



UNISONIC TECHNOLOGIES CO., LTD

UM603S

LINEAR INTEGRATED CIRCUIT

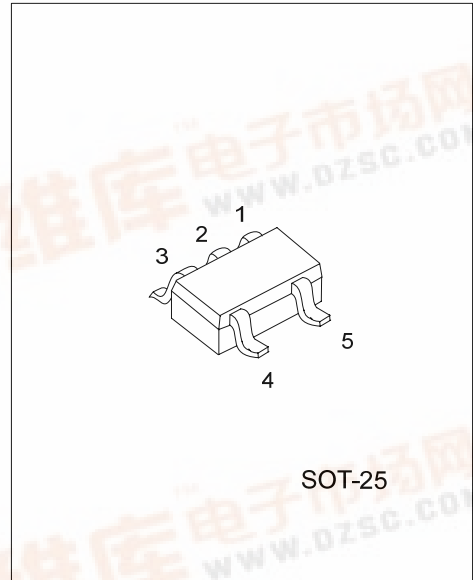
OPERATIONAL AMPLIFIERS WITH 2.5V SHUNT REGULATOR

DESCRIPTION

UTC **UM603S** 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 V_{REF}
- * Reduced external components



*Pb-free plating product number:UM603SL

ORDERING INFORMATION

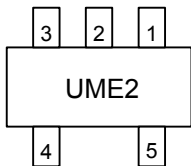
Order Number		Package	Packing
Normal	Lead Free Plating		
UM603S-AF5-R	UM603SL-AF5-R	SOT-25	Tape Reel

UM603SL-AF5-R (1)Packing Type (2)Package Type (3)Lead Plating		(1) R: Tape Reel (2) AF5: SOT-25 (3) L: Lead Free Plating, Blank: Pb/Sn
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UM603S

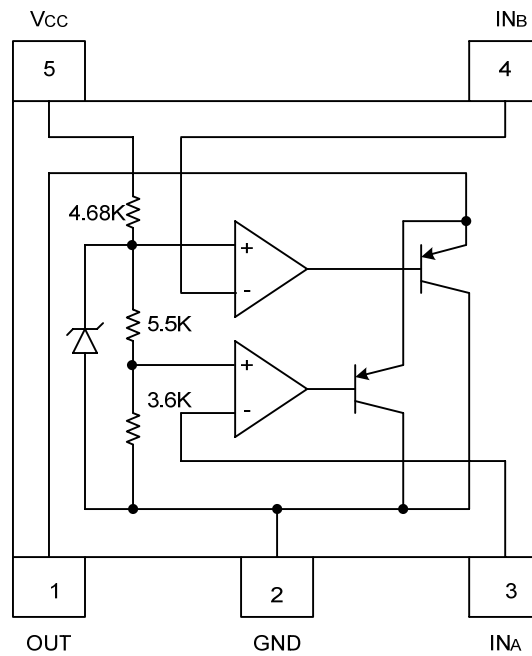
LINEAR INTEGRATED CIRCUIT

■ MARKING AND PIN DESCRIPTION



PIN NO.	PIN NAME	FUNCTION	INTERNAL CIRCUIT DIAGRAM
1	OUT	Output Pin	The diagram shows a common-emitter amplifier stage. The output of the transistor is connected to pin 1. The base is biased by a voltage divider network connected to pins 3 and 4. The emitter is connected to ground.
2	GND	Ground	
3	IN _A	Input Pin	The diagram shows a differential input stage. The inputs are connected to pins 3 and 4. The outputs are connected to pins 1 and 2. The circuit is biased by a current source connected to pin 5.
4	IN _B		
5	V _{CC}	Supply Voltage	

■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

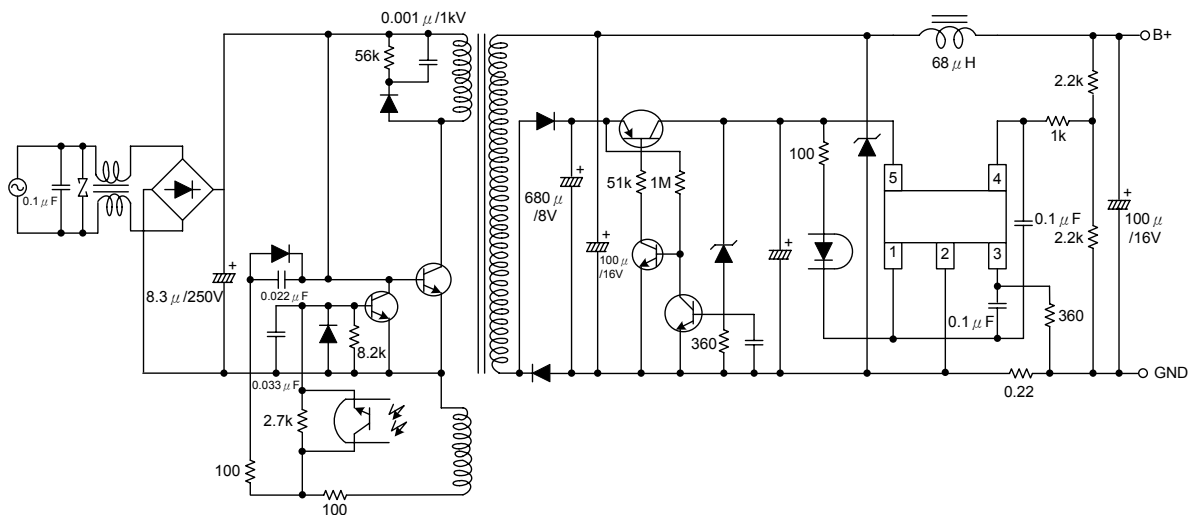
PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V _{CC}	-0.3 ~ +20	V
Recommended Operating Voltage	V _{OPR}	+4 ~ +20	V
Allowable loss	P _D	250	mW
Operating Temperature	T _{OPR}	-25 ~ +85	°C
Storage Temperature	T _{STG}	-40 ~ +125	°C

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, Ta=25°C, unless otherwise specified.)

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	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	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



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