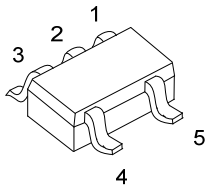
UM605A/B

LINEAR INTEGRATED CIRCUIT

OPERATIONAL AMPLIFIERS WITH 2.5V/1.25V SHUNT REGULATOR



SOT-25

■ DESCRIPTION

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

■ FEATURES

* Small SOT-25 package
* Internal accurate 2.5V / 1.25V V_{REF}
* Reduced external components

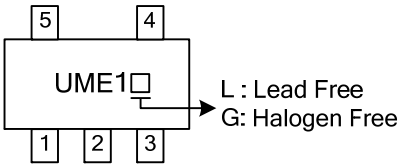
■ ORDERING INFORMATION

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

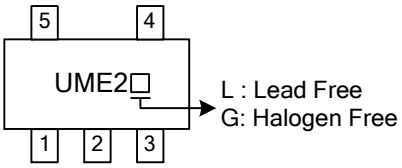
UM605AL-AF5-R (1)Packing Type (2)Package Type (3)Lead Free	(1) R: Tape Reel (2) AF5: SOT-25 (3) L: Lead Free, G: Halogen Free

■ MARKING

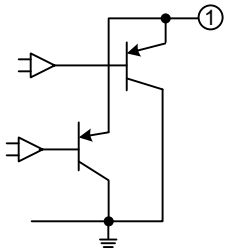
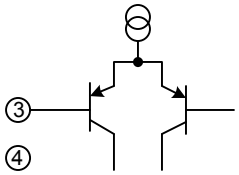
UM605A



UM605B

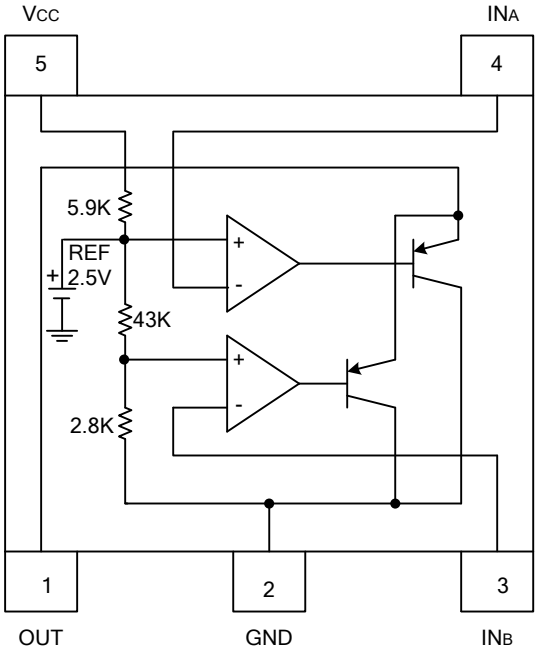


■ PIN DESCRIPTION

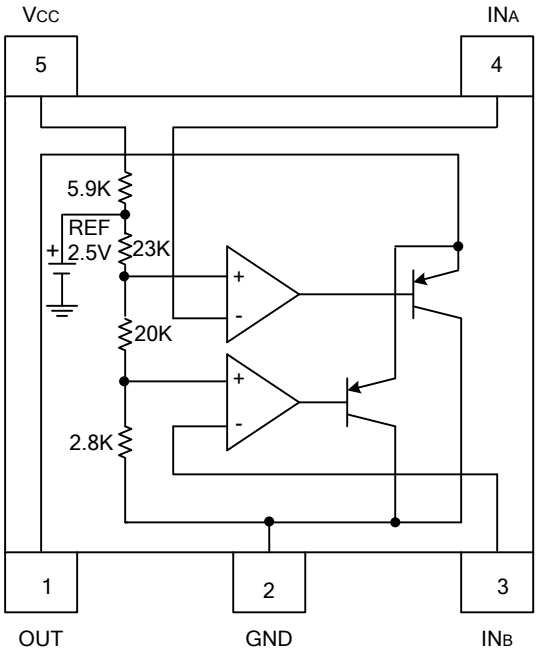
PIN NO.	PIN NAME	FUNCTION	INTERNAL CIRCUIT DIAGRAM
1	OUT	Output Pin	
2	GND	Ground	
3	IN_B	Input Pin	
4	IN_A		
5	V_{CC}	Supply Voltage	

■ BLOCK DIAGRAM

UM605A



UM605B



■ ABSOLUTE MAXIMUM RATINGS (T_A = 25℃, 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	°C
Storage Temperature	T_{STG}	-40 ~ +125	°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}=5V, T_A=25℃, unless otherwise specified.)

FOR UM605A

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

FOR UM605B

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

■ APPLICATION CIRCUIT