Double Flasher

Description

The bipolar circuit, U880B, is designed as a double flasher for wide range of applications. It has polarity and short-circuit protected stages for timely coupled outputs.

Features

- Integrated oscillator
- $f_{nominal}$ = 3.3 Hz
- Supply voltage range: 4.75 to 20.4 V
- Polarity protected
- Two protected power stages
- Output current, 55 mA nominal

Applications

- Toys
- Roboter
- LED switching

Case: TO 50

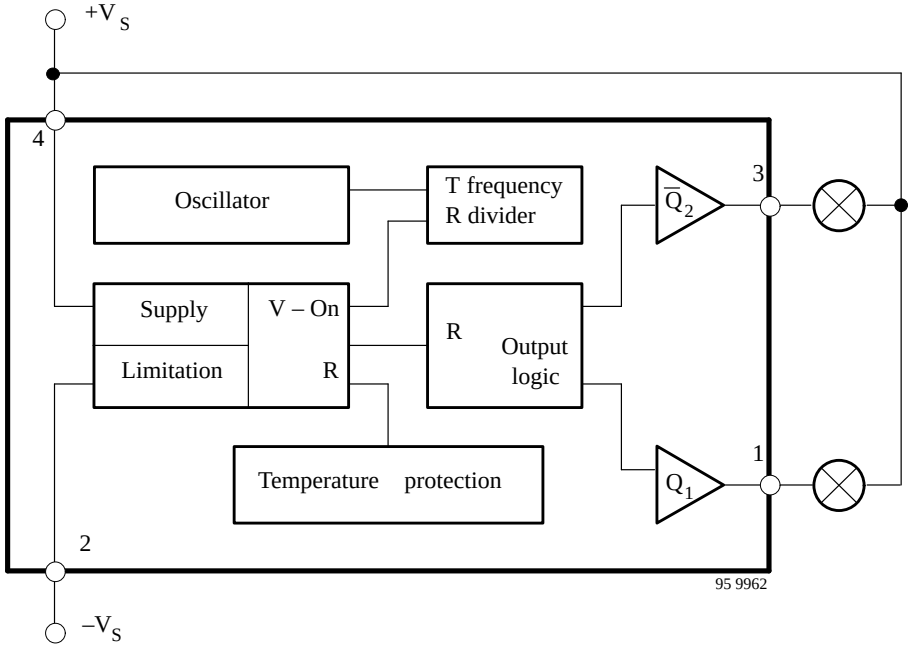


Figure 1. Block diagram with application

Pin Description

Pin	Symbol	Function
Pin 1	O_1	Output O_1
Pin 3	$\overline{O}_2$	Output $\overline{O}_2$

Pin	Symbol	Function
Pin 2	$-V_S$	Supply, GND
Pin 4	V_S	Supply

Absolute Maximum Ratings

Reference point Pin 2, unless otherwise specified

Parameters			Symbol	Value	Unit
Supply current		Pin 4	I_S	30	mA
Peak supply current	$t \leq 10\ \mu s$	Pin 4	I_S	150	mA
Supply voltage		Pin 4	$\pm V_S$	20.4	V
Output stage		Pin 1, 3	V_O	20.4	V
Peak current	$t \leq 1$ ms; $P_{tot} \leq 200$ mW	Pin 1, 3	I_O	100	mA
			$-I_O$	150	
Power dissipation	T_{amb} = 45 °C		P_{tot}	200	mW
	T_{amb} = 100 °C			80	
Storage temperature range			T_{stg}	–40 to +125	°C
Ambient temperature range			T_{amb}	–10 to +100	°C

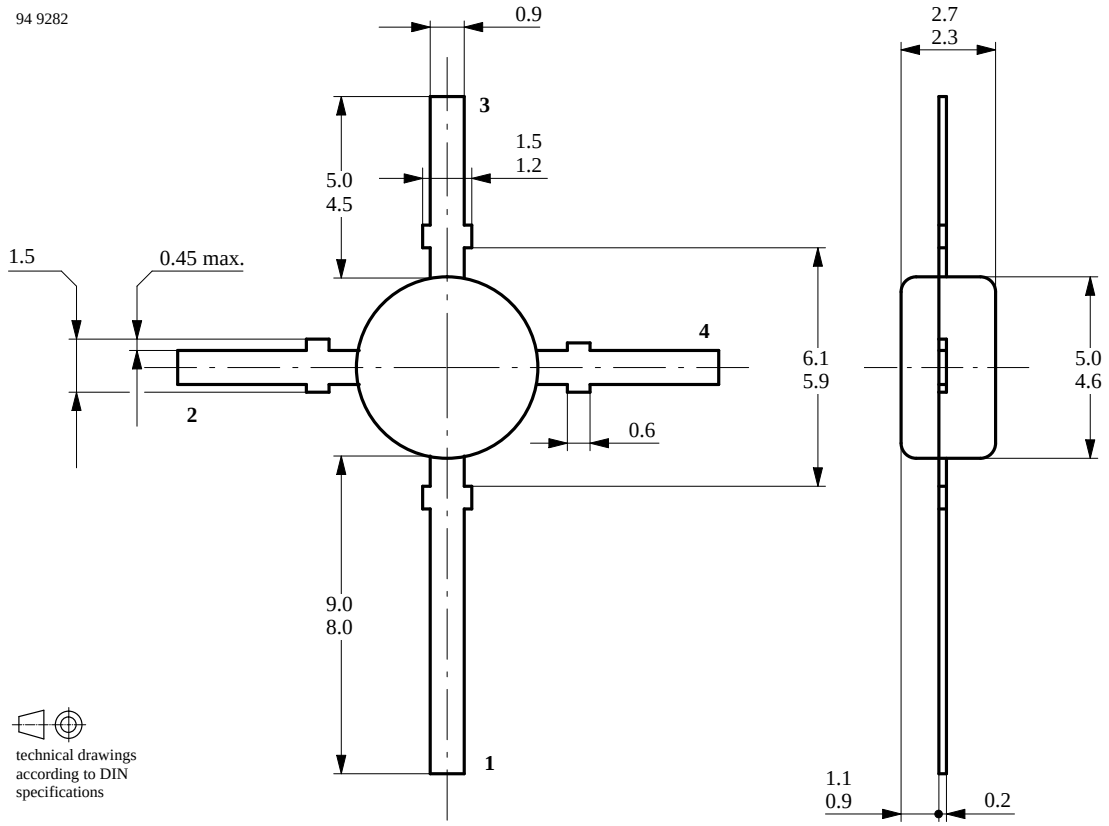
Electrical Characteristics

Reference point Pin 2, V_S = 9, T_{amb} = 25 °C, unless otherwise specified

Parameters	Test Conditions / Pin	Symbol	Min	Typ	Max	Unit
Supply current	Pin 4					
	$V_{4\ min}$ = 4.75 V	I_S		3.2	4.9	mA
	V_4 = 9.0 V			3.3	5.0	
	$V_{4\ max}$ = 20.4 V			3.8	6.5	
Supply voltage limitation	I_4 = 10 mA Pin 4	V_4	20.8		24.2	V
Voltage monitoring	Pin 4					
ON–Threshold		V_4		4.2	4.75	V
OFF–Threshold		V_4		3.0		V
Output stage	Switched off	V_4		3.8		V
Temperature coefficient		TC		0.025		%/K
Oscillator						
Clock frequency	Pins 1 and 3	f	2.0		4.0	Hz
Temperature coefficient		TC		0.025		%/K
Voltage coefficient	T_j = 45 °C	VC		0.5		%/V
	T_j = 100 °C			1.0		
Output stage	Pins 1 and 3					
Saturation voltage	V_4 = 6.0 V; I_o = 25 mA	V_O	250		700	mV
Current limitation	V_4 = 8 V; $V_{1,3}$ = 7.5 V	I_O		55	80	mA
	V_4 = 9 V; $V_{1,3}$ = 2.0 V		35	50		
Temperature coefficient		TC		0.5		%/K
Voltage limitation	$-I_O$ = 1 mA	V_O	20.4		24.2	V
	I_O = 30 mA		–1.1		–0.4	
Leakage current	$V_{1,3}$ = 10 V Pin 1, 3	I_O			20	µA
Over temperature limitation	V_4 = 5 V	T_j		130		°C
	V_4 = 9 V			145		

Dimensions in mm

Package: JEDEC TO 50



Ozone Depleting Substances Policy Statement

It is the policy of **TEMIC TELEFUNKEN microelectronic GmbH** to

1. Meet all present and future national and international statutory requirements.

2. Regularly and continuously improve the performance of our products, processes, distribution and operating systems with respect to their impact on the health and safety of our employees and the public, as well as their impact on the environment.

It is particular concern to control or eliminate releases of those substances into the atmosphere which are known as ozone depleting substances (ODSs).

The Montreal Protocol (1987) and its London Amendments (1990) intend to severely restrict the use of ODSs and forbid their use within the next ten years. Various national and international initiatives are pressing for an earlier ban on these substances.

TEMIC TELEFUNKEN microelectronic GmbH semiconductor division has been able to use its policy of continuous improvements to eliminate the use of ODSs listed in the following documents.

1. Annex A, B and list of transitional substances of the Montreal Protocol and the London Amendments respectively

2. Class I and II ozone depleting substances in the Clean Air Act Amendments of 1990 by the Environmental Protection Agency (EPA) in the USA

3. Council Decision 88/540/EEC and 91/690/EEC Annex A, B and C (transitional substances) respectively.

TEMIC can certify that our semiconductors are not manufactured with ozone depleting substances and do not contain such substances.

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