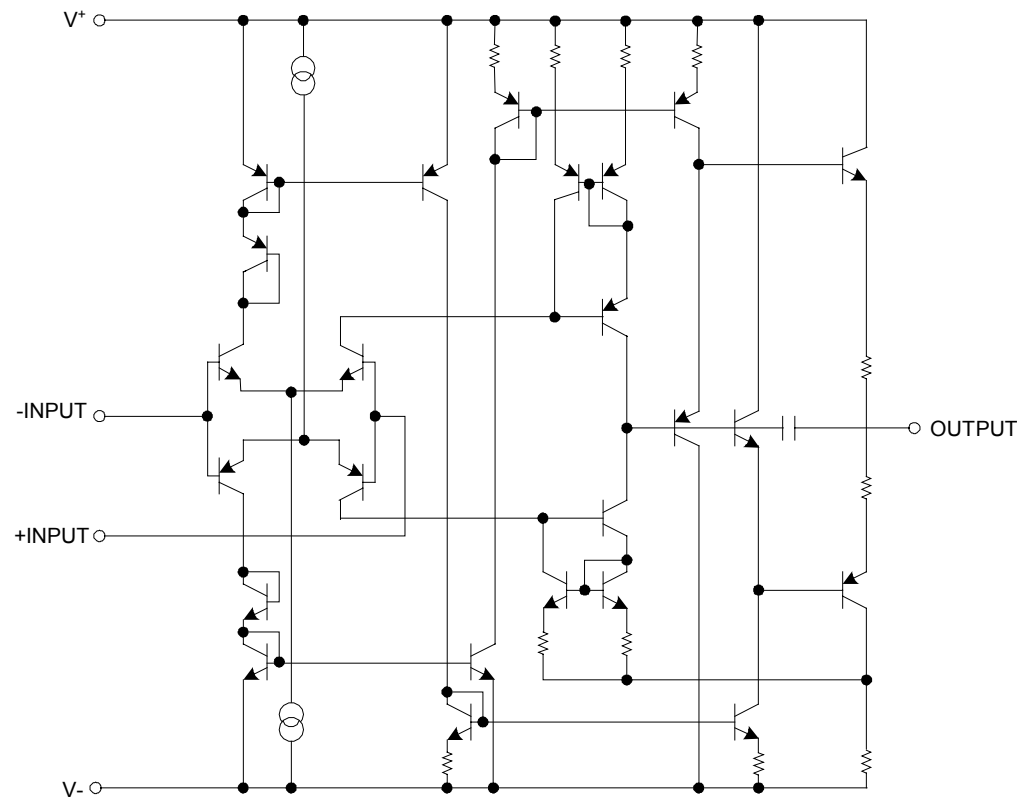


PIN CONFIGURATION



UTC M2136 LINEAR INTEGRATED CIRCUIT

EQUIVALENT CIRCUIT



ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

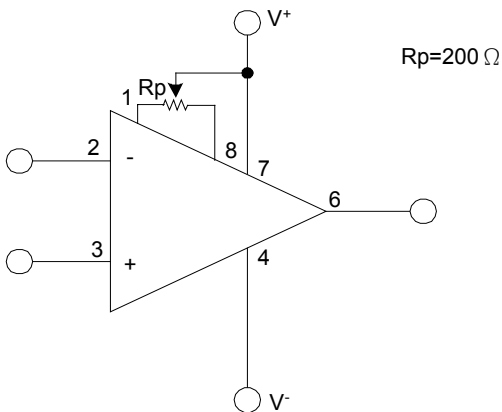
PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V ⁺ /V ⁻	±6.75	V
Differential Input Voltage	V _{ID}	±3	V
Power Dissipation	P _D	250 300	mW
Operating Temperature Range	T _{opr}	-40~+85	°C
Storage Temperature Range	T _{stg}	-50~+125	°C

UTC M2136 LINEAR INTEGRATED CIRCUIT

ELECTRICAL CHARACTERISTICS ($V^+/V^- = \pm 2.5V, T_a = 25^\circ C$)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Operating Voltage	V^+/V^-		± 1.35	± 2.50	± 6.00	V
Input Offset Voltage	V_{IO}	$R_s \leq 0 \Omega$		1.0	5.0	mV
Input Bias Current	I_B			0.5	2.0	μA
Input Offset Current	I_{IO}			20	200	nA
Large Signal Voltage Gain	A_v	$R_L \geq 10k \Omega$	65	75		dB
Input Common Mode Voltage Range	V_{ICM}		1.2	1.5		V
			-1.2	-1.5		
Common Mode Rejection Ratio	CMR	$-1V \leq V_{cm} \leq +1V$	45	60		dB
Supply Voltage Rejection Ratio	$+SVR$		70	100		dB
			50	60		
Maximum Output Voltage Swing	V_{OM}	$R_L = 1k \Omega$	1.1	1.4		V
			-0.9	-1.2		
Operating Current	I_{CC}	$R_L = \infty$ (all Amp.)		0.63	0.82	mA
Slew Rate	SR	$A_v = 0dB$		45		V/ μs
Gain-Bandwidth Product	GB	60dB $\cdot$ 500kHz	120	200		MHz
Phase Margin	Φ_M	40dB		25		deg
Unity Gain-Bandwidth	f_T	40dB		40		MHz

OFFSET ADJUSTMENT METHOD



note: The electrical characteristics change a little, in case the R_p is connected.

UTC M2136 LINEAR INTEGRATED 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. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.