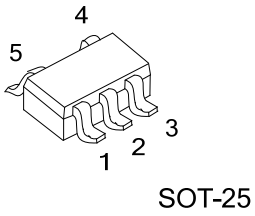
UM21125

LINEAR INTEGRATED CIRCUIT

SINGLE-SUPPLY COMPARATOR



SOT-25

■ DESCRIPTION

The UTC **UM21125** is a single-supply comparator. There is a 70mV V_{REF} negative input inside.

■ FEATURES

* Single-Supply Operation
* Low Operating Voltage: ±2.7V~20V
* Low Operating Current: 1.3mA (Typ.)

■ ORDERING INFORMATION

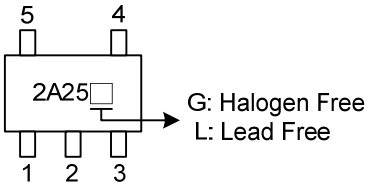
Ordering Number		Package	Packing
Lead Free	Halogen Free		
UM21125L-AF5-R	UM21125G-AF5-R	SOT-25	Tape Reel

UM21125L-AF5-R

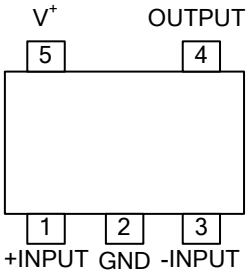
(1)Packing Type
(2)Package Type
(3)Lead Free

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

■ MARKING



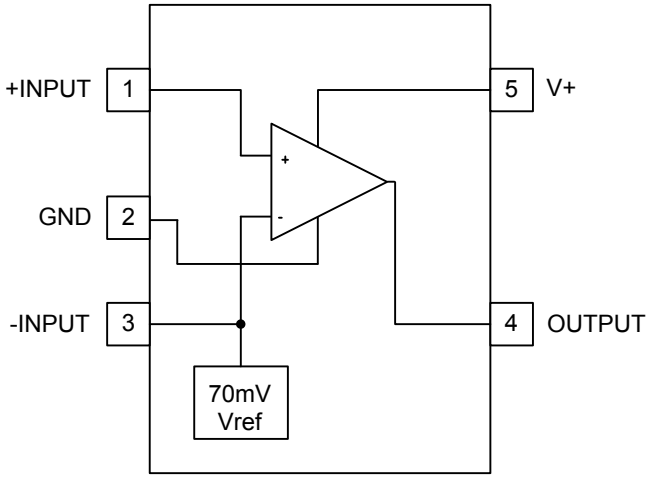
PIN CONFIGURATION



■ PIN DESCRIPTION

PIN NO.	PIN NAME	DESCRIPTION
1	+INPUT	Positive input of the comparator
2	GND	Ground Connection
3	-INPUT	Negative input of the comparator (there is 70mV Vref inside)
4	OUTPUT	The output of the comparator
5	V+	Supply voltage

■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C, unless other specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V^+	+20	V
Differential Input Voltage	$V_{I(DIFF)}$	+20	V
Input Voltage	V_{IN}	-0.3 ~ +20 (Note 2)	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~+125	°C

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

■ ELECTRICAL CHARACTERISTICS (V^+=5V,T_A=25°C, unless other specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
-Input DC Level	V_{IN}-		63	68	73	mV
Maximum Output Voltage Swings	V_{OM}	R_L=2kΩ	3.5			V
Operating current	I_{CC}	V+=5V, R_L=∞		1.3	1.75	mA
		V+=20V, R_L=∞		1.6	2.35	mA
Output Source Current	I_{SOURCE}	V_{IN}+=1V, V_{IN}-=70mV	20	30		mA
Output Sink Current	I_{SINK}	V_{IN}+=0V, V_{IN}-=70mV	8	20		mA

■ TYPICAL CHARSACTERIST