

# UTC M2125 LINEAR INTEGRATED CIRCUIT

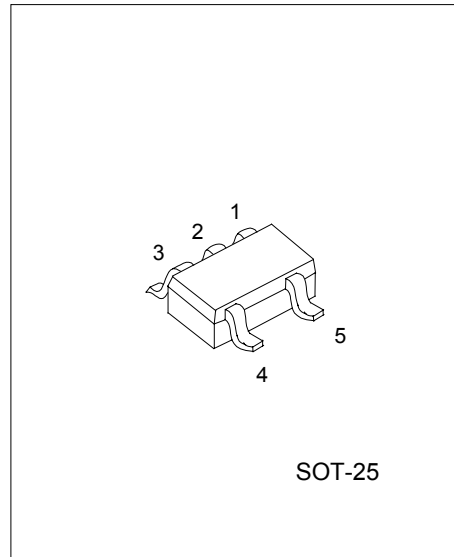
## SINGLE-SUPPLY OPERATIONAL AMPLIFIER

### DESCRIPTION

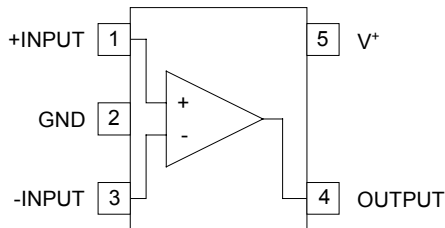
The UTC M2125 is a single-supply operational amplifier.

### FEATURES

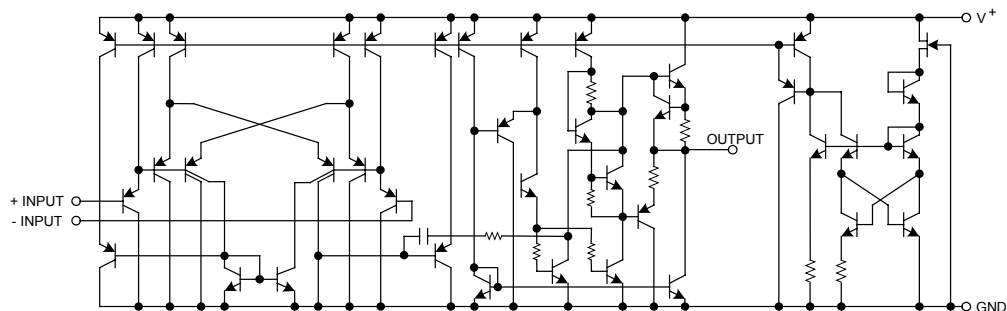
- \*Single-Supply Operation
- \*Low Operating Voltage:  $\pm 2.7V \sim 20V$
- \*Low Operating Current: 1.0mA (typ.)
- \*Slew Rate:  $1.2V/\mu s$  (typ.)



### PIN CONFIGURATION



### EQUIVALENT CIRCUIT



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## ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

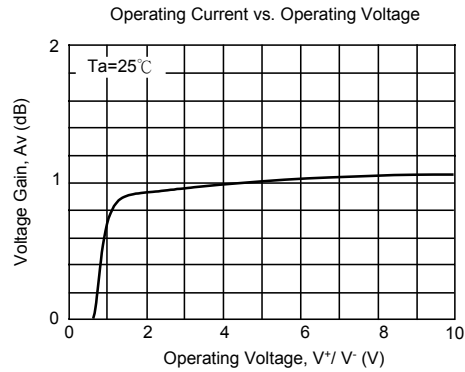
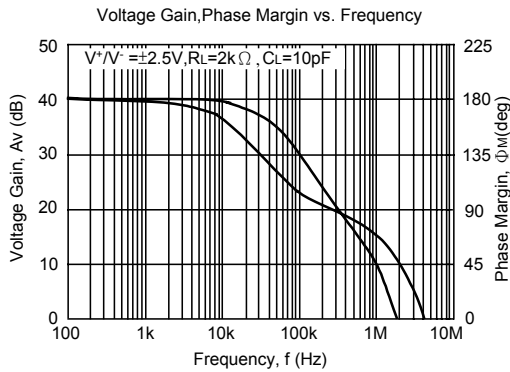
PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V <sup>+</sup>	+20	V
Differential Input Voltage	V <sub>ID</sub>	+20	V
Input Voltage	V <sub>IC</sub>	-0.3 to +20 (note)	V
Power Dissipation	P <sub>D</sub>	200	mW
Operating Temperature Range	T <sub>opr</sub>	-40~85	°C
Storage Temperature Range	T <sub>stg</sub>	-40~125	°C

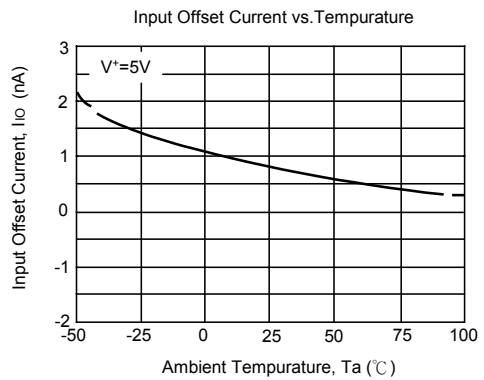
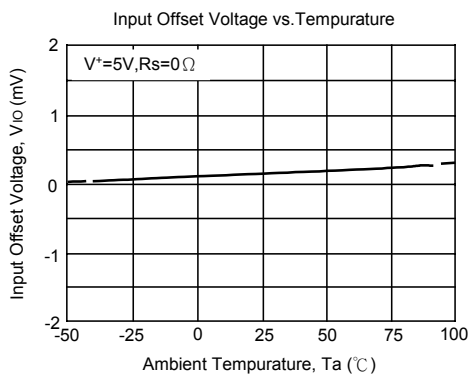
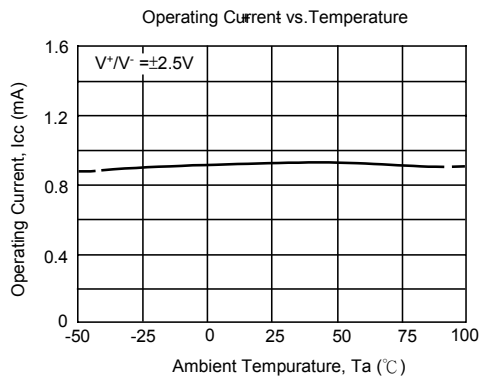
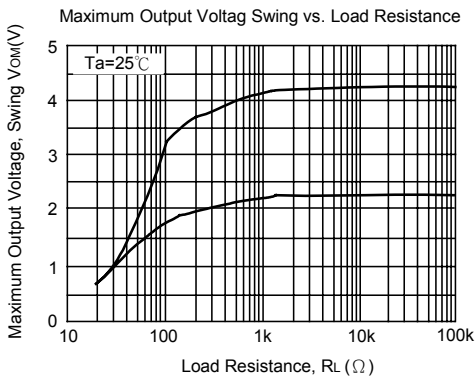
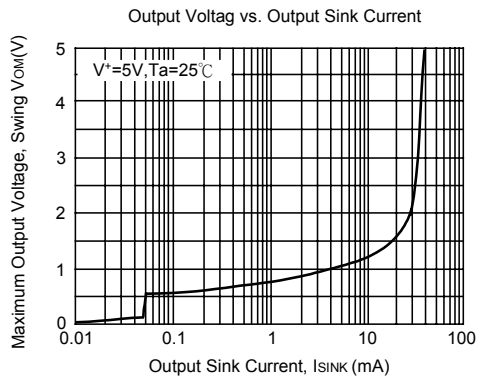
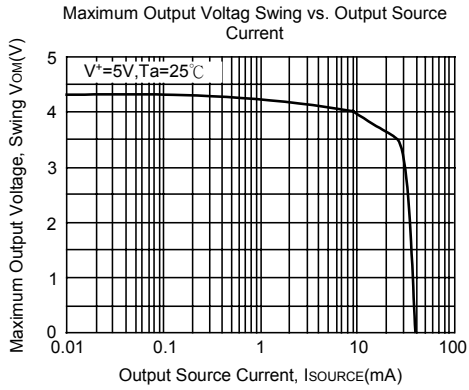
Note: When the supply voltage is less than +20V, the absolute maximum input voltage is equal to the supply voltage

## ELECTRICAL CHARACTERISTICS(V<sup>+</sup>=5V, Ta=25°C)

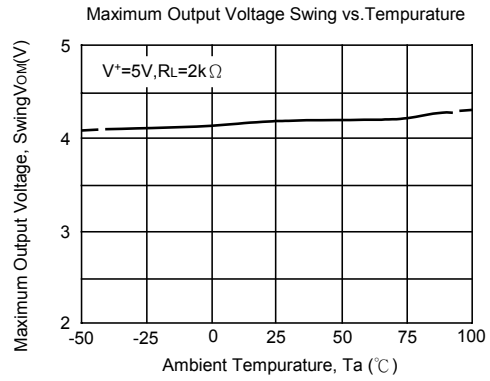
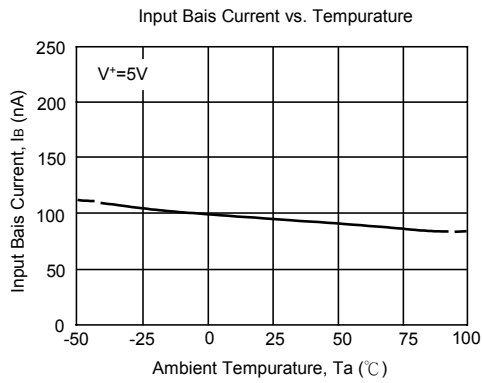
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Input Offset Voltage	V <sub>IO</sub>	R <sub>S</sub> =0 Ω		2	7	mV
Input Offset Current	I <sub>IO</sub>			5	50	nA
Input Bias Current	I <sub>B</sub>			25	250	nA
Large Signal Voltage Gain	A <sub>V</sub>	R <sub>L</sub> ≥ 2k Ω	88	100		dB
Maximum Output Voltage Swings	V <sub>OM</sub>	R <sub>L</sub> =2k Ω	3.5			V
Input Common Mode Voltage Range	V <sub>ICM</sub>		0~3.5			V
Common Mode Rejection Ratio	CMR		70	90		dB
Supply Voltage Rejection Ratio	SVR		80	94		dB
Output Source Current	I <sub>SOURCE</sub>	V <sub>IN</sub> <sup>+</sup> =1V, V <sub>IN</sub> <sup>-</sup> =0V	20	30		mA
Output Sink Current	I <sub>SINK</sub>	V <sub>IN</sub> <sup>+</sup> =0V, V <sub>IN</sub> <sup>-</sup> =1V	8	20		mA
Operating Current	I <sub>CC</sub>	R <sub>L</sub> =∞		1.0	1.75	mA
Slew Rate	SR			1.2		V/μs
Unity Gain Frequency	f <sub>T</sub>			1.2		MHz

## TYPICAL CHARACTERISTICS





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