

**DUAL 2-A SOURCE DRIVER**

- OUTPUT CURRENT UP TO 2.5 A
- WIDE RANGE OF SUPPLY VOLTAGE : + 8 V TO + 26 V
- CAN WITHSTAND OVERVOLTAGES OF AS HIGH AS 60 V BETWEEN  $V_{CC}$  AND GROUND
- OUTPUT VOLTAGE CAN SWING TO LOWER THAN GROUND
- "SENSE" AND "ALARM" OUTPUTS ARE OPEN COLLECTOR OUTPUTS

**DESCRIPTION**

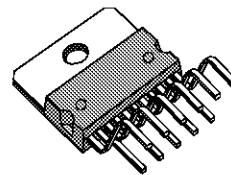
The TDF1779A is a dual source driver delivering high output currents and the capability to drive highly inductive loads (Electrovalves, contractors, relays...).

This device is essentially blow-out proof, each output is protected against short-circuits. If internal dissipation becomes too high, drivers will shut down to prevent excessive heating. An "ALARM" output is provided to indicate the action of the thermal protection. To reactivate the power outputs, the reset input must be forced to low state.

"SENSE" information of both power outputs are ORed together and then processed internally.

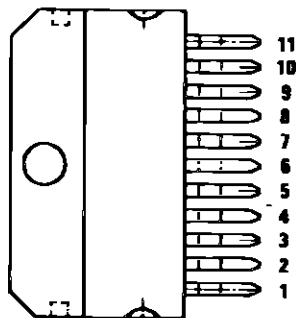
A "STROBE" input is also provided to offer the possibility of disabling the power outputs.

**MULTIWATT-11**



**ORDERING NUMBER : TDE 1779ASP**

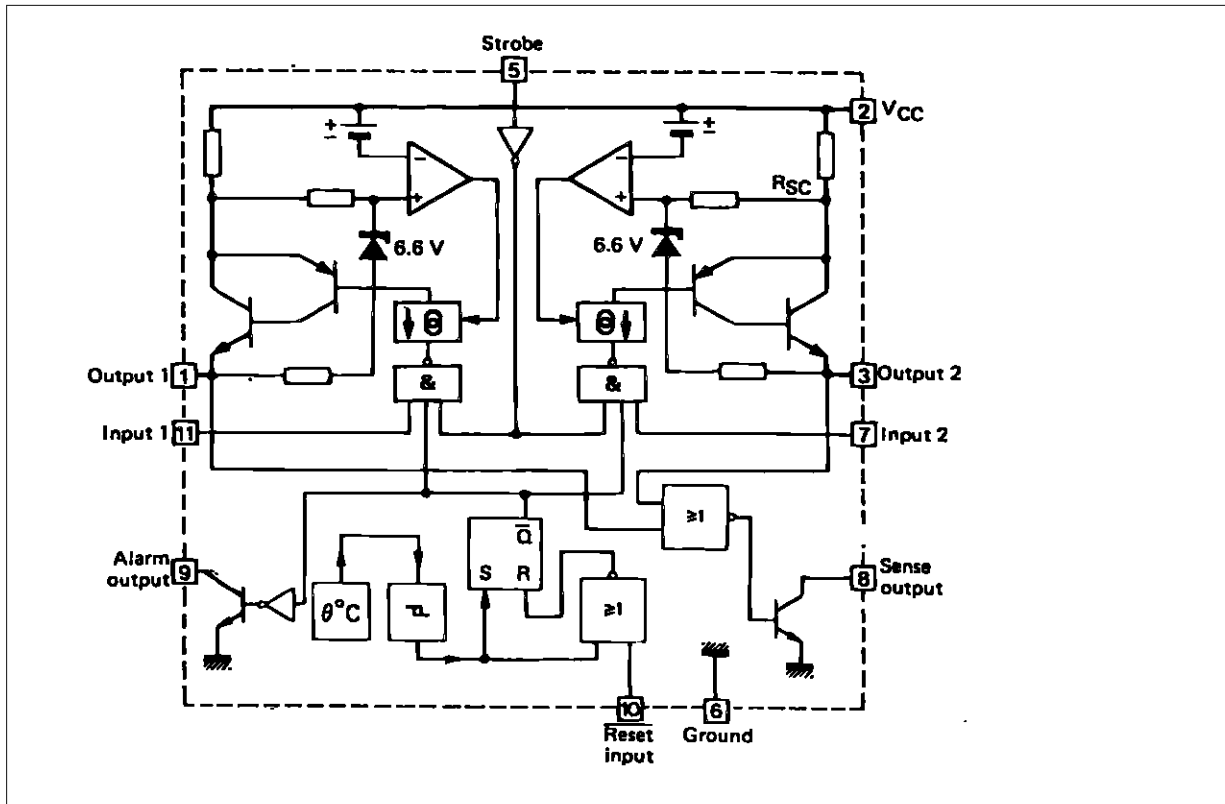
**PIN CONNECTION**



**Tab is connected to pin 6**

- 1 - Output 1
- 2 -  $V_{CC}$
- 3 - Output 2
- 4 - N.C.
- 5 - Strobe
- 6 - Ground
- 7 - Input 2
- 8 - Sense output
- 9 - Alarm output
- 10 - Reset input
- 11 - Input 1

**BLOCK DIAGRAM**



**MAXIMUM RATINGS**

Symbol	Parameter	Value	Unit
V <sub>CC</sub>	Supply Voltage	35 V (60 V/10 ms)	V
V <sub>I</sub> , V <sub>reset</sub>	Input Voltage (Pins 7, 10 and 11)	- 30 to + 50	V
V <sub>strobe</sub>	Strobe Input Voltage	- 0.5 to V <sub>CC</sub>	V
I <sub>O</sub>	Output Current	Internally Limited	A
P <sub>tot</sub>	Power Dissipation	Internally Limited	W
T <sub>oper</sub>	Operating Ambient temperature Range	- 40 to + 85	°C

**THERMAL CHARACTERISTICS**

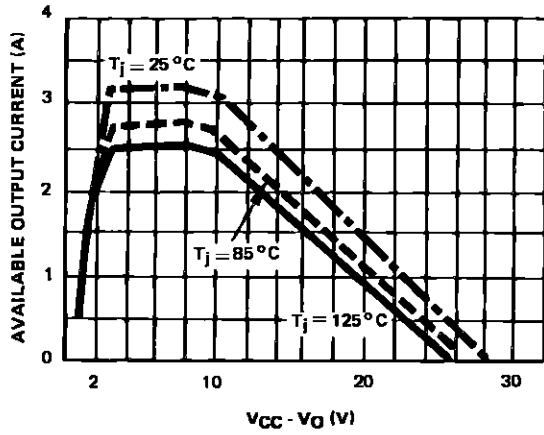
Symbol	Parameter	Value	Unit
R <sub>th (j-c)</sub>	Junction-case Thermal Resistance	Max. 3	°C/W
R <sub>th (j-a)</sub>	Junction-ambient Thermal Resistance	Max. 40	°C/W

**ELECTRICAL OPERATING CHARACTERISTICS**(V<sub>CC</sub> = + 24V, -40°C < T<sub>j</sub> < + 85°C, unless otherwise specified)

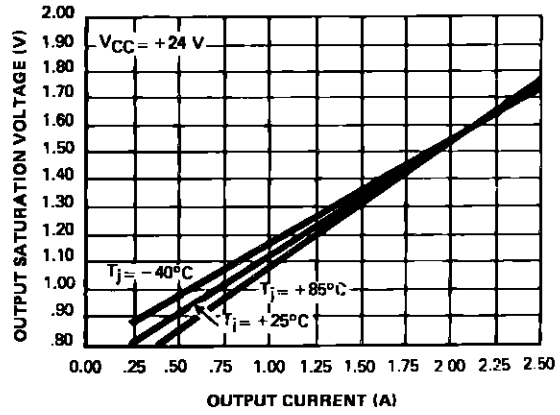
Symbol	Parameter	Min.	Typ.	Max.	Unit
V <sub>CC</sub>	Power Supply Voltage	8	-	26	V
I <sub>CC</sub>	Power Supply Current (pin 6), I <sub>O1</sub> = I <sub>O2</sub> = 2A	-	-	20	mA
V <sub>IL</sub> V <sub>IH</sub>	Logic Input Voltage (pin 7,10,11)	- 2	- -	0.8 -	V
V <sub>I</sub>	Logic Input Threshold (pin 5)	-	0.8	-	V
I <sub>IH</sub>	High Level Input Current (pins 7,10,11) V <sub>I</sub> = + 2V	-	20	50	μA
I <sub>IL</sub>	Low Level Input Current (pins 7,10,11) V <sub>I</sub> = + 0.8V	- 5	0	+ 5	μA
-	Off State Output Voltage (pins 8,9) I(8) = I(9) = 2 mA	-	-	0.4	V
V <sub>CC</sub> - V <sub>O1</sub> V <sub>CC</sub> - V <sub>O2</sub>	Output Saturation Voltage (V(7) high, V(11) High, I <sub>O</sub> = 2A)	-	1.5	1.8	V
I <sub>OL</sub>	Low Level Output Current pins 1,3) V(7) Low, V(11) Low, V <sub>O</sub> = 0V	-	400	1000	μA
V <sub>CC</sub> - V <sub>O1</sub> V <sub>CC</sub> - V <sub>O2</sub>	Switch-off Output Voltage (inductive load) Note 1	-	-	45	V
I <sub>O1</sub> , I <sub>O2</sub>	Available Output Current (pins 1,3), V(7) high, V(11) high, V <sub>CC</sub> - V <sub>O</sub> = 26V, T <sub>j</sub> = 25°C	10	-	-	mA
I <sub>O</sub> Alarme	Available "Alarme" Output Current, V(9) = + 4V	4	8	-	mA
I <sub>O</sub> Sense	Available "Sense Output Current, V(8) = + 4V	4	8	-	mA
I <sub>IH</sub> Sense	Output Sensing high Level Input Current (pins 1,3) V <sub>I</sub> = +2V	-	1	2	mA

**Note 1** : An external discharge circuit is required for inductive loads

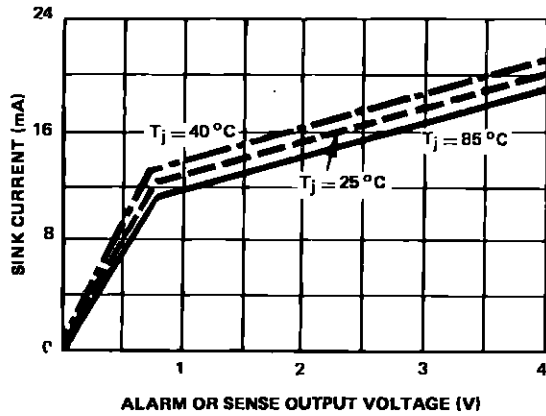
AVAILABLE OUTPUT CURRENT



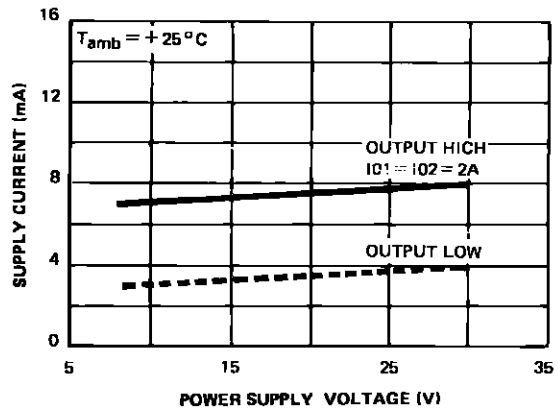
OUTPUT SATURATION VOLTAGE

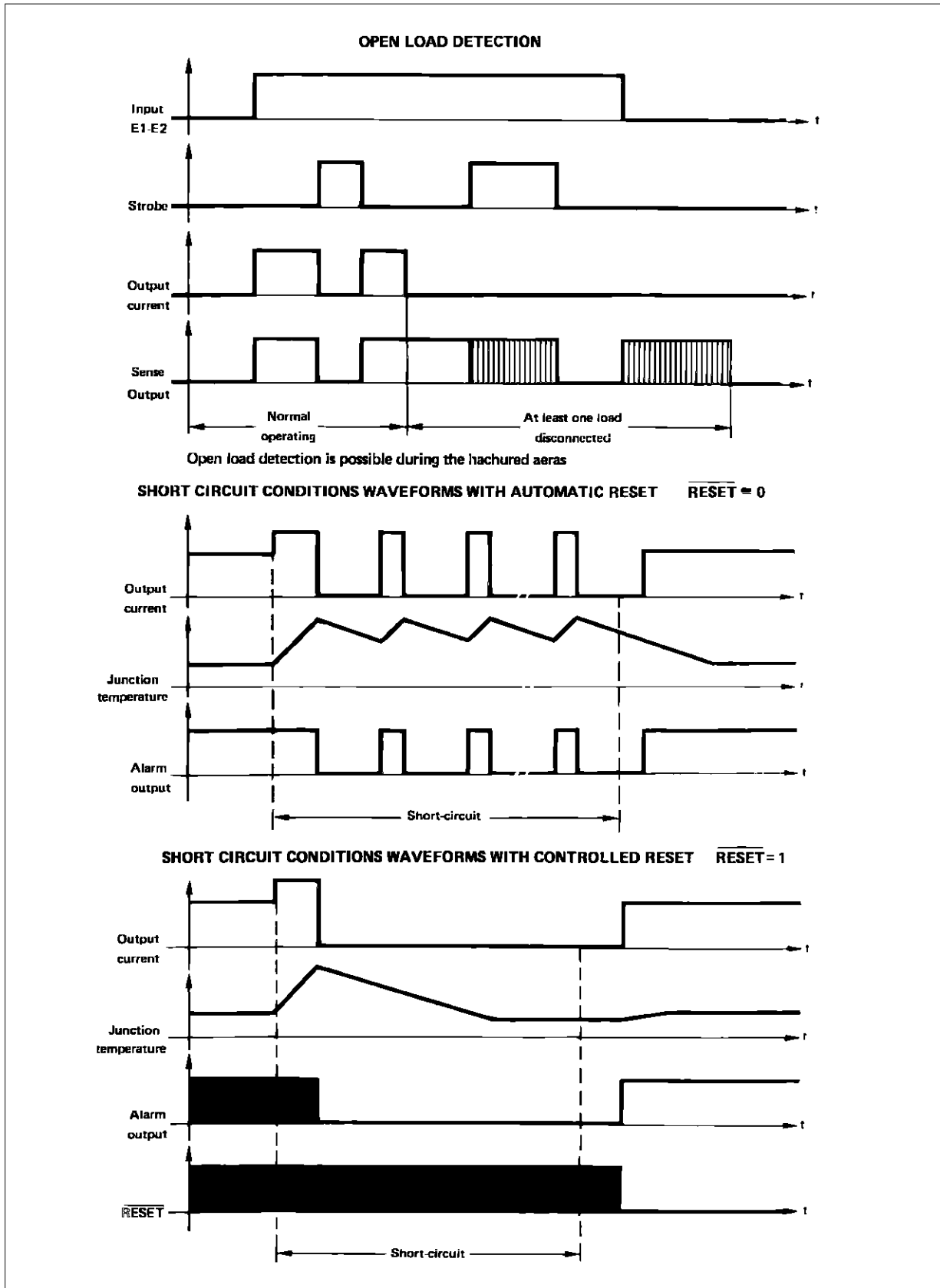


AVAILABLE ALARM OR SENSE OUTPUT CURRENTS



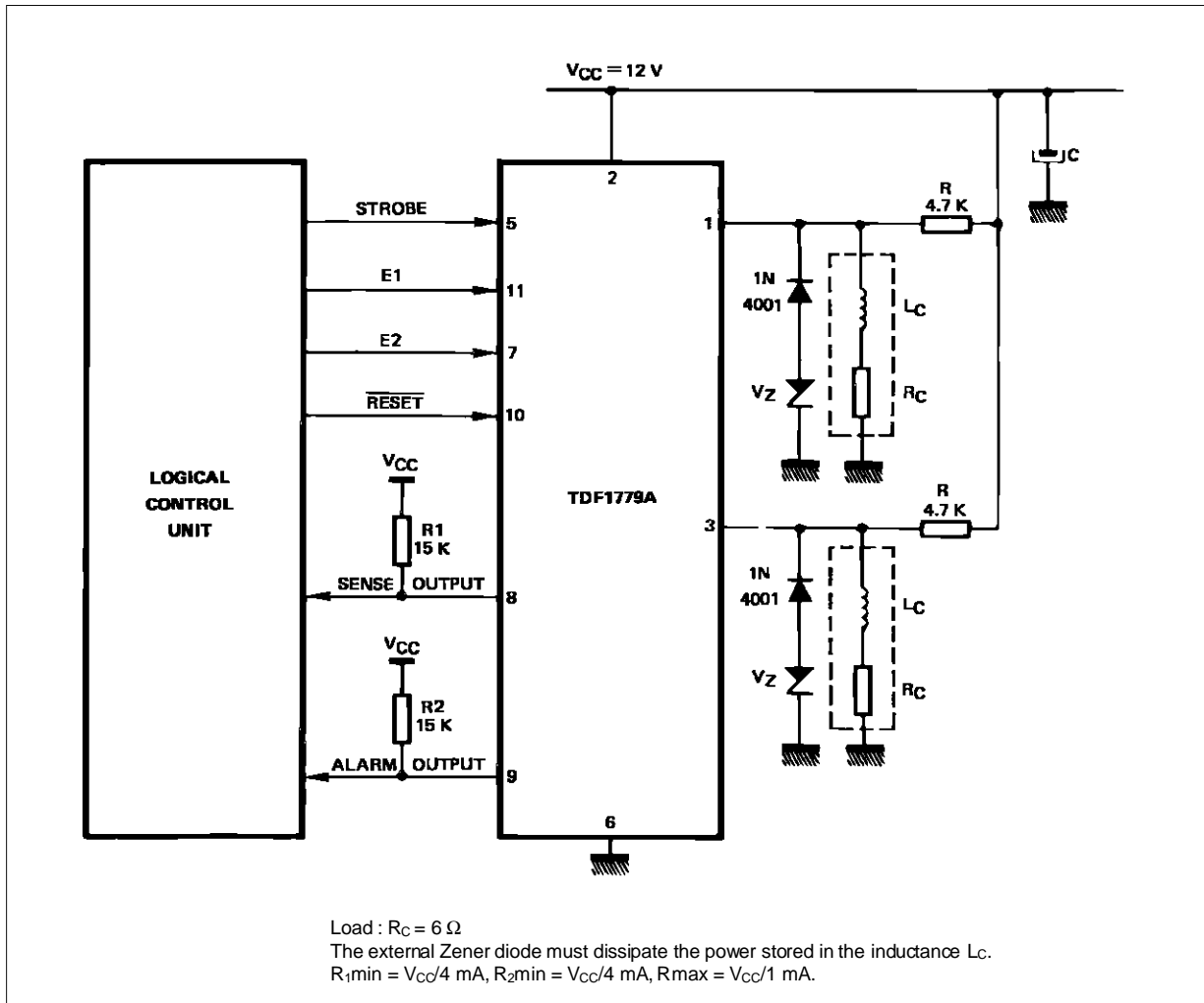
POWER SUPPLY CURRENT





# TDF1779A

## TYPICAL APPLICATION WITH TDF1779A TWO LOADS 12 V - 2 A



### MAIN FEATURES

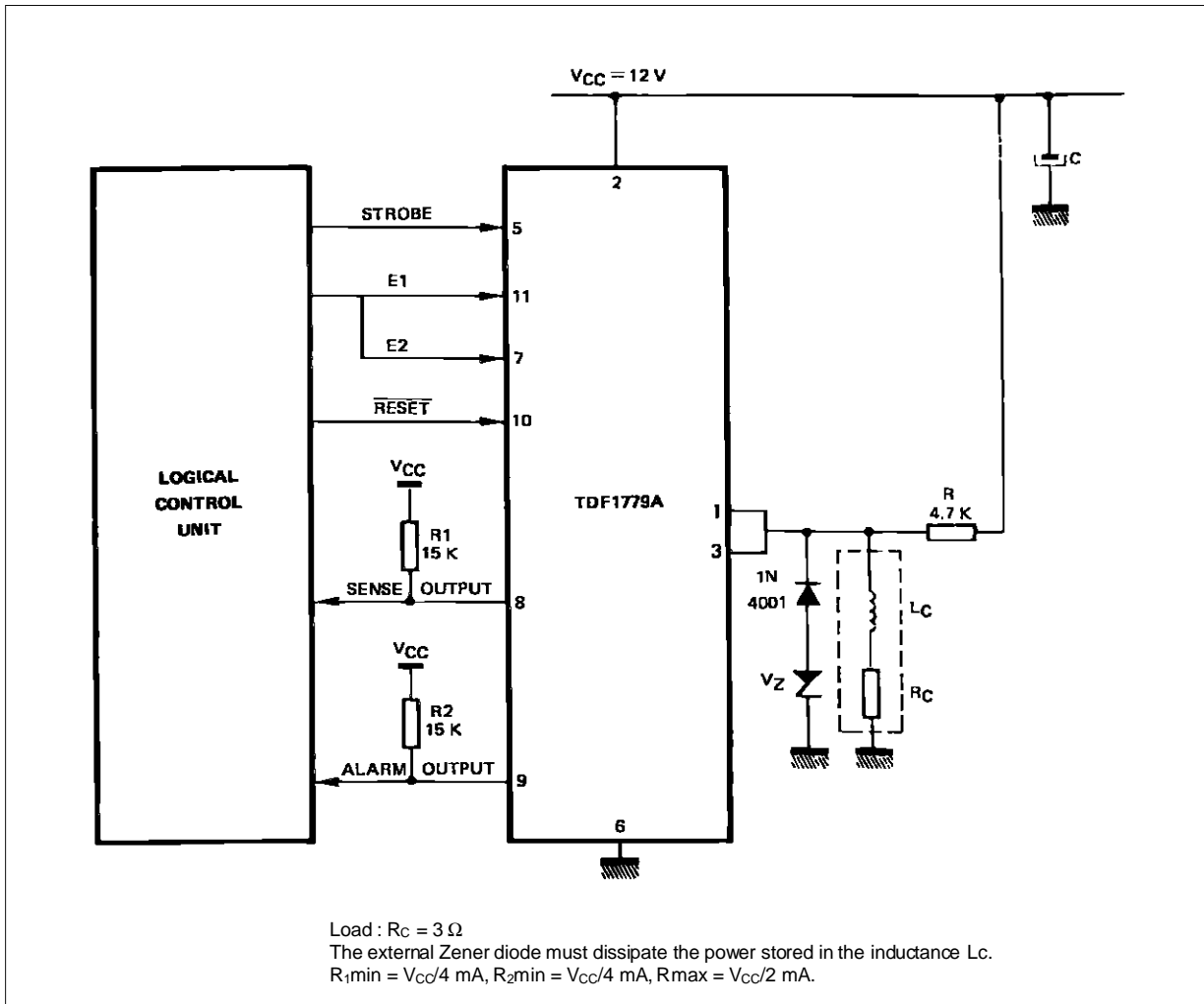
This application is protected against for short circuit and overload.

The load disconnection is detected when inputs  $E_1$  and  $E_2$  are low and the sense output is high.

When thermal protection is activated the pin 9 is low. Inputs are TTL compatible.

Sense output, Alarm output are open collector.

TDF1779A HIGH CURRENT APPLICATION WITH LOAD 12 V - 4 A

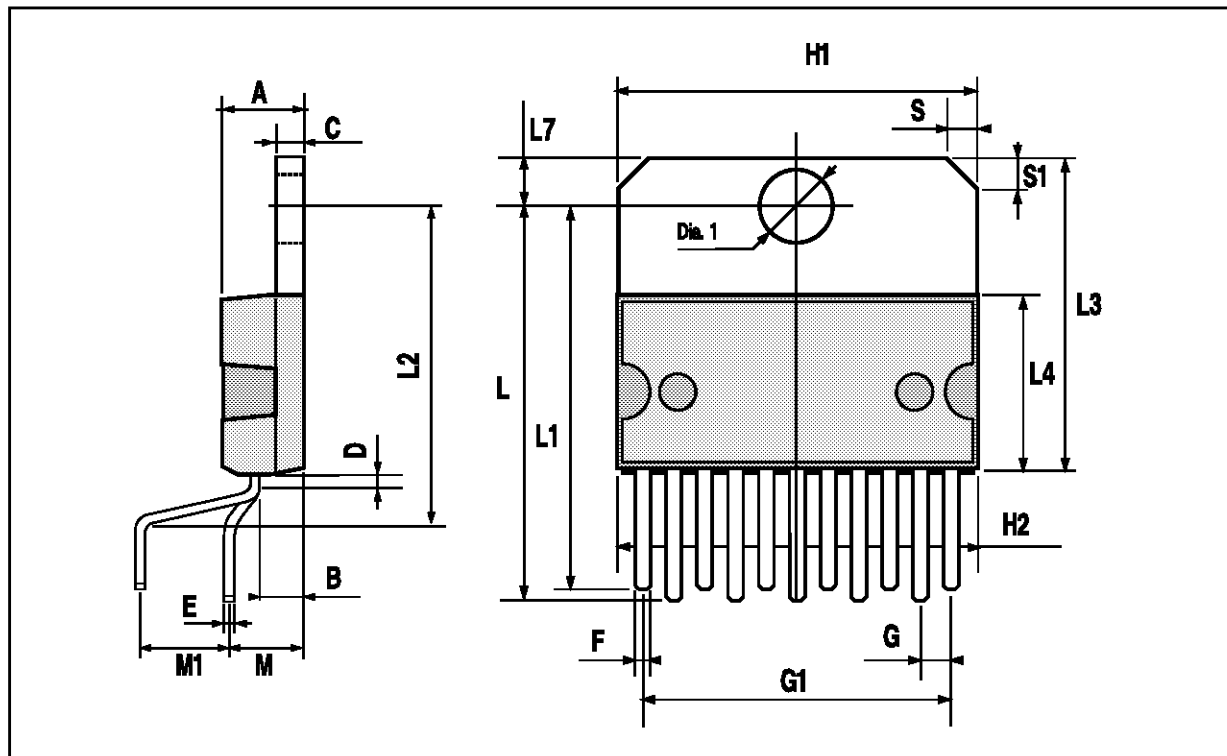


MAIN FEATURES

This application has the same features as the dual 2 A - 12 V application.

MULTIWATT11 PACKAGE MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A			5			0.197
B			2.65			0.104
C			1.6			0.063
D		1			0.039	
E	0.49		0.55	0.019		0.022
F	0.88		0.95	0.035		0.037
G	1.45	1.7	1.95	0.057	0.067	0.077
G1	16.75	17	17.25	0.659	0.669	0.679
H1	19.6			0.772		
H2			20.2			0.795
L	21.9	22.2	22.5	0.862	0.874	0.886
L1	21.7	22.1	22.5	0.854	0.87	0.886
L2	17.4		18.1	0.685		0.713
L3	17.25	17.5	17.75	0.679	0.689	0.699
L4	10.3	10.7	10.9	0.406	0.421	0.429
L7	2.65		2.9	0.104		0.114
M	4.25	4.55	4.85	0.167	0.179	0.191
M1	4.73	5.08	5.43	0.186	0.200	0.214
S	1.9		2.6	0.075		0.102
S1	1.9		2.6	0.075		0.102
Dia1	3.65		3.85	0.144		0.152





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