



UM605A/B

LINEAR INTEGRATED CIRCUIT

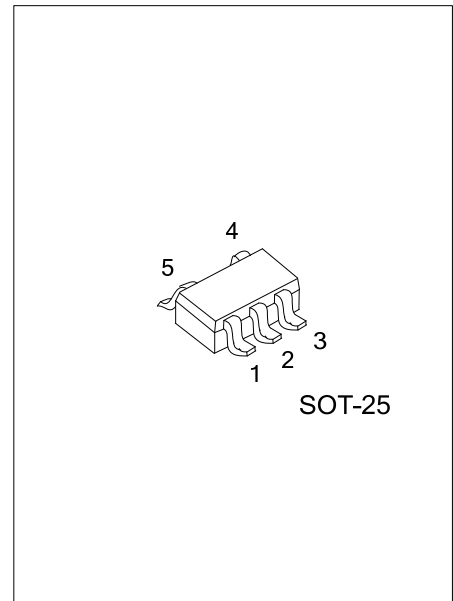
OPERATIONAL AMPLIFIERS WITH 2.5V/1.25V SHUNT REGULATOR

DESCRIPTION

UTC **UM605A/B** that is designed to include 2 op amp and one shunt regulator for battery charger and AC adapter application.

FEATURES

- * Internal accurate 2.5V / 1.25V V_{REF}
- * Reduced external components



ORDERING INFORMATION

Ordering Number		Package	Packing
Lead Free	Halogen Free		
UM605AL-AF5-R	UM605AG-AF5-R	SOT-25	Tape Reel
UM605BL-AF5-R	UM605BG-AF5-R	SOT-25	Tape Reel

<p>UM605AG-AF5-R</p> <ul style="list-style-type: none"> (1) Packing Type (2) Package Type (3) Green Package 	<ul style="list-style-type: none"> (1) R: Tape Reel (2) AF5: SOT-25 (3) G: Halogen Free and Lead Free, L: Lead Free
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MARKING

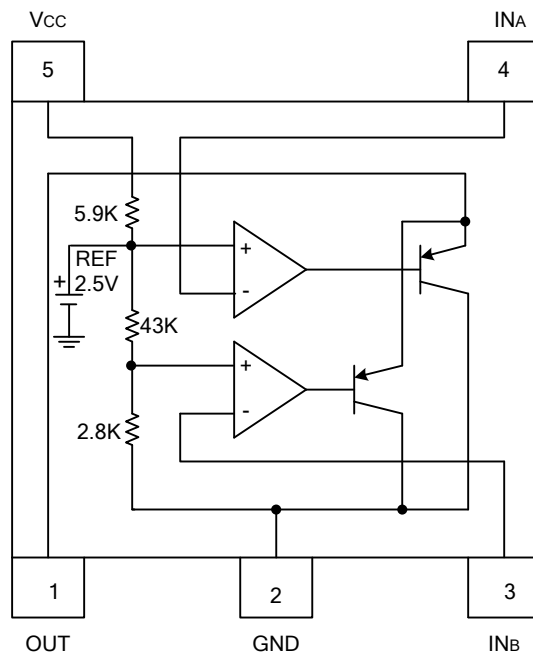
UM605A	UM605B
<p>L: Lead Free G: Halogen Free</p>	<p>L: Lead Free G: Halogen Free</p>

■ PIN DESCRIPTION

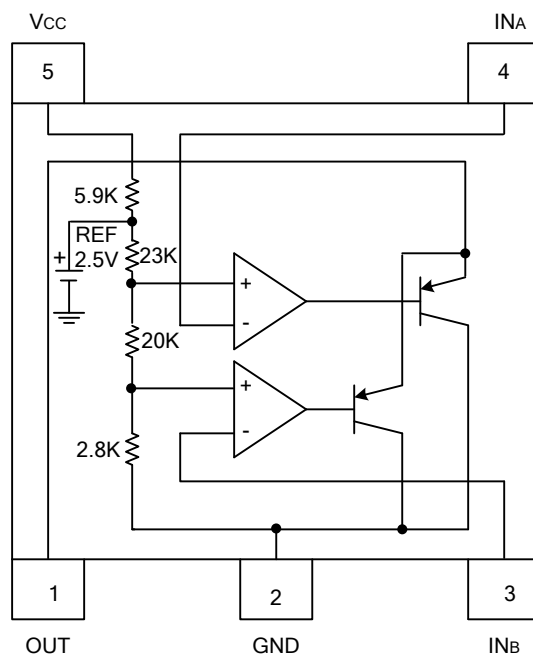
PIN NO.	PIN NAME	FUNCTION	INTERNAL CIRCUIT DIAGRAM
1	OUT	Output Pin	
2	GND	Ground	
3	IN _B	Input Pin	
4	IN _A		
5	V _{CC}	Supply Voltage	

■ BLOCK DIAGRAM

UM605A



UM605B



■ ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$, unless otherwise specified.)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V_{CC}	-0.3 ~ +20	V
Recommended Operating Voltage	V_{OPR}	+4 ~ +20	V
Power Dissipation	P_D	250	mW
Operating Temperature	T_{OPR}	-25 ~ +85	$^\circ\text{C}$
Storage Temperature	T_{STG}	-40 ~ +125	$^\circ\text{C}$

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 ($V_{CC}=5\text{V}$, $T_A=25^\circ\text{C}$, unless otherwise specified.)

FOR UM605A

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Current Consumption	I_{CC}	$IN_A=0\text{V}$, $IN_B=0\text{V}$, $R_L=\infty$		2.4	3.4	mA
A AMPLIFIER						
Output Inverting Voltage	V_A	$IN_A=0\text{V}$, $R_L=4.3\text{k}$	2.45	2.50	2.55	V
Output Sink Current	$I_{O(SINK A)}$	$IN_B=2.7\text{V}$, $IN_A=0\text{V}$, $V_{OUT}=1.5\text{V}$	5			mA
Input Bias Current	$I_{I(BIAS A)}$	$IN_A=0\text{V}$, $R_L=4.3\text{k}$		50	140	nA
PSRR	PSRR(A)	$IN_A=0\text{V}$, $R_L=4.3\text{k}$	50			dB
B AMPLIFIER						
Output Inverting Voltage	V_B	$IN_B=0\text{V}$, $R_L=4.3\text{k}$	152		160	mV
Output Sink Current	$I_{O(SINK B)}$	$IN_B=0\text{V}$, $IN_A=0.17\text{V}$, $V_{OUT}=1.5\text{V}$	5			mA
Input Bias Current	$I_{I(BIAS B)}$	$IN_B=0\text{V}$, $R_L=4.3\text{k}$		50	140	nA
PSRR	PSRR(B)	$IN_B=0\text{V}$, $R_L=4.3\text{k}$	65			dB

FOR UM605B

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Current Consumption	I_{CC}	$IN_A=0\text{V}$, $IN_B=0\text{V}$, $R_L=\infty$		1.2	1.7	mA
A AMPLIFIER						
Output Inverting Voltage	V_A	$IN_A=0\text{V}$, $R_L=4.3\text{k}$	1.225	1.25	1.275	V
Output Sink Current	$I_{O(SINK A)}$	$IN_B=2.7\text{V}$, $IN_A=0\text{V}$, $V_{OUT}=1.5\text{V}$	5			mA
Input Bias Current	$I_{I(BIAS A)}$	$IN_A=0\text{V}$, $R_L=4.3\text{k}$		50	140	nA
PSRR	PSRR(A)	$IN_A=0\text{V}$, $R_L=4.3\text{k}$	62			dB
B AMPLIFIER						
Output Inverting Voltage	V_B	$IN_B=0\text{V}$, $R_L=4.3\text{k}$	152		160	mV
Output Sink Current	$I_{O(SINK B)}$	$IN_B=0\text{V}$, $IN_A=0.17\text{V}$, $V_{OUT}=1.5\text{V}$	5			mA
Input Bias Current	$I_{I(BIAS B)}$	$IN_B=0\text{V}$, $R_L=4.3\text{k}$		50	140	nA
PSRR	PSRR(B)	$IN_B=0\text{V}$, $R_L=4.3\text{k}$	65			dB

