

**5V + 12V REGULATOR WITH DISABLE**

ADVANCE DATA

- OUTPUT CURRENTS UP TO 600mA
- FIXED PRECISION OUTPUT 1 VOLTAGE 5V ± 2%
- FIXED PRECISION OUTPUT 2 VOLTAGE 12V ± 2%
- OUTPUT 2 VOLTAGE DISABLED BY A TTL INPUT
- SHORT CIRCUIT PROTECTION AT BOTH OUTPUTS
- THERMAL PROTECTION
- LOW DROP OUT 1.5V AT 400mA
- HIGH SUPPLY VOLTAGE REJECTION

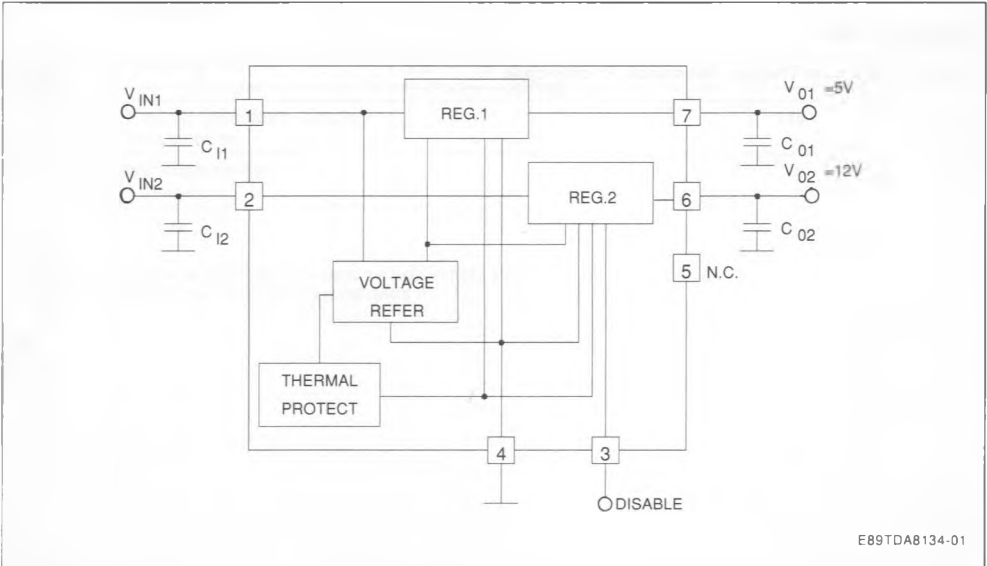
**DESCRIPTION**

The TDA8134 is a monolithic dual positive voltage regulator designed to provide fixed precision output voltages, 5V + 12V at currents up to 600mA.

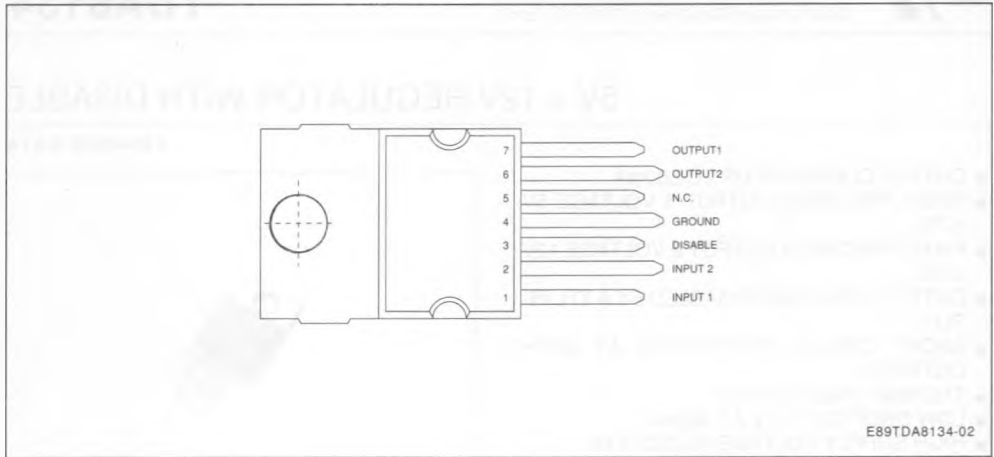
Output 2 can be disabled by a TTL input. Both output currents are limited by an internal short circuit protection.



**BLOCK DIAGRAM**



## PIN CONNECTION (top view)



## ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
$V_{IN1,2}$	DC Input Voltages	24	V
$V_{DIS}$	Disable Input Voltage Pin 3	24	V
$I_{O1,2}$	Output Currents	Internally Limited	
$P_t$	Power Dissipation	Internally Limited	
$T_{STG}$	Storage Temperature	- 65 to + 150	°C
$T_j$	Junction Temperature	0 to + 150	°C

## THERMAL DATA

$R_{TH(j-c)}$	Maximum Thermal Resistance Junction-case	3	°C/W
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**ELECTRICAL CHARACTERISTICS** ( $V_{IN1} = 7V$  ;  $V_{IN2} = 14V$  ;  $V_{DIS} = 2.5V$  ;  $I_{O1,2} = 0$  ;  $T_J = 25^\circ C$   
unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$V_{O1}$	Output Voltage at Pin 7		4.9	5	5.1	V
$V_{O2}$	Output Voltage at Pin 6		11.76	12	12.24	V
$I_{O1}$	Quiescent Current	$V_{IN2} = 0$ $V_{DIS} = 0$ $I_{O1} = 10mA$ (see fig. 1)			2	mA
$I_{O2}$	Quiescent Current	$I_{O2} = 10mA$ (see fig. 1)			2	mA
$V_{IN1}-V_{O1}$	Drop Out Voltage 1	$I_{O1} = 400mA$			1.5	V
$V_{IN2}-V_{O2}$	Drop Out Voltage 2	$I_{O2} = 400mA$			1.5	V
$\Delta V_{O1LI}$	Line Regulation 1	$7V < V_{IN1} < 14V$ $I_{O1} = 200mA$			90	mV
$\Delta V_{O2LI}$	Line Regulation 2	$14V < V_{IN2} < 18V$ $I_{O2} = 200mA$			120	mV
$\Delta V_{O1LO}$	Load Regulation 1	$0 < I_{O1} < 600mA$			100	mV
$\Delta V_{O2LO}$	Load Regulation 2	$0 < I_{O2} < 600mA$			240	mV
$I_{O1SC}$	Short Circuit Current 1	$14V < V_{IN1} < 18V$			1.3	A
$I_{O2SC}$	Short Circuit Current 2	$14V < V_{IN2} < 18V$			1.3	A
$V_{DISH}$	Disable Voltage HIGH at Pin 3		2			V
$V_{DISL}$	Disable Voltage LOW at Pin 3				0.8	V
$I_{DISH}$	Bias Current at Pin 3	$V_{DIS} = 5.3V$			10	$\mu A$
$I_{DISL}$	Bias Current at Pin 3	$V_{DIS} = 0.4V$	- 80			$\mu A$
$SVR_1$	Supply Voltage Rejection 1 (see note 1)	$V_{IN1} = 9V_{DC} + 1V_{PP} SIN$ $f = 120Hz$ $I_{O1} = 200mA$	50			dB
$SVR_2$	Supply Voltage Rejection (see note 1)	$V_{IN2} = 16V_{DC} + 1V_{PP} SIN$ $f = 120Hz$ $I_{O2} = 200mA$	50			dB
$I_O$	Quiescent Current	$V_{IN1} = V_{IN2} = 14V_{DC}$ $I_{O1} = I_{O2} = 200mA$			6	mA
$T_{JSD}$	Thermal Shut-down Junction Temperature			145		$^\circ C$

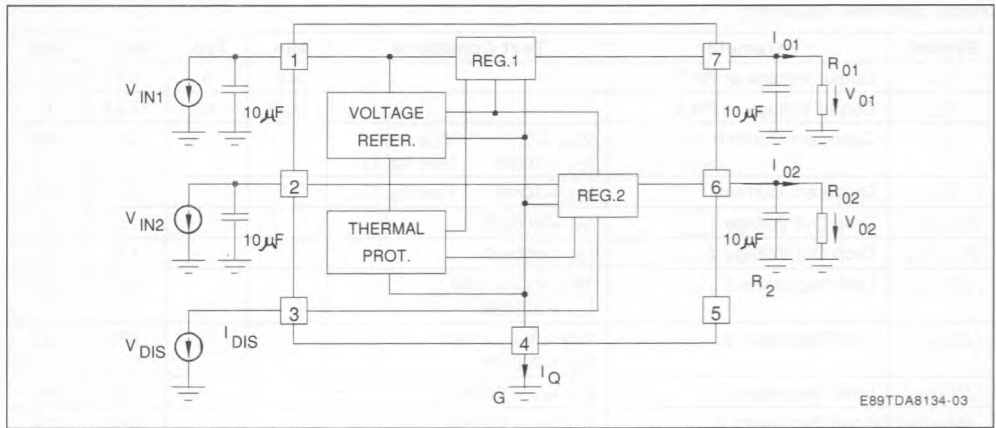
Note 1 : SVR supply voltage rejection :

$$20 \cdot \text{LOG} \left| \frac{V_{IN ac}}{V_{O ac}} \right|$$

where :

- $V_{IN ac}$  is the value of the sinusoidal signal forced at the input. (120Hz, 1V<sub>PP</sub>)
- $V_{O ac}$  is the peak-peak ripple voltage present at the output

Figure 1 : Test Specification.



### CIRCUIT DESCRIPTION

The TDA8134 is a dual voltage regulator with disable.

The two regulation parts are supplied from one voltage reference circuit, trimmed by zener zap during EWS test. Since the supply voltage of this last is

connected at pin 1 ( $V_{IN1}$ ), the regulator 2 will not work if the pin 1 is not supplied.

It is possible switch-off the output voltage 2 ( $V_{O2}$ ) applying at pin 3 (disable input) a low TTL level.

## PACKAGE MECHANICAL DATA

HEPTAWATT – PLASTIC PACKAGE

