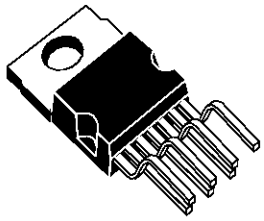
SGS-THOMSON MICROELECTRONICS

TDA8132

5.1V +12V DISABLE VOLTAGE REGULATOR

- OUTPUT CURRENTS UP TO 1A
- FIXED PRECISION OUTPUT 1 VOLTAGE 5.1V +/- 2%
- FIXED PRECISION OUTPUT 2 VOLTAGE 12V +/- 2%
- OUTPUT 1 WITH DISABLE BY TTL INPUT
- OUTPUT 2 WITH DISABLE BY TTL INPUT
- SHORT CIRCUIT PROTECTION AT BOTH OUTPUTS
- THERMAL PROTECTION
- LOW DROP OUTPUT VOLTAGE



HEPTAWATT
(Plastic Package)

ORDER CODE : TDA8132

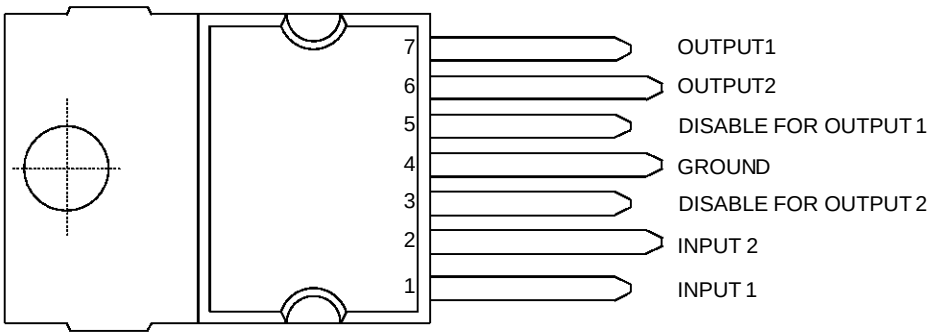
DESCRIPTION

The TDA8132 is a monolithic dual positive voltage regulator designed to provide fixed precision output voltages of 5.1V and 12V at currents up to 1A.

Each output can be disabled separately by a TTL input.

Short circuit and thermal protections are included.

PIN CONNECTIONS



Tab. connected to Pin 4

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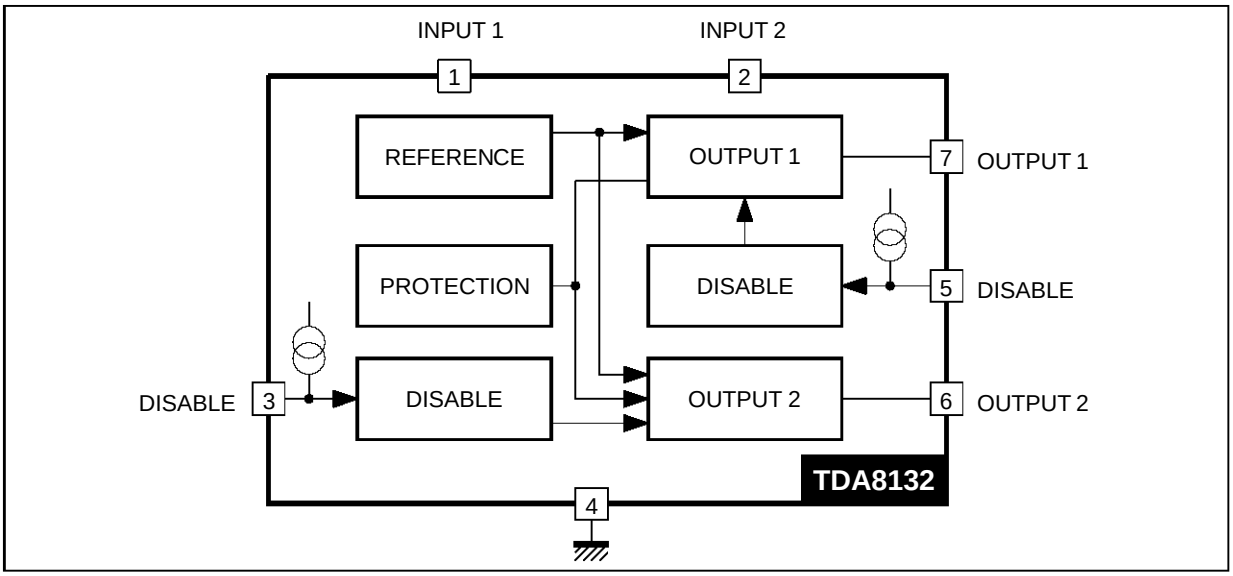
BLOCK DIAGRAM



CIRCUIT DESCRIPTION

The TDA8132 is a dual voltage regulator with separate Disable for each output.

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 Pin 1 is not supplied.

The outputs stage have been realized in darlington configuration with a drop typical 1.2V.

For each output a disable circuit switches-off this output if a voltage lower than 0.8V is applied at corresponding Pin (Pin 3 for output 2, Pin 5 for output 1).

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{IN}	DC Input Voltage Pin 1	20	V
V_{DIS}	Disable Input Voltage Pins 3-5	20	V
$I_{O1, 2}$	Output Currents	Internally Limited	
P_t	Power Dissipation	Internally Limited	
T_{stg}	Storage Temperature	-65, +150	^oC
T_j	Junction Temperature	0, +150	^oC

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THERMAL DATA

Symbol	Parameter	Value	Unit
$R_{th\ (j-c)}$	Maximum Thermal Resistance Junction-case	3	$^oC/W$
T_j	Maximum Recommended Junction Temperature	130	^oC

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ELECTRICAL CHRACTERISTICS (V_{IN1} = 7V, V_{IN2} = 14V, T_j = 25°C, unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_{O1}	Output Voltage	I_{O1} = 10mA	5	5.1	5.2	V
V_{O2}	Output Voltage	I_{O2} = 10mA	11.76	12	12.24	V
V_{O1} V_{O2}	Output Voltage	5mA < $I_{O1,2}$ < 750mA 7V < V_{IN1} < 14V 14 < V_{IN2} < 18V	4.9 11.5		5.3 12.5	V V
$V_{IO1,2}$	Dropout Voltage	$I_{O1,2}$ = 750mA $I_{O1,2}$ = 1A			1.4 2	V V
$V_{O1,2LI}$	Line Regulation	7V < V_{IN1} < 14V 14 < V_{IN2} < 18V $I_{O1,2}$ = 200mA			50 120	mV mV
$V_{O1,2LO}$	Load Regulation	5mA < I_{O1} < 0.6A 5mA < I_{O2} < 0.6A			100 250	mV mV
I_Q	Quiescent Current	I_{O1} = 10mA Output 2 Disabled			2	mA
$K_{O1,2}$	Output Voltage Thermal Drift	T_j = 0 to 125°C $K_O = \frac{\Delta V_O \cdot 10^6}{\Delta T \cdot V_O}$		100		ppm/°C
$I_{O1,2SC}$	Short Circuit Output Current	V_{IN1} = 7V, V_{IN2} = 14V $V_{IN1,2}$ = 16V (see Note)			1.6 1	A A
V_{DISH}	Disable Voltage High (corresponding out active)		2			V
V_{DISL}	Disable Voltage Low (corresponding out disabled)				0.8	V
I_{DIS}	Disable Bias Current	0V < V_{DIS} < 7V	-30		2	µA
T_{jsd}	Junction Temperature for Thermal Shut Down			145		°C

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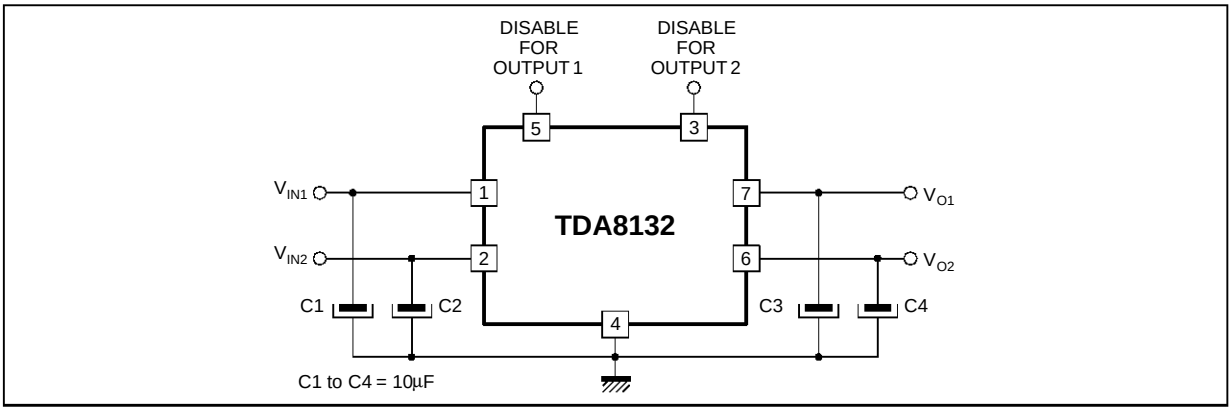
Note : Safe permanent short-circuit is only guaranteed for input voltages up to 16V.

TYPICAL APPLICATION



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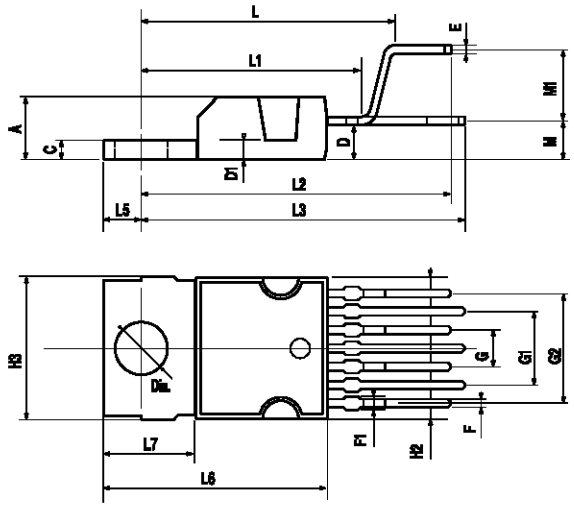
PACKAGE MECHANICAL DATA : 9 PINS - PLASTIC HEPTAWATT



PM-HEPTV.EPS

Dimensions	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A			4.8			0.189
C			1.37			0.054
D	2.4		2.8	0.094		0.110
D1	1.2		1.35	0.047		0.053
E	0.35		0.55	0.014		0.022
F	0.6		08	0.024		0.031
F1			0.9			0.035
G	2.41	2.54	2.67	0.095	0.100	0.105
G1	4.91	5.08	5.21	0.193	0.200	0.205
G2	7.49	7.62	7.8	0.295	0.300	0.307
H2			10.4			0.409
H3	10.05		10.4	0.396		0.409
L		16.97			0.668	
L1		14.92			0.587	
L2		21.54			0.848	
L3		22.62			0.891	
L5	2.6		3	0.102		0.118
L6	15.1		15.8	0.594		0.622
L7	6		6.6	0.236		0.260
M		2.8			0.110	
M1		5.08			0.200	
Dia.	3.65		3.85	0.144		0.152

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