

L7809

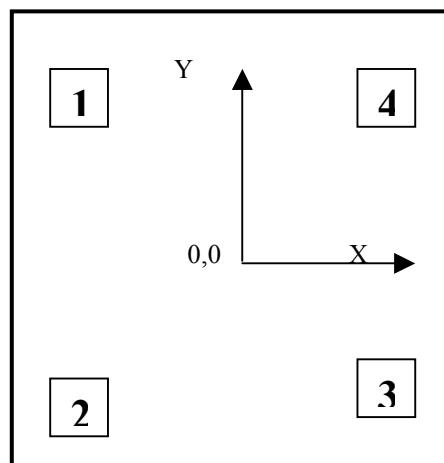
CHIP FOR THREE-TERMINAL POSITIV VOLTAGE REGULATOR IC

Features:

- ◆ Output Current in Excess of 1.5A ($T_j=25^\circ\text{C}$, $P_D \leq 15\text{W}$)
- ◆ No External Components Required
- ◆ Internal Short Circuit Current Limiting
- ◆ Internal Thermal Overload Protection
- ◆ Output Transistor Safe-Area Compensation
- ◆ Output Voltage Offered in 4% Tolerance

Physical Characteristics:

Wafer Diameter.....	$100 \pm 0.5\text{ mm}$
Wafer Thickness.....	$280 \pm 20 \mu\text{m}$
Die size.....	$1.4 \times 1.9 \text{ mm}^2$
Scribe Width.....	$100 \mu\text{m}$
Metallization Bottom.....	Ti-Ni-Ag Ti-Ni – 0.5-0.7 μm Ag - 0.5-0.7 μm
Passivation.....	PSG



- ◆ Maximum Input Voltage – 36V
- ◆ Operation Junction Temperature Range – $-40^\circ\text{C} \sim 125^\circ\text{C}$

Pad #	Pad name	Description	Bond Pad (μm)	X	Y
1	IN	Input	230x230	-610	247
2	GND	Ground	230x230	-610	-626
3	OUT	Output	230x230	372	-560
4	OUT	Output	230x230	372	247

ELECTRICAL CHARACTERISTICS CHIPS ON WAFER(Vin=15V, Io=0.5A, Ci=0.33 μF , Co=0.1 μF , Tj = 25°C , unless otherwise noted.)

Characteristic	Symbol	Test Condition	Min	Max	Unit
Output Voltage	Vo		8.65	9.35	V
Output Voltage	Vo	$5.0\text{mA} \leq I_o \leq 1.0\text{A}$; $11.5\text{V} \leq V_{in} \leq 24\text{V}$ $0^\circ\text{C} \leq T_j \leq 125^\circ\text{C}$	8.55	9.45	V
Line Regulation	ΔV_v	$11.5\text{V} \leq V_{in} \leq 26\text{V}$; $11.5\text{V} \leq V_{in} \leq 17\text{V}$	180 90		mV
Load Regulation	ΔV_i	$5.0\text{mA} \leq I_o \leq 1.5\text{A}$ $0.25\text{A} \leq I_o \leq 0.75\text{A}$	180 90		mV
Quiescent Current	Ib			8.0	mA
Quiescent Current Change	ΔI_b	$11.5\text{V} \leq V_{in} \leq 26\text{V}$, $5\text{mA} \leq I_o \leq 1.0\text{A}$		1.0 0.5	mA