

DUAL 12V REGULATOR WITH DISABLE

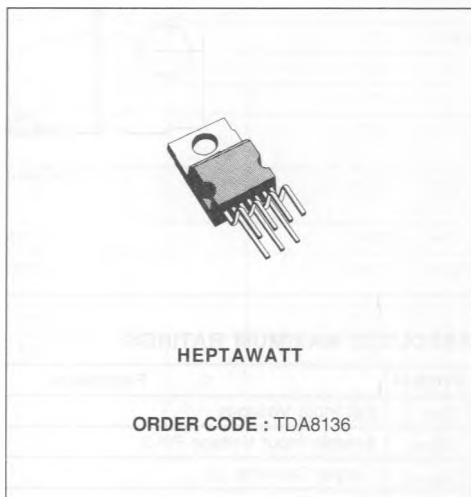
ADVANCE DATA

- OUTPUT CURRENTS UP TO 600mA
- FIXED PRECISION OUTPUT 1 VOLTAGE 12V $\pm 2\%$
- FIXED PRECISION OUTPUT 2 VOLTAGE 12V $\pm 2\%$
- 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

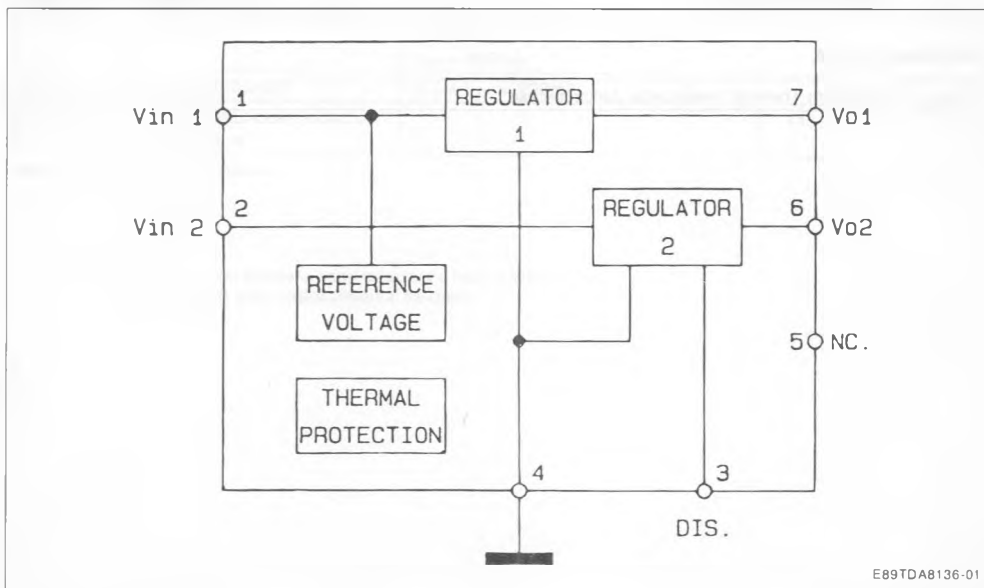
DESCRIPTION

The TDA8136 is a monolithic dual positive voltage regulator designed to provide fixed precision output voltages, both 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.

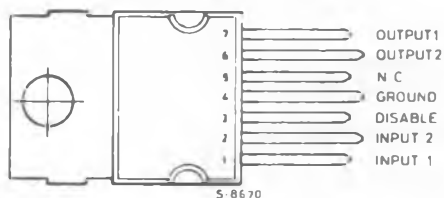


BLOCK DIAGRAM



E89TDA8136-01

PIN CONNECTION (top view)



Tab connected to pin 4.

E89TDA8136-02

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_{IN1,2} = 14V ; V_{DIS} = 2.5V ; I_{O1,2} = 0 ; T_J = 25°C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V _{O1}	Output Voltage at Pin 7		11.76	12	12.24	V
V _{O2}	Output Voltage at Pin 6		11.76	12	12.24	V
I _{O1}	Quiescent Current	V _{IN2} = 0 I _{O1} = 10mA V _{DIS} = 0 (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
ΔV _{O1LI}	Line Regulation 1	14V < V _{IN1} < 18V I _{O1} = 200mA			120	mV
ΔV _{O2LI}	Line Regulation 2	14V < V _{IN2} < 18V I _{O2} = 200mA			120	mV
ΔV _{O1LO}	Load Regulation 1	0 < I _{O1} < 600mA			240	mV
ΔV _{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	μA
I _{DISL}	Bias Current at Pin 3	V _{DIS} = 0.4V	- 80			μA
SVR ₁	Supply Voltage Rejection 1 (see note 1)	V _{IN1} = 16 V _{DC} + 1V _{PP} SIN f = 120Hz I _{O1} = 200mA	50			dB
SVR ₂	Supply Voltage Rejection (see note 1)	V _{IN2} = 16 V _{DC} + 1V _{PP} SIN f = 120Hz I _{O2} = 200mA	50			dB
I _O	Quiescent Current	I _{O1} = I _{O2} = 200mA			6	mA
T _{JSD}	Thermal Shut-down Junction Temperature			145		°C

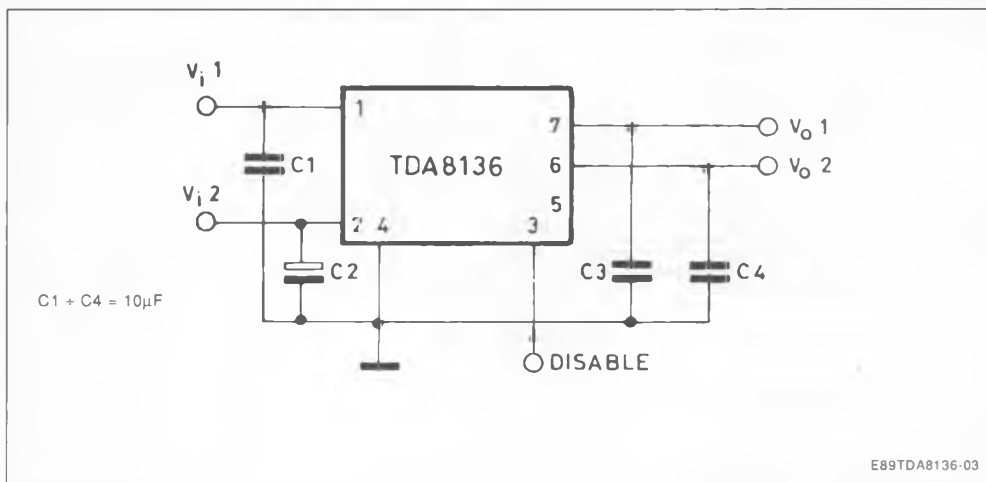
Note 1 : SVR supply voltage rejection

$$20 \cdot \log \left(\frac{V_{RAC}}{V_{OAC}} \right)$$

where :

- V_{RAC} is the value of the sinusoidal signal forced at the input. (120Hz, 1V_{PP})
- V_{OAC} is the peak-peak ripple voltage present at the output.

TYPICAL APPLICATION CIRCUIT



CIRCUIT DESCRIPTION

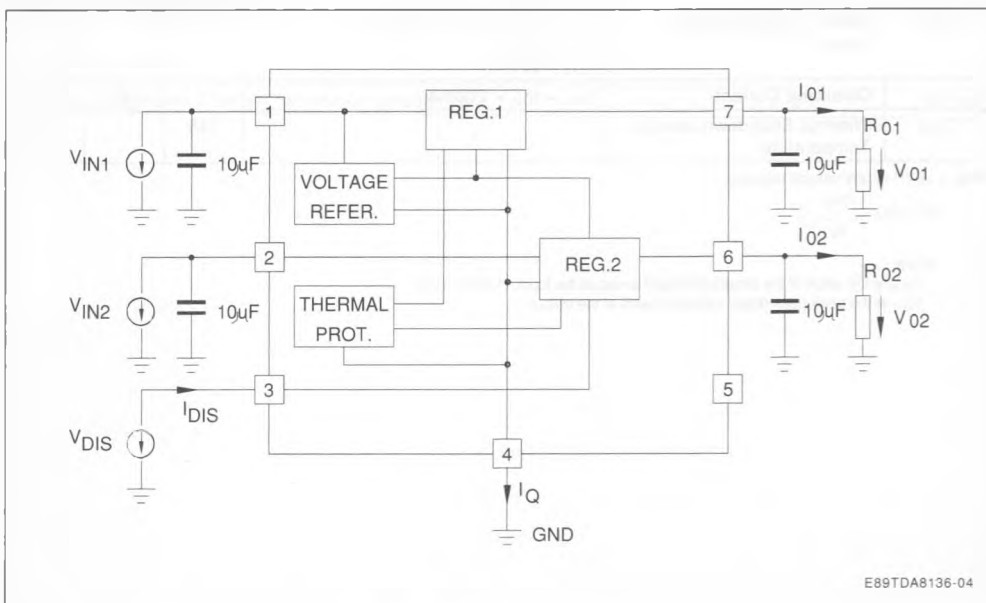
The TDA8136 is a dual voltage regulator with disable.

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.

Figure 1 : Test Circuit.



PACKAGE MECHANICAL DATA

HEPTAWATT – PLASTIC PACKAGE

