



M2125

LINEAR INTEGRATED CIRCUIT

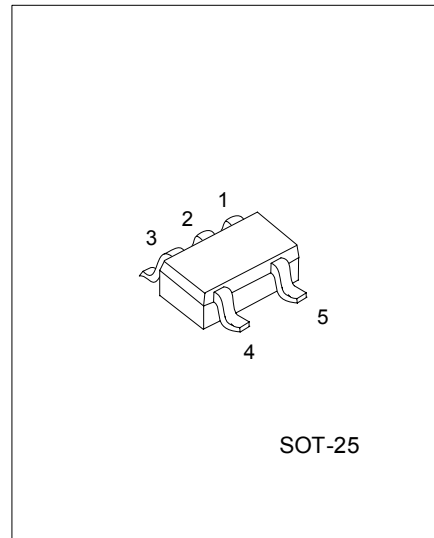
SINGLE-SUPPLY OPERATIONAL AMPLIFIER

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/ μs (typ.)



*Pb-free plating product number: M2125L

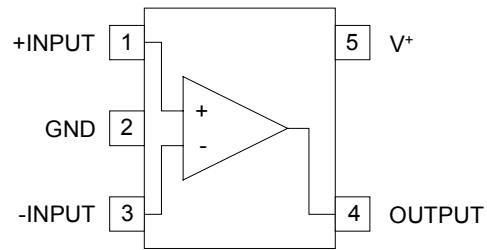
ORDERING INFORMATION

Order Number		Package	Pin Assignment					Packing
Normal	Lead Free Plating		1	2	3	4	5	
M2125-AF5-0-R	M2125L-AF5-0-R	SOT-25	I ⁺	G	I ⁻	O	V ⁺	Tape Reel

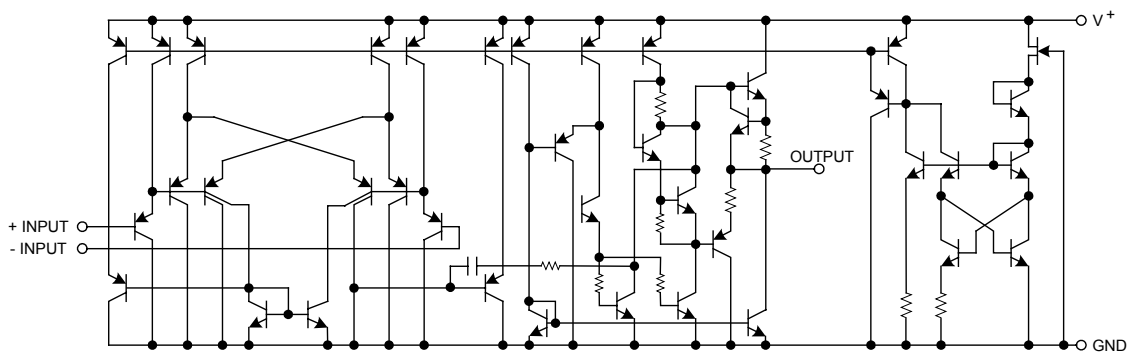
Note: Pin Assignment: I: V_{IN} O: Output G: GND

<p>M2125L-AF5-0-R</p> <ul style="list-style-type: none"> (1) Packing Type (2) Pin Assignment (3) Package Type (4) Lead Plating 	<ul style="list-style-type: none"> (1) R: Tape Reel (2) refer to Pin Assignment (3) AF5: SOT-25 (4) L: Lead Free Plating, Blank: Pb/Sn
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■ PIN CONFIGURATION



■ EQUIVALENT CIRCUIT



■ ABSOLUTE MAXIMUM RATINGS (Ta=25 °C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V ⁺	+20	V
Differential Input Voltage	V _{I(DIFF)}	+20	V
Input Voltage	V _{IN}	-0.3 to +20 (note 3)	V
Power Dissipation	P _D	200	mW
Junction Temperature	T _J	+125	°C
Operating Temperature	T _{OPR}	-40~+85	°C
Storage Temperature	T _{STG}	-40~+150	°C

Note 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged.

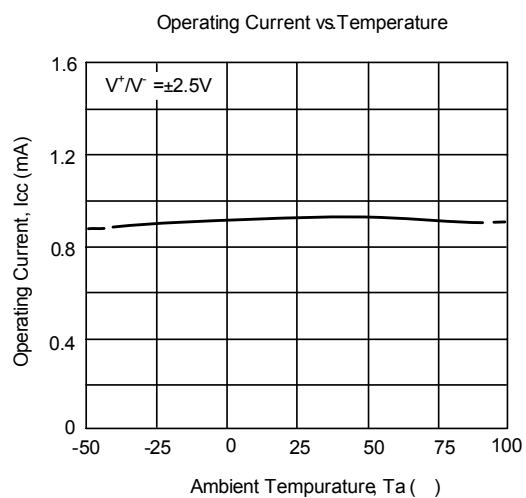
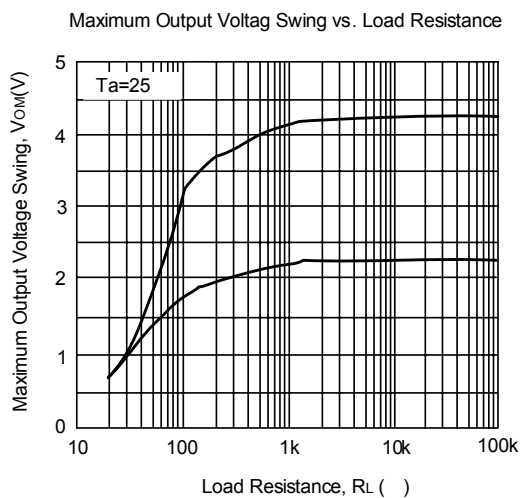
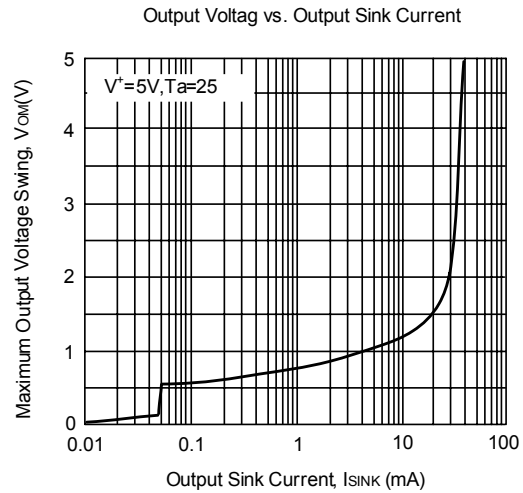
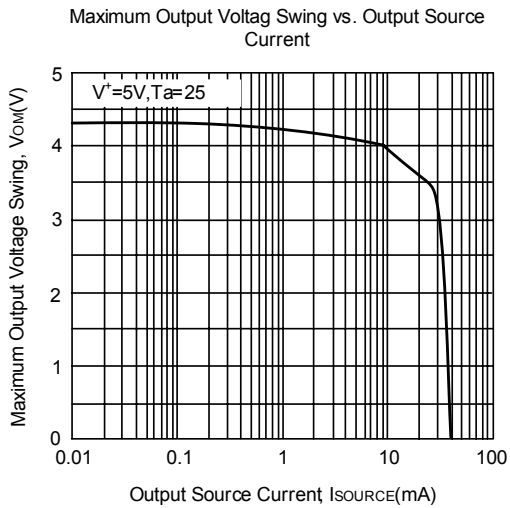
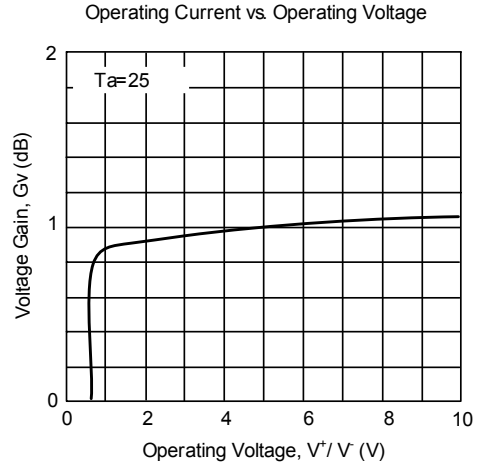
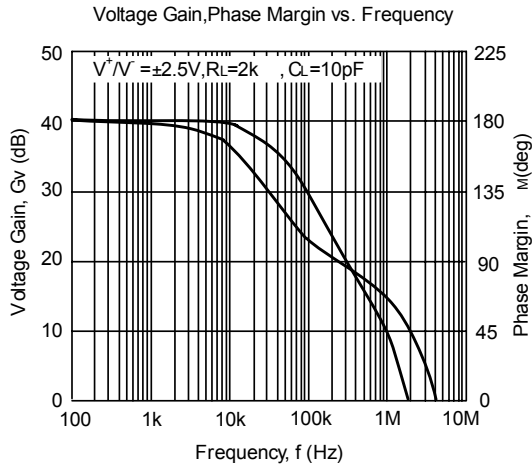
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

- The device is guaranteed to meet performance specification within 0 ~+70 °C operating temperature range and assured by design from -40 ~+85 °C.
- When the supply voltage is less than +20V, the absolute maximum input voltage is equal to the supply voltage.

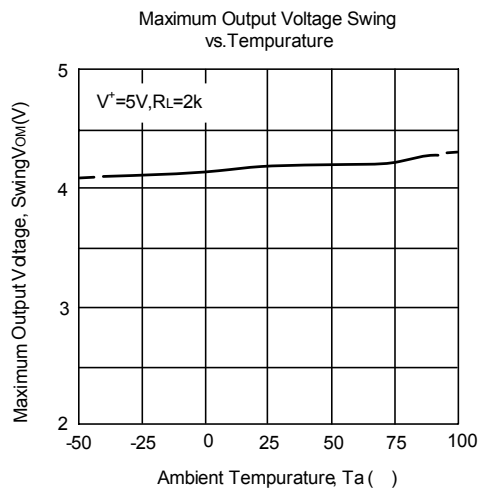
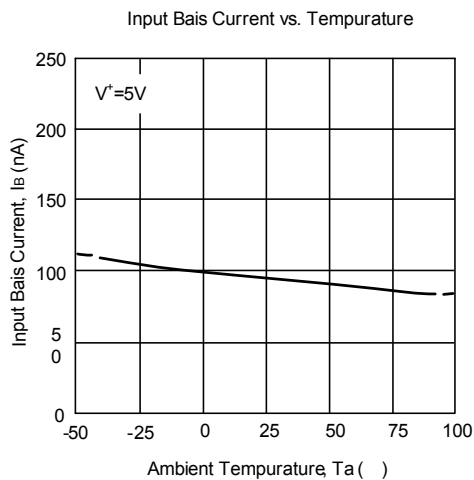
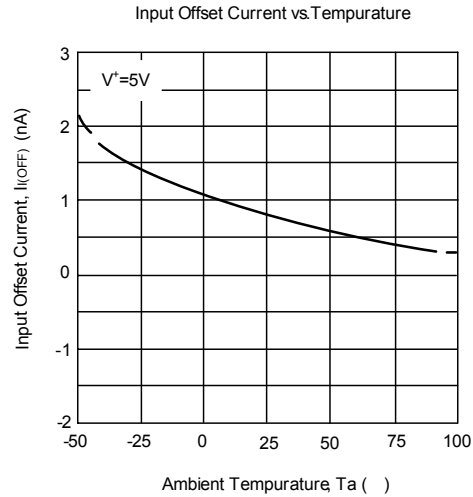
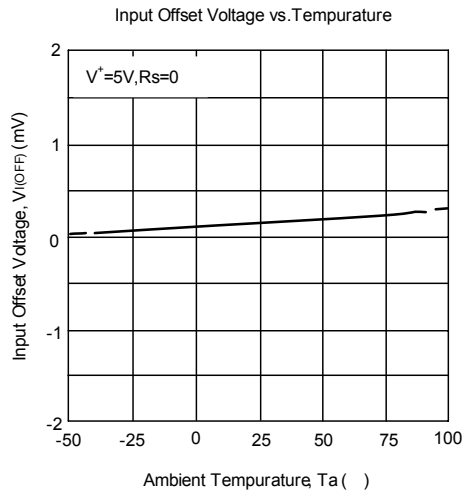
■ ELECTRICAL CHARACTERISTICS (V⁺=5V, Ta=25 °C)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Input Offset Voltage	V _{I(OFF)}	R _S =0Ω		2	7	mV
Input Offset Current	I _{I(OFF)}			5	50	nA
Input Bias Current	I _{I(BIAS)}			25	250	nA
Large Signal Voltage Gain	G _v	R _L = 2kΩ	88	100		dB
Maximum Output Voltage Swings	V _{OM}	R _L =2kΩ	3.5			V
Input Common Mode Voltage	V _{I(CM)}		0~3.5			V
Common Mode Rejection Ratio	RR		70	90		dB
Supply Voltage Rejection Ratio	SVR		80	94		dB
Output Source Current	I _{SOURCE}	V _{IN⁺} =1V, V _{IN⁻} =0V	20	30		mA
Output Sink Current	I _{SINK}	V _{IN⁺} =0V, V _{IN⁻} =1V	8	20		mA
Operating Current	I _{CC}	R _L =∞		1.0	1.75	mA
Slew Rate	SR			1.2		V/μs
Unity Gain Frequency	f _T			1.2		MHz

TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS(Cont.)



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