

ABSOLUTE MAXIMUM RATINGS

● Maximum Supply Voltage	15V*	● Operating Junction Temperature Range	0 to 125 °C
● Power Dissipation	Internally Limited	● Storage Temperature Range	-40 to 150 °C
● Thermal Resistance Junction to Case, θ_{JC}	18 °C/W	● Lead Temperature (Soldering, 10 Seconds)	260 °C
● Thermal Resistance Junction to Ambient, θ_{JA}	160 °C/W		

* When considering short circuits to ground, the maximum input-to-output differential voltage shall not be allowed greater than approximate 2~3V at values of supply voltage in excess of 10V, continuous short-circuits can exceed the power dissipation ratings and cause eventual destruction.

ELECTRICAL CHARACTERISTICS (Unless otherwise specified, $T_A = 25\text{ °C}$)

Parameter	Symbol	Test Conditions	Typical	Limits
Reference Voltage (Adjustable version)	V_{REF}	$V_{IN} = 5V, I_{OUT} = 10mA$	1.25V	$1.23V_{Min}$ $1.27V_{Max}$
Output Voltage (Fixed version)	V_O	$V_{IN} = 5V, I_{OUT} = 10mA$	V_O	$0.98V_{O(Min)}$ $1.02V_{O(Max)}$
Dropout Voltage	V_D	$\Delta V_{REF} = 1\%, I_{OUT} = 0.8A$	1.2V	1.45V
Line Regulation	$REG_{(LINE)}$	$(V_{OUT} + 1.5V) \leq V_{IN} \leq 15V, I_{OUT} = 10mA$	0.5%	2%
Load Regulation	$REG_{(LOAD)}$	$(V_{IN} - V_{OUT}) = 2V, 10mA \leq I_{OUT} \leq 0.8A$	0.5%	2.5%
Minimum Load Current	I_O	$1.5V \leq (V_{IN} - V_{OUT}) \leq 5.75V$	10mA	
Adjust Pin Current	I_{ADJ}		55 μ A	100 μ A
Current Limit	I_{CL}	$V_{IN} - V_{OUT} = 2V$	1.2A	0.9A (Min)
RMS Output Noise	V_N		0.003% of V_{OUT}	
Ripple Rejection Ratio	R_A	$f = 120Hz, C_{ADJ} = 22\mu F$ for ADJ pin, $V_{IN} = 5V, I_{OUT} = 0.8A$	72dB	60dB (Min)

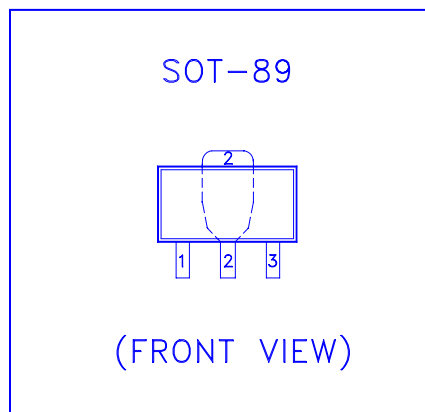
DEVICE SELECTION GUIDE

Device	L1087CG	L1087NG	L1087CG-3.3	L1087NG-3.3	L1087CG-2.5	L1087NG-2.5
Voltage Version	Adjustable	Adjustable	3.3V	3.3V	2.5V	2.5V
Package	SOT-89	TO-92	SOT-89	TO-92	SOT-89	TO-92
Marking	L1087G	L1087G	87G-3.3	87G-3.3	87G-2.5	87G-2.5

Device	L1087CG-X	L1087CG-3.3X	L1087CG-2.5X
Voltage Version	Adjustable	3.3V	2.5V
Package	SOT-89	SOT-89	SOT-89
Marking	87G-X	87G-33X	87G-25X

Orders for parts with Lead-Free plating can be placed using the LXXXXXG-XX parts name.

PIN CONFIGURATIONS



L1087CG
L1087CG-3.3/2.5

Pin #	Function
1	Adjust/Ground
2	Output
3	Input

TAB PIN
Output

L1087CG-A
L1087CG-3.3A/2.5A

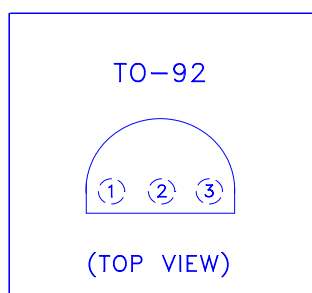
Pin #	Function
1	Adjust/Ground
2	Input
3	Output

TAB PIN
Input

L1087CG-C
L1087CG-3.3C/2.5C

Pin #	Function
1	Input
2	Adjust/Ground
3	Output

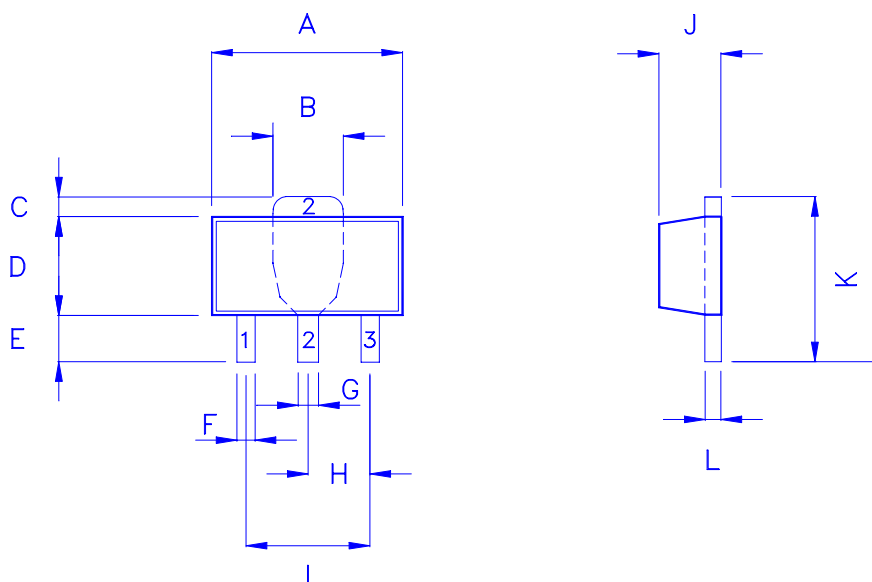
TAB PIN
Adjust/Ground



Pin #	Function
1	Output
2	Adjust/Ground
3	Input

SOT-89 MECHANICAL DATA

Dimension	mm			Dimension	mm		
	Min.	Typ.	Max.		Min.	Typ.	Max.
A	4.3	4.5	4.7	H	1.4	1.5	1.6
B	1.6	1.7	1.8	I	2.8	3.0	3.2
C	0.4	0.5	0.6	J	1.3	1.5	1.7
D	2.4	2.5	2.6	K	3.8	4.2	4.6
E	0.8	1.2	1.4	L	0.3	0.4	0.5
F	0.4	0.45	0.5	M			
G	0.4	0.5	0.6	N			



TO-92 MECHANICAL DATA

Dimension	mm			Dimension	mm		
	Min.	Typ.	Max.		Min.	Typ.	Max.
A	4.445		5.207	H	2.413	2.540	2.667
B	4.318		5.334	I	0.356		0.533
C	12.7		15.5	J			
D	0.356		0.533	K			
E	1.143	1.27	1.397	L			
F	3.175		4.191	M			
G	0.762		1.270	N			

