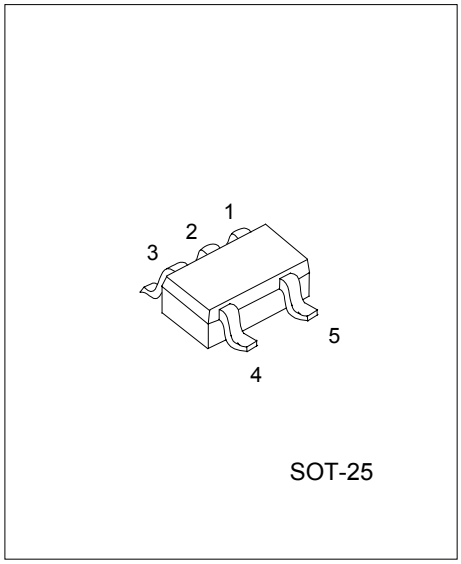
UTC M2125 LINEAR INTEGRATED CIRCUIT

SINGLE-SUPPLY OPERTIONAL AMPLIFIER



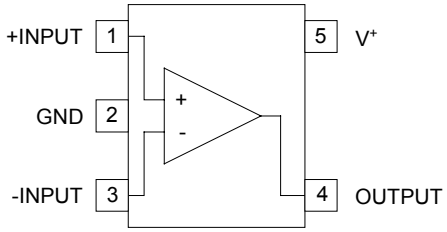
DESCRIPTION

The UTC M2125 is a single-supply operational amplifier .

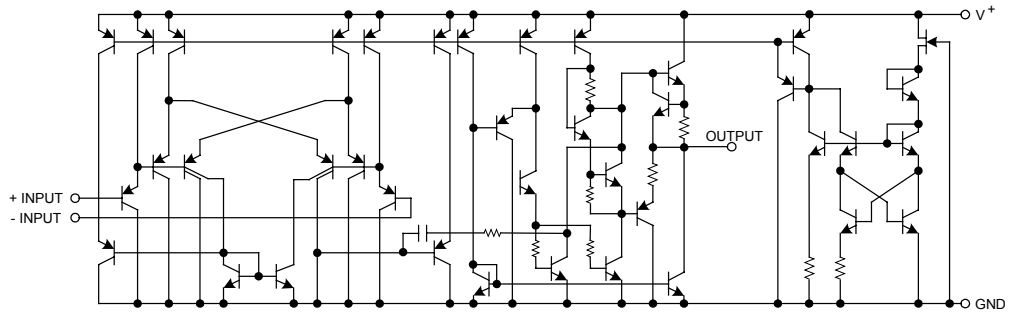
FEATURES

*Single-Supply Operation
*Low Operating Voltage: ±2.7V~20V
*Low Operating Current: 1.0mA (typ.)
*Slew Rate: 1.2V/μs (typ.)

PIN CONFIGURATION



EQUIVALENT CIRCUIT



ABSOLUTE MAXIMUM RATINGS(Ta=25℃)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V^+	+20	V
Differential Input Voltage	V_{ID}	+20	V
Input Voltage	V_{IC}	-0.3 to +20 (note)	V
Power Dissipation	P_D	200	mV
Operating Temperature Range	Topr	-40~85	°C
Storage Temperature Range	Tstg	-40~125	°C

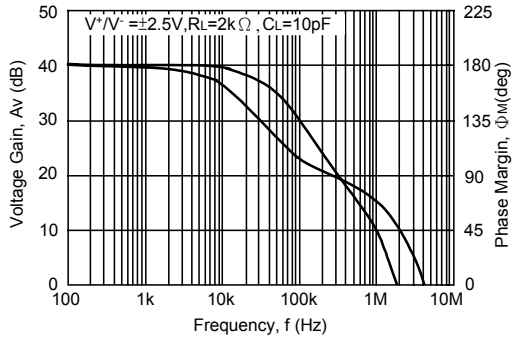
Note: When the supply voltage is less than +20V,the absolute maximum input voltage is equal to the supply voltage

ELECTRICAL CHARACTERISTICS(V^+=5V,Ta=25℃)

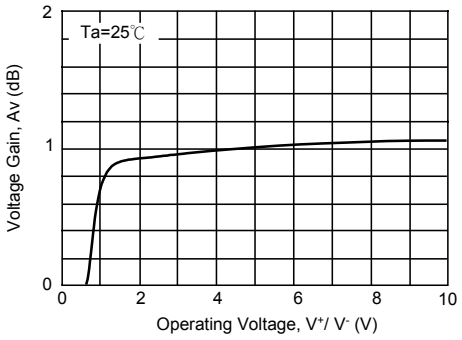
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Input Offset Voltage	V_{IO}	Rs=0Ω		2	7	mV
Input Offset Current	I_{IO}			5	50	nA
Input Bias Current	I_B			25	250	nA
Large Signal Voltage Gain	Av	$R_L \geqslant 2k\Omega$	88	100		dB
Maximum Output Voltage Swings	V_{OM}	R_L=2kΩ	3.5			V
Input Common Mode Voltage Range	V_{ICM}		0~3.5			V
Common Mode Rejection Ratio	CMR		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	Icc	R_L=∞		1.0	1.75	mA
Slew Rate	SR			1.2		V/μs
Unity Gain Frequency	f_T			1.2		MHz

TYPICAL CHARSACTERISTICS

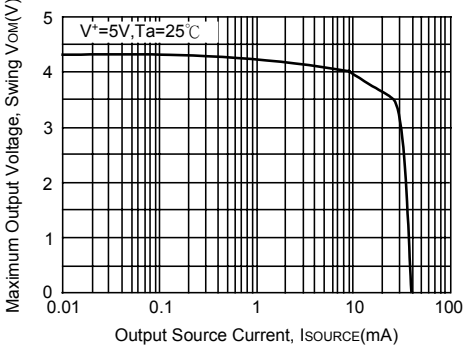
Voltage Gain,Phase Margin vs. Frequency



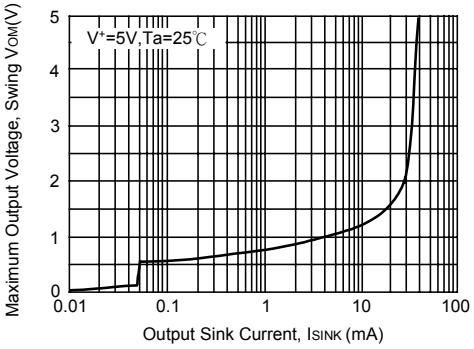
Operating Current vs. Operating Voltage



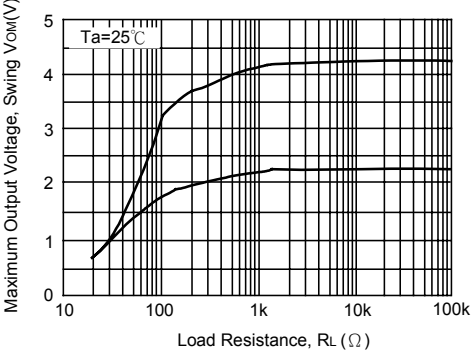
Maximum Output Voltag Swing vs. Output Source Current



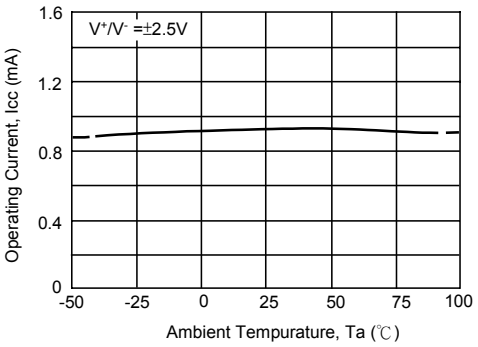
Output Voltag vs. Output Sink Current



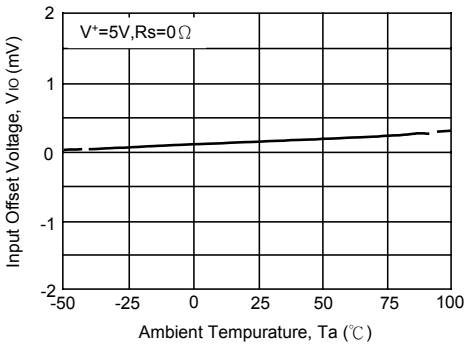
Maximum Output Voltag Swing vs. Load Resistance



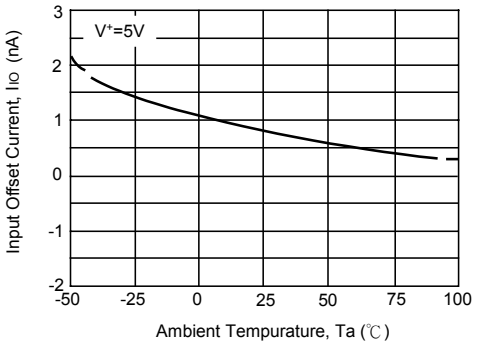
Operating Current vs.Temperature



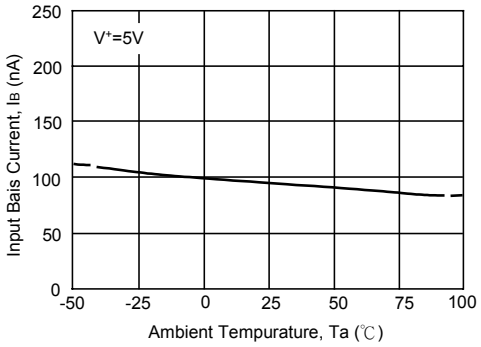
Input Offset Voltage vs.Tempurature



Input Offset Current vs.Tempurature



Input Bais Current vs. Tempurature



Maximum Output Voltage Swing vs.Tempurature